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RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska.—A press despatch from Tacoma, Wash., says that M. J. Heney, who built the White Pass and Yukon Ry., has undertaken to construct 400 miles of standard gauge railway between Valdez and Eagle City, on the Yukon, in less than three years. Mr. Heney, with a survey party, is now going over the route. Capt. John Healy has been in London, Eng., in connection with the proposal, and says the line will be carried to Port Clarence, which is only 40 miles from the Siberian coast. The total length of the line, if built, will be 1,200 miles.

The Alberta Ry. and Coal Co. intends changing the gauge of its line between Coutts, at the International boundary, and Lethbridge, 64.62 miles, from 3 ft. to standard. It is expected that the work will be completed early next year. (July, pg. 198.)

Algoma Central and Hudson's Bay Ry.—W. Beatty, M.L.A., of Brockville, is in charge of a survey party for this line, and is working north towards the C.P.R. main trans-continental line. (June, pg. 170.)

The main line now under construction from Sault Ste. Marie northwards towards the main line of the C.P.R. will probably connect with the branch from Michipicoten harbor at or near the Josephine mine. (May, pg. 153.)

The Atlantic and Lake Superior Ry. is in operation from the I.C.R. at Metapedia to New Carlisle, Que., 98 miles. On June 19 we were informed that no further construction had been done this year up to that date, but that it was expected to extend the line about two miles to Paspébiac this summer.

At the recent session of the Dominion Parliament the following subsidies were voted: For a railway from Caplin to Paspébiac, in lieu of subsidy granted by 1899, chap. 7, sec. 2, par. 15, the subsidy contract to be entered into with the trustees or receivers under mortgage from the Atlantic and Lake Superior Ry. Co., and to contain the conditions that the subsidy when earned shall be paid in the following manner: (1) To the Hamilton Bridge Works Co., in payment for bridge superstructures on the said section of railway, when furnished and erected by that Co., not to exceed \$35,000. (2) For the completion of the roadbed and works incidental thereto. (3) Towards payment of overdue balances, pro rata, in settlement of claims for labor, boarding house claims, and material and supplies furnished in connection with the construction of the said

section of railway, in all not exceeding 30 miles—\$96,000.

A press despatch dated Quebec, July 12, says that in consequence of the subsidies mentioned work has been resumed, that the iron superstructure for the bridge over the Bonaventure river is being placed in position, and that the four other bridges between Bonaventure and New Carlisle are to be completed during the summer. (Aug., 1900, pg. 237.)

The Brockville, Westport and Sault Ste. Marie Ry. is improving its roadbed. An extension of the line is talked of so as to effect

agricultural country will be served by the line. Tenders were recently asked to be sent in by Aug. 1 for the construction of 14½ miles. The Ontario Legislature has voted a subsidy of \$39,000 towards the construction of 13 miles of this railway. A. S. Burrows, Bruce Mines, Ont., is Managing Director. (April pg., 112.)

Canada Atlantic Ry.—Considerable work in the way of betterments is being done on the western portion of the line, between Scotia Jct. and Rose Point, where about 10 wooden trestles are being replaced by steel viaducts with concrete pedestals.

Canada National Ry. and Transport Co.—A meeting of the incorporators was held June 5, when S. F. McKinnon, Toronto, was elected Chairman; J. H. Boyle, Toronto, Secretary, and J. B. McColl, Toronto, Treasurer, with the following as an Executive Board: F. Wyld, L. M. Jones and E. Rogers, Toronto; J. McMullen, Mount Forest; D. Wilson, Collingwood, and F. Kraus, Milwaukee. The other directors are: J. Ryan, R. S. Stewart, C. C. Van Norman, T. Crawford and McD. Thompson, Toronto; A. T. Wood, Hamilton; J. Chamberlain, Collingwood; J. Millen and G. G. Barnum, Duluth, Minn.; J. G. Keith, Chicago; G. H. Breyman, Toledo, and J. D. McGregor, New Glasgow, N. S. Arrangements are being made for a survey of a proposed route from Toronto to Collingwood or some other Georgian Bay port, to be made in the fall. The temporary offices of the Co. are at 33 Yonge Street Arcade, Toronto. (May, pg. 153.)

The Minister of Public Works, who was recently at Collingwood, stated on his return to Ottawa that he was much impressed with the Toronto-Collingwood air-line route. If the railway, he said, were an accomplished fact, it would result in the establishment of a fleet of Canadian grain carriers on Lake Ontario. He was not in a position to say whether the Government will grant aid to this project.

The Canada Ry. and Coal Co. was incorporated by the New Brunswick Legislature last session, and has entered into a contract with the Government for the construction of a railway from Chipman to Gibson for the purpose of opening up the Newcastle coal fields. It is said a survey will be started at once and that construction will follow immediately the line is located, as the promoters desire to have some portion of the railway in operation next year. The Dominion Parliament has voted a subsidy of \$144,000 towards the construction of 45 miles of this line. The officers are: President, E. Hutchinson, Miramichi; Vice-President, F. Stetson, St. John; Secretary, G. W. Allen, Fredericton, E. G. Evans, of Hampton, N.



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a junction with the Kingston & Pembroke Ry. at or near Sharbot Lake.

Brookdale to Londonderry, N. S.—Mr. Cooke, of the Sydney corporation engineering staff, and Messrs. Goodwin and Morrison, of the Dominion Steel Co.'s works, are surveying for a line between these points.

The Bruce Mines and Algoma Ry. is projected from Bruce Mines, on the Sault Ste. Marie branch of the C.P.R., to the Rock Lake copper mines. The Co. operating this mine has spent a considerable amount in developing it. The ore, although of low grade, is said to contain 5% of copper. It is said that a fair

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NEXT MEETING, probably in March, 1902.

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Holloway, Toronto Jct., Ont.; N. Delaire, Montreal.

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NEXT ANNUAL MEETING at Hamilton, Oct. 16, 1901.

Canadian Society of Civil Engineers.

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PRESIDENT, M. McNamara, Walkerton, Ont.; 3rd

VICE-PRESIDENT, W. H. C. MacKay, St. John, N.B.;
SEC.-TREAS., E. de la Hooke, London, Ont.; AUDITOR,
S. H. Palmer, St. Thomas, Ont.

EXECUTIVE COMMITTEE, W. F. Egg, Montreal, Chair-
man; W. H. Harper, Chatham, Ont.; C. E. Morgan,
Hamilton, Ont.; T. Long, Port Hope, Ont.; J. P.
Hanley, Kingston, Ont.

NEXT ANNUAL MEETING at Montreal, Nov. 6, 1901.
OFFICIAL ORGAN.—THE RAILWAY & SHIPPING WORLD,
Toronto.

Great Lakes and St. Lawrence River Rate Committee.

CHAIRMAN, A. A. Schantz, Detroit, Mich.
SECRETARY, G. C. Wells, Passenger Department, C-
P.R., Montreal.

NEXT MEETING, at Sault Ste. Marie, Ont., probably
in Feb., 1902.

National Association Marine Engineers of Canada.

PRESIDENT, W. J. Barton, St. John, N.B.; VICE-
PRESIDENT, D. McQuade, Collingwood, Ont.; SEC.-
TREAS., J. A. Findlay, Toronto; CONDUCTOR, J. A.
McArthur, Montreal; DOORKEEPER, N. J. Morrison,
St. John, N.B.; AUDITOR, D. L. Foley, Toronto.

NEXT ANNUAL MEETING of the Grand Council in
Toronto, Jan. 1902.

Niagara Frontier Summer Rate Com- mittee.

CHAIRMAN, T. Henry, Montreal.
SECRETARY, G. C. Wells, Passenger Department, C-
P.R., Montreal.

NEXT MEETING, at New York, probably in Jan., 1902.

Track Supply Association.

PRESIDENT.—F. E. Caine, Montreal.
FIRST VICE-PRESIDENT.—R. J. Davidson, Hillburn,
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NEXT ANNUAL MEETING at Hamilton, Oct. 16, 1901.

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B., is mentioned in connection with the sur-
veys. (June, pg. 167.)

Canadian Northern Ry.—The allocation of
reserve A at Port Arthur has not yet been
decided on, but W. Mackenzie and D. D.
Mann were in Port Arthur recently conferring
with the local authorities in respect to the
various proposals that have been made in re-
gard to it. The Thunder Bay, Nepigon and
St. Joe Ry. promoters are also negotiating
with the local authorities so that it may be as-
sured of an entrance to the reserve.

The foundations for the 1,000,000 bush
elevator at Port Arthur are nearly completed,
and it is expected that work on the super-
structure will be commenced on an early date.
The elevator dock is about half-a-mile in
length, and has been built by the Co., and the
erection of an additional dock is contemplated.
A contract has been given for 3,270 steel
buckets for the elevator, to be delivered in
Sept. (June, pg. 170.)

Rails have been laid a short distance beyond
the Atikokan iron range, and 75% of the
grading has been completed between that
point and Rainy River. The bridge construc-
tion over Rainy Lake at Fort Frances is also
in a forward state. Every effort is being
made by the contractors to hurry the work
forward, so that the line may be opened
through from Port Arthur to Winnipeg by
Oct. 1. (June, pg. 170.)

W. Mackenzie and D. D. Mann have com-
pleted an inspection of the Ontario division
from Port Arthur as far as the track has been
laid, and of the Manitoba section from Rainy-
peg to Beaudette, and thence over the Rainy
River section to Fort Frances. Mr. Macken-
zie says that the line between Port Arthur and
Winnipeg will be completed by Oct. 1.

A dock costing \$15,000 is being built by
the Co. at Beaudette, Minn., where the line
crosses Rainy River.

The bridge across the Red River between
St. Boniface and Winnipeg is expected to be
completed by Sept. 15. (June, pg. 170.)

Nothing in the way of car or repair shops
will be built this year at Winnipeg, but some
improvements and additional machinery will
be put up so as to complete 100 box cars by
Oct., in time for the handling of the season's
crop.

It is rumored that the C.N.R. Co. intends
to rebuild the section of the Winnipeg and
Hudson's Bay Ry., which was constructed
from Winnipeg northwesterly to the vicinity of
Shoal Lake, some 45 miles, but which has
never been operated, and that it will be fur-
ther extended northwesterly.

The contract for the construction of a
branch line from St. Charles, 11 miles from
Winnipeg, on the Portage la Prairie branch
recently taken over from the Northern Pacific,
to Carman, and thence westerly 68 miles, or
100 miles as necessity may arise, has been let
to G. H. Strevel. J. W. Buchanan and A.
Labelle & Co. are sub-contractors, and grad-
ing is being pushed forward rapidly. Mr.
Strevel says the work is light. (June, pg. 182.)

Grading has been commenced on the ex-
tension of about 18 miles from Beaver, the
terminus of the Portage la Prairie-Beaver
branch taken over from the Northern Pacific
Ry., 19 miles northwest of Portage la Prairie,
to Gladstone Jct. on the Minnedosa section of
the C.P.R., formerly the Manitoba & North-
western Ry. Gladstone Jct. is the original
starting point of the Lake Manitoba Ry. &
Canal Co.'s railway, now merged in the C.N.
R. It is expected that the work, which is in
charge of R. J. Mackenzie, will be completed
by Oct. 1, and the C.N.R. will then have a
through line from Winnipeg to Saskatchewan.
(June, pg. 182.)

The Canso and Louisburg Ry. Co. is re-
presented at Port Hawkesbury, N.S., by the
Dominion Construction Co., the head office of
which is at 64 Equitable Building, Boston,
Mass. It is said this Co. proposes to con-
struct 110 miles of railway, but no names are
given of the officers or of the engineer who
will have charge of the work. This Co. was in-
corporated in 1896, being given two years with
in which to commence operations, and it was
also required to make a deposit with the
Government. In 1898 the Co. was given
an extension of two years, and in 1900 was
granted a still further extension, which gave
it four years and four months within which it
could commence work. This latter act also
recognized the charter as a valid one although
the deposit required by the original charter
had not been made. Surveys were made by
J. S. Armstrong, Chief Engineer, and in Jan.,
1900, H. Alton, the Vice-President, claimed
there was capital enough to carry the scheme
through, as well as to construct a branch to
Aricat. In a recent interview Attorney-Gen-
eral Longley said it was understood that this
charter had expired. Some surveying and a
little grading is said to be all that this Co.
has done. (June, 1900, pg. 175. See also
Cape Breton Ry. Extension Co.)

The Cape Breton Ry. Extension Co. obtain-
ed its charter from the Nova Scotia Legislature
in 1899, the incorporators being: L. Shute,
contractor, J. Shute, engineer, and H. Dix,
merchant, of Stanwick, N.J.; J. Crump, dock
superintendent, New York; D. Corfield, gen-
tleman, Philadelphia; I. Le Blanc, merchant

and D. Finlayson, solicitor, Arichat, C.B.; S. Joyce, merchant, D'Escouse, C.B.; and J. W. Ousley, Windsor, N.S., for the purpose of constructing within three years a railway from the Straits of Canso to Louisburg, and for the purpose of building a bridge, tunnel, or ferry, over, under or at the Straits of Canso in connection with such railway. In the following year the Co. obtained power to construct a branch from its main line at Barra-sois, St. Louis, Richmond County, to Arichat, as well as other branches, subject to the approval of the Government. Nothing appears to have been done by the promoters of the original Co., the charter for which passed into the hands of R. J. Campbell and J. M. Guerin, who organized the present Company. Its offices are at 51 East 44th St., New York, and New York Life Building, Montreal. The Co. is actively preparing for construction. Its plans include a line from Port Hawkesbury, on the I.C.R., and Straits of Canso to Louisburg, on the east coast of Cape Breton, with a branch to Sydney. The Co. entered into a contract with the Commissioner of Public Works of Nova Scotia on Oct. 1, 1900, to build 30 miles, from Port Hawkesbury to St. Peters, Richmond County, in return for a subsidy of \$3,200 a mile. The Co. undertook to begin the work at once and to have the line completed, equipped and in operation by Dec. 31, 1902. The rolling stock to be provided by the Co. includes 3 locomotives, 2 first class passenger cars, 2 second class passenger cars, 2 baggage, mail and express cars, 35 platform cars, 25 box freight cars, and 1 snow plough. The contract was signed on behalf of the Co. by R. J. Campbell, President, and J. M. Guerin, of Montreal, Secretary.

R. W. Leonard, formerly Chief Engineer of the St. Lawrence and Adirondack Ry., and later of the C.P.R. engineering staff, has been appointed Chief Engineer and Manager of Construction, and surveys are being made under him. The line will be approximately 80 miles in length, passing through the southern part of Richmond and Cape Breton Counties, and touching the towns of Hawkesbury, St. Peters, L'Ardorse, Gabarouse and Louisburg. The Co. proposes to build 30 miles, seven of which have been located this year, from Port Hawkesbury to St. Peters. The most important engineering feature of this portion of the line will be the bridge over the tidal river Inhabitants and the swing bridge at St. Peter's canal.

It is understood that the construction will be done by the Manhattan Construction Co., whose Chief Engineer, Mr. VanAken, and a staff of assistants are at Port Hawkesbury. This Co., which was incorporated in 1899 in New York, has a capital of \$100,000, has among its shareholders E. VanEtten, 2nd Vice-President of the New York Central Ry., and W. Seward Webb, Chairman of the Rutland Ry., who has just been elected President of the C. B. Ry. Extension Co., Mr. Campbell taking the Vice-Presidency.

At the annual meeting in Montreal, July 17, the following officers were elected: W. S. Webb, Shelburne, Vt., President; R. J. Campbell, New York, Vice-President; A. L. Meyer, New York, Treasurer; J. M. Guerin, Secretary; other directors: V. T. Rogers, S. R. Callaway, J. J. Astor, E. Van Etten, F. G. Smith and H. L. Sprague, of New York, and M. Guerin, Montreal. It was decided to authorize the Co.'s counsel, E. Guerin, K.C., to apply to the N.S. Legislature next session for legislation altering the name of the Co. to the Cape Breton Ry. Co., and a resolution was passed authorizing the issue of 5% gold bonds to the amount of \$2,400,000 secured by a first mortgage on the Co.'s property and franchises.

Carleton and Miramichi.—Organization work is going on for this Co. which proposes to build from the C.P.R. at Bristol, N.B., to

Foreston, some 26 miles. Part of the line is already subsidized. A reconnaissance survey was made for it last year by C. L. B. Miles, C.E., and J. S. Stewart and Mr. Balcom, C.E., have lately been over the route as far as Glassville. It is reported construction will be started at an early date.

Central Ontario.—A number of the stations are being equipped with enameled iron station name signs, two on each station, supplied by the Acton Burrows Co., Toronto.

Chateauguay & Northern Ry.—The contract for the grading of the railway to be constructed from Montreal to a junction with the Great Northern Ry. at Joliette, 37 miles, has been let to Smith & Abbott, of New York. This firm will also put up the masonry for the big bridge at Bout de l'Isle. Contracts have also been let for the superstructure of all the bridges. The aggregate amount of the contracts will be about \$1,000,000. J. P. Mullarkey, Montreal, is President of the Co., the control of which is said to have been secured in the interest of the Great Northern Ry. of Canada. (June, pg. 173.)

Coast-Kootenay Ry.—Nothing whatever apparently has been done by the British Columbia Government in the way of giving out a contract for the construction of the Coast-Kootenay railway for which tenders were asked in April. The Golden Era recently published what purported to be an interview with the Commissioner of Lands and Works, in which it was stated that a contract for the building of the road would be given to the C. P.R., but on his return to Victoria he repudiated the statement. (June, pg. 178.)

Crow's Nest Southern Ry.—Construction work will commence immediately on this line, which will run from the coal mines at Michel, B.C., to the International boundary, 65 miles. Here connection will be made with the Montana and Great Northern Ry., which has been incorporated in the U.S., to construct a line from the Great Northern (U.S.) at Jennings, to the International boundary, about 90 miles. The survey of the B.C. portion of the line has been completed, and construction will be pushed forward with vigor. Elias Rogers, managing director of the Crow's Nest Coal Co., and one of the directors of the C.N.S.R. says that the line will be opened by next winter. It will be built simply for the purpose of carrying coal and coke, under a B.C. charter, and an agreement has been entered into with the B.C. Government regarding charges.

Some differences arose between the C.P.R. and the Crow's Nest Pass Coal Co., and as a result the C.P.R. applied to the courts for an injunction to prevent the construction of the railway. These differences, says Mr. Rogers, have now been amicably settled, and in the future there will be such co-operation between the two companies as will tend to greatly facilitate business and to promote the rapid development of the mines, smelting and other industries of the west.

The preference given to the Jennings route over the more feasible route from Kalispell, Mont., is because of the better facilities of handling the coal products of the Crow's Nest, nearly all the shipments being designed for the west. According to the articles of incorporation of the M. and G.N.R., three branch lines are contemplated: First, from Jennings in a northerly direction to the International boundary, and from a point about five miles south of the boundary and near Tobacco River southeasterly to a station on the Great Northern Ry. in the county of Flathead. Second, from Kalispell station on the G.N.R. southerly to Flathead Lake, thence southeasterly to a junction with the Northern Pacific Ry. at or near Jocko. Third, from, at or near Chester, on the G.N.R., northerly and northwesterly to near Sweet Grass Hills.

A contract for the construction of the line from Jennings to the Crow's Nest coal fields

has been let, and it is stated that work commenced on July 20. (June, pg. 172).

The Cuba Co.—The railway projects to which Sir Wm. Van Horne and his associates have set their hands, and in which millions of dollars are involved will, it is said, be completed about next April. There are 3,500 men at work and more will be employed as soon as they can get labor from Spain. The men get \$1 a day of American money, and are well satisfied. By the date mentioned there will be some 400 miles of rail laid, which will include the main line and some branches. Sir William, on returning to Montreal from Cuba recently, said that he had never put his hand to a project in which he had met with less obstruction or opposition. There had been no demands, no blackmail; on the contrary, the projectors had the hearty good will of the people. This was something to be able to say. There was one person who had written to the newspapers complaining that the prosecution of the enterprise was a violation of the Foraker amendment, but even that small measure of opposition had ceased, and the work was being prosecuted without a murmur from the people, who appreciated what it meant in the way of development.

R. G. Ward, manager of construction of this Co., Ciego de Avila, Cuba, wants manufacturers and dealers in all kinds of railway supplies, apparatus, fittings, machinery, etc., likely to be used in the building and operating of railways, to send to him catalogues and descriptive matter of their different devices.

Edmonton, Yukon and Pacific Ry.—The contractor for the construction of this line from Strathcona to Edmonton, Alberta, M. McCrimmon, has begun work. The line starts from the Calgary & Edmonton Ry., half a mile south of its terminus at Strathcona station on the south side of the Saskatchewan River, and will be 4½ miles in length to the station in Edmonton, on the north side of the river, which will be situated 3,000 feet from the post office, just below H. H. Robertson's house. The construction between this point and the high level offers the greatest difficulties of the road, it being impossible to secure a 1% grade which will rule on the south side. From Edmonton the line will bend south, running along the face of the cut bank south of the Hudson's Bay Co.'s fort; then trending northward along the face of the hill, rising gradually with the lay of the country. The roadway is being cut out 100 ft. wide and grading has been commenced. The contract calls for the completion of the work by Sept. 1. Mr. Armstrong is engineer in charge. (June, pg. 173.)

Grand Forks to Republic.—A contract has been let to G. S. Deeks & Co. for the construction of a line from Grand Forks, B.C., to Republic, Wash., 42 miles, to be completed by Nov. 1. The Canadian section, 5 miles, from Grand Forks to the International boundary at Carson City, will be constructed under the charter of the Grand Forks & Kettle River Ry. Co., a company holding a provincial charter granted in 1899, and the section of the line in Washington is covered by a State charter granted to the Republic & Grand Forks Rd. The line will follow the Kettle River valley from Grand Forks to Curlew in Washington, crossing the International boundary at Carson City; from Curlew it will follow the Curlew Creek to San Poil River, thence to Republic.

Arrangements are being made for the construction of a smelter of 500 tons capacity at Grand Forks, and for the carrying of ore from the Republic mines to it for two years. (See also Kettle River Valley Ry. pg. 230.)

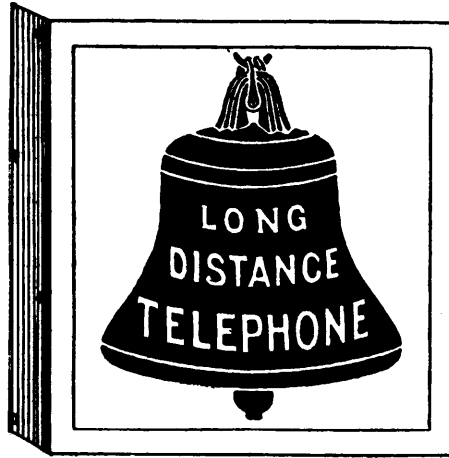
Great Falls and Canada Ry.—The gauge of this line between Sweet Grass, at the International boundary, and Great Falls, Mont., 134.37 miles, is to be changed from 3 ft. to

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No. 5. Double, 19½ x 8 inches, including flange. If made single without flange, 18 x 8 inches.



No. 6. Double, 19½ x 8 inches, including flange.



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standard by the Great Northern Ry. Co., U. S. A., to which the ownership of the line will be transferred in the near future. (July, pg. 198.)

Great Northern Ry. of Canada.—A meeting was called to be held in Quebec, July 17, to authorize construction of extensions to this railway from Grand Mere or Garneau Jct. to the Quebec and Lake St. John Ry., in the County of Port Neuf or the County of Quebec, and from Hawkesbury to South Indian, Ont.

Great Northern Ry., U.S.—The Washington and Great Northern Ry. Co., a subsidiary of the G.N.R., has been incorporated to build a line from Marcus, Wash., at the junction of the Columbia and Kettle rivers, on the line of the Spokane Falls and Northern Ry., to Republic, Wash. Although the distance between these two points is less than 45 miles, 83 miles of line will be built, so difficult is the country through which the line passes. A connection will be made at Republic with the Grand Forks and Kettle River Ry. Co. (See pg. 227.)

The Railway Committee of the Privy Council has issued a formal order permitting the Red Mountain Ry., a subsidiary of the G.N.R., to join its tracks to the tracks of the Columbia and Western Ry. Co., upon the mining property known as the Pack Train, formerly the Legal Tender, as well as upon the Center Star and other mining properties in Rossland, B.C., subject to certain conditions as to tolls and arrangements with respect to traffic.

It is reported from St. Paul, Minn., that the organization of the Montana and Great Northern Ry. Co. has been completed, the incorporators being J. J. Hill, T. T. Sawyer, of St. Paul, Minn., G. T. Gross and L. P. Veasey, of Montana. The Co. proposes to construct a line from Jennings, Mont., on the G.N.R. to the Canadian boundary, and thence to the Crow's Nest country. (See Crow's Nest Southern Ry., pg. 227.)

The G.N.R. branch which crosses the International boundary at Blaine, Wash., and terminates at Brownsville, B.C., on the south side of the Fraser River, opposite the penitentiary, will, it is said, be extended to the ferry at South Westminster.

Halifax and Yarmouth Ry.—The Dominion Securities Co., with offices in New York, has, through W. S. Webb, President of the Cape Breton Ry. Extension Co., submitted an offer to the Nova Scotia Government to construct this line for a Provincial subsidy of \$10,000 a mile, and a Dominion subsidy of \$3,200 a mile. The Co. proposed to purchase the interests of Messrs. Brill and Fletcher, who are owners of the portion of the line from Yarmouth to Barrington already completed, the price mentioned being \$1,000,000.

D. D. Mann, of Mackenzie, Mann & Co., Toronto, and H. Donkin have recently had an interview with Premier Murray of Nova Scotia in regard to this line, and we have reason to believe that they have made a contract with the Government, under which they will take over the Yarmouth-Barrington line and continue it to Halifax.

R. G. Hervey, of Boston, one of the promoters of the Nova Scotia Southern Ry., was in Yarmouth recently, and said he would have an important part in the building of the H. & Y. R. (June, pg. 173.)

Intercolonial Ry.—Considerable work will be done along the road during this season. Several additional bridges are to be strengthened so as to make them strong enough to stand the weight of the new engines and the heavier trains they will draw. New ties will be put in and considerable ballasting done all along the line.

Following the recent inspection of the yards and terminal facilities at Halifax by C. Schreiber, Deputy Minister of Railways, D. Pottinger, General Manager, E. G. Russell, Manager, and E. T. Horne, Manager's Assistant, it is announced that a comprehensive

plan for improvements has been decided upon. The improvements, for which plans are being prepared, involve an expenditure of over \$200,000, and include an almost entire new track system from North St. to a point several hundred yards beyond Richmond. The freight tracks will be removed entirely from the tracks over which the passenger trains run, and will be so arranged that it will be possible for five shunting engines to work at the same time between Richmond and the deep water pier, and that the handling of freight at one wharf will be done independently of the other. The line will be double tracked for a considerable distance from the present round-house, a beginning of the double tracking contemplated between Halifax and Truro. It is proposed to erect a new round-house opposite Mulgrave Park.

At the Truro yard two additional side tracks are being laid, and the platform at the east end of the passenger station is being extended. The old express office building will be moved nearer the Esplanade in order to allow one of the new tracks to be laid.

The site for the new station at Sydney has been selected at the foot of Ferry St. near the bridge. It is not expected that work on the building will begin until the autumn. The present freight shed will be moved in order to make room for the new yard.

Manager Russell, replying to a question recently, said that it was not at present proposed to double track the line in the vicinity of Sydney, but by a system of sidings, which will be built, the efficiency of the road in handling the very much increased volume of traffic, owing to the development of the Cape Breton coal and iron industries, will be very much added to.

It is proposed to make considerable extensions and improvements in the yards at St. John. E. T. Horne, Manager's Assistant, has just made an inspection and will embody his recommendations in a general report. A few changes will be made at the Government pier; a new 16-stall engine-house, capable of having the accommodation increased to 24, will be erected, and the yard will be re-arranged so as to permit of greater facility in handling trains.

The new freight shed at St. John has been completed and is in use. The old shed will be repaired and the freight staff will be located at the western end.

Tenders have been received for an extension of the freight sheds at Campbellton, for the erection of a freight shed and the remodeling of the station at St. Pierre, and for the building of a freight shed at St. Francois.

The new wharf at Father Point has been completed, and trains can now be brought alongside ocean steamers.

The Interprovincial Bridge, extending from Nepean Point, Ottawa, across the Ottawa River to Hull, was illustrated in our June issue. The main bridge is 1,437 ft. long, having a cantilever span of 556 ft., two arm spans of 247 ft., one truss of 247 ft., and one truss of 140 ft. The cantilever span is the longest in the Dominion, and only a few others exist which are longer. These spans rest on piers built on bed rock, and composed of concrete placed within bottomless caissons to within 2 ft. of low water level, and from that point up of first class masonry. Pier no. 2 (the second from Nepean Point) is 100 ft. high, 70 ft. of concrete and 30 ft. of masonry, making one of the highest concrete piers built in this manner in America, and as far as known the only one in the world that has been successfully tested by a diamond drill from the top to the bottom, producing satisfactory core. A heavy deposit of sawdust had to be removed to place the foundation at each of the piers, in some cases reaching a depth of over 20 ft. By test borings sawdust and slabs were found to be under the main span to a depth of 60 ft. with 20 ft. of water over this. The north ap-

proach in the Province of Quebec is upwards of half a mile long, being composed of heavy steel and timber trestle, the former resting on concrete superstructures, and crossing over seven streets in Hull by heavy steel bridges resting on concrete abutments. The south approach from the end of the bridge to the central station, Ottawa, is over half a mile in length, and is for the most part cut out of solid rock, and has an outside retaining wall for the entire length built of heavy masonry, in some places being 50 ft. high. In this length are included two structures built of heavy steel for three tracks of railways, one bridge carrying the railway over the waggon road which leads from the bridge to the city, and the other being a steel trestle 300 ft. long, and in places upwards of 60 ft. high, carrying the railway over a government road. The main bridge is 65 ft. wide, having one steam track in the centre and foot passenger, electric tracks and roadway for vehicles, etc., at each side, the waggon road portion having the approaches to each side laid out in such a manner that vehicles and pedestrians do not have to cross the steam railway tracks. Work was commenced on the bridge in Feb. 1898, the first locomotive crossed over in Dec., 1900, and the first passenger train on April 22, 1901. H. J. Beemer was contractor for the entire work. A very satisfactory test of the bridge was made on April 19, by loading it with four locomotives and 10 cars loaded with steel rails and stone, giving a total weight of between 450 and 500 tons, the deflection on the cantilever span being about 2 inches both in dead and running load. G. C. Dunn, Chief Engineer of the Pontiac Pacific Jct. Ry., and of the Ontario, Northern and Western Ry., was also Chief Engineer for the bridge, it being built by those companies jointly. Steel poles and brackets are being erected on the approaches and structures, and wire is being strung for electric cars. (June, pg. 171.)

Inverness and Richmond Ry.—Prior to the opening of the 56½ miles between Hastings and Broad Cove, the line was inspected by Provincial Engineer M. Murphy, and passed for service. The first regular train left Broad Cove at 5.45 a.m. June 15, for Port Hastings. D. D. Mann went over the road on a special during the day. A round-house and a machine shop are being erected at Broad Cove, where it is expected the general offices of the line will be located, as the coal mines, for the opening up of which the line was constructed, are situated there. At Hastings the Co. has expropriated 15 acres of land for a railway yard and a pier. Plans for the pier have been prepared, and construction will be commenced at an early date. The extension of the line between Hastings and Point Tupper is being pushed forward, and it is expected that it will be completed in Sept. Angus Sinclair is manager of construction. (June, pg. 174.)

The Irondale, Bancroft and Ottawa Ry. is in operation from Grand Trunk Jct. to Bancroft, 50 miles. The Co. has a subsidy from the Ontario Government of \$3,200 a mile for an extension of 15 miles from the present terminus to near Fort Stewart. No Dominion subsidy has been granted for this portion, but it is said an endeavor may be made to obtain one next session. The Toronto, Lindsay and Pembroke Ry. has a Dominion grant covering the country between the terminus of the I. B. and O. and Golden Lake, the junction of the Canada Atlantic and the Pembroke and Southern Ry. (See pg. 233.) It is said that the I. B. and O. R., the T. L. and P. R. may be merged with a view to the operation of a through line from Grand Trunk Jct. to Golden Lake.

James Bay Ry.—The contractors for the 5 miles of line to connect the Canada Atlantic Ry. with Parry Sound are Johnston and Beveridge, of Ottawa. It is said the work will be completed this year. Mr. Wicksteed is engineer in charge.

Kaslo and Slocan.—Col. N. W. Brayton, of Kaslo, B.C., announces that 12 miles of line from Crawford Bay will be built this fall. The Co. has a charter to build 76 miles from Crawford Bay, on Kootenay Lake, to Fort Steele.

The Kettle River Valley Ry. Co., which was incorporated at the last session of the Dominion Parliament, is being organized by the same persons who are constructing the Grand Forks-Republic line. Surveys will be made on the lines authorized by this act this year, but it is not expected that construction will be commenced before next spring. (May, pg. 155; this issue, pg. 227.)

The Kingston & Pembroke Ry. is said to be contemplating an extension of its line from Sharbot Lake, 40 miles, to Palmer's Rapids, to open up the townships of Olden, Palmerston, North and South Canonto, Clarendon, Miller, Denbeigh and Ashley, in the county of Peterborough. A route through this country was granted a Dominion bonus in favor of the Brockville, Westport & Sault Ste. Marie Ry., but it was not taken advantage of. (June, pg. 174.)

Kootenay Railway & Navigation Co.—The recently completed Bedlington & Nelson Ry. extends from Kuskonook wharf, on Kootenay Lake, to the International boundary at Bedlington, connecting with the Kootenai Valley Ry., running to Bonner's Ferry, Idaho, 25.56 miles, where it connects with the Great Northern Ry. (U.S.A.) The B. & N. Ry. has a total length of 15.49 miles, and has running powers over 8.49 miles of line owned by the B.C. Southern Ry., and operated by the C.P.R. as part of the Crow's Nest Pass line. The B.C. and U.S. sections of the line were constructed under local charters by the Kootenay Ry. & Navigation Co., which has been absorbed by the Great Northern Ry. (U.S.A.)

The maximum grade is 0.80 per 100, excepting a gain of 500 ft. of 1 per 100 on tangent. The sharpest curve up the maximum grade is 4 degrees. The distance on curves of various denominations is: Under 6 degrees, 3.58 miles; over 6 degrees, 4.19 miles; total on curvatures, 7.77 miles; total distance, 15.49 miles; total on tangent, 7.72 miles, or practically 50% of the line in B.C. on curvature. The sharpest curve used is 10 degrees, excepting 300 feet of an 11 degree. The roadbed in the cuttings has been constructed to a uniform width of 20 ft., and on all the embankments is in no case less than 14 feet, and for the most part exceeds that width. Ballast is dressed flat to rail surface of tie and extends 8 ins. beyond either end, from this sloping $1\frac{1}{2}$ to 1 to foundation level or sub-grade. Height of tie is generally 12 ins. above sub-grade. Rock cuts have been excavated to a depth of 6 ins. below foundation level. The general depth of ballast under tie is placed at 6 ins., but this has been greatly exceeded over the greater part of the line. "A good deal of ingenuity," says H. P. Bell, who inspected the line for the B. C. Government, in his report on the line, "has been exercised in regulating and protecting channels in rapid waters. Structure no. 1, counting south from Kuskonook, has been built with the lower sills placed upon raised pediments of stone, has a wide, rough, stone invert with an overflow below to stop the velocity of the water and a training wall upon the north side for some hundreds of feet in length, to prevent high water from finding its way into adjacent hollows on the up stream side of embankment. Altogether it is an effective, economical and ingenious piece of work."

The total length of bridging is 3,680 ft., of which 3,232 ft. is on piled trestles and 448 ft. is on framed trestles; all are 16 ft. centres, and the highest bridge is 36 ft.

The ties are of a high standard, the local

timber insuring this, and are 8 ft. in length, 6 in. thick, with a minimum face of 6 in. They are placed 2,640 to the mile. The rails are 60 lbs. to the yard, fastened by suspended joints of double angle bars with 4 bolts. Besides the 60 lbs. steel, the Co. has laid about 4,000 ft. on tangent in Goat River bottom, of second-hand rails weighing 56 lbs. per yard, fastened with $1\frac{1}{4}$ lb. angle bars and 4 bolts. The Co. proposes at once to put on pressed steel track braces accurately fitting the section of rail, and fastened to tie by three spikes. Three braces to each rail to be fixed to a 6 and 7 degree curve, and 4, 5, and 6 braces to each rail on an 8, 9, or 10 degree curve, respectively. Split or point switches, working through iron switch stands having high vanes are used on the main line and stub switches on sidings. The switches, Mr. Bell points out in his report, are an excellent article, of the European fast-travel pattern, the character of which has been proved by use over a long period of time. The switch rail is bent for 10 ft. to 12 ft. back from the point for half the width of its lead, the effect of which, when put in the planing machine is to make a pointed switch with a truly straight entrance from toe to heel upon the gauge side of the rail. The frogs, which are no. 9, on both main line and sidings, are well made and appear to answer all purposes.

The signal apparatus at the junction of the B. and N. with the Crow's Nest Pass line, was installed under instructions from the Dominion Department of Railways. It consists of a tower, in which is placed, besides the ordinary telegraph apparatus connected with both lines of railway, nine levers, which work three switches and seven signals. The signals are: 2 distant, 1,750 ft. from tower, and 2 home, 550 ft. from tower; there being placed one of each upon either line of railway approaching the point of junction. Fifty feet towards the tower from the home signal on both approach-

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ing lines is a derailing switch, in connection with which—by the same lever—is worked with similar result the junction switch. After passing the tower, and upon the joint rail there is placed, 47 ft. from the tower, a home signal with two vanes, and 1,247 ft. from the tower, a distant signal common to the trains of both railways.

The one terminal, within a traffic sense, is at Kuskonook, on the south end of Kootenay lake. Beside the station there is a three-stall round-house, and water tank of 50,000 gallons capacity, both supplied by gravitation under a pressure of 80 lbs. per square inch. Communication at this point with the Co.'s boats for Kaslo, Nelson and the Lardo country is by means of an inclined wharf on level of car floor. It is the intention, so soon as business demands, to construct a three-track car transfer at this point. The yard room at Kuskonook consists of 2,632 ft. of sidings, but this can easily be increased.

The present engines to be used on the road weigh, with light tender, 40 tons, leaving a weight on drivers of 26 tons; but a mogul freight engine, 35 tons on drivers, has been proposed. Cars of 60,000 lbs. capacity, of which the tare weight is about 30,000 lbs., are used. These weights will not likely be increased during the life of the present bridges.

Lindsay, Bobcaygeon and Pontypool Ry.—As far as can be ascertained, there is no prospect of construction being gone on with this year. A reconnaissance survey was made last year from the C.P.R. between Burketon and Pontypool to Lindsay, and a field and location survey was made between Lindsay and Bobcaygeon. W. T. C. Boyd, Bobcaygeon, Ont., is President. (Aug., 1900, pg. 240.)

Macleod to International Boundary.—Haultain, McKenzie & McNeill, solicitors, Macleod, Alberta, give notice that application will be made to the Dominion Parliament to incorporate a company to build a railway from Macleod by way of Stand-Off and Cardston southwards to the International boundary with branches from any points on the proposed line not exceeding in any one case 30 miles in length, with power to construct and operate telegraph and telephone lines, roadways, tramways and roads, together with usual powers as to maintaining and disposing of the railway.

Magnetawan River Ry.—The following organization of this Co. has been effected:—President, Jas. Sharp; Vice-President, A. White, G.T.R.; Treasurer, W. Cooper; other directors: W. Wainwright, G. C. Jones, and W. R. Tiffin, G.T.R., W. H. Biggar. It is said arrangements have been made for the construction of the proposed line between the G.T.R. at Burk's Falls, Ont., and the navigable portion of the Magnetawan river, about 2 miles, and that the work will be completed by the opening of navigation next year. The Co. has a subsidy of \$10,000 from the Ontario Legislature, and \$6,400 from the Dominion Parliament. (April, pg. 116; May, pg. 156; June, pg. 167.)

Manitoulin and North Shore Ry.—R. S. McCormick is in charge of the survey party now engaged in locating the Owen Sound-Meaford end of the line. Two routes are being gone over, one from the C.P.R. yards at Owen Sound via the lake shore, about 27 miles, on which there are practically no grades, and the other via Bognor, 25 miles, on which there would be heavy grades at both ends. We were officially informed on July 22 that the route had not then been determined and that it would be some time before it was decided. After the survey on this portion of the line has been completed, the survey will be continued up the Bruce peninsula to Tobermory. It is said construction will commence as soon as the line has been located.

Tenders were recently asked for the construction of two sections at the northern end of the line, near Sudbury, viz: from Gertrude Mine to Vermilion River, about 5½ miles, and from the falls of Spanish River to Georgian Bay, about 16¼ miles, but contracts had not been awarded up to July 20. Tenders have not yet been asked for the section from Vermilion River to the crossing of the C. P.R. "Soo" branch, at about mile board 42 from Sudbury. W. N. McPhail is in charge of construction at the Sudbury end. (June, pg. 175.)

Premier Ross, in speaking of this line at Utterson recently, said: "It will run from Meaford north through the Bruce peninsula, connecting with Manitoulin Island by a car ferry, and thence northerly along the east end of the island to Little Current, crossing by a bridge to the mainland, and thence northerly to about 25 miles west of Sudbury, from which it will proceed directly west to the east end of Lake Superior, crossing the Algoma Central Ry., not far from Michipicoten. By this railway the whole railway system of Ontario, including the G.T.R. and C.P.R., will be connected with New Ontario. It will shorten the distance between Toronto and the 'Soo' by 80 miles, and all points west of London and westward by 200 miles. Running powers are conceded to all other railways over this line. The length of the road is about 330 miles, and it is to be built entirely by a land grant of 7,400 acres a mile for 200 miles, and 10,000 acres a mile for 130 miles. The lands granted are in alternate townships on each side of the railway. The Co. binds itself to place 1,000 male settlers of 16 years of age and over on these lands each year for 10 years. It also binds itself to place a steel ship car ferry on the gap between the mainland of the County of Bruce and Manitoulin Island, and until the railway is completed to establish a steamship line for freight and passengers to call at lake ports between Windsor and Little Current, and in addition to build a smelter capable of smelting 300 tons a day at some suitable point along the railway. The Government has reserved to itself the right of buying out the railway at the end of 15 years. All supplies used in the construction of the railway, including steel rails and all other material, are to be obtained in Canada, if obtainable as cheaply as they can be anywhere else. The construction of the road must be begun before May 1, 1902, the connection between Meaford and Owen Sound must be completed before Oct. 31, 1903, and the whole road finished before Dec. 1, 1906."

The Michigan Central Rd. has completed the laying of 40 miles of double track on the Canada Southern division of the main line, which was opened for traffic July 1. Of the 227 miles of line in Canada the M.C.R. has now 130 miles double tracked. The double tracking done this year was from Cayuga to Hagarville, on the eastern division; and from Dutton to Bismarck, and from Essex to Tilbury, on the western division. The contractors were: C. Currie, Detroit; J. J. Dewhirst, Woodslee; Wellman and Graham, Buxton, and Tench & Co., Buffalo. (June, 1900, pg. 174.)

Midland of Nova Scotia.—It was hoped that the bridge over the Shubenacadie river would be completed last spring, but only two spans were in place up to July 20. The contractors considered that the erection of the remaining spans in the ordinary way would be attended with so much danger, on account of the exceedingly rapid flow of water both in and out caused by the Bay of Fundy tides, and of the deep bottom on which the false work had to rest, that they decided to erect the remaining three spans on the shore and float them into place on pontoons, placing them in position when the tide was high and allowing them to drop into position as the tide fell.

Unless something unforeseen occurs it is expected that the bridge will be completed about Sept. 15, so that through traffic may be started between Windsor and Truro. No portion of the line has yet been opened for traffic, but it is expected to commence operating the section of the line between Windsor and Shubenacadie river almost at once. (June, pg. 175.)

The Montreal Bridge Co. is asking the Montreal City Corporation to contribute \$1,000,000 towards the construction of the bridge. This is one-fifteenth of the estimated cost, and if the city contributes this amount the Quebec Government will, it is said, give \$500,000.

It is proposed to name the bridge the Royal Albert bridge, and to have the corner stone laid by the Duke of Cornwall and York.

Musquodoboit.—See North Eastern Ry. of N. S. below, also June, pg. 175.

Nanaimo-Alberni Ry.—It is proposed to make a preliminary survey of the newly-discovered passes between Nanaimo Lakes and China Creek, Vancouver Island, on the route of the proposed line. Nanaimo Board of Trade has voted \$100 towards the cost of the survey.

New York and Ottawa.—The old Northern New York Rd. from Moira to Tupper Lake, N.Y., 54 miles, now a portion of the N.Y. & O., is being reconstructed. Gradients and curvature are being reduced, and 65 lbs. steel is replacing 56 lbs. New bridges are being built of southern pine, and the culverts are being rebuilt of either wood or stone. The stations, platforms, etc., have already been rebuilt, and the portions of the line which pass through farm lands have been fenced with Page wire fence. The work is in charge of the Co.'s Superintendent and Engineer, M. G. De Shaw.

The Co. has decided to remove its shops from Santa Clara, N.Y., to Ottawa. Last year it put up a wooden building at Ottawa, 190x90 ft., for a general repair shop. Part of the machinery has been installed, and the balance will be brought from the present shops at Santa Clara.

A wooden freight shed, 190x40 ft., is being built in Ottawa, on Nicholas St., west of Anne St., near the C.A.R. shops. A freight yard is also being constructed, with about two miles of tracks.

Five locomotive stalls will be built at Ottawa this year, to form the first half of a 10-stall round-house.

Nipissing and James Bay Ry.—R. McCallum, Engineer for the Ontario Government, says: Mackenzie, Mann & Co. have started work on this line from North Bay to James Bay, with which they propose to tap the Temiscamingue district. The charter had practically expired by default of work done, but they will probably have no difficulty about its renewal. W. P. Russell, who has charge of the Ontario government survey in the same territory, has found an excellent location for 20 miles out of North Bay. It looks as if the government would come to some arrangement with Mackenzie, Mann & Co., whereby a railway to the Temiscamingue country will be completed in the course of a year. (June, pg. 176.)

Nitinat to Cowichan Lake.—It is reported that the Georgian Sawmill Co., of Cowichan, B.C., contemplates the construction of a logging railway, 18 miles in length, from Nitinat to Cowichan lake, Vancouver island.

The North-Eastern Ry. Co. of Nova Scotia was organized at Montreal June 19, with the following officers:—Hon. J. Stratton, Provincial Secretary of Ontario, President; J. Greer, Montreal, Vice-president; M. H. Fitzpatrick, M.L.A., New Glasgow, N.S.; G. McCormack, M.P., Orillia; A. McLeod, M.P., Bracebridge; W. McNally, Montreal; T. P.

Coffee, Toronto, and C. Klopfer, Guelph, directors. Other details of the organization are not yet completed, and will not be until the end of July.

The directorate is composed of the incorporators of the N.E.R. Co., and of the Musquodboit Ry. Co., the charter for the construction of which, granted by the Nova Scotia Legislature in 1898, was revived at its last session. The M.R. Co. held a meeting early in June, when the following were elected:—J. W. Greer, Montreal, President; H. Fitzpatrick, M.L.A., New Glasgow, N.S., Vice-president; W. C. Trotter, St. John's, Que., Treasurer, and Dr. H. H. McKay, New Glasgow, Secretary. (Oct., 1899, pg. 295.)

The N.S.E.R. Co. was incorporated at the last session of the Nova Scotia Legislature, and received a Dominion charter also this year. The Co. was authorized to construct a standard gauge railway from the I.C.R. at New Glasgow, running past Thorburn to Sutherland river, thence to Moose river east of the Blue Mountain range, thence down the east side of the Garden lake by Campbell's brook into St. Mary's, thence it will follow the Chambers' survey into Guysborough, and thence to the Straits of Canso. No survey has been made of this part of the route. There is a Dominion subsidy available for a line from New Glasgow to Country Harbor, and Country Harbor cross road to Guysborough. (June, pg. 167.)

The Ottawa, Northern and Western will build a joint station in Hull, Que., of either pressed brick or stone, to cost from \$4,000 to \$5,000, and to be used also by the Pontiac Pacific Jct. Ry.

On the extension from Gracefield, 60 miles from Ottawa, towards Maniwaki, about 12 miles were cleared and a little grading done last year. No work has been done this year.

Pacific, Northern and Omineca Ry.—J. H. Gray, C.E., is reported to have started to make a location survey of the section of this proposed line between Kitimaat to Hazleton, about 100 miles, the first section of which is said to be intended as an all-Canadian route to the Yukon, the Co., which was incorporated in 1890, being empowered to build from Kitimaat to Hazleton, and thence to the northerly boundary of B.C. The Victoria Colonist says:—"The importance of this railway, not only to the Cassiar district, but to Victoria and the coast generally, is very great. It will open an immense tract of country rich in the precious metals, coal and timber and agricul-

tural lands to development and settlement, and will provide new channels for the trade of Victoria."

Pontiac Pacific Jct.—Though no definite information is obtainable, there is little doubt that H. J. Beemer is negotiating to secure control of the Hull Electric Co., which owns the electric railway between Hull and Aylmer, Que. Last year the Pontiac Pacific Jct. Ry., of which Mr. Beemer is the chief promoter and also the contractor, built from the Aylmer terminus towards Hull as far as Deschenes, and graded for a short distance further. No construction has been done this year, and it is thought work has been delayed with a view of getting control of the Hull-Aylmer Electric Ry., and utilizing a portion of its right of way between Deschenes and Hull, for the P.P.J. Ry. so as to avoid some rock cutting. Should the H. E. Ry. be secured by Mr. Beemer it would probably be used for a time for running P.P.J. passenger trains between Aylmer and Hull, thence over the Interprovincial bridge into Ottawa. The Hull Electric Co. now hauls P.P.J. freight cars between Aylmer and Hull. Track has already been laid between the Hull Electric Co.'s terminus in Hull and the Interprovincial bridge, and electric cars are now crossing the bridge into Ottawa.

See also "Ottawa Northern & Western."

Port Arthur Union Station.—Councillor Neelin, of Port Arthur, who came east with the New Ontario delegation recently, in an interview on his return home stated that he had good reasons for saying that the C.P.R. and the Canadian Northern were agreeable to the erection of a union station at foot of Arthur St., Port Arthur.

Prince Edward Island Ry.—With the removal of three considerable curves in the vicinity of Colville station, the section of line between Royalty Jct. and North Wiltshire, 12 miles, has been much improved. It is proposed to continue reducing curves all over the line where practical.

The new steel bridge over the Morell river has been placed in position. It is 109 ft. long, 6 ft. wide and 12 ft. high, and weighs about 80 tons.

M. J. Haney, contractor for the bridge over the Hillsborough river between Charlottetown and Mutch's Point, near Southport, has a large number of men employed in the erection of plant. A lumber mill is ready equipped with a 50 h.p. engine; the work of framing the first caisson has begun; the pile-

driving scow has been built and launched; and a dredge will be ready for work about July 10. A stone quarry will be opened at Arisaig, N.S.

On the Murray Harbor branch, which will connect with the Mutch's Point end of the Hillsborough river bridge, grading has been done from Mutch's Point to near Vernon river, about 15 miles. No track has been laid. The line has been surveyed from Vernon river to Murray river, 26 miles, and it is expected that a contract for the grading of this section will be let shortly. (June, pg. 176.)

Quebec Bridge.—A considerable amount of preparatory work had to be done at the site of the bridge before anything in the way of construction could be commenced. The banks of the river at the site, just south of Chaudiere on the south side of the river, and at Cap Rouge on the north side, are 120 ft. high, and were heavily wooded. They are now clear, the rock has been blasted out for pier foundations, a railway two miles long has been built for the transfer of stone from the quarries, a wharf has been constructed for the landing of supplies, and houses and workshops have been built. This work took up the whole of the summer of 1900, and in Oct. the first block of granite from the Riviere à Pierre quarries was put in position. During the winter the first caisson, within which the main north pier of the bridge will be built, was constructed, and placed in position May 20. The caisson is 150 ft. long, 50 ft. wide, and 25 ft. deep, and contains over 1,000,000 ft. of lumber. The pier will be built outside the ship channel, and the foundation will be carried 60 ft. below high water level. It will be 30 ft. above high water, 150 ft. long at the foundation, tapering to 70 ft. at the top and about 40 ft. wide. The depth of water is about 7 ft. at dead low water, and as the highest tide rises about 18 ft. this will give a height above the river bed of 55 ft. The second caisson will be constructed next winter, and placed in position in the spring. It is estimated that the steel superstructure will take 18 months to erect, and on this estimate the Co. expects to have the bridge open for traffic in 1904. (Aug., 1900, pg. 241.)

The Quebec and James' Bay Ry. Co. was incorporated in 1883 to construct a line to James' Bay, and its charter has been extended from time to time, the last extension fixing the date of the commencement of the work as expiring on June 29 last. At the

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last session of the Dominion Parliament a bill changing the name of the Co. to the Trans-Canada Ry. Co., and giving a further extension of time for 3 years was introduced, but it was not passed. To comply with the terms of the charter 10 miles of a line from Roberval, at the present terminal point of the Quebec and Lake St. John Ry., has been located by A. E. Doucet, chief engineer. J. Paquet was reported to have had a gang of men at work for some days prior to June 29, but on that day the first sod was formally turned, with a public ceremony. The Dominion Parliament has voted \$192,000 towards the construction of the first 60 miles of this line. The distance from Roberval to the mouth of the Nottoway on James' Bay is 380 miles. J. D. Guay, Mayor of Chicoutimi, in speaking at the dinner following the beginning of construction, said he regarded the railway as a link in a transcontinental line from Quebec to Port Simpson. The line would be shorter than the C.P.R., and would be so far from the U.S. boundary as to be of great strategic value for the transport of troops and provisions in case of war. He suggested a race between Ontario and Quebec for the great northern port.

Quebec and Lake St. John.—The contract for the construction of the steel bridge across the Jacques Cartier river near St. Catherines, Que., on the extension from Valcartier to St. Catherines, 4 miles, has been let. It is a steel bridge 450 ft. long and about 60 ft. above the river, consisting of three riveted truss spans, with short girder approaches. The substructure is being built by J. Paquet. (April, pg. 115.)

Quebec and New Brunswick Ry.—A subsidy was given by the Dominion Parliament in 1900 and was revised at the last session on the ground that the subsidy voted in 1900 did not correspond with the terms of the charter. The New Brunswick Government has given a bonus of \$2,500 a mile for 18 miles from Connors at the terminus of the St. Francis branch of the Temiscouata Ry. to the Quebec boundary. The object of the line as claimed by the promoters is to provide the shortest line through Canadian territory from Montreal and Quebec to the seaboard. The eastern portion of the route was surveyed years ago in connection with the I.C.R. original surveys, and was afterwards surveyed by the New Brunswick Ry. The western portion of the route was partially surveyed some time ago for the Quebec Government. Hon. J. Costigan, Ottawa, is President of the Co. (Aug., 1900, pg. 243.)

Quebec Railways Aid.—Replying to a deputation representing the counties of Yamaska and Nicolet, the Premier of Quebec recently said the Commissioner of Public Works had under consideration propositions to grant subsidies for several railways, including the James' Bay Ry., the Quebec and Lake Shore, a new branch of the Great Northern and several others. The policy of the Government was to favor progress as much as possible, but the financial state of the Province had to be considered. He believed it was time to take a step forward. The proposed lines which were under consideration for subsidies would all open up rich colonization districts, but he feared that the Government would not be able to give them money although they might be able to grant lands.

Quebec Southern.—It is said the line between Albury and Sorel is to be relaid with steel rails, 80 lbs. to the yard, and that other improvements in the roadbed are to be made.

Restigouche and Western.—About 20 miles of this route were surveyed last fall by C. L. B. Miles, when it was expected that construction would be resumed this spring. It is said that the contractor is endeavoring to make financial arrangements to go on with the work.

The line has a subsidy of \$2,500 a mile from the New Brunswick Government, and last session the Dominion Parliament voted \$64,000 for the construction of 20 miles from Campbellton on the I.C.R. towards Grand Falls, and \$99,600 for a further 33 miles towards the St. John River. (Aug., 1900, pg. 242.)

Shediac and Coast Ry.—A survey of 20 miles from the I.C.R. at Shediac, N.B., was made last fall by F. W. Holt, C.E., of St. John, N.B., and 19½ miles to Shemogue located. It is said construction will begin as soon as the contract between the Co. and the Department of Railways and Canals has been executed. The line will start at the eastern end of the Shediac yard of the I.C.R. and will swing to the right for nearly a mile, then by a 2 degree curve left till nearly due east for 13 miles from the start to Cape Bald, broken only by three short one degree curves. From Cape Bald the line will go a little more southeast by a 2 degree curve to the Portage village, 16½ miles, keeping to the west, and east of the highway very soon after passing Cape Bald, then by 32 degrees of two degree curve right and ¾ mile tangent west, and south of the highway, then 35 degrees left and tangent to Shemogue. There are no long grades, the longest being just after leaving Shediac yard, 65 ft. in a mile and a quarter. There are two tidal rivers—the Aboushagan and the Kouchibouguac—to be bridged. Stone arch bridges will probably be erected, as it is the intention of the Co. to use permanent material wherever possible so as to keep down maintenance account. The principal points to be served on the route surveyed are: Shediac, Barachois, Upper Abouggougi, Kouchibouguac, Cape Bald and Shemogue. Beyond this are Little Shemogue and Cape Tormentine, which latter is 40 miles from Shediac by the route it is proposed the line will follow. The Co. has a Dominion subsidy.

The following are the officers: A. I. Truman, St. John, N.B., President; A. B. Copp, Sackville, Vice-President; C. N. Skinner and A. P. Barnhill, St. John; Dr. E. A. Smith, Shediac; R. A. Irving, Buctouche, and L. Avar, Shemogue, directors; J. McQueen, Shediac, Secretary.

South Shore Ry. (Que.)—An endeavor is being made to obtain a subsidy for the construction of a line from the present terminal at St. Francis du Lac to Nicolet, about 18 miles. Mr. Beauchemin says the road can be constructed this summer if the Co. is assured that it will be granted the subsidy. It is proposed eventually to extend the line to Levis.

The St. John Valley Ry. Co. was incorporated at the last session of the New Brunswick Legislature to construct a line from St. John, or from Westfield on the C.P.R., following the valley of the St. John River to Fredericton; also from the north terminus of the proposed Woodstock & Centerville Ry. to St. Leonards, to connect with the Restigouche & Western; and from St. Leonards to Edmundston; also to arrange for running powers over portions of the C.P.R. between Westfield and St. John, and from St. Leonards to Edmundston; also to acquire power to run over the St. John Valley & Riviere du Loup and the Woodstock & Centerville railroads when built. C. N. Skinner is solicitor to the promoters.

South Shore Line Ry. (N.B.)—It is understood that the line will practically be rebuilt, the curves straightened out and its length shortened; that it will be extended into St. John, either by a bridge at the Falls or by a new bridge at Navy Island, and that it will be connected at the other end with the Washington County, Maine, Ry. The S.S.L.R. is controlled by Russell Sage, of New York.

Temiscamingue Ry.—In a letter to the Ontario Public Works Department W. B. Russell, engineer in charge of the location of

the proposed Government railway to Lake Temiscamingue, says he has laid out a trial line for 24 miles north from North Bay. He states that he tried first to the east and then to the west, and finally chose his present location. As soon as he is convinced that he is over the height of land he will return and make his plan of location. (June, pg. 176.) See also Nipissing & James Bay Ry., pg. 231.

Thunder Bay, Nipigon and St. Joe Ry.—It is stated by the principal promoter, D. F. Burke, of Port Arthur, Ont., that construction will be commenced shortly from both ends of the 30 miles located, and for which a subsidy was voted by the Ontario Government last session. The work will, it is said, be done by the Co. under the charge of H. J. Wickham, C.E., and will be pushed forward as fast as possible. The exact route by which entrance will be made into Port Arthur has not yet been decided on. Negotiations are in progress for obtaining running powers over about 5 miles of the C.P.R. tracks west so that an easier entrance can be had into Port Arthur and Fort William than if the Co. made its own independent entrances. (June, pg. 176.)

Tilsonburg, Lake Erie and Pacific Ry.—A meeting of shareholders was called, to be held at Tilsonburg, Ont., July 9, to authorize the building of an extension from Tilsonburg to Ingersoll, to borrow money for the purpose and to increase the capital stock. It is stated, but not officially confirmed, that the desired authority was given, that a contract has been let to Dart & Hamilton, of Ridgetown, and that work will be started at once.

Toronto, Lindsay and Pembroke Ry.—The preliminary survey for the proposed line between Bancroft and Golden Lake, Ont., being made by J. L. Morris, C.E., Pembroke, is almost completed, and construction will, it is said, be proceeded with as soon as the line has been located. The terminal points are Bancroft, where a junction will be effected with the Irondale, Bancroft and Ottawa Ry. and the Central Ontario Ry., and Golden Lake, a distance of 60 miles. Starting from Bancroft the route proposed will be through the townships of Faraday, Herschell, Mont-eagle and Carlow, thence north-easterly past Rockingham and Brudenell to Golden Lake, where a junction will be made with the Canada Atlantic Ry. (June, pg. 177.)

Victoria Terminal Ry. and Ferry Co.—The approaches at Sidney, Vancouver Island, where the ferry will connect with the Victoria and Sidney railway are being built, and a temporary landing is being constructed at Liverpool on the mainland. It is intended, with a view of shortening the ferriage, to extend the line to Point Roberts, on the mainland, where the permanent ferry approaches will be built. While a permanent ferry is being built, the Co. proposes to use the barge Georgian, which was built for the Yukon trade, prior to the advent of so many steamers, and the necessary alterations are now being made. Three lines of track will be laid on the deck, providing accommodation for 17 cars. Captain Mackenzie, who recently returned to Victoria from New York, says that all the financial arrangements necessary for the complete carrying out of the company's plans have been made. It is expected that the V.T.R. and F. will be the western end of the Victoria, Vancouver and Eastern Ry. (June pg., 177.)

Wabush.—In our June issue it was stated that the Canadian repairing shops were to be built at St. Thomas at a cost of \$100,000. On June 19 we were officially advised that the management was unable to give any information in regard to the matter.

It was recently stated by J. Ramsay, Jun., President and General Manager, that new 80 lb. rails will be laid between Glencoe and

Windsor, 80 miles, replacing the present 65-lb. rails. Gravel ballasting is progressing at the rate of a mile a day.

White Pass and Yukon Ry. to Rainy Hollow and Porcupine Creek.—B. Russell, solicitor, Halifax, gives notice that application will be made to the Dominion Parliament to incorporate a company to build a railway from any point on the W.P. and Y. R. between the stations of Cariboo and White Horse, Yukon Territory, to Rainy Hollow and Porcupine Creek, B.C.; to build branch lines, not exceeding 50 miles in any one case, and to build telegraph and telephone lines and to sell or lease its railway to or amalgamate with the W.P. and Y.R.C.

Short Route to Europe.

The Dominion Securities Co., a U.S. corporation, with its head office in New York city, according to New York despatches has in contemplation an extensive scheme of railway construction throughout Nova Scotia, and the building of a fleet of steamers, specially fitted for tourist purposes, to sail from

New York to ports in the Maritime Provinces, as well as the building of fast and luxurious transatlantic steamers to sail from Louisburg, Cape Breton, and to make Milford Haven the terminal point in Great Britain. The report states that the Vanderbilt interests are behind the Co., but the only indication of this at present is that the directorate includes W. S. Webb, Chairman of the Rutland Rd.; S. R. Callaway, President of the American Locomotive Co.; E. Van Etten, second Vice-President of the New York Central Rd.; and P. Clement, President of the Rutland Rd. The railway part of the proposition is to have a line reaching from Yarmouth right along the coast of Nova Scotia to Louisburg. The only portion of such a line at present built is the section from Yarmouth to Barrington, about 51 miles, of the Halifax and Yarmouth Ry., which is owned by Messrs. Brill and Fletcher. The D.S. Co. proposes to purchase this line for \$1,000,000, and has made an offer to the N.S. Government to complete the line to Halifax. (See pg. 229.) At the Cape Breton end the Co. is reported to be financing the Cape Breton Ry. Extension Co., which is now surveying, preparatory to immediate construc-

tion, the section from Port Hawkesbury to St. Peters, of the line it was chartered to construct from the Straits of Canso to Louisburg. (See pg. 226.) Between Halifax and the Straits of Canso there is no line along the shore, but two companies—the North Eastern of Nova Scotia and the Musquodoboit Valley—have been organized to construct lines through the country, the first from New Glasgow to Country Harbour, and from Country Harbor to Guysboro, and the second from a point near Windsor Jct., on the I.C. R., along the Musquodoboit Valley. The promoters of these two lines have amalgamated, and, according to the New York report, it is through the lines which the amalgamated companies have power to construct that the through connection from Yarmouth to Louisburg will be made. (See pg. 231.)

Since the above was written it is stated that Mackenzie, Mann & Co. have arranged with the N.S. Government to build the Halifax and Yarmouth line, or rather, to build from Halifax to Barrington Passage to connect with the line already built between the latter point and Yarmouth.

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New Ontario Railways.

Premier Ross, in speaking at Underwood, recently said: "It might be worth while, in dealing with railway matters, to summarize the results of the last two or three years of railway legislation. First, we shall have running from Port Arthur to the mouth of the Rainy River, in Ontario, a distance of 285 miles, and thence to Winnipeg, 130 miles, a line of railway which will open up extensive iron mines on the north shore of Lake Superior, and lead to the fertile valley of the Rainy River. Second, the road from Sault Ste. Marie to the C.P.R., known as the Algoma Central, a distance of 140 miles, will in all probability be completed in another year. Then a short railway from Bruce Mines to the Copper Mines at Rock Lake, a distance of 13 miles. Then east of that comes the Manitoulin & North Shore Railway, 330 miles, to be completed in five years. Then east of that, from Parry Sound to Sudbury, 90 miles, an important road on which operations will begin this summer, if they have not already begun. Then we have the railway into the Temiscamingue, a distance of 100 miles, of which the surveys are now being made. That gives 953 miles of railway, one half of which is being built without charge to the treasury of a single dollar—the land grant being accepted in lieu of a cash subsidy. You can estimate for yourself the effect which this railway development must have upon New Ontario, upon its gold and silver and copper mines. In old Ontario we have given small subsidies to perfect our railway connection in the east, and which, when fully carried out, will give a continuous connection through Lindsay eastward to Ottawa. The capital required will probably be \$20,000,000, all of which will go to build up our Canadian industries and to give employment chiefly to our own people."

Kincardine Wants More Railways.

The Mayor of Kincardine, Ont., which is situated on Lake Huron, and is the terminus of a G.T.R. branch from Palmerston, recently wrote President Shaughnessy, of the C.P.R., urging connection with that Co.'s system by a line from Teeswater. Mr. Shaughnessy replied that the Co. could not at present consider the building of any extensions except west of Lake Superior.

The Mayor also wrote F. H. Clergue, of Sault Ste. Marie, suggesting the building of a line from Park Head via Port Elgin to Kincardine. In replying Mr. Clergue said: "The conditions seem to make it necessary that the towns on Lake Huron should have a more direct connection with New Ontario, if they are to participate in the profits of the developments now under way. A cursory glance at the map would seem to indicate that a line from Allenford, on the G.T.R., to Southampton, another from Turner, on the G.T.R., to Goderich, would, in conjunction with the G.T.R., afford Goderich, Kincardine, Port Elgin, Southampton, and all the intermediate towns, a line to New Ontario as direct as that enjoyed by the Southern Ontario towns. If a united effort were made by the municipalities interested I think the interest of the Government in the matter might be excited, and the Manitoulin and North Shore Ry. Co. would construct these lines, and doubtless secure such running rights over the G.T.R. as would secure their co-operation in a favorable way. I shall be very glad to co-operate in any way I can to further your interests in the matter, as the region referred to is resourceful in materials and supplies which we very urgently require."

H. Moody, Assistant Secretary of the C.P.R. and Registrar of Transfers, who is stationed in London, Eng., is visiting Canada.

Exploring the Hope Mountains.

The British Columbia Government has decided to definitely ascertain if a practicable route for a railway can be located through the Hope mountains, in order to provide for the construction of a railway from the Pacific coast to the Kootenay district. The Dominion Government engineers in 1872-3 reported against locating the C.P.R. through the Hope mountains on account of the heavy grades and the consequent great cost of construction, maintenance and operation, but there have been those who have argued that a really feasible route could be found through the mountains. The survey now to be made is in charge of Hon. E. Dewdney, C.E., who, while organizing his party, will have an office in the Legislative Buildings, Victoria, and later on will have his headquarters at Hope. Two parties will be sent out, and will be in charge of C. F. Hannington, C.E., and C. E. Perry, C.E. The route proposed to be followed will be up the valley of the Coquehalla river northerly to near the source of the stream on its west side. Crossing the stream at some convenient point the eastern side will be explored, and the summit of the Hope mountains approached about midway between the Coquehalla and Tullameen rivers. After crossing the summit the easiest descent to the valley of the Tullameen will be looked for, which being found, the route will be comparatively easy along the valley of the Tullameen via Granite creek, Princeton and Allerson, to the mouth of the Similkameen river. The crucial point of the survey will be the country between the Coquehalla and the Tullameen, a section called the Coquehalla railway pass. An alternative route will be explored to the south of what is called the Cedar Flat and Roach river route, which follows the course of the South Similkameen river.

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

Windsor St. Station, Montreal.—The improvements being made are considerably advanced, and the conveniences of the new arrangements are being manifested. The new baggage-room is 400 feet long, is floored with concrete, and is equipped with all the conveniences necessary for the rapid handling of baggage. It is on the ground floor of the new wing on Osborne St. Between the new baggage-room and the old platform two new tracks have been laid into the station, so that there will be altogether seven tracks and three entrances to the train platforms, one from the general waiting-room, one from the new ticket office, and the third direct from Osborne St. The old passage from the waiting-room, the express and station-master's office have been demolished, and their sites thrown into the new platform and waiting-rooms. The ladies' waiting-room is to be erected where the station-master's office formerly stood; the restaurant is to be placed in the room now used as a ladies' waiting-room, and a smoking-room is to be built where the news stand now is. The balance of the additional space provided by the re-construction is to be utilized as a general waiting-room and promenade.

Norwood to Apsley.—H. D. Lumsden, of the Co.'s engineering staff, recently went over the proposed route of this projected line in Peterborough County, Ont. (June, pg. 179).

Lake Superior Division.—A locomotive roundhouse is being built at White River, and the roundhouse at Schreiber is being enlarged.

Spur from Webbwood.—The Spanish River Pulp Co.'s spur of between 1 1/4 and 1 3/4 miles, starting from the Sault Ste. Marie branch about 4 miles east of Webbwood, Ont., has been completed. (Nov., 1900, pg. 239).

Port Arthur.—The long standing dispute between the Co. and the McVicar estate at Port Arthur, Ont., is reported to have been settled, and it is said that the station may be moved into town, and other improvements made.

Branch from Raleigh.—A survey party was recently reported to be at work from Raleigh, 167.6 west of Port Arthur, on a branch some 14 miles south, which would, it is said, tap a good timber country.

Winnipeg Hotel.—In an interview at Winnipeg recently the General Manager said he could say nothing as to the Co.'s intentions of building an hotel there. It was, he said, realized that a large new hotel would be most desirable in a growing city like Winnipeg, but while the matter had been discussed, no decision had been reached in regard to the matter by the Co. He thought that when the subway matter was settled the subject might be taken up by the Co.

The Co.'s Divisional Engineer of Construction is A. C. Dennis, of Winnipeg, who is in charge of all construction work in Manitoba and the Northwest Territories, reporting to W. F. Tye, Chief Engineer of Construction, at Montreal.

West Selkirk Branch.—The old portion of this branch, between Winnipeg and West Selkirk, 22.7 miles, has been rebalasted and generally placed in first-class condition, so that good time can be made over it. On July 23 we were informed that the grading on the extension to the west shore of Lake Winnipeg was practically completed and that tracklaying would be started early in August. The terminus is in sec. 34, tp. 17, range 4 west. There is no present intention of extending this branch to Gimli as has been reported. (June, pg. 177.)

The Co.'s land department is spending a considerable sum at Winnipeg beach, the terminus of the extension above referred to. About 300 yards from the station and stores the Co. has erected a large pavilion, 60 ft. by 100 ft., facing the lake, in which is a dining-room, 25 ft. by 50 ft. Six cottages have been built by the Co. on an avenue, 70 ft. wide, running back from the beach, which is 1 1/2 miles in length. The land is laid out in lots, 75 ft. by 150, and is being sold for the erection of summer residences.

Manitoba Branches.—The Co. has arranged with the Manitoba Government for the building of several branch lines and extensions this year. A line is to be built from Forrest on the old Great Northwest Central Ry. westerly 42 miles. The Waskada branch is to be extended westerly from Waskada, 18 miles. The Snowflake branch is to be extended easterly from Snowflake, 10 miles, and the McGregor-Varcoe branch is to be extended westerly from Wellwood, 10 miles. In all 80 miles are to be built, the consideration given by the Government being \$75,000 cash.

Snowflake Branch.—On July 23 we were informed that nothing definite had been decided in regard to the proposed extension of this branch from Snowflake, Man., about 10 miles southeast to or near Mowbray, close to the International boundary, but that it was expected to begin work on the extension in a very short time. This is one of the branches in connection with which arrangements were made with the Co. by the Manitoba Government. (June, pg. 178.)

Waskada Branch.—Construction is proceeding on the extension of this branch for about 18 miles from Waskada. J. G. Hargrave & Co., of Winnipeg, have the contract. (June, pg. 178.)

McGregor-Varcoe Branch.—A survey for the extension of this branch from its present terminus at Wellwood, 26.45 miles from McGregor, was recently made by R. W. Jones,

and a contract for construction has been let. (June, pg. 178.)

North Central Section.—Speaking of this section, formerly the Great Northwest Central Ry., at Winnipeg, recently, the General Manager said the management had plans for its extension, and that as soon as men could be obtained it would be brought into Brandon. This will involve the building of some two or three miles of line from Brandon north-easterly, and will cut off the distance from Brandon to the present starting point of the line at Chater, and from Chater west to the point at which the proposed line from Brandon will join the present line.

Branch from Forrest.—On July 23 we were informed that about 14 miles of grading on this branch had been completed by Contractor McArthur, but that no track had been laid. (June, pg. 178.)

Chilliwack Branch.—Surveys have been made from Abbotsford, B.C., on the Co.'s Mission Branch, 6.5 miles south of Mission Jct., for about 50 miles to the Hope District. Press despatches recently stated that construction had been commenced, but it is incorrect. It is possible that about 26 miles from Abbotsford to Chilliwack may be built this year. On July 23 we were informed that it was not expected to start construction until the high water had subsided. The decision as to the building of the line through to Hope will probably depend on the result of the surveys about to be made by the B.C. Government to ascertain the practicability of building a railway through the Hope mountains, particulars of which will be found on pg. 235. (June, pg. 178.)

Vancouver and Lulu Island Ry.—This line, General Superintendent Marpole said on his return to Vancouver from Montreal a short time since, will be completed as soon as practicable. The V. and L.I.R. Co. was incorporated by the B.C. Legislature in 1891 to construct a standard gauge railway from Vancouver southerly to the north arm of the Fraser River, across the river to Lulu island, thence southerly across Lulu island to the south arm of the Fraser river, thence to be connected by steam ferry or otherwise with some point on the south bank of the Fraser river near Ladner's Landing, such railway to be operated by steam, horse or electric power. In the same year the Vancouver and Lulu Island Electric Ry. and Improvement Co. was incorporated by the local Legislature for the

purpose of constructing an electric railway between the same points and a ferry from the island to Ladner's Landing. In 1897 the V. and L. I. Ry. Co. obtained a renewal of its charter for three years, and obtained Dominion incorporation last session. Some construction was done last year. A meeting of the shareholders has been called at Montreal for Aug. 14, to arrange for raising funds to defray the cost of constructing or acquiring and completing the Co.'s railway. (June, 1900, pg. 173.)

Vancouver to Greer's Beach.—A track will, it is said, be laid at once to Greer's Beach, and the land will be cleared up so as to make the place an attractive summer resort.

Hancock and Calumet.—It is said that the gauge of 3 ft., which is now in use on the 31 miles of this Michigan line, will be changed to standard gauge and relaid with 60-lb. steel during Aug. and Sept. The present rails weigh 50 lbs. to the yard.

Minneapolis, St. Paul and Sault Ste. Marie Ry.—It is stated that the line will be extended from Wishek, N.D., south 20 miles to Ashley, and not to Aberdeen as reported.

Grand Trunk Betterments, Etc.

Steel Rails.—The Co. has purchased 7,300 tons of German steel rails.

Portland Terminals.—J. E. Dalrymple, assistant to the General Manager of the Grand Trunk, on returning recently from Portland, Me., said satisfactory progress is being made with the new wharf and elevator. Over half the wharf is completed and the flooring laid. The rocky formation of the site where the excavations had to be made for the new elevator delayed the foundation work for the elevator. Hard wood piles with steel points had to be used to sink into the rock. The foundation is nearly finished, and along one side the cement pillars have been constructed.

Montreal Terminals.—The management has accepted the conditions upon which the Montreal City Corporation will exchange property with the Co., so that the city may improve Chaboillez Square, and the Co. its terminal facilities. The Co. desires to erect sheds on the south side of Albert St., to remove the sidewalks and replace them by landing platforms for freight, and the Corporation consents to the exchange of land proposed on condition that the Co. keeps Al-

bert St. in repair, and allows the middle to be used for public traffic.

General Offices.—Work on the new general offices, McGill St., Montreal, is nearing completion. The plasterers have about finished, which will enable work on the lighting fixtures, heating apparatus, etc., to be pushed forward with a view to having the building ready for occupation before fall. The demolition of St. Ann's market, which was one of the conditions of the agreement entered into between the City and the G.T.R. authorities when the latter agreed to build the offices on the present site, has been completed.

Relaying Track.—Roadmaster Henderson, on July 14, with a gang of 190 men, relaid 20 miles of the west-bound main line between Lyn and Thousand Islands Jct. in 11 hours. The new rails put down are 80 lbs., replacing 73 lbs. The single track between the two points was used while the work was being performed.

Napanee.—Press reports recently stated that the grade at Napanee, Ont., would be raised some five or six ft. this year, necessitating a change in the location of the station, and the raising of the bridge over the Napanee river. We are informed that the work referred to will not be done this year.

Whitby.—Press reports recently stated that a new main line station was to be erected at Whitby, and that a portion of the line in the vicinity would be double tracked. We were informed on July 25 that nothing definite had been arranged in regard to the station, but the management is in communication with the town authorities on the subject. We were also informed that no additional double track work is contemplated at present.

Central Vermont Ry.—The extension of the Montreal and Province line branch from Farnham to Frelighsburg, Que., 18 miles, being constructed by the C.V.R., is nearly completed. The stations on the extension are Stanbridge North, Stanbridge East, Riceburg, and Frelighsburg. The country through which the extension passes is generally level. The Montreal and Province Ry. was originally chartered to build a line from St. Lambert, Que., to the International boundary; a portion of the line was built and operated as an independent line about 25 years ago. The C.V.R. is now carrying on the construction work, and it is reported that it is the intention to complete the line to Sheddon Jct., on the Missisquoi Valley division.

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It is said the C.V.R. Co. will erect an elevator with 1,500,000 bush. capacity at New London, Conn.

Middle Division Yards, Stations, etc.

—The rearrangement of the yards along the line is being carried out in a systematic manner. At Sarnia, which is one of the largest and most important on the system, the work is in progress, and as it has to be carried out without interfering with the traffic, it is taking up a great deal of time. Plans for the work were prepared about two years ago, after it had been decided to enlarge the yards to the full extent of the available land. The first work taken in hand was the erection of a new roundhouse, having a capacity of 30 locomotives, adjoining which to the rear is a repair shop and oil tanks. Adjoining the track leading into the roundhouse are the coal bins and chutes, a little further on are the sand boxes, then the standpipe for supplying water, and in front of the roundhouse are the ash pits. The roundhouse with its adjuncts is one of the most complete in Canada.

The yards, which cover an area of over 40 acres, are built up from the switch leading into the roundhouse, and the new tracks have been arranged, and are being laid in such a way as to interfere as little as possible with the working of the yard. There will be a western and an eastern yard, the former having a capacity of 889 cars, and the latter of 711 cars. It is not intended to complete the western yard at present. This will give an available trackage of about 12 miles. In both yards the sidings will be built up on a single straight switching lead. The east bound trains will be switched by means of a poling engine, and the westbound trains in the ordinary way. Preparation has been made for caboose tracks and repair tracks, and also for spare tracks to facilitate movements of engines along the track without their going on the main line. On account of the large engines used for hauling the trains through the tunnel, all the frogs that will be used by them are no. 10, all others being no. 7.

A new station has been built at Dundas, and there has also been considerable rearrangements of the tracks, and of the yards. Various improvements have also been made



THE HUDSON'S BAY CO.'S POST AT PORT SIMPSON, B.C.

A possible future Pacific Coast Terminus for the Canadian Northern Railway.

at Princeton, London, Dorchester and Cookstown stations. At Brantford a complete rearrangement of the yard is being taken in hand. The freight sheds at present are very inconveniently situated, all freight having to be taken across the tracks. Under the new arrangement the freight sheds are to be erected on the city side of the main line. In addition to the ordinary switching facilities there will be two long passing tracks in the station yard so that freight trains can be switched out of the way of passenger trains without deranging any of the switching arrangements in the yard proper.

Southern Division.—The ballasting of the section between Welland Jct. and Fort Erie has been completed.

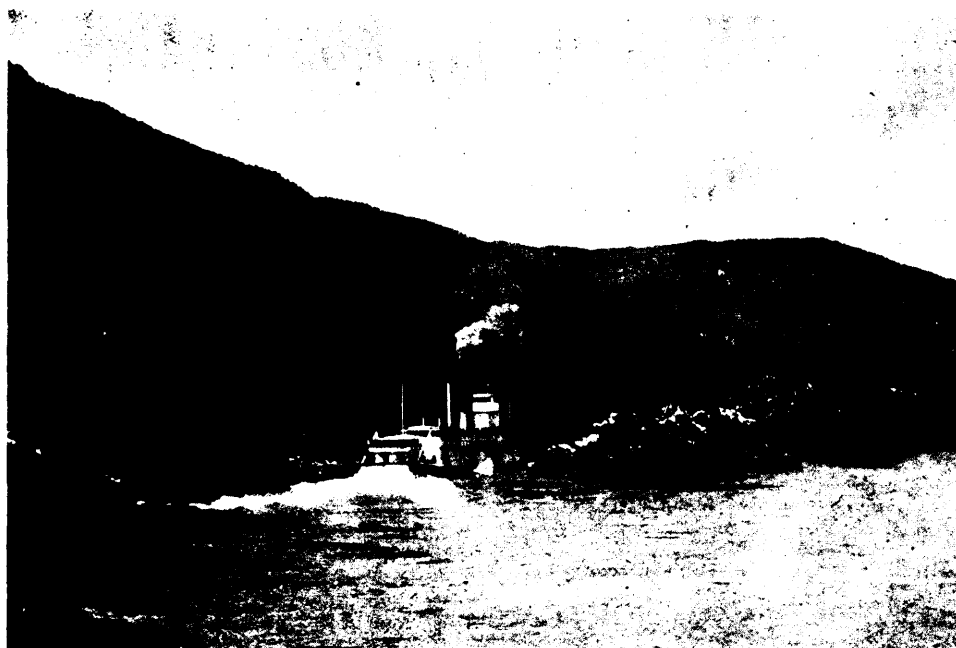
RAILWAY APPOINTMENTS, ETC.

Algoma Central and Hudson's Bay.—J. W. Dawsey, heretofore local freight agent of the C.P.R. at Montreal, has been appointed Superintendent of the main line of the A.C. and H.B.R., from Sault Ste. Marie northward, with office at Sault Ste. Marie, Ont.

Canadian Northern Ry.—Following is the official list: D. B. Hanna, General Superintendent, Winnipeg, Man.; G. H. Shaw, Traffic Manager, Winnipeg; J. M. Smith, Sec.-Treas., Toronto; C. E. Friend, acting Auditor, Winnipeg; A. J. Gorrie, Superintendent, Port Arthur, Ont.; C. Raitt, acting Master Mechanic, Winnipeg; J. Abbott, Chief Dispatcher, Winnipeg.

G. H. Shaw, Traffic Manager, will, for some time at least, be in immediate charge of both freight and passenger work, but the details have been sub-divided, George Stephen, heretofore travelling freight agent for the C.P.R., Kootenay district, having been placed in charge of the freight branch, and C. W. Cooper, heretofore of the C.P.R. ticket office at Ottawa, in charge of the passenger branch.

Canadian Pacific.—W. Stitt, Assistant General Passenger Agent of the Western Division at Winnipeg, who was sent to Australia some months since to look the ground over and see how the situation could be improved to secure increased business for the Co., returned recently and made his report to headquarters in Montreal. The result is that the management contemplates the appointment of a resident representative in Australia, but before further action can be taken negotiations have to be carried on with the owners of the Canadian Australian Steamship line. If these result satisfactorily Mr. Stitt will undoubtedly be appointed General Agent, with headquarters at Sydney, N.S.W., to look after all the Co.'s interests there, freight as well as passenger. It is said he will be succeeded as Assistant General Passenger Agent at Winnipeg by H. W. Brodie, now Chief Clerk to General Passenger Agent McPherson at Winnipeg.



THE HUDSON'S BAY CO.'S STEAMER CALEDONIA ASCENDING THE SKEENA RIVER, B.C.

The Caledonia is a stern wheeler, 140 ft. long, and 30 ft. beam. She has a draught of 4 ft. 9 in., and a speed of 17 knots. She is fitted with electric interior and searchlights, steam capstans and other modern improvements.

W. S. Elliott, heretofore chief clerk to the Auditor of Freight Claims, has been appointed Travelling Freight Agent, succeeding A. R. Evans, appointed chief clerk to the Assistant Freight Traffic Manager, eastern lines.

J. F. Mundle, heretofore Local Freight Agent at Ottawa, and formerly Local Freight Agent at Montreal, has been appointed City Freight Agent at Montreal, with office in C.P.R. Telegraph Chambers, Hospital St.

J. Quinn, heretofore Freight Agent at Mile End, Que., has been appointed Local Freight Agent at Ottawa, Ont., succeeding J. F. Mundle.

J. Halstead, heretofore in the freight department at Toronto, has been appointed chief clerk to the General Freight Agent of the Western Division at Winnipeg.

R. C. Montgomery, of Webbwood, Ont., who was a member of the trackmen's grievance committee, is said to have been appointed Roadmaster of the Ottawa terminals.

L. R. Johnston, formerly Master Mechanic of the Pacific Division, and latterly Superintending Engineer at Vancouver, with charge of the Vancouver shops, and of the machinery of the Empress steamers, is reported, unofficially, to have been appointed Assistant Superintendent of Rolling Stock, with office at Montreal.

Grant Hall, heretofore General Foreman at Winnipeg, has been appointed Master Mechanic of the Pacific division, with headquarters at Revelstoke, succeeding F. E. Hobbs, transferred as General Foreman of the Vancouver shops which will hereafter be operated under the supervision of the Master Mechanic instead of as heretofore under the Superintendent Engineer, L. R. Johnson.

The Cataract Power Co., which owns and operates the Hamilton St. Ry., the Hamilton Radial Ry., and the Hamilton and Dundas Ry., as well as other concerns, has appointed

W. C. Hawkins, of Schenectady, N.Y., as General Manager.

Duluth, South Shore and Atlantic.—W. W. Walker, heretofore Assistant General Freight Agent, has been appointed General Freight Agent, succeeding W. Orr, who has resigned and will, it is said, reside abroad.

Grand Trunk Ry.—F. W. Morse, heretofore Superintendent of Motive Power, has been appointed Third Vice-President. The transportation, motive power and car departments, will report direct to him. He will also act as Assistant General Manager from time to time, in dealing with matters which may be delegated to him that do not pertain to the transportation, motive power or car departments.

This appointment has given rise to a good deal of speculation. Our impression is that G. B. Reeve, Second Vice-President and General Manager, will again retire to his California ranch, probably at the end of next year, and that Mr. Morse will succeed him.

W. D. Robb, heretofore Master Mechanic of the middle division, has been appointed acting Superintendent of Motive Power, with office at Montreal.

W. Kennedy, heretofore Locomotive Foreman at Point Edward, has been appointed Master Mechanic of the middle and southern divisions, having jurisdiction over all matters pertaining to the motive power department on these divisions, exclusive of the Stratford shops. Office, Union Station, Toronto. The Stratford shops remain under R. Patterson, Master Mechanic.

J. C. Willson, heretofore travelling auditor of the G.T.R., has been appointed joint ticket agent for the G.T.R. and the I.C.R. at Bonaventure Station, Montreal, succeeding R. Robertson, who resigned on account of ill

health. The announcement in our last issue that J. Lund had been appointed was incorrect.

Great Northern Ry. of Canada.—W. R. Russell, heretofore Superintendent of the Quebec Ry. Light and Power Co., has been appointed General Superintendent of the G. N.R.

Interecolonial.—The Government organ at Moncton mentions a rumor that an attempt is being made to abolish the position of Engineer of Maintenance of Way and Works, which is occupied by T. C. Burpee.

J. M. Daly has been engaged for two or three months to organize a car service system. He is stationed at Moncton.

W. B. Logan has been appointed storekeeper at Moncton, succeeding J. R. Fraser, retired, under whom he was chief clerk. Mr. Logan has charge of the receipts and issuing department. His position must not be confounded with that of General Storekeeper, which is occupied by C. R. Palmer, to whom he reports.

L. R. Ross, station master at St. John, N. B., has been appointed Superintendent of Terminals, in addition to his present duties.

Michigan Central.—J. Freyer, heretofore passenger conductor, has been appointed trainmaster at Buffalo.

J. C. Mock has been appointed Signal Engineer, with headquarters at Detroit, vice H. D. Miles, transferred to the operating department.

New York and Ottawa.—The headquarters of Master Mechanic M. Goodrich are about to be transferred from Santa Clara, N. Y., to Ottawa, Ont., in consequence of the removal of the shops.

Northern Pacific.—W. G. Pearce, heretofore assistant to the President, at Tacoma,

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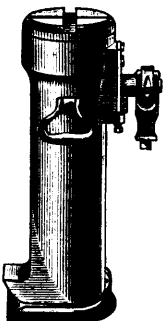
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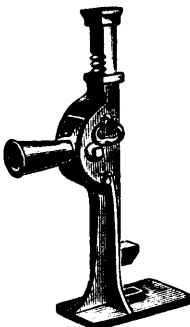
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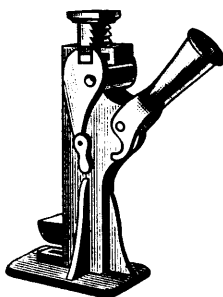
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Agent for Canada,

31 Melinda St., - Toronto

Wash., has been appointed General Manager with office at St. Paul, Minn.

E. H. McHenry, Chief Engineer, has resigned, effective Sept. 1.

Following is a list of the officers who were in the service at Winnipeg when the Co.'s Manitoba lines were transferred recently to the Canadian Northern Ry., with particulars as to their present positions: G. W. Vander-slice, Superintendent, now Superintendent N.P.R. at East Grand Forks, Minn.; F. E. Potter, Chief Despatcher, now Chief Despatcher N.P.R. at East Grand Forks, Minn.; H. Swinford, General Agent, retains same title; C. E. Lang, local freight agent, now General Agent for N.P.R. at Victoria, B.C.; R. Crawford, cashier, now local freight agent Canadian Northern Ry.; J. E. Riley, roadmaster, now Roadmaster for N.P.R. at East Grand Forks, Minn.; C. W. Tyson roadmaster, now roadmaster for C.N.R. at Belmont, Man.; J. T. Lord, Master Mechanic, now in Chicago, Ill.; C. Raitt, foreman of shops, now acting Master Mechanic C.N.R., Winnipeg; J. T. Spear, supervisor, now supervisor C.N.R., Winnipeg.

Quebec Ry. Light and Power Co.—J. A. Everell has been appointed Superintendent of the Montmorency and Ste. Anne divisions. H. N. Bartlett has been appointed Assistant Superintendent of the Citadel division (City electric system.) These appointments are in consequence of the resignation of General Superintendent W. R. Russell, who has been appointed General Superintendent of the Great Northern Ry. of Canada.

Following is the official list:—President, A. Thomson; General Manager and Chief Engineer, E. A. Evans; Sec.-Treas., E. F. Wurtele; Superintendent, J. A. Everell; Assistant Superintendent, Citadel division, H. N. Bartlett; Sup't. Mechanic, W. Langford; Asst. Engineer and Roadmaster, C. J. Pigot.

Southern Pacific Co.—E. H. Fitzhugh, formerly Vice-President and General Manager of the Central Vermont Ry., has been appointed Assistant to President Hays, of the S. P. Co.

J. M. Herbert, heretofore General Superintendent of the St. Louis, Iron Mountain and Southern Ry., and formerly Superintendent of the Eastern division of the G.T.R., has been appointed Manager of the Pacific system of the Southern Pacific Co., succeeding J. A. Fillmore, resigned.

Wabash Rd.—President Jos. Ramsay, Jr., announces that the office of General Manager will be abolished and that the duties heretofore performed by him while serving in that capacity will be continued by him in his new position.

White Pass and Yukon Route.—A. B. Newell has been appointed Vice-President of this route, composed of the Pacific & Arctic Ry. and Navigation Co., British Columbia Yukon R.R., British Yukon R.R., and British Yukon Navigation Co. The heads of departments will continue to report to E. C. Hawkins, General Manager.

It is said A. L. Berdoe, formerly in the Auditor's office at Seattle, is to be appointed comptroller.

The Canadian Society of Civil Engineers will hold its summer meeting in Buffalo on Sept. 26, 27 and 28. For some time past Secretary C. H. McLeod has been making the necessary arrangements so that the members may have as much time as possible to see the Exposition. The Engineers' Society of Western New York, 975 Ellicott Square, Buffalo, has placed its rooms at the disposal of the visitors. A special committee of the members of the same society, of which G. A. Ricker is chairman, will assist the members of the Canadian society in viewing works of engineering interest in or near Buffalo.

Mainly About People.

Robt. Moore, G.T.R. despatcher, died suddenly at Belleville, July 12, aged 50.

W. Mackenzie, of Mackenzie, Mann & Co., arrived in Toronto July 1 from England.

Mrs. Wm. Wainwright, of Montreal, is spending the summer at Little Metis, Que.

The Minister of Railways, Mr. Blair, is expected to return from England early in Aug.

C. Schreiber, Deputy Minister of Railways, spent a considerable portion of July inspecting the I.C.R.

Mrs. T. G. Shaughnessy, of Montreal, and her family are spending the summer at St. Andrew's, N.B.

Sir C. Rivers Wilson, President of the G. T. R., has given £25 to the National Victoria Memorial Fund.

Mrs. D. D. Mann, of Toronto, is spending the summer at St. Patrick's, Riviere du Loup, Que., accompanied by her son and her sister, Miss Williams.

John D. Kiely, who was a member of the syndicate which leased the Toronto St. Ry. after the city took over the franchise in 1891, died in Toronto recently.

H. Wilkinson, Mechanical Superintendent of the Brockville, Westport & Sault Ste. Marie Ry., has received a medal for service in the Fenian raid in 1870.

J. B. Ingersoll, Superintendent of Rolling Stock for the Montreal Street Railway Co., has resigned to become construction engineer with the Westinghouse Co.

Mrs. G. S. McKinnon, wife of the recently-appointed Master Mechanic of the Western Division of the C.P.R., has removed from Toronto to Winnipeg with her family.

C. H. Sibbald, who died at Brooklyn, N.Y., June 30, was at one time a resident of Hamilton, being private secretary to General Manager Broughton, of the old Great Western Ry.

J. E. Simmons, bridge and wharf contractor, who died at Gibson, N.B., recently, was father of T. L. Simmons, assistant inspecting engineer of the Dominion Department of Railways.

W. W. Walker, who has recently been promoted to be General Freight Agent of the Duluth, South Shore & Atlantic Ry., was born in Ontario and went into the G.T.R. service at the age of 15 as an office boy.

Sir Wm. Van Horne and Senator Drummond, of Montreal, are stated to have underwritten all the stock, \$5,000,000, of the St. Lawrence Power Co., which recently tendered for supplying Montreal with light.

H. L. L'Hommedieu, in the engineering department of the Michigan Central Ry., a son of General Superintendent L'Hommedieu, of the M.C.R., was killed at Ann Arbor, Mich., July 31, through stepping in front of an express train.

Sir Louis Davies, Minister of Marine, returned from England late in July, and proceeded to Gananoque, where Lady Davies is spending the summer. It is semi-officially announced that Sir Louis will shortly be appointed to the Supreme Court.

President Hays, of the Southern Pacific, in speaking recently of railway co-operation, said: "I think it is the desire of the companies to employ the money that will be saved through the elimination of unnecessary competition and fighting among themselves in the building up of the properties, so that the public may get the advantage of it in improved transportation facilities and better service."

C. W. Cooper, who has been placed in charge of the passenger branch of the Canadian Northern Ry.'s traffic department at Winnipeg, under Traffic Manager Shaw, was at

one time in the employ of the G. T. R. passenger department in Montreal, afterwards entering the C.P.R. service, in which he was secretary to the General Passenger Agent, rate clerk, and afterwards in the city ticket office at Ottawa.

A. B. Newell, who has recently been appointed Vice-President of the White Pass & Yukon route, was for several months previous to Oct., 1891, assistant trainmaster Franklin division, Lake Shore & Michigan Southern Ry.; since which he has been consecutively, Oct., 1891, to May, 1892, Superintendent Kalamazoo division at Grand Rapids, Mich.; May, 1892, to Feb., 1893, Superintendent Franklin division, same road; Feb., 1893, to recent date, Superintendent Western division, same road.

Geo. Stephen, who has been placed in charge of the freight branch of the Canadian Northern Ry.'s traffic department at Winnipeg under Traffic Manager Shaw, was chief clerk for Mr. Shaw in the Assistant General Freight Agent's office at Winnipeg, from Aug., 1899, to June, 1900, when he was promoted to be Travelling Freight Agent of the C.P.R., Western Division. Last autumn he was temporarily transferred to the C.P.R., Kootenay division, remaining there until resigning to enter the C.N.R. service.

H. C. Sheffield, who was up to 18 months ago sleeping car distributor for Ontario for the C.P.R., with office in Toronto, went to Niagara Falls on July 29, and stopped at the Windsor Hotel there. On the morning of July 31 a revolver shot was heard in his room, and on the door being forced open he was found lying dead on the bed. The deceased, who was a brother of J. A. Sheffield, Superintendent of Sleeping, Dining and Parlor Cars and Hotels on the C.P.R., had been in low spirits for some time, owing to financial troubles.

W. Kennedy, recently appointed Master Mechanic of the middle division of the G.T.R., was born at Belleville, Ont., Dec. 23, 1869, and has been in the service of the G.T.R. continuously since 1883, his record being: 1883 to 1886 apprentice in the Belleville shops; 1886 to 1891 apprentice and journeyman in the Point St. Charles shops; 1891 to Sept., 1897, in charge of the waterworks between Toronto and Montreal, under the Master Mechanic, with headquarters at Belleville; Sept., 1897, to June, 1901, locomotive foreman at Sarnia tunnel.

C. F. Spaulding, formerly Superintendent of the New London Northern (the New London Division of the Central Vermont Rd.), died at his home in New London, July 8, aged 64. He was born in Cavendish, Vt., and entered the railway service in 1863 as a clerk in the office of the Rutland & Burlington. From 1873 to date of absorption by the Central Vermont he was General Freight Agent of the New London Northern. He was then Acting Superintendent same Co., and in 1883 became Superintendent of the New London Division of the Central Vermont.

S. Hill, a son of J. J. Hill, and third vice-president of the Great Northern Ry., U.S., arrived at Seattle recently from a trip around the world, having as its special object the examination of U.S. trade conditions with Siberia and Oriental ports. It has long been a favorite project of J. J. Hill to establish trade relations between the Pacific Coast and Asiatic ports, including Vladivostock, Honolulu, Hong Kong and other points. The trip of S. Hill included a minute examination into these ports. Starting from Moscow, he travelled over the entire Trans-Siberian Ry.

J. W. Loud, Freight Traffic Manager of the G.T.R., sailed from Portland, Me., for England, July 6. It is thought his visit may have something to do with the representation of his department in Europe. Since R. Quinn,

who now represents the Great Eastern line at Detroit, was European Freight Agent of the G.T.R. at Liverpool, the freight department has not been specially represented in Europe, although its interests have been looked after by W. Cuthbertson, who also represents the Co.'s passenger department and the Canadian Express Co. at Liverpool.

W. D. Robb, who has recently been appointed acting Superintendent of Motive Power, G.T.R., was born at Longueuil, Que., Sept. 21, 1857. He entered railway service as a machinist's apprentice in the G.T.R. shops at Montreal in 1873, and became charge hand in the erecting shops of the works July, 1882, remaining in that position until Jan., 1883, since which his record has been: July, 1883, to Aug., 1883, night roundhouse foreman at Montreal; Aug., 1883, to Jan., 1897, locomotive foreman at Belleville; Jan., 1897, to July, 1901, Master Mechanic at Toronto.

J. M. Lyons, whose portrait appears on page 225, was born at Halifax, N.S., July 1, 1850, and entered railway service 1870, as clerk on the audit staff of the Nova Scotia Ry. Two years later he was appointed first clerk in the audit department of the I.C.R. at Moncton, N.B., holding that position until 1874, since which time his record has been: 1874 to 1876, assistant agent same road at Halifax, N.S.; 1876 to 1881, chief clerk of accounts in connection with the interchange of traffic between the I.C.R. and the G.T.R. at Riviere du Loup and Chaudiere Jct.; 1881 to Nov., 1892, assistant to General Passenger and Ticket Agent, I.C.R.; Nov., 1892 to date, General Passenger and Ticket Agent same road.

Wm. Cotter, recently appointed General Superintendent of the St. Louis, Iron Mountain and Southern Rd., is a native of Bloomington, Ill., and is 43 years old. His first railway experience was with the Chicago & Alton as night operator in 1873. He then went to the St. Louis, Iron Mountain & Southern, and was soon promoted to be train despatcher and later trainmaster. He left this Co. in 1882 to go to the Chicago, Milwaukee & St. Paul as train despatcher, and after remaining there one year took a similar position on the Wabash. The next year (1884) he was made Chief Train Despatcher. In July, 1896, he went to the G.T.R. as Superintendent of the Eastern Division, and was transferred to the Western Division in 1899.

J. A. Fillmore, who recently resigned the position of manager of the Pacific system of the Southern Pacific Co., is reported to have said in an interview that his retirement had been under consideration for several months. He added: "President Hays and myself have made an arrangement that is satisfactory to both of us. In fact, I have a verbal arrangement with him as to the future of myself that shows a fair and just spirit on his part to me. I am not at liberty to divulge its nature. The relations between President Hays and myself are of the friendliest character." Mr. Fill-

more has been at the head of the operating department of the Southern Pacific on the Pacific coast for 19 years. He is 56 years of age, and entered railway service at the age of 21 as a brakeman on the Delaware, Lackawanna and Western.

W. B. Bulling, recently appointed Assistant Freight Traffic Manager of the C.P.R. Eastern Lines, was born in Montreal in 1858, and his first railway experience was with the G.T.R., which service he entered in 1872 in that city. He resigned in 1880 to accept a position with the Chicago and North-Western Rd. in Chicago, in which employ he remained, however, only a short time, returning to the staff of the G.T.R. In 1883 he was appointed Chief Clerk of the general freight department of the C.P.R.; in 1889 he was appointed District Freight Agent, and in 1892 General Freight Agent of the Eastern Division, which position he occupied until appointed, on July 1 last, Assistant Freight Traffic Manager of Eastern Lines, comprising all lines of the C.P.R. east of Fort William and Detroit to Quebec and St. John, N.B.

The Railway and Engineering Review says: "Promotions from the motive power department into the higher operating departments have been so rare as to call for especial comment. The new century seems inclined to develop a tendency in this direction, as evidenced by the cases of Mr. Potter, of the Pennsylvania, and Mr. Delano, of the Burlington, followed closely by that of Mr. Morse, of the Grand Trunk. The announcement has just been made of the appointment of the latter gentleman as Third Vice-President in charge of the transportation, motive power and car departments, and to act as Assistant General Manager from time to time. It looks as though the subject of co-ordination of the different departments of railway service was beginning to receive something of the attention which its importance merits."

Early in June a number of daily papers published the following despatch from Montreal: "A young French-Canadian named Godefroid Malette, who has been appointed Chief Mechanic of the C.P.R., has risen from the ranks by hard work. He is only 28 years old and had no education when he arrived in Montreal 14 years ago. He served as an apprentice in the C.P.R. workshop, and then was given a passenger locomotive. A few years later he was named inspector, and now he is Chief Mechanic, with a salary of \$8,000 a year." It is almost needless to say that there is no such position as Chief Mechanic. It is alleged that Malette got a French newspaper to publish the story. He became engaged to a young girl of good family and would probably have married her if his story had not been proved to be false. He is also said to have borrowed money on the strength of the appointment and detectives are on the lookout for him.

E. R. Bremner, recently appointed Assistant General Freight Agent of the Canada Atlantic Ry., was born in Toronto Sept. 29,



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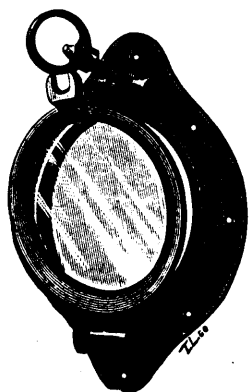
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An address by Joseph Choate, Ambassador to Great Britain, on the career and character of Abraham Lincoln—his early life—his early struggles with the world—his character as developed in the later years of his life and his administration, which placed his name so high on the world's roll of honor and fame, has been published by the Chicago, Milwaukee & St. Paul Railway, and may be had by sending six (6) cents in postage to F. A. Miller, General Passenger Agent, Chicago, Ill.



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1875. He entered the G.T.R. service at Toronto, Oct. 10, 1890, in the office of A. White, District Freight Agent, as junior, and was connected with that Co. until Nov. 1, 1893, when he entered the Ontario agency of the Canada Atlantic and National Despatch fast freight lines, being connected with these lines until May, 1895, when the agency was abolished. He re-entered the service of the G.T.R. as clerk in the Division Freight Agent's office at Toronto, and as Assistant City Freight Agent until Aug., 1895, when he entered the service of the Canada Atlantic Ry. at Ottawa, as secretary to C. J. Smith, General Traffic Manager, holding the position of secretary and rate clerk until the re-organization of the C.A.R. in May, 1898, and the opening of the Canada Atlantic Transit Co., when he was appointed chief clerk of the Traffic Department, which position he held until July 1, 1901, when appointed to his present position.

The Chief Engineer to the Montreal Harbor Commissioners, whose report on elevators appears on another page, has been for almost half a century engaged as a civil engineer in Montreal. His first professional work was under T. C. Keefer, C.E., now of Ottawa, and while with him he assisted in the construction of the Montreal waterworks. For four years he was assistant city surveyor, then became manager of the iron mining and smelting work at Ironsides, near Hull, and in 1871 went into railway construction work on the old Great Western Ry., of which he soon became Chief Engineer. Since 1875 Mr. Kennedy has occupied his present position, and has been intimately connected with the improvement of the port. Under his superintendence the channel has been deepened, and he planned the improvement works now in progress. He has been a member of several Royal commissions, among them those on the flood protection scheme, the Trent Valley Canal, and the leasing of water-power on the Lachine Canal. He was one of the founders of the Canadian Society of Civil Engineers, and was President in 1892.

Frank W. Morse, who has been appointed Third Vice-President of the G.T.R., 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 Co. 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. During Mr. Morse's administration of the mechanical affairs of the G.T.R., he has re-organized and reconstructed his department, so that no railway to-day has its machinery maintained in a higher degree of efficiency than that of the G.T.R. It is said Mr. Morse received a tempting offer from the American Locomotive Co., but he decided to remain with the G.T.R. for another fixed term.

A. E. Doucet, Chief Engineer of the Quebec and Lake St. John Ry., and of the Great Northern Ry. of Canada, was born in Montreal in June, 1860. He graduated at the Royal Military College, Kingston, and began his profession as civil engineer in 1880. Was assistant engineer on the C.P.R. until 1887, during which time he was on location and construction of the Algoma branch and the main line around Lake Superior. Was on active service in the Northwest Rebellion, and

was wounded and mentioned in despatches. Was assistant engineer on the C.P.R. Lachine bridge from April, 1885, to Dec., 1885, then division engineer on the C.P.R. between St. Philip and Iberville, P.Q., from Dec., 1885, to April, 1887. Went with R. G. Reid in 1887 as his engineer, and remained with him till 1898. Employed on the construction of the Sault Ste. Marie Ry., including bridge over the St. Mary's River, from April, 1887, to Dec., 1887; on the Cape Breton extension of the I.C.R., from Dec., 1887, to Mar., 1890, and on the Newfoundland Ry., from Mar., 1890, to July, 1898. In 1898 he went to British Columbia as Chief Engineer of the Arrowhead and Kootenay Ry., remaining there till April, 1900. Then was engaged in revising the location of the C.P.R. main line in Assiniboia, and from Farnham, Que., to Newport, Vermont. On Nov. 15, 1900, was appointed Chief Engineer of the Great Northern Ry. of Canada, and of the Quebec and Lake St. John Railway.

Canadian Freight Association.

A meeting of the Freight Committee was held in Toronto, July 3, at which a number of rates to become effective July 15 were agreed to.

It was decided to add to minute 53 of 1901, Basis of Rates. Rates to St. Francois du Lac, P.Q., on South Shore Ry., to be the same as to Yamaska.

In regard to evaporated apples the rates as authorized per minutes 2,229 of 1900, and 136 of 1901, are those only in operation, all other special rates on this traffic are to be withdrawn.

Mill rolls—re-corrugated—sec. 23 of general circular no. 1, of Jan. 1, 1901, "Re-shipping arrangements" amended to read: "To be charged at one-third less than tariff rates when shipped to the factory, and at full tariff rate when returned to the mill." This to apply only on shipments to the factories of Goldie & McCullough, Galt; the Stratford Mill Building Co., Stratford; and W. and J. G. Greey, Toronto.

Rates from Windsor, ex Pelee Island.—The question of applying special commodity rates from Windsor (less boat pro.) on above was left over for further consideration.

The half-yearly general meeting was held at St. Catharines, July 11, when there were 32 members present, together with three honorary members representing U.S. lines.

The President, W. Woollatt, of the Lake Erie and Detroit River Ry., was in the chair; and an address of welcome was tendered the association by the mayor on behalf of the citizens of St. Catharines.

The following were proposed and elected active members: E. R. Bremner, A.G.F.A., Canada Atlantic Ry., Ottawa; E. F. Seixas, G.M., Niagara, St. Catharines and Toronto Ry., St. Catharines; G. Tombs, G.F. & P.A., Great Northern of Canada, Quebec; W. R. Haldane, D.F.A., C.P.R., Detroit; and G. H. Shaw, G.T.M., Canadian Northern Ry., Winnipeg.

The Classification Committee reported a number of additions and amendments, all of which were adopted, the same to be printed in a ruling circular as soon as possible.

M. H. Brown, C.P.R., Toronto, was elected a member of the committee on freight inspection, vice W. B. Lanigan, removed to Winnipeg, and was also added as a member of the Classification Committee.

The Classification Committee reported a number of propositions on mixed cars—classification no. 2. After some discussion it was resolved that a special meeting of the Classification Committee, with Messrs. Bosworth and Loud, be called at an early date to consider and report upon the whole matter.

The question of men in charge of live stock

was discussed, and it was the general opinion that notwithstanding any difference of opinion respecting the conditions of the live stock contracts, men in charge of l.c.l. lots of live stock should be charged fares, as per classification rule, as some compensation to railway companies for transportation.

It was resolved that agents be instructed to require surrender of the original live stock contract before delivery of the stock at destination, said contract to be retained on file. Also, that it is desirable in the case of shipments of stock originating at a point on one line, and destined to a point on a connecting line, where returned transportation at 1c. a mile second class is authorized, it be arranged that a through ticket be issued from destination to the original point of shipment over the same lines originally carrying the stock.

In view of the frequent reports as to the extent of misrepresentation of freight by shippers it was resolved: That this Association request Messrs. Bosworth, Loud, Tiffin, and Smith to wait upon the Minister of Railways with a view of getting authority to enable the Canadian railways to impose a penalty in cases where shippers misrepresent the actual nature of their shipments with a view to evading the proper classification and charges on same.

The question of fire liability arises out of the disastrous fire at Ottawa last year, when large quantities of freight in the railway companies' warehouses were consumed. Certain consignees claimed that the railway companies were responsible for loss by fire of freight in their possession, and that as the railway companies had all such traffic insured, they could pay the losses and claim from the insurance companies. The insurance companies denied responsibility under their policies on the ground that the fire was not caused by the negligence of the railway companies, or of the act of any of their employes. A test case was taken to court—Lumsden and McMorrin vs. C.P.R. The court upheld the contention of the insurance companies. The following is an extract from the judgment: "That fire was an overwhelming catastrophe, not arising through any negligence in any sense attributable to the defendants, but arising on the property of others with such irresistible force and suddenness as no human forethought could have guarded against." The Secretary of the Toronto Board of Trade, also the Secretary of the Canadian Manufacturers' Association, then wrote the Freight Traffic Managers of the C.P.R. and G.T.R. asking that their bills of lading be so altered as to protect shippers and consignees from loss by fire from all causes whatever. This proposition was fully discussed, and as it had been authoritatively stated that in that event the insurance companies would considerably advance their premiums, it was the unanimous opinion that the railway companies should not increase their liabilities for loss of freight on hand or in transit beyond that existing at present.

The members were at the close of the business session given a trip to Niagara Falls and Buffalo over the electric road and connections of the Niagara, St. Catharines and Toronto Ry., for which their thanks were expressed to Messrs. Seixas and Warburton.

Railway Day at Buffalo.—Sept. 13 has been designated as railway day at the Pan-American Exposition, and the arrangements are in the hands of the Central Railway Club, which has appointed the following committee: J. Macbeth, chairman, Buffalo; S. H. Jones, O. P. Letchworth, and P. Smith, Buffalo; W. H. Marshall, Cleveland. It is said they will seek the co-operation of other railway organizations so as to form a strong joint committee. H. D. Vought, 114 Fifth Avenue, New York, is Secretary of the committee.

Pan-American Exposition Rates.

A meeting to consider Pan-American rates, etc., was held at the Queen's Hotel, Toronto, July 15, the following lines being represented: C.P.R., G.T.R., Michigan Central, Toronto, Hamilton, and Buffalo and Wabash Rys.; Niagara River line and Richelieu and Ontario Navigation Co.

G. T. Bell, G.P.A. of the G.T.R., was elected chairman, and A. H. Notman, A.G. P.A. of the C.P.R., secretary.

It was resolved that, effective July 22, limits for single fare tickets in territory west of Kingston and Sharbot Lake be made as follows:—1 to 80 miles, 2 days in addition to date of sale; 81 miles and over in above territory, 5 days in addition to date of sale. This increases the limit for 81 miles and over from 2 to 5 days in addition to date of sale. The mileage from Brantford to Buffalo is to be considered as 80 miles. It is understood that this will not change the fares and other ticket conditions already agreed on. Windsor and Walkerville to be on the same basis as Detroit.

It was also resolved that limits for special excursions in territory west of Kingston and Sharbot Lake be made 1 to 80 miles, good going one day and return same or next day; 81 miles or over, good going one day and return same or two following days. Mileage from Brantford to Buffalo to be considered as 80 miles. Tickets to be sold July 31, Aug. 14 and 28, to be good going by one regular or one special train, returning by regular or special trains within the limit.

Public Aid to Railways.

The Dominion Government Statistician, G. Johnson, has compiled the following information:—

The Dominion has granted in bonuses to railways, \$90,038,578, and 39,725,130 acres of land.

Of the bonuses the C.P.R. received \$62,742,816, and 25,000,000 acres of land, the

remainder, both of money and land, being divided among various other railways.

The several provinces have bonused railways to the amount of \$28,700,251, and municipalities to the amount of \$12,141,086, making a total cash bonusing of \$130,879,915.

In addition, loans have been made to the extent of \$24,346,800, of which \$15,964,533 was by the province of Canada before Confederation to the G.T.R., the amount being taken over by the Dominion as one of the assets of the province.

Subscriptions for shares or bonds by the provinces and the municipalities amount to \$3,064,500; the Dominion never indulged in that form of assistance.

The cost of the Intercolonial Ry. and connected branches (not included in the above) was \$60,006,192.

The total cash outlay for railways by the Dominion is \$166,009,303; by the provinces, \$33,905,207, and by the municipalities, \$183,382,897, making in all a cash aid of \$218,297,407. The Dominion aid is nearly 16% of the whole capital invested in railways; the Provincial Government aid is 3.14%, and the municipal aid 1.59%, in all a little over one-fifth of the total invested capital in railways has been supplied by the public through the Governments and municipalities.

While the Dominion has aided railways to the extent of \$8,952 per mile constructed, the province of Quebec has contributed \$4.623 per mile of the 3,414 miles within her borders, and the Quebec municipalities have given \$1,342 per mile. Ontario, as a province, has contributed \$1,066 per mile to aid in the construction of the 6,842 miles of railway in that province, and Ontario municipalities have contributed \$1,800 per mile. Quebec, therefore, from her own resources has contributed \$5,965 per mile, and Ontario \$2,866 per mile in aid of railways within their respective boundaries. New Brunswick has contributed \$3,401 per mile of her 1,438 miles of railway, and Nova Scotia \$2,232 per mile of her 927 miles.

The history of railways in Canada shows

that 20 various kinds of railway financing have been adopted in order to provide the railways she possesses.

Dawson, Yukon.—The Alaska Exploration Co. has a charter for the construction of a street railway in Dawson, and, it is reported, will begin construction this summer.

The Quebec Southern Ry's general offices, heretofore temporarily located at 141 St. James St., Montreal, have been removed to 26 St. Sacramento St.

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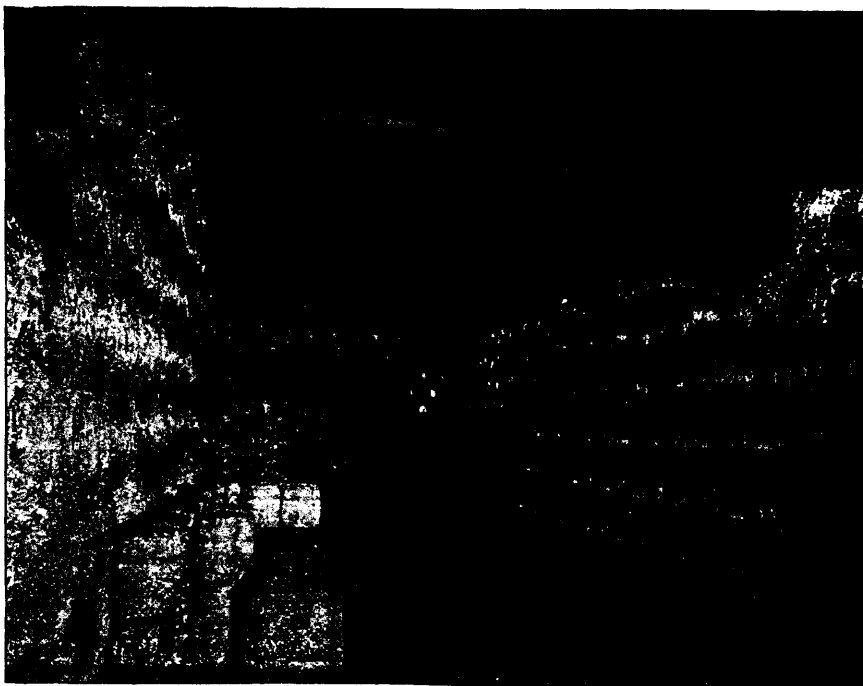
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Ontario Tax on Foreign Railways.

The Provincial Secretary of Ontario recently issued a circular to railways whose head offices are outside Ontario, but doing business within the province, calling attention to the terms of the act respecting the licensing of extra-provincial companies, passed in 1900. Under this act all incorporated companies doing business in Ontario, unless exempted by sec. 2 of the Act, are required to be registered, and on payment of a fee proportionate to the amount of capital proposed to be used in the province will receive a license, which will be renewed annually on payment of a small fee. The companies affected by the act are those incorporated by acts of the late province of Canada, or by royal charter of that province, but not carrying on business at the time of the coming in force of the act; those incorporated by Dominion acts and carrying on business in Canada; and any other corporations. In the case of the first two classes of corporations the registration fee is \$25 when the capital invested is under \$100,000, and \$2.50 for each additional \$10,000; while in the last class the fee charged is the same as the fees payable upon the incorporation of a company by letters patent under the Ontario Companies Act. Without exception the railway and navigation companies doing business in Ontario, whose chief offices are outside the province, come within one or other of the exceptions; their lines were either originally incorporated by the Ontario legislature, or are contributing to the revenue under the terms of chap. 8 of the statutes of 1899. Practically the only companies affected are the U.S. railway companies having offices in Toronto or elsewhere in the province, including the following:—Chicago, Milwaukee and St. Paul, Chicago and North Western, Delaware, Lackawanna and Western, Erie, Great Northern (U.S.), Lehigh Valley, Northern Pacific, Pennsylvania, Wabash, and West Shore, in addition to some fast freight lines and forwarding companies, as well as the Niagara Gorge Ry.

The policy of the department has not yet been fully developed, and the railway companies affected have been told that nothing will be done in the meantime in the way of enforcing payment of the tax until the department has definitely decided on its policy.

The Railway Investigation.

The Dominion Government last session obtained from Parliament a vote of \$5,000 for the purpose of making an investigation to ascertain whether or not it was necessary or desirable to appoint a Railway Commission for Canada. The task of making this investigation was entrusted to S. J. McLean, Professor of Economics at the University of Arkansas, U.S.A., a specialist in railway history and transportation problems. The commission to Mr. McLean is a very general one, and gives him practically a free hand to conduct an investigation into the question of both freight and passenger rates in Canada. He is given full power to investigate all complaints made, to hear evidence in support of the same, and at the conclusion of his enquiry to submit his report, with the evidence taken, to the Department of Railways.

In carrying out his work, Mr. McLean requires that each body or association, having any complaint to make, submit the same in writing, in the form of a statement, then an opportunity is to be given for this statement to be supported in detail by formal evidence, after which the railway companies are given an opportunity to present their side of the case. Statements are also received from private persons who have complaints of alleged unfair charges or discriminations to make, and these will be dealt with in the same

way as those made by boards of trade or other bodies.

The first meeting between the Commissioner and the manufacturers and merchants was held in Toronto, July 12, after which sittings were held at various centers in Western Ontario. After the Ontario meetings Mr. McLean will visit the Maritime Provinces, and then go to Manitoba and British Columbia. He will probably complete his report in time for submission at the next session of the Dominion Parliament.

The Commissioner, who is a young man to be given charge of such an important investigation, graduated from Toronto University in 1894, and has been making a special and systematic study of the transportation problem since that time. After some time spent in post-graduate studies in the U.S., Mr. McLean was appointed Professor of Economics at Arkansas University, which position he held for the four years, up to the date of his present appointment. In addition to his studies in transportation problems, and his university work, Mr. McLean has written considerably on the subject, the following articles having appeared in the Journal of Political Economy, of Chicago:—"The Railway Policy of Canada down to 1849"; "The Railway Policy of Canada from 1849 to 1867" (2 articles); "Canadian Railways and the Bonding Questions"; in the British Economist, "Federal Regulations and Railways in the U.S.," and "State Regulation of Railways in the U.S.,"; in the Canadian Magazine, "The Beginnings of Canadian Railway History"; in the Journal of Economics an article dealing with the railway policy of Canada from 1867 to 1881. Mr. McLean purposes to bring these articles down to date, and to publish them in book form.

A Pass Story.

A story is told of a certain prominent railway official who is equally renowned for his ability to make or take a joke. An employe, whose home is in the country, applied to him for a pass to visit his family.

"You are in the employ of the company?" enquired the gentleman alluded to.

"Yes."

"You receive your pay regularly?"

"Yes."

"Well, now, supposing you were working for a farmer instead of the company, would you expect your employer to take out his horses every Saturday night and carry you home?"

This seemed a poser, but it wasn't.

"No," said the man promptly, "I would not expect that; but if the farmer had his horses out and was going my way I should call him a very mean fellow if he would not let me ride."

The employe came out three minutes after with a pass good for twelve months.

Recent Canadian Patents.

Among the patents recently granted at Ottawa have been the following taken out by Canadians:—

Telephone exchange apparatus, no. 71,309. The Bell Telephone Co. of Canada, Montreal.

Telephone switch board signal, no. 71,310. The Bell Telephone Co. of Canada, Montreal.

Telephone device, no. 71,311. The Bell Telephone Co. of Canada, Montreal.

Signal for trunk telephone lines, no. 71,394. The Bell Telephone Co. of Canada, Montreal.

Angle bar for railway rails, no. 71,417. T. Field, New Oxley, Alberta.

Car Fender, no. 71,448. A. B. Boyle, Toronto.

Railway track joint, no. 71,460. E. Perkins, St. John, N.B.

G.T.R. Insurance and Provident Society.

In the Court of Review at Montreal judgment was rendered in the case of Ferguson vs. the G.T.R., June 29. Plaintiff, who was an engineer in the employ of the Co., was injured at Richmond while employed about his engine, and sued the Co. for \$15,000 damages. A jury awarded him \$4,000. The defendants pleaded, besides denying any fault on the part of the Co., that under authority of certain statutes of the Dominion, 41 Vic., ch. 25, a fund or society had been established known as the G.T.R. Insurance and Provident Society, the object of which was to provide for the payment of sick benefits or allowances to its employes, members of such society, in case of sickness or accident, and also an insurance payable to the legal representatives of any member, in the event of death. It was further pleaded that the plaintiff was a member of that society at the date of the accident, and subject to the rules, regulations and by-laws of the society; that one of the by-laws of the society provided that in consideration of the subscription of the G.T.R. Co. to the Society, no member thereof, or his representatives, shall have any claim against the Co. for compensation on account of injury or death from accident. The Court of Review maintained the plea, and granted the defendant's motion for judgment in favor of the Co. The action of the plaintiff was therefore dismissed.

Attendance at the Pan-American.

The average daily attendance at the Exposition from May 1 to July 1 was 28,640. The average daily attendance at former fairs for the full terms of their duration were as follows:

Chicago, World's Columbian Exposition, 6 months.....	153,112
California, Midwinter Fair.....	13,928
Atlanta, Cotton States Exposition....	13,030
Omaha, Trans-Mississippi Exposition	17,082
Philadelphia, International Export Exposition.....	19,283

The comparison is highly encouraging to the Pan-American Exposition. The first two months of fairs are usually the poorest in point of attendance, owing principally to the almost general belief that the exhibitions are not completed until July. The Pan-American has passed this point and the attendance is growing daily. By Aug. 1 the increase in the average daily attendance should show a very large increase, with the best months still to come. The Pan-American is now complete, and to see the exterior of the buildings in alone worth a long trip. The illuminations with 500,000 lamps is also a wondrous sight.

Algoma Iron and Nickel Steel Co.—F. H. Clergue, Sault Ste. Marie, Ont., E. V. Douglas, and F. S. Lewis, Philadelphia, Pa.; Hon. R. Dandurand, A. F. Galt, G. E. Drummond, and W. Hanson, of Montreal, have been incorporated as the Algoma Iron and Nickel Steel Co. of Canada with a capital of \$20,000,000, of which one-half may be preference shares. After the whole of the stock has been issued and 50% paid up, the capital may be increased to \$30,000,000. The Co. may manufacture and deal in iron, steel and nickel; own and operate coal and other mines, blast furnaces, rolling mills, etc.; manufacture charcoal and by-products, steel rails, etc.; build iron and steel bridges, cars and ships, and construct, operate and dispose of, tramways, telegraph and telephone lines, etc. For the purposes of its undertaking the Co. is empowered to construct and operate 6 miles of sidings, switches or spur lines. The charter shall cease to be in force by non-user for two years, or if the Co. does not go into actual operation within three years.

Dominion Atlantic Railway Meeting.

A special general meeting was held at the head office of the Co., in London, Eng., July 15, the President, C. F. Kemp, in the chair. Mr. Kemp explained that the object of the meeting was to ratify the agreement for the acquisition of the Yarmouth Steamship Co.'s property, assets, and privileges, and to confirm in the directors' hands the various powers required in connection therewith. The D.A.R., by means of its fine fleet of twin screw steamers, had been building up a large business with Boston and New England, and the competition which had affected its trunk traffic for some time was now happily a thing of the past, the agreement referred to in the resolutions having come into effect in the course of the past month. Over and over again he had insisted on the great importance to the Co. of this acquisition of the Yarmouth Steamship Co., which company had prevented the development of their system. He could see his way now, he hoped, with a fair field and no particular favor, to reaping a considerable increase of business. Four-fifths of the Co.'s stockholders had already expressed their confirmation of the directors' views. He would like to remind his hearers that Mr. Caie, who was at that time President of the Yarmouth Steamship Co., was in London last summer, and he entered into negotiations with the D.A.R. directors on the faith of his position; and on the faith of his assurance that the proprietors of the Yarmouth Steamship Co. would support him in any arrangement

he might come to with the D.A.R. directors, the latter entered into negotiations with him. These negotiations happily were abortive, and from subsequent matters which had come to his knowledge he and his colleagues were satisfied that Mr. Caie acted in thorough good faith, and that Mr. Caie believed in all he stated. However, what he had now to say was that traffic on the Co.'s system was rapidly increasing, with a fair prospect of increased profits. He felt very strongly indeed that the acquisition of the Yarmouth Co. would lead particularly to the development of the trade of Yarmouth, which was capable of being made a very important commercial centre, and any assistance which could be given by the D.A.R. Co. to the development of the prosperity of Yarmouth, within the compass of their power of influence, they should be very happy to give. In addition to that, they hoped that the general prosperity of Nova Scotia, the charm of the climate, and the country's splendid attractions would lead to a considerably increased traffic over the D.A.R. Co.'s entire system. He would like to express his warm commendation, as he had done before, for what had been done in their interests by R. L. Campbell, the Co.'s Secretary, and also to P. Gifkins, the General Manager, as he had been of great assistance in these negotiations. He also desired to thank F. H. Chrysler, K.C., of Ottawa, who was with them at this meeting, for his services. Mr. Chrysler had shown a desire in everything he had done to promote the interests of the Co. The price being paid in connection with the

Yarmouth Steamship Co.'s acquisition was \$260,000.

The resolutions were carried unanimously. The D.A.R. Co. has removed its London office to commodious premises at Threadneedle House, Bishopsgate St., E.C.

The U.S. Locomotive Consolidation.

The New York stock exchange official abstract of the application of the American Locomotive Co. for placing its stocks in the unlisted department of the stock exchange has been made public. This shows, in brief, that of the \$50,000,000 authorized capital stock of the Co. all but \$900,000 of preferred stock had been issued. The Co. has no bonded debt of its own and cannot mortgage its property unless upon the assent of two-thirds of the holders of preferred stock. There are, however, two underlying mortgages amounting to \$1,312,500.

Following are extracts from the statement:

	Capital stock	Authorized.	Issued.
Preferred 7% cumulative	\$25,000,000	\$24,100,000	
Common	25,000,000	25,000,000	
Preferred unissued (in Co.'s treasury for general purposes), \$900,000. Par value of shares \$100, fully paid and non-assessable, with no personal liability to stockholders. The bonded debt of constituent companies is: Dickson Manufacturing Co., Scranton, Pa., 5%, maturing Nov. 1,			

WIRE ROPES, MARION STEAM SHOVELS, BALLAST UNLOADERS.

Columbus Pressed Bowl Wheel and Drag Scrapers.

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

Contractors Rails and Dumping Cars.

Saddle Tank Locomotives.

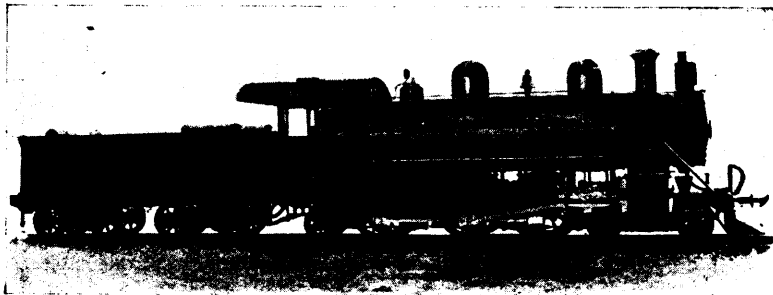
JAMES COOPER, 299 ST. JAMES ST., MONTREAL.

Established 1831.

Annual Capacity, 1,200.

BALDWIN LOCOMOTIVE WORKS.

SINGLE EXPANSION AND COMPOUND LOCOMOTIVES.



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

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

Electric Locomotives and Electric Car Trucks with Westinghouse Motors.

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

Established 1849

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

BRADSTREET'S

Capital and Surplus \$1,500,000

OFFICES THROUGHOUT THE CIVILIZED WORLD

EXECUTIVE OFFICES

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

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

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

CORRESPONDENCE INVITED

OFFICES IN CANADA:

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

THOS. C. IRVING,

Gen. Man. Western Canada, Toronto.

JOHN A. FULTON,

Gen. Man. Eastern Canada, Montreal.

1927 (property acquired by American Locomotive Co., subject to said bonds).....	\$562,500
Richmond Locomotive Works, Richmond, Va., 5% maturing April 1, 1929.....	750,000
	\$1,312,500

The American Locomotive Works owns in fee the following properties: Brooks Locomotive Works, Dunkirk, N.Y.; Cooke Locomotive and Machine Co., Paterson, N.J.; Pittsburg Locomotive and Car Works, Pittsburg, Pa.; Rhode Island Locomotive Works, Providence, R.I.; Schenectady Locomotive Works, Schenectady, N.Y., and the Dickson Mfg. Co., Scranton, Pa. The Co. also owns the following stocks in properties operated by it, as follows: Richmond Locomotive Works, 18,850 shares of stock out of a total authorized and outstanding of 18,890, and the Manchester Locomotive Works, 3,000 shares of stock out of a total authorized and outstanding of 3,000.

Following are the plants:
Name and location—

	Acreage.	Capacity.
Schenectady works, Schenectady, N.Y.	43	425
Brooks works, Dunkirk, N.Y.	19	375
Pittsburg works, Pittsburg, Pa.	10	200
Richmond works, Richmond, Va.	24	250
Cooke works, Paterson, N.J.	16	150
Rhode Island works, Providence, R.I.	9	150
Dickson works, Scranton, Pa.	5	100
Manchester works, Manchester, N.H.	8	50

Each of these works includes real estate, buildings, machinery, tools, etc., formerly owned by the companies above named, being equipped for the manufacture of railway locomotives.

The nature of the business is defined as being primarily that of building railway locomotives and disposing of the same, to manufacture and repair railway cars, to mine and quarry ores, oil, gas, and similar products, and to acquire inventions, rights, licenses, etc., and other powers, as stated in articles of incorporation. The preferred stock is limited to 7% dividends, but is preferred as to assets as well as dividends. The directors of the company, all of whom are elected for one year, are S. R. Callaway, A. J. Pitkin, P. Fisk, G. R. Sheldon, all of New York; W. S. Webb, Shelburne, Vt.; J. Bryan, Richmond, Va.; F. H. Stevens, Buffalo, N.Y.; C. Miller, Franklin, Pa.; J. E. French, New York; G. W. Hoadley, Providence, R.I., and S. L. Schoonmaker, New York. The officers are, S. R. Callaway, President; A. J. Pitkin, Vice-President; R. J. Gross, Second Vice-President; L. Best, Secretary; C. B. Denny, Treasurer, and C. E. Patterson, Comptroller; Reed, Simpson, Thatcher & Barnum, counsel.

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

Gross earnings, working expenses, net profits & increases or decreases over 1900, from Jan. 1, 1901:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
Jan.	\$2,054,015.68	\$1,405,819.23	\$648,196.45	\$43,373.16-
Feb.	1,977,189.47	1,356,500.63	620,679.84	2,052.41-
Mar.	2,500,618.77	1,552,283.04	948,335.73	149,234.49+
April.	2,681,311.83	1,500,503.02	1,180,808.81	153,741.10+
May.	2,654,847.73	1,644,593.31	1,010,254.42	69,386.07-
June.	2,702,176.93	1,580,744.68	1,121,432.25	63,626.63+

\$14,570,160.41 \$9,040,422.91 \$5,529,737.50 \$251,790.67+
Approximate earnings for July, \$2,824,000; increase over July, 1900, \$382,000.

DULUTH, SOUTH SHORE AND ATLANTIC.—Approximate earnings for July, \$255,627, against \$244,427 in July, 1900. Gross earnings for May \$224,938.16, net earnings \$70,-

714.32, against \$236,381.59 gross and \$84,326.26 net, for May, 1900. Net earnings for five months ended May 30, \$312,023.55, against \$387,381.37, for same period 1900.

HANCOCK AND CALUMET.—Approximate earnings from June 30 are included with those of the Mineral Range.

MINERAL RANGE.—Approximate earnings for July, \$55,035, against \$55,604 for July, 1900.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE.—Approximate earnings for July, \$424,937, against \$362,786 for July, 1900. Gross earnings for May, \$415,231.29, net earnings \$184,402.87, against \$442,863.82 gross, and \$204,858.46 net for May, 1900. Net earnings for 11 months ended May 30, \$1,754,304.74, against \$2,436,950.88 for same period, 1900.

Grand Trunk Earnings, Expenses, &c.

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

	1901.	1900.	Increase.	Decrease.
Jan.	\$2,225,878	\$2,222,200	\$3,678	....
Feb.	1,903,493	1,917,348	76,145	....
Mar.	2,372,980	2,188,635	184,345	....
April.	2,358,286	2,189,859	168,427	....
May.	2,330,041	2,219,460	111,481	....
June.	2,327,119	2,278,937	48,182	....
July.	2,265,970	2,177,495	88,475	....
	\$15,974,667	\$15,193,914	\$780,750	....

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

GRAND TRUNK RAILWAY.

Revenue statement for May, 1901:				
	1901.	1900.	Increase.	Decrease.
Gross receipts.	£397,300	£366,600	£30,700	....
Working expenses.	248,700	230,800	17,900	....
Net profit.	£148,600	£138,800	£9,800	....
Aggregate Jan. 1 to May 31, 1901:				
Gross receipts.	£1,874,000	£1,758,800	£115,200	....
Working expenses.	1,276,100	1,220,700	55,400	....
Net profit.	£597,900	£538,100	£59,800	....

GRAND TRUNK WESTERN RAILWAY.

Revenue statement for May, 1901:				
	1901.	1900.	Increase.	Decrease.
Gross receipts.	£67,600	£71,200	£3,600	....
Working expenses.	63,400	60,600	2,800	....
Net profit.	£4,200	£10,600	....	£6,400
Aggregate Jan. 1 to May 31, 1901:				
Gross receipts.	£364,300	£377,100	£12,800	....
Working expenses.	315,600	312,100	£3,500	....
Net profit.	£48,700	£65,000	....	£16,300

DETROIT, GRAND HAVEN AND MILWAUKEE.

Revenue statement for May, 1901:				
	1901.	1900.	Increase.	Decrease.
Gross receipts.	£14,000	£15,100	£1,100	....
Working expenses.	13,700	12,000	£1,700	....
Net profit.	£300	£3,100	....	£2,800
Aggregate Jan. 1 to May 31, 1901:				
Gross receipts.	£78,300	£74,900	£3,400	....
Working expenses.	64,100	63,100	1,000	....
Net profit.	£14,200	£11,800	£2,400	....

TRAFFIC RECEIPTS OF THE SYSTEM.

Traffic receipts, Jan. 1 to June 30, 1901:				
	1901.	1900.	Increase.	Decrease.
Grand Trunk.	£2,265,152	£2,137,025	£128,127	....
G. T. Western.	434,028	450,439	....	£16,411
D. G. H. & M.	94,539	90,879	3,660	....
Total.	£2,793,719	£2,678,343	£115,376	....

Calgary and Edmonton Ry.—Gross earnings for May \$38,088.14, against \$31,319.70 in May, 1900; net earnings \$6,810.53, against \$11,310.68 in May, 1900, the increase in expenses being on account of the renewal of ties.

RAILWAY FINANCE, MEETINGS, ETC.

The Brockville, Westport and Sault Ste. Marie Ry. Co.'s annual meeting was held at Brockville, July 9. The report is not given out for publication, but it is stated that the receiver's financial statement showed the Co. had a balance on hand for further improvement of the roadbed and rolling stock, after having purchased a locomotive, and overhauled another, and purchased a passenger car and several flat cars for immediate necessities. Following is the organization for the current year:—President, E. R. Dick, Philadelphia; Vice-President, W. H. Cole, Brockville; General Manager, S. Hunt, Detroit, Mich.; General Passenger Agent, J. Mooney, Brockville; other directors, R. Bowie, G. H. Weatherhead, D. Derbyshire, D. W. Downey, Brockville; R. A. Williams, Jr., Philadelphia; W. C. Fredenburg, Westport; R. G. Murphy, Elgin; Superintendent, General Freight Agent and Sec.-Treas. E. A. Geiger; Auditor, W. A. Gogo.

C.P.R. School Taxes.—In the case of the City of Winnipeg v. the C.P.R. Co., an application for special leave to appeal from the Supreme Court of Canada to the Imperial Privy Council, made before the latter body July 14, was refused. The suit was for \$30,000 claimed by the city for school taxes. The Co. contested this, on the ground that the by-law of the city, passed in Sept., 1881, exempted the Co. from all taxes, school as well as municipal. The Court of Queen's Bench for Manitoba decided in favor of the city. The Co. appealed to the Supreme Court, which allowed the appeal. The city's application for leave to go before the Judicial Committee of the Privy Council has been refused, and this ends the litigation.

The Chatham and Lebanon Valley Rd., 52.2 miles, from Chatham to Bennington, Vt., has been purchased by W. S. Webb, Chairman of the Rutland Ry. Co.

Dominion Atlantic Ry.—Gross receipts for June \$74,100, an increase of \$11,932 over June, 1900, making for the six months to June 30, \$322,531, an increase of \$13,566.

Great Falls and Canada Ry.—In our last issue, pg. 198, we gave pretty complete particulars about this line, and mentioned that it was likely to be sold to the Great Northern Ry., U.S.A. We have since been informed that the transfer of the line between Sweet Grass, at the International boundary, and Great Falls, Montana, 134.37 miles, to the G.N.R., will be made in the near future. It is the intention to widen the gauge from 3 ft. to standard, and at the same time the Alberta Ry. and Coal Co. will change to standard the gauge of its connecting line, from the International boundary at Coult's to Lethbridge, 64.62 miles. The A.R. and C. Co. will continue to own and operate the Canadian section of the line above mentioned.

The Kootenay and Arrowhead Ry. Co.'s shareholders will meet at the C.P.R. Secretary's office, Montreal, Aug. 13, to decide on the means to be adopted to raise funds to defray the cost of constructing or acquiring and completing the Co.'s railway, and if the issue of bonds be decided on, to fix the amounts thereof, rate of interest, etc., and to authorize the mortgages to be given to secure them.

The Mineral Range Rd., a Michigan line which is a subsidiary of the C.P.R., and which late last year opened up its South Range extension from Keweenaw City, Mich., to Riddlet Jct., 36 miles, has issued \$1,000,000 new general mortgage 50-year 4% bonds. The entire authorized amount of consolidated mortgage bonds due 1931, viz. \$600,000, is also outstanding (against \$339,000 on Dec. 31, 1900), of which \$346,000 bear 5% interest and \$254,000 have the interest reduced to 4%. Of the stock which was recently increased to

\$800,000, there has been issued \$643,400, against \$393,400 on Dec. 31. The loans and bills payable, amounting on Dec. 31 to \$1,233,951, have been wholly or mostly retired.

New Brunswick Coal and Ry Co.—At a meeting of the shareholders in St. John, June 10, the following were elected:—President, E. Hutchison, Douglastown; Vice-President, F. Stetson, St. John; Secretary and Solicitor, G. W. Allen, St. John; Directors: C. A. C. Bruce, Chatham; R. A. Irvine, Buctouche; E. B. Winslow, and W. Kitchen, Fredericton; and A. P. Barnhill, St. John.

Quebec Central Ry.—Gross earnings for June \$51,409.83, against \$53,350.98 in June, 1900; working expenses, \$38,096.96, against \$32,834.54, net earnings \$13,312.87, against \$20,516.44.

Gross earnings Jan. 1 to June 30 \$284,646.04, against \$235,497.81 for corresponding period of 1900; working expenses \$197,272.21 against \$164,813.69; net earnings \$87,373.83 against \$70,684.12.

Qu'Appelle, Long Lake and Saskatchewan Ry. and Steamboat Co.—Net loss in operating for May \$9,940.61, against a net loss of \$8,279.45 in May, 1900.

St. Lawrence and Adirondack Ry.—Press reports recently stated that the New York Central Rd. has obtained complete control of this line, the C.P.R. Co. being reported to have sold its stock, less than one-third of the whole, though President Shaughnessy and other C.P.R. officials were said to have retained their individual holdings. The stock advanced on the report of the transfer and on a rumor that the next dividend would be 4%. We are officially informed that the C.P.R. Co. never had any interest in the St. L. and A. Ry. Co.

The St. L. and A. Ry. is a consolidation of the St. Lawrence and Adirondack, the Malone and St. Lawrence, and the Southwestern railways. Its mileage is Malone, N.Y., to Valleyfield, Que., 30 miles; Beauharnois to Adirondack Jct., Que., 13.20 miles; leased G.T.R., Valleyfield to Beauharnois, Que., 13.20 miles, trackage C.P.R., Adirondack Jct. to Montreal, 8.70 miles; total length of line operated, 65.10 miles. It is operated in connection with the Adirondack division of the New York Central Rd. Its gross earnings for the year ended June 30, 1900, were \$548,982.64, and net earnings \$282,316.65. The New York Central trains run into the C.P.R.'s Windsor St. station, Montreal.

At a special meeting of shareholders of the St. L. and A.R., at Montreal, July 2, the act respecting the Co., passed by the Dominion Parliament last session, was unanimously accepted and approved, and it was decided to issue debenture bonds to the amount of \$300,000 for the purpose of equipment.

South Shore Ry., Que.—The Montreal and Sorel Ry. will be offered for sale at the sheriff's office, Montreal, on Aug. 15, by virtue of a writ of execution issued in a case where in J. F. Armstrong, of Fort Steele, B.C., as administrator of the estate of the late J. Armstrong, formerly Chief Justice of Santa Lucia, a subrogated party to G. S. Carter, K.C., of Montreal, is plaintiff, and the Montreal and Sorel Ry. Company is defendant. The property offered for sale consists of the track, stations, wharves and other appurtenances of the M. and S. Ry., situate in the counties of Richelieu, Vercheres and Chambly, extending from and including the wharves of the Montreal and Sorel Co., at Sorel Point, to the junction of that railway with the G.T.R. in the parish of St. Antoine de Longueuil.

President Choquette, of the South Shore Ry., in a recent interview said that he did not know how what did not exist could be sold. Almost 10 years ago the S.S.R. Co. brought all the property of the M. & S. Ry. under the hammer and bought it up. As a matter of fact, the S.S.R. bondholders had already at that time practically acquired the ownership of the M. & S. Ry. by purchase of its bonds, and the sheriff's sale of the railway and its property was carried through more to make the title of the S.S.R. absolutely legally secure than for any practical effect it produced. At present time the M. & S. R. does not own a stick of property in the counties of Richelieu, Vercheres and Chambly, nor has it done for some years past. People, however, confuse the South Shore Ry. with the M. & S. Ry., a practically defunct Co., and the old name of the road is still commonly used, and this is what President Choquette fears may prove embarrassing to the S.S.R., as it wants to raise \$25,000 to build a new bridge over the St. Francis river.

Montreal Harbor Elevators.

During their recent ten days' tour of inspection to the Great Lake ports the members of the Montreal Harbor Commission, with their Secretary and Engineer, visited Owen Sound, Sault Ste. Marie, Duluth, Minneapolis, Chicago, Cleveland and Buffalo. The views of the Commissioners were embodied in a report prepared by Mr. Kennedy, the engineer, and presented at a meeting on July 4. After some discussion it was resolved that the government be requested to build its elevator at the east end without delay; that

C. P. R. LANDS.

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

- Lands in the Province of Manitoba average \$3 to \$6 an acre.
- Lands in Assiniboia, east of the 3rd meridian, average \$3 to \$4 an acre
- Lands west of the 3rd meridian, including the Calgary District, generally \$3 per acre.
- Lands in Northern Alberta and the Lake Dauphin District, \$3 per acre.

TERMS OF PAYMENT.

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

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

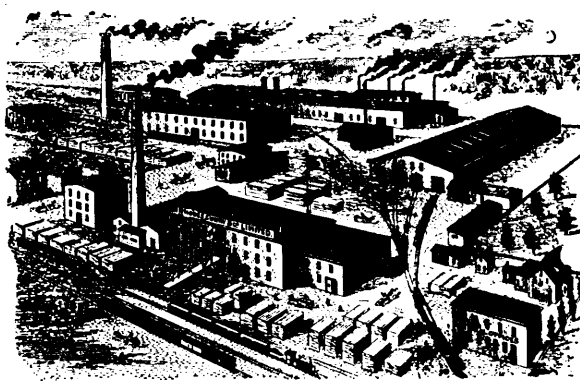
- 160 acres at \$3.00 per acre, 1st instalment \$71.90, and nine equal instalments of \$60.
- 160 acres at \$3.50 per acre, 1st instalment \$83.90, and nine equal instalments of \$70.
- 160 acres at \$4.00 per acre, 1st instalment \$95.85, and nine equal instalments of \$80.
- 160 acres at \$4.50 per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

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

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

Write for maps and full particulars.

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



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

Rhodes, Curry & Co.,

Ltd.,

Railway and Street Cars

of all descriptions.

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

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

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

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

the Harbor Commissioners decide to build one elevator in the centre of the harbor of 1,000,000 bush. capacity, suitable for steamships and the railways, and costing about \$500,000; that a smaller elevator and terminal facilities be provided at Windmill Point at a cost of about \$400,000, the same to be leased for 10 or 20 years to Captain Wolvin or some one else who was able to supply the traffic, from 5 to 5½% to be charged, so as to provide a renewal fund. This would leave from \$50,000 to \$100,000, which might be used to supply floating elevators. The further consideration of the matter was adjourned until July 15.

In his report Mr. Kennedy said: "For convenience of description and consideration the elevators examined may be divided as regards bin construction into four types: (1) Those having rectangular grain bins built of steel plates. (2) Those having cylindrical bins, commonly called tank bins, built of steel plates. (3) Those having cylindrical bins built of tiles strengthened by steel hoops; and (4) those having cylindrical bins built of concrete strengthened with steel hoops. Of the first type, a notable example is the Great Northern elevator at Duluth. It is of 3,000,000 bush. capacity, and is the largest and amongst the first of its kind. The bins are 14 ft. 9 in. square by 85 ft. high, holding 14,500 bush., except a few which are of two-thirds, half or quarter capacity. The bins are arranged in straight rows lengthwise and crosswise, and they are formed of steel plates of such lengths as to reach from corner to corner, the corner junctions being formed with four angle bars and rivet fastenings. The plates are stiffened by angle bars riveted to each side and by flat tie bars reaching across the bins, placed edge up. For the smaller bins, the space of the standard bins is divided into three, one is divided into two, or one into four. The bins have steel plate hopper bottoms, at suitable height for allowing cars to pass beneath, and they are carried on steel columns reaching through the ground floor to foundation piers beneath. The floor which covers the heads of the bins and the next above it are, for some unexplained reason, of wood plank on steel joists, but all other floors are of steel or other fire-proof materials. There is no framing or walls surrounding the bins, but they are protected from the sun and weather by corrugated iron sheeting attached to them in such way as to give a 6 in. air space all round between the sheeting and the outside plates of the bins. The framing of the building above the bins is of steel covered with iron sheeting and fire-proof roofing. The elevator legs and heads, the garners, weighing hoppers and spouting are all of steel. With the exception of the two wooden floors, the wooden casings and frames of the cleaning machines, the elevator belts, driving ropes, and a few small wooden sills for machinery, everything worth noting, of both building and machinery, is of non-combustible material. The elevator is fitted for receiving from cars and delivering into large boats. For receiving it has two tracks extending through the building lengthwise, and holding nine cars each, and for delivering it has telescope spouts supported by cranes and convenient tackle. The machinery is all of the most improved description and largest capacity, and is driven by electricity.

"At Minneapolis there are also examples of elevators having square steel bins, in which the square bins are essentially the same as those in the Great Northern elevator of Duluth, but the Minneapolis elevators as a whole differ from the Great Northern in having only part of their storage capacity in square bins and the remainder in round bins. In the Pioneer steel elevator of Minneapolis, for instance, finished about a year ago, and of about 1,200,000 bush. capacity, there is a central working house which contains the receiv-

ing and delivering machinery, which is fitted with square steel bins, but they are of only 200,000 bush. aggregate capacity, and the main storage capacity of the elevator is in 10 circular steel bins of 100,000 bush. each, arranged in two annexes of 5 bins each. The square bins of the Pioneer are built and supported in substantially the same way as those of the Great Northern, but their outer sides stand open to the weather, without walls or sheeting of any kind. In the working house containing the square bins, the ground floor is of concrete, and the upper house floors, frames and sidings are of steel. Everything about the whole elevator and annex bins is of non-combustible material, except the belts and cleaning machines.

"Another Minneapolis elevator, of 1,800,000 bush. capacity, under construction, is to be of practically the same construction as the Pioneer, except that the tank annex is to be all at one end and everything but the belts will be non-combustible. Even the cleaning machinery will have steel casings and frames. The elevator is notable as being mainly owned by its builders, who are known as elevator builders of great skill and experience, and who may be considered as building that which their skill dictates as best suited to the requirements of the place, and most likely to be profitable as a venture.

"Of the second type of steel elevators, or those having circular bins of steel plates, amongst the early examples are the electric elevator at Buffalo, and the C.P.R. elevator at Fort William, Ont. Later examples are the Great Northern of Buffalo, and the storage annex of the Pioneer steel elevator at Minneapolis, and the latest are the American Linseed Co. and the Buffalo Elevating Co.'s elevators under construction in Buffalo, and the annex of another under construction in Minneapolis. In all of these, except the Great Northern and the Buffalo Elevating Co., under construction in Buffalo, the bins are simple cylindrical tanks built of steel plates and placed in rows with their bottoms at ground level. The grain is taken in from grain boats or cars by machinery, placed in a house at the end of the rows or groups of bins, and is sent to the bins by overhead conveyers which carry and drop it into any desired one. Beneath each row of bins is also a conveyer by which the grain is carried from any bin back to the working house, where it is elevated and shipped or restored as may be desired. The bins are roofed overhead, but the sides are not covered. In the Buffalo examples, the bins are of various sizes, but in those at Minneapolis they are all of about 50 ft. diameter and 100,000 bush. capacity each.

"In the Great Northern elevator of Buffalo the circular bin system is quite differently treated. In it the bins are all supported on steel columns with their hopper bottoms at about the usual spouting height above the ground floor, and the elevator legs and working machinery, instead of being all at one end, is distributed throughout the house, and the grain is spouted from the bins to the boots and from the heads to the bins as in ordinary elevators. There are 30 circular bins of about 39½ ft. diameter and 75,000 bush. capacity each, and in their interspaces 27 circular bins of about 15½ ft. diameter and 12,000 bush. capacity. A number of irregular shaped interspaces formed between the small and large cylinders have been further utilized by connecting the cylinders by steel plates, thus making little bins of about 2,000 bush. capacity. The bins are housed around by steel framing and sheeting, and are surmounted by the usual upper stories and cupola for containing the elevator heads, spouting, weighing hoppers, etc. The elevator has a storage capacity of about 2,600,000 bush., and it is fitted for receiving from boats and for delivering to cars on tracks outside the house.

"In the elevator of the Buffalo Elevating

Co. (practically the Lehigh Valley Ry. Co.) the round steel bin system is being skilfully used in still another way. It is yet in the early stages of construction, but it is intended to be a working and storage house for receiving from lake boats and delivering into canal boats and cars. The circular bins are supported on steel columns, with their bottoms at spouting height above the ground floor. They are 15½ ft. diameter by about 70 ft. high, and placed a foot apart, which gives circular bins of about 10,500 bush. capacity and interspaces of about 5,000 bush. capacity, which are utilized as bins.

"The third type of fireproof construction, or that in which the bins are of tiles, has thus far been used only for storage annexes, and the only examples seen are two in Minneapolis. In these the bins are circular, of 50 ft. diameter and 100,000 bush. capacity each; their bottoms are at ground level, or concrete foundations, and they are filled and emptied by conveyers overhead and underneath. The walls of the bins are of specially moulded glazed hollow tiles laid in two thicknesses, with steel hoops built in to resist the internal pressure of the grain. Only the inside of the bins is used for storage; the interspaces are not utilized.

"Of the fourth, or concrete type, there is only one example, and that is an unfinished elevator at Duluth. The bins proper are being built in circular form, and in rows at about 4 ft. clear distance apart, with connecting walls to separate the interspaces. The bins are 50 ft. diameter and 100,000 bush. capacity, and the interspaces which are also intended to be utilized, are of about 30,000 bush. capacity each. The walls of the bins are of high class concrete, 12 in. in thickness at the lower part and about 9 in. at the top, and they are strengthened by steel hoops and diagonal wire lacing built in. The bins are being roofed over, but they are to have no housing around them.

"It is obvious, on considering the main characteristics of the elevators described, that the new materials which have been adopted in order to make them fireproof, have in great measure governed the larger features of the elevators, as well as the details of construction. When wood alone was used the rectangular plank bin was so clearly the best that no other was used, and the limitations of the material and mode of construction practically limited the general arrangement to groups of rectangular bins of 15,000 bush. or less capacity each. Bins of such material and size have the advantage of suitability for the storage of grain of all sorts and conditions, and lots of all usual sizes, but being of inflammable material, the risk of fire made it prudent to keep the aggregate capacity of the group, or single elevator building to something like a million bushels. On the other hand, steel, the first and most generally adopted material for wholly fireproof elevators, is best suited to the construction of bins of large size, of, say, 100,000 bush. capacity."

The main questions which have to be considered, Mr. Kennedy points out, are whether the elevator be built of wood or of fireproof materials; what are the chief requirements to which an elevator for the central part of the harbor should comply as regards its machinery and storage arrangements; and what are the materials of which the bins should be built. After going into some elaborate calculations as to cost of building, insurance and other charges, Mr. Kennedy recommends that any elevator built by the Commissioners for general use be made fireproof; that an elevator resembling the Great Northern at Duluth in its main features, but greatly reduced in size, and modified in structural details, with bins of about 12,000 bush. capacity each, would best answer the requirements of Montreal, and that steel would be altogether the most suitable and economical material.

At a meeting of the commissioners on July 15 the matter was under discussion for a considerable time, and on July 16 the following resolution was passed: "That the harbor engineer be instructed to prepare the necessary information to enable builders of elevators to make plans, specifications and tenders for the construction of a fire-proof elevator of 1,000,000 bush. capacity, the elevator to be placed at the inshore end of the basin, sec. 16, and the conveyers to extend to ships at the middle and upper piers, and the shore wharves between the canal and the Victoria pier, and to be so arranged as to be able to load six ships at one time. Plans, specifications and tenders to be in by noon, Aug. 27, and to be accompanied by an accepted cheque for \$25,000."

In connection with the provision of an elevator at the Windmill Point site, it was resolved on motion of R. Bickerdike, seconded by A. Racine: "That the secretary be instructed to communicate with Capt. Wolvin and his associates, with the Grand Trunk, the Canada Atlantic and Canadian Pacific railways, and any other large transportation companies, with a view to ascertaining on what terms they will operate an elevator and terminal facilities at Windmill Point, should the commissioners obtain a cancellation of the Conners contract."

The commissioners have instructed their attorney to take the necessary legal steps to forfeit the \$50,000 deposited by the Conners syndicate, on entering into a contract two years ago to build elevators.

SHIPPING MATTERS.

Sunday Steamboat Traffic.

The question of running steamers on Sundays came before Col. Denison in the Toronto police court, July 16, when Capt. Wigle, of the Lakeside, and Capt. Cooney, of the Garden City, the two boats operated in conjunction with the Niagara, St. Catharines and Toronto Ry., were charged with running their steamers to Port Dalhousie, the first on July 7 and the second on July 14, "for amusement or pleasure"; and Capt. O'Brien, of the Ar-

gyle, was charged with running his steamer into Toronto from Olcott, N.Y., on June 30, July 7 and 14. The proceedings were instituted by Crown Attorney Curry on information coming from the Lord's Day Alliance, which was represented at the hearing by its counsel, J. A. Patterson. W. H. Blake appeared in the cases against the Lakeside and the Garden City, and L. V. McBrady was in the cases against the Argyle.

There was no conflict of testimony as to the facts of the boats being operated and the police officers called simply gave formal evidence of the arrival and departure of the boats on days when the infringements of the act are alleged to have taken place. On behalf of the companies, the pursers and other officers were called to show that so far as the Lakeside and Garden City were concerned, the boats were run for the convenience of through travellers who complained that they were left at points on their route greatly to their inconvenience. No excursion tickets were issued, the fares charged being the ordinary fares, and the times of arrival and departure the same as on week days.

In dismissing the cases Col. Denison stated that he was of opinion that the act contemplated dealing with steamers going out on the lake and returning for the sail only and had nothing to do with through travel at all. If people hired a boat for a Sunday excursion it would clearly be a violation of the law. Things had changed very much in the last 30 or 40 years and Sunday traffic was a necessity. It was not done out of disrespect for the day, but because it was a necessity. As to the case against the Argyle, Col. Denison, in dismissing it, expressed his opinion that the act contemplated an excursion starting in Ontario, and not one from a foreign country. In his opinion the Dominion Parliament alone has power to legislate to meet such a case.

Since the cases were dismissed the boats have been run on Sundays as on week days and some of the other companies have also been running in connection with some route or other. The Niagara River Line is not operated on Sundays, and the Richelieu and Ontario Navigation Co.'s boats do not leave or arrive at Toronto on Sundays, and this state of affairs is not likely to be changed in

the near future at all events. The number of passengers patronizing the boats that do run on Sundays is not very large, and according to reports showed a decrease on July 21.

In regard to the fining of Capt. Tyrie for running an excursion on a U.S. registered vessel from Buffalo to Port Colborne, Ont., by the Fort Erie police magistrate, Justice Ferguson on July 23, granted a writ of certiorari to bring the matter before the High Court in order that the conviction might be quashed.

A Canadian steamer, the Aletha, had some difficulty at Brockville, near Ogdensburg, N. Y., on July 14, while carrying a U.S. excursion party. The villagers had passed a by-law prohibiting the landing of excursion steamers on Sunday and the chief of police was on the scene when the steamer arrived, to enforce the by-law. A writ has been served on the chief to restrain further action on his part, and the matter has been referred to the Secretary of the Treasury at Washington, as the steamer, although Canadian, was sailing with a U.S. excursion, and was cleared by the U.S. customs from Ogdensburg to Gananoque, and, under international law, it is claimed, has a right to land at intermediate ports. Proceedings were taken against the captain of the Aletha for carrying an excursion out of Brockville, Ont., but it was withdrawn on Capt. Roys paying the costs and promising not to offend again.

Protection for Shipbuilders.

In a recent interview T. Long, Secretary of the Northern Navigation Co., and a director of the Collingwood, Ont., Shipbuilding Co., spoke of the shipbuilding industry and marine matters generally. He was particularly severe on the policy of allowing vessels built in the U.S. and registered in the name of some one living in Canada, to come in and do business in Canadian waters without paying duty. "This is a most iniquitous policy, and Canadians are altogether too generous in their treatment of their neighbors in matters respecting the marine business. If any Canadians go to the U.S. and attempt to secure employment in the construction of these vessels,

MANITOBA

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

CROPS.

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

STOCK.

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

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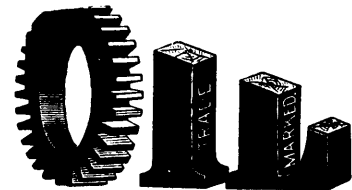
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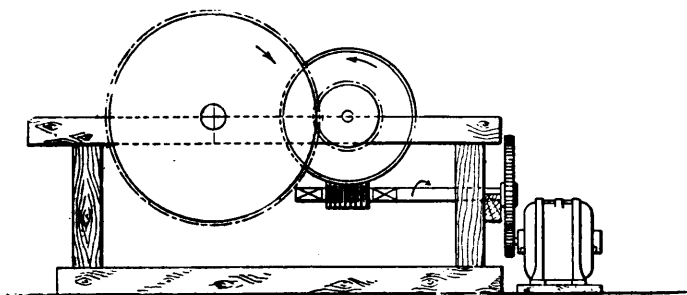


FIG. 1. LIVERPOOL MARINE RAILWAY.

they are promptly sent home; and if a Canadian vessel becomes disabled in a U.S. port, and goes on a U.S. drydock, the owners have to pay duty on those repairs before she leaves."

Speaking of government aid to the shipbuilding industry, Mr. Long pointed out that a large amount of public money has been given to railways, but nothing to aid steamboat transportation. Shipbuilding has not received any encouragement from either provincial or federal governments. A large amount of the carrying trade of the country is done by vessels, and the facilities provided by private capital have not been aided in the least.

"In order to encourage shipbuilding the Government should give aid to shipyards," said Mr. Long, "and that aid should be based on the tonnage and the class of vessel constructed, in order to compete with U.S. and English shipyards, because all materials which go into iron or steel vessels are manufactured in the U.S. or Great Britain, and have to be brought here at a greater cost to Canadian builders than if taken to U.S. or English shipyards. The shipbuilding industry is just springing into existence in Canada, and skilled labor has to be imported. If the government subsidized shipyards it would give a great impetus to the industry. Any material, whether raw or otherwise, now going into the construction of vessels here, and not made in Canada, ought to be exempt from duty.

"I would not like to say," continued Mr. Long, "what the bounty ought to be, but I do think a bounty ought to be paid, whether on wood, iron or steel vessels. The inland marine is nearly depleted of Canadian bottoms, and there is a great need for the construction of Canadian vessels. If the shipyards were encouraged in the way I speak of, it would largely increase the number of Canadian vessels on the lakes."

Mr. Long also pointed out the need of drydocks for the inland marine. The only Canadian drydock on the upper lakes is the one at Collingwood. It has been built 18 or 19 years and has been a great public service, but, owing to the increased size and tonnage of vessels now being built, it requires to be enlarged to meet the present and growing requirements of the marine business. It would give accommodation to the ports of Parry Sound, Midland, Meaford and Owen Sound, and also to Lake Huron ports, if enlarged to meet present needs. The Collingwood shipyard has now on the stocks a steel steamer 326 ft. long by 43 ft. beam, which will have to go to a U.S. dock when repairs are needed.

Steel Shipbuilding in Canada.

This question is kept to the front in a variety of ways, and is being discussed from all points of view. Capt. McDougall, who is one of the directors of the Collingwood Shipbuilding Co., and who also builds whalebacks at West Superior, Wis., in a recent interview gave his views as to what were the necessary conditions that would have to prevail before

Canada would be able to compete with Great Britain or the U.S. as a shipbuilding center. He said: "Steel shipbuilding in Canada cannot be a great success until some protection is given against the evils now existing. In the U. S. where there is cheap steel many shipbuilding yards, encouraged by protection, are now selling ships for Canadian

coastwise trade, while Congress has forbidden Canadian or any ships save those built in the U.S. to trade coastwise in U.S. waters. The only condition upon which a foreign vessel can come under the U.S. flag is by special act of Congress, or when it is wrecked on the coast of the U.S., and is repaired in the U.S. at a cost of more than three-quarters her value.

"If a U.S. vessel is repaired in Canada, she must pay 50% of this cost as customs duty at the first U.S. port she enters. Thus U.S. shipyards have protection for both building and repairing ships, while Canadians have little or no ship protection. The Canadian coastwise trade is freely open to all British ships, and British ship registers are open to all foreign-built ships, so that when a ship is wanted in Canada it can be bought in the U. S., with all its appurtenances, which belong to many branches of trade, and by a little red tape can be enrolled under British registry and hail from some British port by putting its name on her stern and buying a British flag. A Canadian vessel can get repairs in a U.S. port and pay but little customs charges for such repairs.

"The U.S. Government further protects its Pacific coast shipyards, by allowing a large percentage in favor of Pacific coast shipyards when tendering for Government work, and at present there are U.S. Government ships under contract at San Francisco and Seattle at prices from \$100,000 to \$200,000, more than they could be built for on the Atlantic coast. In Canada, when Government ships are wanted, bids are asked for in Canada and also in Great Britain; the details of their specifications and fittings are of a class such as can only be got in Great Britain, and the Canadian shipbuilder would have to pay duty on these parts. Unless the Canadian is the lowest bidder the contract is let to an outsider, who can get the ship built in Great Britain, Germany, the U.S. or elsewhere. Thus an industry

which, with its great quantity of raw material, Canada is peculiarly fitted for, is hampered, and the heavy traffic along the frontier is carried by ships not made in the Dominion. If some restriction were laid upon British ships and foreign-built ships of English register engaging in the Canadian coastwise trade; if the Canadian Government would pay a small bounty on all steel ships built in this country, and if an increased customs duty was charged on repairs to Canadian ships in foreign ports, steel shipbuilding here would be so stimulated that in the near future steel ships might be sold

with their cargoes in foreign countries, as formerly wooden ships, built in Quebec, were sold all over the earth."

Marine Railway Electrical Equipment.

An interesting electrical installation of somewhat novel character has been made recently at Liverpool, N.S. It was devised for hauling vessels out of and lowering them into the River Mersey, a distance of over 500 ft. on an incline having a grade of half an inch to the foot. Some years ago the Liverpool Marine Railway Co. had a slip of this kind in operation, whose motive power was horses. A framework carried two horizontal gears attached to which was a beveled gear with a vertical shaft projecting upward, and working on this were two long arms or sweeps. To these were hitched two or four horses traveling around on an upper platform, which was reached by a runway outside the building. This animal power was, of course, limited in its capacity, and extremely slow, it taking three to four hours to haul up a small vessel in the cradle. While the vessel was undergoing repairs, it was held from running back by a great dog in a ratchet. When the work was finished it was the custom to knock out the dog and let the cradle go "by the run" back into the water. This crude method soon wrecked the cradle and the track as well. The result was that the whole plant fell into disuse and decay.

During the past year a new company was organized with the object of rebuilding and equipping the slip in an up-to-date manner, and when it came to the question of the best power it was decided to use an electric motor, there being, moreover, a lighting system in town driven by water power, from which the current could be obtained very cheaply. A 30-hp. induction motor has been installed, which will raise and lower ships of a burden up to 400 tons, over a track which is 600 ft. in length, in the remarkably quick time of 25 minutes. The equipment has so far proved a very economical and highly satisfactory investment. The motor is geared to a worm, which in turn operates a further train of gears, as illustrated in figs. 1 and 2 herewith. On the shaft of the large and last gear is a sprocket which engages an endless two-inch chain that hauls the cradle. The whole thing is as simple as possible. It will, of course, be understood that the gears and sprockets are within the frame and not outside, and it may be added that the frame is much heavier than shown. It was found feasible to use much of the old gearing. The framework



FIG. 2. LIVERPOOL MARINE RAILWAY.

was set on a bed of concrete 3 ft. deep and fastened firmly into place by heavy rods running up through the concrete and frames. It also butts against the end of the slip, so that there is not the slightest chance for it to move.—Electrical World.

Registration of Foreign-Built Ships.

Canada's right to tax foreign-built ships is the real issue involved in the case of the Algoma Central Ry. Co. vs. the Crown which is now before the Exchequer Court, and, doubtless, whichever way judgment is given the case will be appealed to the Judicial Committee of the Imperial Privy Council. The A.C.R. Co. contests the right of the Dominion Government to tax the United States built str. Minnie M. under the following circumstances. After purchasing the steamer the Co. applied to the British consul in Chicago, who in accordance with the British merchants shipping act issued to the vessel a conditional British register good for six months within which time the vessel would have to apply at a British port for a permanent register. When application was accordingly made at Sault Ste. Marie, Ont., for such certificate of British registry, the collector of customs before issuing the certificate exacted duty to the amount of \$3,500 on the vessel. This he did under section 409 of the customs tariff, which reads: "Ships and other vessels built in any foreign country, whether steam or sailing vessels, on application for Canadian register on the fair market value of the hull, rigging and all appurtenances, except machinery, 10%, ad valorem; on the boilers, steam engines and other machinery, 25% ad valorem."

The application made by the owners of the Minnie M. was for a "British" register, in a British port, and they contend not only that it could not be refused in view of the provisional register granted by the British consul in Chicago, but that its issue in a British port could not legally be made conditional upon the payment of a duty or tax. Of course the contention of the customs department is that the government has the constitutional right to tax any foreign article coming into the country for use. But the fact remains that had the Minnie M., after receiving her temporary register at Chicago, been sailed to Liverpool she would have been granted a permanent British register there without fee; with that certificate of register, constituting her a British ship, the vessel could not be hindered from engaging in the coasting trade in Canada just as if she had been built and registered in this country. As a matter of fact there is no such thing as a "Canadian" register; and the customs tariff act would perhaps be better worded if it read, "on application for registry as British ships in Canada." However, under the tariff as it stands duty has for

years been charged under conditions similar to those under which the Minnie M. was taxed, and the validity of the tax had never been called in question until the owners of the Minnie M. put up the contention that it is in contravention of the Imperial registration policy.

The Coasting Laws.

The Toronto Globe, the leading paper supporting the Dominion Government, has spoken out clearly on the coasting laws. Its views are entirely identical with ours, and in the interest of Canadian vessel owners it is to be hoped that the Government will be impressed by the argument. There should be no suspension of our coasting laws without reciprocal concessions from the U.S., and no repetition of the illegal order-in-council of two years ago, by which U.S. vessels were permitted to carry grain from Fort William to Canadian ports on the Georgian Bay.

The Globe says:—"Mr. Tarte, discussing matters connected with water transportation with the Montreal Harbor Commissioners and representatives of Montreal's shipping and trade interests, asked whether they had considered that there was not enough Canadian boats to carry any increase of traffic, and whether they favored allowing American vessels to do the business. We quite see that the question Mr. Tarte raises has more than one side, but when they are all considered, the answer, we should say, must be that while the American coasting laws are in their present state we must maintain ours. If we did otherwise we would virtually sign the death warrant of our inland marine. It is small now, and it would never grow larger. The advantage which American vessels would have in being free to engage on both sides of the lakes, while our shipmasters were confined to this side, would inevitably clear us off the lakes.

"As matters are now a Canadian vessel has an advantage in carrying on the through trade to Montreal. It can carry cargo from either a Canadian port or an American port, while an American vessel can only carry from an American port to a Canadian port. This happens because the eastern terminus of the route is Canadian. Until the value of the St. Lawrence route is made manifest Canadian capital may not be readily found to embark in the building of the larger class of vessels which can now be used in the canals, but that state of affairs will not last very long. With a monopoly of the Canadian trade and an equal chance at the international trade the prospect should be encouraging enough to stimulate the creation of a Canadian fleet, a fleet not only large enough to handle the traffic coming from the west to Fort William, but with vessels to spare to engage in the international trade. When the Americans aban-

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don their coasting laws it will be time enough for us to abandon ours."

Notices to Mariners.

The Department of Marine has issued the following notices :

No. 39, June 25, 1901—New Brunswick. Buoys off Heron Island.

No. 40, June 26—British Columbia. Currents in the Straits of Juan de Fuca.

No. 41, June 28—New Brunswick—1. Miramichi Bay, lightship. 2. Gagetown, light-house re-erected.

No. 42, July 1—British Columbia—1. Dorcas rock, Ballinac channel. 2. Northwest bay, hydrographic notes.

No. 43, July 2—Canadian list of lights and fog signals. New edition. A list of all the lights and fog signals in the Dominion of Canada, corrected to April 1, 1901, has just been published. Copies will be supplied to mariners free on application. Quebec—2, removal of wreck from River St. Lawrence ; 3, Quebec bridge, false work.

No. 44, July 3—Ontario. Improvement in Foot's dock, increase in strength of light.

No. 45, July 3—Nova Scotia—1. Buoys in the approach to Liscombe harbor, Newfoundland ; 2. Western Bay Point, light and fog alarm. 3. International code signals at Newfoundland, light stations.

No. 46, July 5—Ontario—1. Wreck of the Specular. 2. Survey buoys placed temporarily in St. Lawrence river.

No. 47, July 8—Nova Scotia. Victoria beach lighthouse.

No. 48, July 22—Ontario. Southeast shoal lightship. A lightship established and maintained by the Lake Carriers' Association, has been moored in 38 ft. water, one mile southeastwardly from the southern extremity of the Southeast shoal, Pelee passage, Lake Erie.

Maritime Provinces Shipping.

The Minas Basin Steamship Co. (Ltd.) has been incorporated under the Dominion Companies Act, with a capital of \$25,000, to carry on a general shipping business.

The new wharf at Leursport (Burnt Bay), Newfoundland, extends 710 feet from the shore ; is fitted with railway sidings, and has a storage capacity of 40,000,000 ft. of lumber.

The Colchester Steamship Co. (Ltd.) has been given a Dominion Charter to operate steam or sailing vessels between Canadian, British or foreign ports. The capital is fixed at \$80,000.

The Bras d'Or Steamboat Co.'s str. Weymouth was fitted with two new boilers, and other machinery, and was otherwise improved before she was put on the North Shore route this season.

The Collin's Bay Wrecking Co.'s tug Petrel, which was sunk on going to the rescue of the str. Assyrian off the coast of Newfoundland, has been raised and taken to St. John's, Nfld., for repairs.

Twenty-eight new schooners have been added to the register at Lunenburg, N.S., this season, 26 of which were built at that port. Twelve more are under contract for launching this season.

The Halifax Shipbuilding Commission is about to circulate a statement showing the advantages of Halifax as a site for a yard, and to ask the Provincial Government to receive a delegation to discuss the question.

The Wabana Steamship Co. (Ltd.) has placed the str. Greyhound in service between Bell Island and Killigrews, via Portland Cove, making three trips daily. She will also make one trip a week each way between Bell Island and St. John's, Nfld.

The Fredericton and Woodstock Steamboat Co. (Ltd.) has been organized as follows : President, J. S. Neill ; Secretary-Treas., H. C. Grant ; other directors, D. Gilman, M. B. McNally, J. G. Rogers, W. Fisher, and F. R. Brooks. It is proposed to build a steamer to ply between Fredericton and Woodstock.

A wreck chart showing the number of wrecks that have taken place in and around Cape Race has been prepared by the Department of Marine and Fisheries of Newfoundland. It is estimated that hundreds of lives have been lost, and that \$20,000,000 of property has been destroyed along the coast during the 40 years under review.

Province of Quebec Shipping.

Up to July 1, 252 vessels representing 494,000 tons, arrived in the port of Montreal from the sea.

Robert Reford, shipping agent, of Montreal, has been elected to the Montreal Harbor Commission, in succession to the late Andrew Allan.

The contract for a steel steamer to replace the Druid in the Quebec service of the department of Marine and Fisheries, has been awarded to Fleming & Fraser, of Paisley, Scotland. The price is \$110,960. (May, pg. 151.)

The Quebec Harbor Amendment Act of last session, guaranteeing the bonds of the Great Northern Ry. Co. for increased elevator facilities at the port, came into force on July 24 by proclamation.

It is reported that Col. McNaught, Vice-President of the Great Northern Ry. of Canada, is in Paris for the purpose of establishing a winter ocean steamship service between Quebec and Europe. The proposal is to use vessels of the style of the Russian ice-breaker Ermak.

It is reported that a marine railway is to be constructed for the use of the R. & O.N. Co.'s boats at Sorel. The cost will be about \$100,000 and the Co. will ask the town to grant a bonus. In the event of the town declining to grant a bonus it reported that the Co.'s repair shops will be removed to Quebec.

The Imperial Hydrographic Survey has had a survey made by Staff-Captain W. Maxwell, of the two navigable channels of the St. Lawrence below Quebec. The report on this, just issued, sums up in favor of the north channel as possessing greater breadth, deeper water, and the utmost freedom from danger.

The Hamburg-American Packet Co. recently sought to recover from the Dominion Government damages for injuries to its str. Arabia, received owing, as alleged, to the Government not maintaining a depth of 27½ ft. of water at Sorel, as shown by the gauge there. Justice Burbidge in the Exchequer Court decided that the Government was in no wise responsible for the accident. The case was dismissed with costs.

Sir Wilfrid Laurier, at a recent meeting with the Quebec Harbor Commissioners, heard their views on the question of improving the St. Lawrence from Quebec to the sea, and in reply informed the Commissioners that the improvements asked for in the memorial presented to the Government in April last would be carried out next season. The improvements proposed include the laying down of more gas buoys, the substitution of occulting for fixed lights, the dredging and straightening of certain channels, the erection of piers, and the placing of steam sirens instead of fog guns at different points. The Deputy Minister of Marine, who accompanied the Premier, stated that most of the improvements were already in progress. The question of the north channel was also brought up,

when he stated that nothing definite on this head could be agreed to until the survey now proceeding had been completed.

The Polson Iron Works, of Toronto, are building a large dredge for the Dominion Government for use on the lower reaches of the St. Lawrence. The work on the hull, which is of steel, is so far advanced that the launching will take place early in Aug. The dimensions of the dredge are: length, 160 ft.; breadth, 42 ft., and she will draw 12 ft. 6 in. There is a well in the centre through which the suction pipe will be handled. This pipe can be dropped 70 ft., if necessary, and will be hauled up into the well when the dredge is moved from place to place. The machinery will be driven by a triple expansion engine with cylinders 20, 31 and 50 ins. diameter by 25 ins. stroke, to which steam will be supplied by four locomotive boilers 6 ft. in diameter and 25 ft. in length. The engine will be capable of developing 1,200 horse-power. The pipe will be operated by a centrifugal pump having a suction of 36 ins. and will be capable of discharging 2,000 cubic yards of material an hour. In the estimates for the current year the Dominion Parliament voted \$250,000 for the dredge.

Ontario and the Great Lakes.

The Booth Co. is reported to be arranging to have a steamer for the Lake Superior south shore route built next year.

Engineers Chapleau and Dufresne are making a survey of the St. Lawrence between Kingston and Prescott with the str. Jessie Bain.

It is proposed to establish a daily service on the Rideau next season between Kingston and Ottawa, for which another steamer is to be built.

George Batten, river pilot of the R. and O. Navigation Co., recently piloted three vessels, each drawing 14 ft. 6 in., from Kingston to Montreal.

The steamer Lakefield, of the Algoma Central S.S. Line, is in dry dock at Detroit undergoing repairs, having collided with a pier in the Welland Canal.

There has been placed on the Buffalo-Crystal Beach, Ont., passenger route a steamer which was formerly in service as a car ferry between Cleveland and Euclid.

The customs authorities have declined to permit the use of U.S. tugs, as asked for by a deputation from Sarnia, for the purpose of towing logs from Spanish River.

The Algoma Central S.S. Line's str. Ossifrage has been taken off the north shore route, and is entirely engaged in carrying freight and passengers between the "Soo" and Windsor.

Geo. Chambers, of Toronto, is having built at Chicago a steel pleasure steamer, 180 ft. long, and 25 ft. beam. She will have four tenders equipped with gasoline motors.

During June 4,519,075 tons of freight passed through the Sault Ste. Marie canals, of which 1,235,055 passed through the Canadian canal, 986,489 being east bound, and 248,566 west bound.

The steam-tug C. A. Ranney, belonging to Captain R. Boyter, of Little Current, has been wrecked in the channel there by a boom of logs. The tug was 60 ft. long and was valued at \$1,000.

Extensive harbor improvements are being carried out at Port Burwell. Two jettys are being built, and dredging is being carried on with a view of admitting vessels drawing 18 ft. of water.

The Toronto City Council is considering a proposal to renew the Toronto Ferry Co.'s lease at Hanlan's point for 21 years at \$500 a year and taxes. The Co.'s improvements are assessed at \$100,000.

J. H. Walker, a cook on board the Bon-Ami, has been arrested for smuggling whisky from Port Arthur to Duluth, Minn. It is alleged that considerable smuggling is carried on by employes of lake vessels.

F. W. Glen writes to the New York Sun, urging the U.S. to protest against the construction of the canal from French river to the Ottawa river, on the ground that it would give an entrance for British war vessels to the Upper lakes.

The Minister of Public Works proposes to complete his inspection of the route of the proposed Ottawa and Georgian Bay Canal in August. He has already made the trip down French River, and is highly pleased with the waterway there.

The Thousand Islands Steamboat Co. chartered the Robinault, of Montreal, for the St. Vincent route, but she could not pass the Canadian or the U.S. inspectors. The Co. will do without the additional steamer it had proposed to operate this year.

U.S. wrecking steamers came into Canadian waters to work on the str. Preston, abandoned in Lake Superior, and were seized by the customs authorities, but were subsequently released. The Preston has since been towed into Port Coldwell.

The Thousand Islands Steamboat Co. has leased the only dock at Fine View, which is the only place passengers for the park can be landed on Sundays, and has secured an injunction against Capt. Visger, who used the dock in spite of protests, from further using it.

The Donnacona, a sister ship to the Strathcona, built in Great Britain for the iron ore trade between Michipicoten and Hamilton, is on her way from England to Hamilton. Both steamers are owned by the Quebec, Hamilton and Fort William Navigation Co., of Hamilton, Ont.

W. Fraser, engineer of the Dominion Public Works Department, is making a survey of the north channel of Georgian Bay, with a view of ascertaining what improvements are necessary in the event of navigation being opened up between Sault Ste. Marie and Lake Nipissing, via French River.

The Collingwood Corporation has agreed to renew for 21 years the dry dock franchise lately acquired by the Collingwood Shipbuilding Co., with power to enlarge the same, the dock to be free from all municipal taxation, and the value for school taxation to be fixed at \$100,000, irrespective of any increase in value.

Press despatches recently stated that F. H. Clergue had contracted with the Collingwood Shipbuilding Co. for building a barge 390 ft. long, 46 ft. beam, 26 ft. depth of hold, with a cargo capacity of 6,500 tons of iron ore, and that it would be ready for next year's trade between Michipicoten and Lake Erie. On July 27 we were informed that the contract had not been closed.

The licensed carrying capacity of the passenger steamers running out of Toronto is as follows: Chippewa, 2,000; Corona, 1,450; Kingston and Toronto, 1,000 each; Chicora, 875; Argyle, 800; Modjeska, 800; Garden City, 760; White Star, 700; Macassa, 615; Lakeside, 525; Canada, 490; Tymon, 450; Richelieu, 410; Corsican, Algerian and Hamilton, 400 each; Persia, 150; and Ocean, 125.

The R. and O. N. Co.'s new str. Kingston made her first trip on July 4, and with the exception of a few days, during which one of her cylinder heads was replaced after being blown out, she has been on the run between Toronto and Prescott. The officers are: Captain, H. Esford; chief officer, M. Kane; 2nd officer, C. Renford; chief engineer, A. Milne; 2nd engineer, P. Bourette; purser, J. B. Tinning; steward, F. M. Hepburn.

It is reported that the high rate of insurance is the only thing that stands in the way of the successful operation of a regular line of freight steamers between Chicago and Europe. Two of the steamers which sailed from Chicago on the opening of navigation have completed the round trip, and the returns are said to be very satisfactory. Four round trips a season will be the limit of each vessel during the season of navigation.

Senator Forget, President of the R. and O. N. Co., in a recent interview referred to the intention of the Co. to build two new steamers for the Montreal-Quebec route, each of which will have much larger accommodation than either of the vessels of the line. One of the new boats will be launched next year, and the second in 1903. With these new boats the President said he hoped to see the receipts reach \$1,500,000. The receipts for the present year are expected to be over \$1,000,000. In 1895 the gross receipts were \$689,000, which was increased to \$901,000 for the year 1900.

The steamer White Star, which was chartered to the International Navigation Co., of Buffalo, for the present season, but which has not been operated by them for some weeks, is understood to be sold to a company running a line between Buffalo and Dunkirk, N.Y. The purchase was made by D. F. Toomey and D. Reed, of Dunkirk, and it is understood that the Dunkirk Cruising Club is interested in the purchase. The steamer will, on her arrival in Lake Erie, be completely overhauled and refitted, and will be renamed the City of Dunkirk. To obtain a registry in the U.S. work to the extent of three-fourths of the value of the vessel must be done. While she was licensed to carry 750 passengers in Canada, the U.S. system of measurement will enable her to carry 1,000.

The steamer Midland Queen sailed July 27, from Manchester, Eng., with a general cargo of 3,000 tons for Chicago. She was built at Dundee, under the highest class British Corporation survey, her dimensions being: length, 255 ft. over all; breadth, 42 ft. 6 in.; depth, moulded, 23 ft. 8 in. She is driven by triple expansion engines, the cylinders being 18 in., 30 in. and 50 in. respectively, with 36 in. stroke. She was built under the supervision of Captain Featherstonhaugh, of Toronto. Her engines were supplied from the Tyne. The vessel is owned by the Midland Navigation Co. (Ltd.), which was recently incorporated under the Ontario Co.'s Act, with a capital of \$200,000. The officers are: President, A. Hill; Vice-President, J. Playfair; other directors, D. L. Whitaker, W. L. Morris, and J. S. Playfair.

After having traversed French river, partly by tug and partly by canoe, the Minister of Public Works, Mr. Tarte, formed a high opinion of it as a waterway. In an interview on his return to Ottawa he said, "Much has been said about the river, its disadvantages and the many difficulties that would have to be overcome in the scheme of improvement desired by residents of the district and marine men generally; that is, a 20-ft. channel from Georgian Bay to Lake Nipissing. I must confess, however, that the trip was a surprise to me. The river is deep all the way, 40 to 50 ft. in most places, and the engineering difficulties are not very great. Dams will be needed at two or three rapids, with one lock at each dam. There will be no great difficulty in carrying out the work, which would forge another link in our transportation system."

The old Dominion cruiser Druid, purchased by the Toronto Navigation Co., has been thoroughly overhauled and fitted for passenger traffic. She arrived in Toronto from Quebec waters, and W. Evans, inspector of hulls, made his official inspection, July 27, prior to

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granting the official certificate to carry passengers. The official record shows that the *Druid* was built of iron in 1856 at Glasgow, Scotland, by Todd, McGregor & Co., was re-engined in 1876, and received a new boiler in 1890. She is a screw-steamer, and makes about 10 miles an hour. Her dimensions, according to recent measurements, are: Length, 160 ft.; breadth, 21 ft. 6 in.; depth of hold, 10 ft. 4 in. The number of passengers she will be licensed to carry has not yet been computed. The *Druid* has been renamed by her new owners the *Niagara*, and she has been placed on the Toronto-Youngstown route. The T.N. Co.'s other steamer, the *Canada*, has been placed on the Toronto-Oswego route.

There was launched from the yards of the Polson Iron Works, Toronto, July 6, a steel ferry steamer for the Sault Ste. Marie Ferry Co. The vessel, which was named the *Algoma*, entered the water sideways, instead of stern first, as is the general practice. The *Algoma* is a stoutly-built craft, constructed to class 100 A1, at Lloyd's, and is planned after the pattern of the ice crushers now in service at Sault Ste Marie. The hull and deck frames throughout are of steel, and the lines of the boat are those which experience has proved to be best adapted for withstanding ice and rough winter navigation. When completed the *Algoma* will have three decks, main, promenade, and overhanging shade deck, providing accommodation in all for 600 passengers. Her dimensions are: length, 104 ft.; breadth of hull, 26 ft.; breadth over guards, 33 ft., with a draft aft of 10 ft. The *Algoma* will be driven by a single screw driven by fore and aft compound jet condensing engines of 18 in. and 36 in. diameter by 24 in. stroke. Steam will be supplied by a Scotch boiler 11 ft. diameter by 12 ft. long, and with a working pressure of 160 lbs. The total cost of the *Algoma* will be \$50,000. On her arrival at Sault Ste. Marie the *Algoma* will be placed on the day service between the Canadian and the U.S. side of the river.

British Columbia Shipping.

A judicial order has been made to wind up the Vancouver Coast Line Steamship Co., which operates the str. *Saga*. It is expected that the boat will start running again very soon.

Seattle despatches state that there is a probability of an amalgamation of steamship lines on the coast, the principal lines interested being the Pacific Coast and the Dodwell Co.

The C.P.R. has offered to place the steamship *Empress of India* at the disposal of the Duke and Duchess of Cornwall and York for their trip from Vancouver to Victoria and return.

The keel has recently been laid at Vancouver for the Government cruiser to be built at Wallace's shipyard there. She will be of wood, and will be fitted with engines to steam 12 knots an hour. Her length is 140 ft., with 24 ft. beam. She is to be ready for launching by March 1, 1902.

The Federation Canning Co. has had built at Port Guichon for its service, a tug which has been named King Edward VII. Her dimensions are: Length, 67 ft.; breadth, 13 ft. 9 in.; draught, 7 ft. She is to be fitted with 8x16 fore and aft compound engines, having a 14-inch stroke.

The new freighter *Trader*, belonging to Victoria, has been given a trial trip which proved satisfactory. Her dimensions are: Length, 101 ft.; breadth, 22 ft. 6 in.; depth, 8 ft. 2 in. Her engines are fore and aft compound condensing, with 10 and 20 in. cylinders and 16 in. stroke. An auxiliary pump is attached and the hoisting gear is so arranged that it can be worked without interfering

with the running of the main engines. The vessel's gross tonnage is 200 tons, and her register tonnage 150 tons.

The Revelstoke Navigation Co. is building a steambot 130 ft. long, 24 ft. beam, light draught, with accommodation for passengers and for 30 or 40 tons of freight, to run between Revelstoke and the Big Bend district north of there, which is a promising mining camp. The machinery, which is being built by the Polson Iron Works, Toronto, consists of one pair of stern wheel engines 12x26, with locomotive boiler 60 in. x 21 ft. 6 in., carrying 200 lbs. steam pressure. The officers of the Co. are: President, F. McCarty; Secretary-Treasurer, G. S. McCarter; other directors: T. E. L. Taylor and D. Robinson, all of Revelstoke. (July, pg. 221.)

The B.C. Board of Trade, in its recent annual report, has the following in reference to shipbuilding in the Province: "The lumber trade is suffering from discrimination in freights 1s. 3d. to 2s. 6d. per thousand feet, compared with Puget Sound ports. This discrimination could be overcome by building the necessary vessels in B.C. The vessels being owned here, the freights instead of, as now, being paid to foreign owners, would be circulated in Canada. The men employed in the shipbuilding and as mariners would become a wage-earning and money circulating medium and their families would settle in the Province. The benefits to be derived, directly and indirectly, would be substantial. It is not easy, if at all possible, to obtain capital for such an enterprise under present conditions, hence the necessity for Dominion Government aid. Vessels of 600 to 1,000 tons would suit the trade, and a bonus of, say, \$10 a ton for vessels of 450 tons and upwards built in British Columbia of either iron, steel or wood, would be sufficient inducement during the first five years, afterwards the bonus could be reduced. The main object is to get it started on a firm footing."

Yukon and Northern Navigation.

When the Yukon River broke up the river steamer *City of Paris* was carried by an ice floe from the river into Bering Sea, but managed to get back to port under her own steam.

The Clifford Sifton, a stern-wheel steamer, when coming off the British Yukon Navigation Co.'s slipway at White Horse recently, turned turtle and now lies under water.

The river steamers now make the voyage from Dawson to White Horse in about 68 hours, the best time recorded between the two points. Last year the time required for this trip was four days.

J. F. Lee, Traffic Manager of the White Pass and Yukon Ry., says that there was 3,500 tons of freight at White Horse, for shipment to Dawson, when he came through on his way to Vancouver recently.

S. F. McMichael, Chief Customs Inspector, has gone to the Yukon for a three months' trip, and while there will investigate the seizure of a U.S. steamer at Dawson City by the Collector of Customs there. The seizure was made on behalf of a number of the crew who had claims against the boat for wages.

The White Pass and Yukon Ry. purposes putting on a fleet of freight steamers to work in connection with its railway to handle freight consigned to Dawson from Skagway, at rates which will enable Skagway merchants to supply Circle City, Eagle and other U.S. mining camps below Dawson. The haul from Skagway to Dawson by this line will be 575 miles by rail and boat.

The Yukon river traffic is practically controlled by the British Yukon Navigation Co., and it is worked in harmony with the White

Pass and Yukon Railway. Three new boats have been added to the river fleet this season, and two others bought, making a total of 20 vessels; yet, says Faith Fenton, it is anticipated that it will take them all to handle the freight from White Pass to Dawson during the season, so great is the quantity.

Switzerland has devised a practical method of putting an end to frequent disputes with regard to the ages of children. The steamboat authorities have decided that in every case where doubt may arise the child must be measured. All children under 2 ft. in height are to have free passage; those between 2 and 4 ft. are to pay half fares, and full fare will be charged for all over 4 ft. in height.

A new trans-Pacific record has been made by the C.P.R. steamship *Empress of China*, which arrived at the quarantine station at Victoria, July 3. She made the run from Yokohama, 4,300 miles, in nine days and 18 hours. The high speed necessitated the burning of 140 tons of coal a day on the trip, as against 90 tons, the ordinary daily fuel consumption. The best previous time made by a C.P.R. liner was 10 days and 14 hours by the *Empress of Japan* in 1897.

Masters in the trans-Atlantic trade are invariably courteous to their passengers, but when one of them was asked to steer the ship over towards the horizon so that a lady could see what it was like at a near view, he condescended to collapse. Another master hauled his steamer well in shore in the Gulf of St. Lawrence to give a better view of a stranded steamer belonging to a rival line. A lady insisted upon knowing what put her there, and the captain replied without the faintest shadow of a smile on his weather-beaten countenance, "The propeller, madam, the propeller."

Among the Express Companies.

Jas. Bryce, Vice-President and Manager of the Canadian Ex. Co., sailed on July 27 for England.

The Northern Pacific Ex. Co. has extended its service on the Minnesota & International Ry., running from Brainerd, Minn., north.

In our last issue, in a paragraph about the recent visit of W. S. Stout, Vice-President and General Manager of the Dominion Express Co., to the Argentine Republic a sentence read: "The object of his visit has not transpired, but we are informed it was on express business." It should have read: "It was not on express business."

A recent telegram from Winnipeg stated that the American Ex. Co. had decided to withdraw from Manitoba on Sept. 1 in consequence of the transfer of the Northern Pacific Ry. lines to the Canadian Northern Ry. As a matter of fact the American Ex. Co. has not operated in Manitoba for years, the express business over the N.P. lines having been carried on by the Northern Pacific Ex. Co. No change has so far been made in this respect. The Dominion Ex. Co. operates on Canadian Northern trains between Winnipeg and War Road, Minn., and between Portage la Prairie and Erwood, Sask.

Telegraph and Cable Matters.

On the main line of Dominion Government Telegraph from Ashcroft, B.C., to Dawson, Yukon, J. B. Charleson, superintendent of construction, said on July 12 that only 50 miles had to be completed, and that the work would be finished about Aug. 1.

It was recently stated that the S.S. Lake Champlain had reported her position by wireless telegraphy to Cape Race, Newfoundland, when 300 miles out at sea. The only founda-

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

The Members, the Benefits, and the Surplus

At 31st December Each Year.

Year.	Total Membership.	Benefits Paid.	Total Surplus.	Surplus per Capita.	Death Rate per 1,000.
1881	1,019	\$ 1,300 00	\$ 4,568 55	\$ 4 48	4.50
1882	1,134	12,058 86	2,967 93	2 61	11.00
1883	2,210	9,493 68	10,857 65	4 91	4.73
1884	2,558	13,914 91	23,081 85	9 01	4.23
1885	3,642	26,576 99	29,802 42	8 18	7.76
1886	5,804	28,499 82	53,981 28	9 30	4.85
1887	7,811	59,014 87	81,384 41	10 44	5.78
1888	11,800	89,018 16	117,821 96	9 98	6.43
1889	17,349	116,787 82	188,130 36	10 84	5.85
1890	24,604	181,846 79	283,967 20	11 54	5.18
1891	32,303	261,436 21	408,798 20	12 65	6.40
1892	43,024	344,748 82	580,597 85	13 49	6.25
1893	54,484	392,185 93	858,857 89	15 76	5.47
1894	70,055	511,162 30	1,187,225 11	16 94	5.47
1895	86,521	685,000 18	1,560,783 46	18 03	5.67
1896	102,838	820,941 91	2,015,484 38	19 60	5.50
1897	124,685	992,225 60	2,558,532 78	20 52	5.56
1898	144,000	1,176,125 14	3,186,370 36	22 12	5.67
1899	163,610	1,430,200 33	3,778,543 58	23 09	6.30
1900	180,717	1,545,145 64	4,483,364 44	24 81	6.53

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

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

James Marshall, 24 Charing Cross, London, Eng.

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

A. E. Stevenson, 431 E. Sixty-Third St., Chicago, Ill.

Or Any Officer or Member of the Order.

tion for this story is that the Lake Champlain is fitted for communicating by this means. The Newfoundland coast is not so fitted, but the Minister of Marine of the colony is preparing to demonstrate the necessity of providing such apparatus at Cape Race and the adjacent coast for the protection of life and property embarked on vessels.

It was recently announced in the British House of Commons that several sectional cable houses had already been constructed and sent out, in connection with the work of laying the Pacific cable, and had been erected at the various landing places. The survey had been satisfactorily completed over 1,500 miles of the proposed route, and the manufacture of cable had been begun. Landing sites had been selected in Queensland, New Zealand, Norfolk Island (between New Zealand and New Caledonia), and at Vancouver, and that the Cable Board was satisfied as to the ability of the contractors to complete the work by the end of 1902.

Dominion Telegraph Co.'s Meeting.

The 32nd annual meeting was held in Toronto, July 10, T. Swinyard, President in the chair, F. Roper, Secretary-Treasurer, acting as secretary. Following is the statement:—

ASSETS.	
Capital expenditure.....	\$1,281,819 47
Toronto, Grey and Bruce Ry. Co. 1983 bonds, and interest thereon.....	1,596 24
Suspense.....	102 87
Cash in bank and on hand.....	29,970 00
	<u>\$1,313,488 58</u>
LIABILITIES.	
Capital stock paid up.....	\$ 1,000,000 00
Dividends unclaimed.....	958 75
Dividend 100, payable July 15, 1901.....	15,000 00
	<u>\$ 1,015,958 75</u>
Balance at credit of profit and loss account.....	297,529 83
	<u>\$ 1,313,488 58</u>

The directors reported the payment to the Co. by the lessees—the Western Union Telegraph Co.—of the guaranteed interest of 6% per annum on the capital stock of the Co., up to June 30, 1901, the proceeds of which have been promptly distributed quarterly to the shareholders. The report also referred to the death of Sir Frank Smith, who was Vice-President for 11 years.

Following is the organization for the current year:—President, T. Swinyard; Vice-President, T. R. Wood; other directors, T. F. Clark, Gen. T. S. Eckert, Hector Mackenzie, C. O'Reilly, M.D., H. Pellatt, A. G. Ramsay, and C. A. Tucker; Secretary-Treasurer, F. Roper.

General Telephone Matters.

The new telephone exchange at St. John's, Newfoundland, has been opened.

Within a radius of 30 miles of Chicago it is reported that 1,800 farmers have telephonic connection with regular exchanges.

The Esquimalt and Nanaimo Telephones Co.'s long-distance line from Victoria to Sidney, B.C., has been completed and is in operation.

It is said the Bell Telephone Co. will not extend its long-distance lines to Morden and other points in Southern Manitoba, owing to its failure to secure the passage of its bill at the last session of the Dominion Parliament.

A new telephone cable is being laid from Point Pelee to Pelee Island, some miles east of the old one. The cost will be about \$7,000 and the work is being supervised by J. F. Richardson of the Dominion Government telegraph service.

The Bell Telephone Co. is reported to be contemplating the making of experiments with the Marconi system of wireless tele-

graphy at Kingston, Ont., one of the instruments to be placed on Garden Island, and the other on the mainland.

The work of building a telephone line between Elgin and Petricodiac has been suspended when completed halfway, owing to some friction between the local people and the New Brunswick Telephone Co., which was to operate the line.

The branch lines of the Delaware, Lackawanna and Western Rd., are being equipped with phonographic telephones, for use by the staff in place of the telegraph now in use. It is contemplated to equip the main line offices in the same way.

The Victoria and Esquimalt Telephone Co. is building a trunk line between Esquimalt and Nanaimo, Vancouver Island, and will put up branch lines as required. Exchanges will be established at Ladysmith and Duncans as soon as the trunk line is completed.

The offer of the Ontario Telephone Co. to establish an independent telephone service in Toronto will be laid before the Council in the form of a contract. The offer is to install an underground circuit, and to supply business telephones at \$36 and house telephones at \$24.

For the convenience of passengers telephones have been fixed on the Goodrich line of steamers and a connection is made with the city lines when the boats are lying at the wharves in Chicago. Arrangements for making a similar connection at Milwaukee are in progress.

An effort is being made to form an electrical and telephone Co. at Fort Frances in the Rainy River district of Ontario. The proposed Co. would be a subsidiary of the Citizens' Telephone and Electric Co. of Rat Portage, with which Co.'s system the Fort Frances lines would have a long-distance connection.

The Bell Telephone Co. has recently opened the following offices on its long-distance lines: Province of Quebec—Cascades Point, Cap Sante, Cedars, St. Bazile, St. Joseph de Levis, St. Raymond, Scott, Cushing, Pike River, St. Jean Baptiste de Rouville, Shawbridge. Province of Ontario—Bainsville, Glen Robertson, Brookholm, Erieau, Sturgeon Point.

The Eastern Telephone Co., which operates in Sydney, North Sydney, and Glace Bay, Cape Breton, purposes issuing \$100,000 of additional stock for the purpose of improving and extending its system. It is reported that the Nova Scotia Telephone Co. will take the larger portion of the new stock, and will have representation on the board of the E.T. Co. The E.T. Co. was incorporated in 1891, with a capital of \$50,000, now held by about 30 stockholders, on which a dividend of 6% a year has been paid since the formation of the Co. The Co. has an exchange of about 500 subscribers, the rates being \$15 and \$25. Owing to the increased population of the district served, and the demands for extension and for long-distance communication, the Co. has decided to carry out large extensions. In addition to the local improvements the Co. purposes constructing a toll line to Halifax, and talks of ultimately extending it to Montreal. The present directors of the local company are: President, Dr. McKeen; Mayor Crowe, J. Burchell, J. Lorway, B. Archibald, J. C. Blackett, and Judge Dodd.

T. Paul, of Yorkton, Assa., has made certain improvements in telephonic communication, which he claims are specially applicable to systems of telephonic communication in country places. Two years ago he established a telephone exchange in Yorkton upon his system, giving a service at \$18 a year for business and \$12 a year for private telephones. There are now 50 local lines in connection with the exchange, varying in length up to

one mile. The working of the exchange on Mr. Paul's plan was so successful that he started out to extend it, and during last winter constructed a trunk line 30 miles in length, northward. There are at present six instruments on this line working on the bridging system. All these are at some distance from the main line, and can be connected to any other instrument of the exchange. The line is capable of carrying 14 or 15 more instruments, the annual charge for which is \$18. The line is yet in an experimental stage, but great things are hoped of it. A local company is being formed with a view of extending the system to all territory tributary to Yorkton within a distance of 20 miles from Yorkton, and to enable Mr. Paul to perfect and patent his improvements. The capital proposed is \$20,000 in shares of \$1 each. In describing his system Mr. Paul says: "A few of the novelties of this system are: A battery, situated at central, working on open circuit, rings both subscribers and central alike. The subscriber simply lifts his telephone and is at once in connection with central, or, if central operator has not the telephone at her ear, then an indicator is actuated. One indicator only is required for each section of say 100 subscribers, and yet no difficulty or confusion is occasioned thereby. The system is metallic, and yet only single plugs and cords are required to give connection; no ringing or listening keys are required; no instruments other than the subscribers' sets are in circuit; consequently speaking is loud and clear. Subscribers, even when connected for speaking, are constantly in connection with central, who however, does not overhear subscribers' conversation. Only three simple actions are required to give connection."

Nova Scotia Telephone Co.

At the recent annual meeting the following statements were presented for the year ended Jan. 31, 1901:—

ASSETS.	
Exchanges and plant.....	\$300,270 09
New construction for metallic system.....	19,683 89
Stores, including supplies for new metallic system.....	23,182 28
Stock in other companies.....	21,530 00
Real estate, buildings, etc.....	15,337 87
Amounts due Co.....	3,384 86
Due by agencies, including Halifax.....	8,080 21
Cash in hand and bank.....	38,836 83
	<u>\$430,306 03</u>
LIABILITIES.	
Capital stock.....	\$273,278 00
Bonds.....	20,000 00
Sundry amounts due.....	21,472 01
Sinking fund.....	23,000 00
Dividend payable March 1, 1901.....	4,025 18
Accident reserve account.....	8,902 50
Insurance reserve account.....	9,000 00
Contingent account and depreciation account.....	44,960 39
Profit and loss.....	25,667 95
	<u>\$430,306 03</u>

PROFIT AND LOSS ACCOUNT.	
CR.	
Balance from previous year.....	\$ 25,267 95
Net earnings.....	16,960 10
	<u>\$ 42,228 05</u>
DR.	
Dividend paid June 1, 1900.....	\$ 3,000 00
" paid Sept. 1, ".....	3,000 00
" paid Dec. 1, ".....	3,534 92
" payable Mar. 1, 1901.....	4,025 18
Transferred to sinking fund.....	3,000 00
By balance forward.....	\$ 25,667 95
	<u>\$ 42,228 05</u>

The board was re-elected as follows, all the members being residents of Halifax except Mr. Sise. President, B. W. Chipman; Vice-President, R. Uniacke; other directors, C. F. Fraser, B. F. Pearson, R. L. Borden, Dr. A. C. Cogswell, C. F. Sise, Montreal.

During the past year the Co. has expended a considerable amount in changing the old office apparatus, switchboard, etc., and is

metallizing all lines in Halifax, where a relay central energy board which has been put in is giving very satisfactory results. All leads into the Halifax central are now underground. The business has grown largely during the past year.

Last fall the Co. issued \$100,000 of new stock to cover the improvements above mentioned. A portion of this was bought by J. C. McIntosh, who recently put it on the market and sold it at 122½, or \$12.25 a share. In this connection he issued a circular from which the following is extracted:—"In 1888 the entire plant was purchased from the Bell Telephone Co. of Canada, consisting then of under 900 telephones, and no trunk line, giving a yearly revenue of about \$20,000. The N.S. Telephone Co. issued \$170,000 of stock to pay for and improve this plant, subsequently increasing it by \$30,000, making it \$200,000 on which 6% dividends have been paid regularly, and over \$100,000 added to reserve and profit and loss accounts. In 1900 the capital was increased to \$300,000, the increased amount being issued for extensions and improvements, including a relay switchboard. An idea of the completeness of this switchboard may be obtained when it is known that it is capable of making nearly 9,900,000 different connections. When the new switchboard and connections are in complete working order the telephone system of Nova Scotia will equal any in America. At the close of 1900 the plant of the Co. consisted of 610 miles of poles, carrying 1,161 miles of copper wire and 447 miles of galvanized iron wire, making a total mileage of 1,608. The telephones in use have increased from 900 in 1888, to 2,500 in 1900, and the gross revenue from \$20,000 to \$82,347 in the same period. Increased connections will probably at no distant date be made, extending the business direct to Cape Breton and the western counties, so that it is not unreasonable to expect an increased dividend at no remote period."

Professor Bell on the Telephone.

Professor A. G. Bell writes:—"It is exactly 26 years since I put up my first telephone. At that time I was visiting at my father's house in Brantford, Ont. We obtained the permission of the Canadian Government to use a telegraph line four miles long that extended from Brantford to a neighboring village. We put up our apparatus in a friend's house, kindly loaned for the purpose, and as it was over half a mile from the telegraph line, we were obliged to lengthen the wire. No additional telegraph wire was available, so what do you think we used? You would never guess. We could find nothing in the hardware stores but stovepipe wire, and we had to buy up all the stovepipe wire in Brantford to make our line long enough. We did not trouble to put up posts, but tacked the wire to the fence. The communication that took place over this first telephone wire was not a conversation, but a monologue, as we had the transmitter only at one end and the receiver at the other.

"In this way the first message was sent over the telephone, and I have been told that Brantford calls itself the 'Telephone City' ever since. That was in 1875. A short time afterward C. Williams, of Boston, strung a telephone wire from his office in Boston to his house in Cambridgeport, a distance of two miles. This was the first telephone wire to be permanently erected.

"Since those small beginnings, what amazing progress has been made! Do you know that there are nearly 2,000,000 miles of telephone wires in the U.S. alone? If these wires were fastened together they would encircle the earth 81 times. The total number of telephone calls in this country last year was 1,820,000,000. At the rate of 1c. per call this

would amount to enough pennies to form a double row around the globe, and there would be enough left over to make three rows across the Atlantic. And all this has been accomplished in a single generation.

"I have recently been travelling through Norway and Sweden, and I was surprised to note the wonderful progress made by the telephone in those countries. In proportion

to the population there are more telephones in Norway and Sweden than in any other country, even in America.

"The next great step in the improvement of the telephone will be wireless telephony. This is not an inventor's dream. It has already been done across short distances. In the immediate future it will be made practical for social and commercial purposes."

ENAMELED IRON PLATES

For Doors, etc., in Stations, Steamships, Ferries, Hotels, Offices, etc., carried in Stock for Prompt Delivery.

Any of these Plates can be shipped on the day an order is received.

SMOKING ROOM

Size 23 x 3½ inches. Oblong, fancy ends, white ground, blue letters, lined & tipped:

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

NO ADMITTANCE

Size 10 x 2½ inches. Oblong, oval ends, white ground, blue letters, lined & tipped, hollowed:

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

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

No Admittance.

STICK NO BILLS

Size 18 x 3½ inches. Oblong, square ends, white ground, blue letters, lined & tipped.

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

PUSH • PULL

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

Oblong, square ends, size 3 x 1½ inches, white ground, blue letters, tipped, lettered Push, Pull, as above.

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

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

Oblong, fancy ends, size 3 x 1½ inches, white ground, blue letters, lined and tipped, lettered Push, Pull.

ENAMELED IRON SIGNS.

For Steam & Electric Railways, Steamship, Express, Telegraph, Telephone & Advertising Purposes, of every description, size & color, made to order.

Railway Station Names, Switch Targets, Semaphore Arms, Whistle & Diamond Crossing Signs, Numbers for Railway Bridges, Sections, Mileage Signal Houses, etc.; Street Car Route Signs; Steamship & Ferry Signs; Express, Telegraph & Telephone Office Signs; Agency, Office, Store, Wagon, Cart & Advertising Signs; Street Names & Numbers; Door Numbers.

These signs last practically for ever, they never fade or tarnish, they are ever bright and attractive, they are absolutely impervious to heat or cold, they are the only signs that will withstand the effects of weather in all climates.

For Prices, Illustrated Catalogues, etc., address

THE ACTON BURROWS COMPANY,

29 Melinda Street, - - Toronto, Canada.

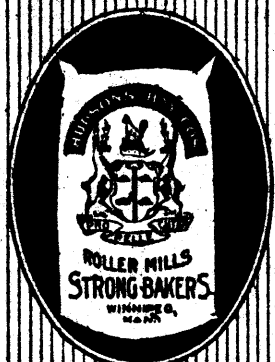
The Purchasing Agents' Guide

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

Accident Insurance		Hand & Push Cars		Semaphore Arms	
Travelers' Insurance Co.....	Montreal.	F. E. Came.....	Montreal.	Acton Burrows Co.....	Toronto.
Aerated Waters		Hardware		Shafting	
E. L. Drewry.....	Winnipeg.	Rice Lewis & Son.....	Toronto.	Rice Lewis & Son.....	Toronto.
Air Brakes & Fittings		The Hudson's Bay Company.....		Shingles	
Westinghouse Mfg. Co.....	Hamilton, Ont.	Headlights		The Haliburton Lumber Company.....	Toronto.
Ales		Noah L. Piper & Sons.....	Toronto.	Shipbuilders' Tools & Supplies	
E. L. Drewry.....	Winnipeg.	Hose		Rice Lewis & Son.....	Toronto.
Anchors		Rice Lewis & Son.....	Toronto.	Ships	
Rice Lewis & Son.....	Toronto.	Illustrations		Poison Iron Works.....	Toronto.
Axles		Acton Burrows Co.....	Toronto.	Showels	
James Hutton & Co.....	Montreal.	Iron		James Cooper.....	Montreal.
Rhodes, Curry & Co.....	Amherst, N.S.	Rice Lewis & Son.....	Toronto.	The Hudson's Bay Company.....	Toronto.
Babbitt		Acton Burrows Co.....	Toronto.	Rice Lewis & Son.....	Toronto.
Rice Lewis & Son.....	Toronto.	Japans		Signal House Numbers	
Blankets & Bedding		McCaskill, Dougall & Co.....	Montreal.	Acton Burrows Co.....	Toronto.
The Hudson's Bay Company.....		Lager Beer, &c.		Signals	
Block & Tackle		E. L. Drewry.....	Winnipeg.	N. L. Piper Ry. Supply Co.....	Toronto.
Rice Lewis & Son.....	Toronto.	Lamps & Lanterns		Signs	
Boat Fittings & Hardware		The Hudson's Bay Company.....		Acton Burrows Co.....	Toronto.
Rice Lewis & Son.....	Toronto.	Rice Lewis & Son.....	Toronto.	Snow Ploughs	
Boiler Covering		Acton Burrows Co.....	Toronto.	Rhodes, Curry & Co.....	Amherst, N.S.
Mica Boiler Covering Co.....	Montreal.	Launches		Spikes	
Boilers		Poison Iron Works.....	Toronto.	Rice Lewis & Son.....	Toronto.
Poison Iron Works.....	Toronto.	Life Insurance		Station Name Signs	
Bolts		Independent Order of Foresters.....	Toronto.	Acton Burrows Co.....	Toronto.
Rice Lewis & Son.....	Toronto.	Travelers' Insurance Co.....	Montreal.	Steamboats	
Brake Shoes		Linoleum and Floor Coverings		Poison Iron Works.....	Toronto.
F. E. Came.....	Montreal.	The Hudson's Bay Company.....		Steamboat Signs	
Bridge Numbers		Rice Lewis & Son.....	Toronto.	Acton Burrows Co.....	Toronto.
Acton Burrows Co.....	Toronto.	N. L. Piper Ry. Supply Co.....	Toronto.	Steam Shovels	
Buckets		Launches		James Cooper.....	Montreal.
Rice Lewis & Son.....	Toronto.	Poison Iron Works.....	Toronto.	Steel	
Building Material		Life Insurance		James Hutton & Co.....	Montreal.
Expanded Metal & Fireproofing Co.....	Toronto.	Independent Order of Foresters.....	Toronto.	Rice Lewis & Son.....	Toronto.
Cables, Electric		Travelers' Insurance Co.....	Montreal.	Steel Castings	
The Wire and Cable Co.....	Montreal.	Locomotive and Floor Coverings		F. E. Came.....	Montreal.
Carpets		The Hudson's Bay Company.....		Switch Targets	
The Hudson's Bay Company.....		Locomotives (Compressed Air)		Acton Burrows Co.....	Toronto.
Cars		Baldwin Locomotive Works.....	Philadelphia, Pa.	Switches	
Rhodes, Curry & Co.....	Amherst, N.S.	Locomotives (Electric)		F. E. Came.....	Montreal.
Car Wheels		Baldwin Locomotive Works.....	Philadelphia, Pa.	Telegraph and Telephone Wires	
Rhodes, Curry & Co.....	Amherst, N.S.	Locomotives (Steam)		The Wire and Cable Co.....	Montreal.
Castings		Baldwin Locomotive Works.....	Philadelphia, Pa.	Telegraph Office Signs	
Rhodes, Curry & Co.....	Amherst, N.S.	Locomotives (Baek)		Acton Burrows Co.....	Toronto.
Chains		Baldwin Locomotive Works.....	Philadelphia, Pa.	Telephone Office Signs	
Rice Lewis & Son.....	Toronto.	Lubricators		Acton Burrows Co.....	Toronto.
Cross Arms, Top Pins & Side Blocks		Rice Lewis & Son.....	Toronto.	Timber	
The Firstbrook Box Co.....	Toronto.	Lumber		The Haliburton Lumber Company.....	Toronto.
Curtains		The Haliburton Lumber Company.....	Toronto.	Tires	
The Hudson's Bay Company.....		Matches		James Hutton & Co.....	Montreal.
Cuts		The Hudson's Bay Company.....		Tobacco and Cigars	
Acton Burrows Co.....	Toronto.	Milepost Numbers		The Hudson's Bay Company.....	
Door Signs		Acton Burrows Co.....	Toronto.	Tollet Paper	
Acton Burrows Co.....	Toronto.	Mohair		The Hudson's Bay Company.....	
Dry Goods		The Hudson's Bay Company.....		Tools	
The Hudson's Bay Company.....		Numbers		Rice Lewis & Son.....	Toronto.
Electric Car Route Signs		Acton Burrows Co.....	Toronto.	Track Jacks	
Acton Burrows Co.....	Toronto.	Oakum		Duff Manufacturing Co.....	Allegheny, Pa.
Electric Trucks		Rice Lewis & Son.....	Toronto.	A. O. Norton.....	Coaticook, Que.
Baldwin Locomotive Works.....	Philadelphia, Pa.	The Hudson's Bay Company.....		Track Tools	
Electric Wires		Oils		F. E. Came.....	Montreal.
The Wire and Cable Co.....	Montreal.	Galena Oil Co.....	Franklin, Pa.	James Cooper.....	Montreal.
Enameled Iron Signs		The Imperial Oil Company.....		Rice Lewis & Son.....	Toronto.
Acton Burrows Co.....	Toronto.	The Queen City Oil Company.....	Toronto.	Tramway Equipment	
Engines, Stationary & Marine		Signal Oil Company.....	Franklin, Pa.	J. J. Gartshore.....	Toronto.
Poison Iron Works.....	Toronto.	Office Signs		Tracks	
Engraving		Acton Burrows Co.....	Toronto.	Rice Lewis & Son.....	Toronto.
Acton Burrows Co.....	Toronto.	Packing		Uniform Caps	
Toronto Engraving Co.....	Toronto.	The Fairbanks Co.....	Montreal.	W. H. Coddington.....	Hamilton, Ont.
Expanded Metal		Pipe Covering		Varnishes	
Expanded Metal & Fireproofing Co.....	Toronto.	Mica Boiler Covering Co.....	Montreal.	McCaskill, Dougall & Co.....	Montreal.
Express Office Signs		Flushes		Vessels	
Acton Burrows Co.....	Toronto.	The Hudson's Bay Company.....		Poison Iron Works.....	Toronto.
Fencing		Pneumatic Tools		Waste	
Page Wire Fence Co.....	Walkerville, Ont.	F. E. Came.....	Montreal.	Rice Lewis & Son.....	Toronto.
Ferry Signs		Porter		N. L. Piper Ry. Supply Co.....	Toronto.
Acton Burrows Co.....	Toronto.	E. L. Drewry.....	Winnipeg.	The Queen City Oil Co.....	Toronto.
Flags		Portland Cement		Water Motors	
Rice Lewis & Son.....	Toronto.	Rice Lewis & Son.....	Toronto.	Westinghouse Mfg. Co.....	Hamilton, Ont.
The Hudson's Bay Company.....		Printing		Wheelbarrows	
Foghorns		The Hunter, Rose Co.....	Toronto.	James Cooper.....	Montreal.
Rice Lewis & Son.....	Toronto.	The Mail Job Printing Company.....	Toronto.	Rice Lewis & Son.....	Toronto.
Furniture		Pumps		Window Blinds	
Office Specialty Mfg. Co.....	Toronto & Montreal.	Rice Lewis & Son.....	Toronto.	The Hudson's Bay Company.....	
Gas & Gasoline Engines		Rails (New)		Wines and Liquors	
Northey Manufacturing Co.....	Toronto.	James Cooper.....	Montreal.	The Hudson's Bay Company.....	
Gates		J. J. Gartshore.....	Toronto.	Wire & Wire Rope	
Page Wire Fence Co.....	Walkerville, Ont.	Rice Lewis & Son.....	Toronto.	Rice Lewis & Son.....	Toronto.
General Supplies		Rails (for relaying)		The Wire and Cable Co.....	Montreal.
The Hudson's Bay Company.....		James Cooper.....	Montreal.	Yachts	
Grain Elevators		J. J. Gartshore.....	Toronto.	Poison Iron Works.....	Toronto.
John S. Metcalfe Co.....	Chicago, Ill.	Rail Saws			
Groceries		F. E. Came.....	Montreal.		
The Hudson's Bay Company.....		Rope			
Half Tones		Rice Lewis & Son.....	Toronto.		
Acton Burrows Co.....	Toronto.	The Hudson's Bay Company.....			
		Scales			
		The Gurney Scale Company.....	Hamilton, Ont.		

THE BEST FLOUR

**HIGHEST AWARDS AT HOME AND ABROAD
WINNIPEG & PARIS EXHIBITIONS**



THE FLOUR MANUFACTURED
BY THE
HUDSON'S BAY COMPANY
HAS RECEIVED THE
GRAND PRIZE
AT THE **PARIS EXHIBITION**
AND THE
HIGHEST AWARDS AT THE
WINNIPEG
INDUSTRIAL EXHIBITION



ALL THE FLOUR MADE BY THE COMPANY IS FROM SPECIALLY SELECTED WHEAT

HUDSON'S BAY & COMPANY