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RAILWAY DEVELOPMENT.

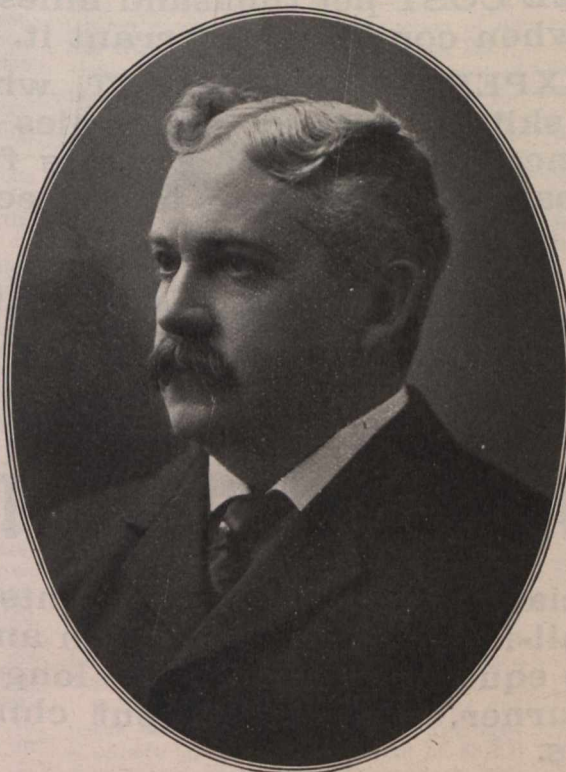
Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska Central Ry.—A report from J. B. Cameron, Engineer of Construction, upon the line has been issued by the Receivers. Mr. Cameron says: "The road is completed and in operation from Seward, Alaska, its terminus on the Pacific Ocean, to mile 53. The line is well constructed, with 14-ft. roadbed, well drained, 2,800 ties to the mile, and with 60-lb. rail on the first 18 miles and 65-lb. on the remainder. The first 53 miles of road crosses two mountain ranges, and in consequence the heaviest construction of the whole line has been encountered on the road now constructed. The road is constructed with a maximum of 1% compensated grade, except over the two mountain ranges, which have a maximum of 2.2% compensated, which is light for mountain grade. The construction from mile 48 to mile 54 was especially heavy. To maintain here the 2.2% grade, loops were necessary, and exceptionally heavy rock work, bridging and tunnelling was encountered. Seven tunnels have been driven, varying from 200 to 900 ft. in length. From mile 53 to mile 67 the grade and pile bridges are completed and ready for tracklaying, and nearly all the material is on hand to complete this section. From mile 67 to mile 75 the grading is about 75% completed. From mile 75 to mile 105 the right-of-way is cleared and some of the grading has been finished—mostly beyond mile 90. The main line has been definitely located and surveyed to mile 225, and the Matanuska coal branch starting from Knik, at mile 149 on the main line, a distance of 38 miles. Preliminary surveys have been made to the Tanana River, about mile 420. At Seward a substantial wharf has been constructed, with approaches, at a cost of over \$75,000; also a large general office building, costing about \$60,000. The company has also three large, well-constructed warehouses. The company owns valuable terminals at Seward, and, by special action of Congress, has been granted 320 acres on the north end of Resurrection Bay, east of Seward, and two strips of land along the shore immediately adjoining Seward on the east. All of the south frontage between tidewater has been deeded in fee simple to the railway. This gives us practically a mile of water frontage." This is a railway company in which Toronto men are largely interested, the late Sovereign Bank holding its bonds as security for advances in aid of construction. (Aug., pg. 547.)

Alberta and British Columbia Ry.—During the course of the discussion on the Railway Subsidy Act in the House of Commons, it was stated that in the event of the

Southern Central Pacific Ry. failing to make progress with the line from Cowley, Alta., to the International boundary, it would be available for this company. (Aug., pg. 547.) See also Southern Central Pacific Ry.

Algoma Central and Hudson's Bay Ry.—The Dominion Parliament last session provided for the payment of a grant in aid of the construction of an extension of the



W. H. GRANT,

Manager of Construction, Mackenzie, Mann & Co.'s Eastern Lines.

company's railway, from its projected point of junction with the C.P.R. transcontinental line northward towards the National Transcontinental Ry., for a distance not exceeding 50 miles.

The question of the completion of the A.C. and H.B. Ry. from its present terminal to a junction with its Michipicoten line, and thence to a junction with the C.P.R. transcontinental line, is before the directors of the Lake Superior Corporation, which controls the railway, and the industries generally spoken of as the Soo companies. (Aug., pg. 547, and June, pg. 401.) See also Manitoulin and North Shore Ry.

Atlantic, Quebec and Western Ry.—The Railway Subsidies Act passed at the recent session of the Dominion Parliament provides for the payment by the Government of the sum of \$250,000 towards the con-

struction and completion of 26 bridges on the line of railway between Paspébiac and Gaspé, the subsidy to be payable upon completion of the line. It was stated in the course of the discussion that four of the bridges, viz., those over the St. John River, the Grand River, the Pabos River and the Little River, were large structures, and that the Quebec Government had decided to grant subsidies towards their construction, provided they were made suitable for ordinary highway traffic, as well as for the railway. The cost of these four bridges alone would absorb to about \$250,000 of subsidy, if the usual principle of asking for 15% of the cost had been followed, the Postmaster-General stated, the difficulties in the way of construction were very great, and the conditions necessitated exceptional treatment.

It is also provided that a subsidy at the usual rate and subject to the usual conditions be paid to the company towards the construction of a line from near Causapsca, Que., on the Intercolonial Ry., to Edmundston, N.B., not exceeding 160 miles, in lieu of the subsidy voted in 1906. (June, pg. 401.)

Bracebridge and Trading Lake Ry.—At the last session of the Dominion Parliament the subsidy granted in 1904 towards the construction of a line of railway from Bracebridge to Baysville, Ont., not exceeding 15 miles, was revoked, but the mileage was increased from 15 to 16. A meeting was held at Baysville, Ont., Aug. 13, when a resolution was passed in favor of the construction of the line. There has been a lot of preliminary work done in connection with the promotion of the railway, but very little in the way of actual construction. (May, pg. 329.)

Bruce Mines and Algoma Ry.—The question of the reconstruction and extension of the B.M. and A. Ry. is under consideration at Bruce Mines, Ont. The line at present extends from the lake front at Bruce Mines to Rock Lake, a total distance of about 20 miles. Since 1903, when the Rock Lake copper mine shut down, only occasional trains hauling logs and freight for the farmers in the back settlements have been run over it. The line has been in the hands of a Receiver since 1905. The company has a charter authorizing it to construct an extension to a point on the National Transcontinental Ry. (Eastern Division G.T. Pacific Ry.). Surveys have recently been made of the country through which such a line would pass, and the reports are that a line could be easily constructed, and would develop a considerable traffic. The suggestion made is that the Ontario Government should take over the present line, and extend it northerly. (Mar., pg. 179.)

Burk's Falls and French River Ry.—A subsidy upon the usual terms and conditions was voted last session of the Dominion Parliament towards the construction of a line of railway from Burk's Falls, Ont.,

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to a point on the French River, not to exceed 85 miles in length. (Nov., 1907, pg. 829.)

Canada Central Ry.—See Manitoulin and North Shore Ry.

Cape Breton Ry.—At the recent session of the Dominion Parliament a subsidy at the usual rate was voted to this company towards the construction of a line from Port Hawkesbury or Point Tupper to St. Peter's, N.S., not exceeding 31 miles, in lieu of the subsidy for 30 miles voted in 1899. This line has already been constructed, and has been operated with more or less success since 1903. It has powers under its acts to extend its line from St. Peter's to Sydney, and surveys have been made for its construction. (Mar., 1905, pg. 93.) See also Cape Breton Railways, July, pg. 471.

Central Ry. of Canada.—In connection with the reported negotiations for the sale of the Irondale, Bancroft and Ottawa Ry. to the C. Ry. of C., it is understood that a price has been agreed upon, and that in the event of the sale being completed the work of extending that line will be taken in hand at once. (Aug., pg. 593.) See Irondale, Bancroft and Ottawa Ry.

Crow's Nest and Northern Ry.—A meeting of the shareholders was held at Crow's Nest, B.C., Aug. 11, for the purpose of authorizing the issue of bonds for construction purposes. (June, pg. 401.)

Death Rapids, B.C.—The Dominion Parliament last session passed an act providing, among others, for the payment of a subsidy upon the usual terms and conditions for the construction of a railway, not exceeding four miles in length, round the Death Rapids, B.C.

Delaware and Hudson Co.—The Dominion Parliament last session voted the following sums towards the construction of bridges on the Quebec, Montreal and Southern Ry., the Canadian line of the D. and H. Rd.: \$15,000, bridge across Gentilly River; \$30,000, bridge across Becancourt River; and \$30,000, bridge across the Richelieu River. These amounts represent 15% of the estimated cost of the bridges.

The subsidy act also provided for the payment of a bonus at the usual rate towards the construction of a line from Yamaska to a point in the county of Lotbiniere, not exceeding 70 miles, and for a line from Mount Johnson to St. Gregoire station, 1.50 miles, in lieu of the subsidy granted to the United Counties Ry. in 1899. Provision was also made for new subsidies for a line from Noyan Junction to the International boundary not exceeding eight miles, and for a line from St. Lambert to St. Constant, not to exceed 15 miles in length. (June, pg. 401.)

Dominion Atlantic Ry.—The Dominion Parliament at its recent session passed an act authorizing the construction of a branch line from Centreville, on the Cornwallis Valley line, to a point on the main line at or near Aylesford, Kingston or Middleton, N.S., and the subsidies voted included one at the usual rate for such a line not to exceed 35 miles in length. A subsidy was also voted for the construction of a line from Brazil Lake to Kemptville, not exceeding 11 miles, in lieu of that granted in 1900. (Mar., pg. 179.)

Eastern British Columbia Ry.—We are officially advised that construction has been started on the line from McGillvray station on the C.P.R. Crow's Nest Line, southerly along Michel Creek, B.C., to the coal mines being developed by D. C. Corbin, of Spokane, a distance of 14 miles. It is expected that the line will be completed and in operation by the end of October. (Aug., pg. 547.)

Eastern Townships Ry.—At the last session of the Dominion Parliament a subsidy at the usual rate was voted towards the construction of a railway from St. Leonard's Junction, on the Intercolonial Ry., to Duds-well, Que., a distance of 36 miles. Duds-well Junction is the point on the main line of the Quebec Central Ry. at which the Hereford Ry., the Maine Central Rd. line to Lime Ridge, crosses. (April, 1907, pg. 243.)

Erie, London and Tillsonburg Ry.—At the recent session of the Dominion Parliament a subsidy at the usual rates and upon the usual conditions was voted to the E.L. and T. Ry. towards the construction of a railway from Port Burwell to London, Ont., not exceeding 35 miles. It was stated in the course of the discussion that the railway was intended to run from Port Burwell through the township of Malahide, the town of Aylmer and the village of Belmont into London. The charter was originally held for an electric railway, but it was found impossible to finance it, and the present company stepped in and obtained a charter of incorporation. The representations made to the Minister of Railways were to the effect that at present sufficient facilities were not afforded for getting in the coal supplies to western Ontario. The company also secured an extension of time for the construction of its line at the recent session. (Mar., pg. 181.)

Ha Ha Bay Ry.—At the last session of the Dominion Parliament a subsidy at the usual rate was voted towards the construction of a railway from near Jonquieres Village, via Laterrieres Village, to Baie des Ha Ha, Que., not exceeding 24 miles, in lieu of the subsidy for 20 miles voted in 1906.

Press reports state that the Ha Ha Bay Ry. Co. is arranging a contract for the construction of a railway from between Jonquieres, on the Quebec and Lake St. John Ry., to Bagotville, on Ha Ha Bay, where there is a deep water harbor suitable for sea-going vessels. This line will have a total length of about 20 miles, but it is the intention of the company to ultimately extend the line to St. Catherines Bay, at the mouth of the Saguenay River, and to effect a junction there with the Quebec and Saguenay Ry., a projected electric railway from the present terminus of the Quebec Ry., Light and Power Co.'s line.

The Quebec and Lake St. John Ry. extends to Chicoutimi, east of Jonquieres, and the Dominion Parliament last session voted a subsidy for an extension from that point southerly or southeasterly for a distance of five miles. (June, pg. 403.)

Halifax and South-Western Ry.—At the recent session of the Dominion Parliament a subsidy at the minimum rate of \$3,200 a mile, increasing to \$6,400 a mile in proportion to the cost of construction, was voted for a line 12 miles in length from Lunenburg to Bridgewater, N.S., via Upper La Have. The H. and S.W. Ry. already has a connection between Lunenburg and Bridgewater, these towns being served by the old Nova Scotia Central Ry., which was amalgamated, and the portion between Mahone Junction and Bridgewater being incorporated in the main line of the H. and S.W. Ry. from Halifax to Yarmouth, Lunenburg being placed on a short branch. The projected line would serve some points not now having a railway connection. (May, pg. 331.)

Halifax and Northeastern Ry.—In 1906 the Dominion Parliament granted a subsidy towards the construction of a railway from a point on the Intercolonial Ry. at or near Dartmouth, N.S., to Guysboro, with branch lines to the Intercolonial Ry. near New Glasgow, and to Country Harbor, not exceeding in the whole 236 miles, in

lieu of the subsidies voted in 1903, for 116 and 120 miles respectively. At the recent session of Parliament a subsidy was voted for a line from Dartmouth to a point near Dean's Settlement, not exceeding 80 miles, in lieu in part of the subsidy of 1906. The following subsidies were also voted in lieu of those voted in 1906, already mentioned: For a line from Dean's Settlement to Melrose, not exceeding 52 miles; for a line from New Glasgow to Melrose, and from Melrose to Guysborough, with a branch to Country Harbor, not exceeding 116 miles. The question of the construction of a line in this part of Nova Scotia has been taken up by several companies during the past six or seven years, but beyond the making of surveys nothing has been done. The Nova Scotia Government has taken powers to grant material assistance to any company undertaking to construct the line whether under the charter of the Halifax and Northeastern Ry. or otherwise. (May, pg. 329.)

Hudson Bay Pacific Ry.—A press report states that a contract for grading the first 10 miles of this railway from the Pacific Coast to Fort Churchill has been let to J. Haggarty, Victoria, B.C. (April, pg. 245.)

Intercolonial Ry.—M. J. Butler, Deputy Minister of Railways, said in the course of an interview at St. John, N.B., Aug. 6: "It is the ultimate object of the Government to double-track the whole of the Intercolonial Ry. It may take some time to complete the work, but surveys will be completed between Moncton and Halifax as soon as possible. The great increase in traffic on that section renders double-tracking a necessity. The survey has been made for some distance below Moncton, and will be completed in the course of a few weeks."

The Dominion Parliament at its recent session voted the following sums on account of betterments, etc., in addition to the amounts already reported:

To increase water supply.....	\$ 7,500.00
Increased accommodation and facilities.....	21,690.00
Diversion of line, Sydney Mines to River George, N.S.....	25,000.00
Stellarton, N.S., increased accommodation (revote \$5,000).....	22,000.00
Survey to ascertain the best route for an additional line from Moncton, N.B., or Amherst, N.S., to near Truro, N.S.....	10,000.00
Avondale, N.B., subway.....	10,000.00
Fredericton, N.B., improvements.....	10,000.00
Chatham, N.B., diversion of line and branch to wharves.....	40,000.00
Fort Lawrence, Que., laying rails on wharf	12,500.00
Diversion of public road near St. Cyrille to eliminate level crossing.....	1,300.00
Petit Rocher, N.B., spur track.....	25,000.00

Replying to a question during the discussion on the vote of \$10,000 for surveys on branch lines for the Intercolonial Ry., the Minister of Railways said the question of taking over the branch lines in New Brunswick was a very large one. If he were Manager or President of a company owning the Intercolonial he would at once proceed to see what branch lines would be of benefit to the main line and try to get hold of them. (Aug., pg. 547.)

International Ry. of New Brunswick.—At the last session of the Dominion Parliament a subsidy was voted for a line of railway from the western end of the 20 miles as already constructed from Campbellton, N.B., to a point on the St. John River between Grand Falls and Edmundston, N.B., a distance of 90 miles, in lieu of the subsidy voted in 1903. The Chief Commissioner of Public Works of New Brunswick has approved of maps, etc., of the right-of-way, and lands required by the company, between mileage 0 and mileage 20 in the County of Madawaska, and between mileage 20 and mileage 40 in the county of Victoria. (Aug., pg. 547.)

Interprovincial Ry. Bridge of New Brunswick.—The Dominion Parliament last session passed an act extending the time for

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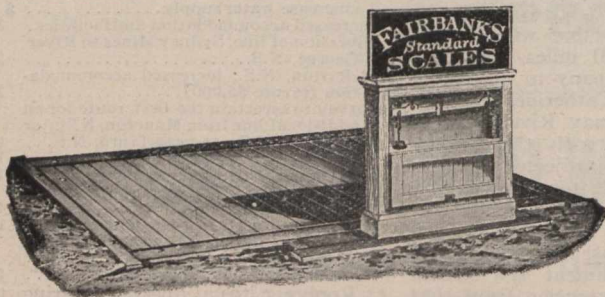
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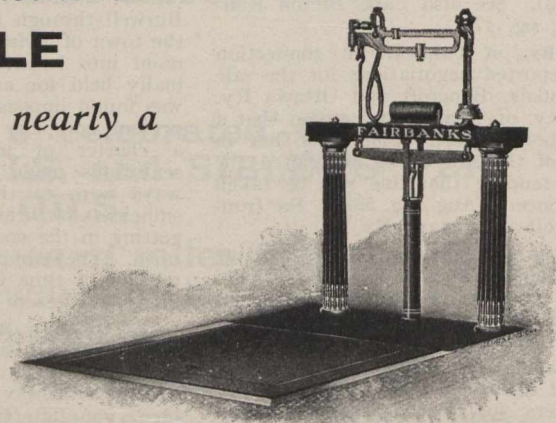
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construction and voted an amount not exceeding \$160,000 towards the construction and completion of a railway bridge over the Restigouche River from Campbellton, N.B., to Mission Point, Que. The bridge is estimated to cost from \$650,000 to \$750,000, and its construction is projected with a view of securing a connection for the International Ry. of New Brunswick with the Atlantic and Lake Superior Ry. (Mar., pg. 181.)

Inverness Ry. and Coal Co.—Last session of the Dominion Parliament a subsidy was voted to aid in the construction of a railway from Cheticamp, N.S., to a point on the line already constructed between Broad Cove and Point Tupper, a distance of about 37 miles, in lieu of the subsidy voted in 1903. (Nov., 1904, pg. 428.)

Irondale, Bancroft and Ottawa Ry.—It is understood that negotiations are in progress with a view to extending this railway from the point of junction with the G.T.R., near Kinmount, to a point on the Georgian Bay, and from the present terminus near Bird's Creek to Montreal. We are advised that the negotiations have not yet reached a point when a definite announcement can be made.

Last session of the Dominion Parliament the subsidy voted in 1906, for a line from a point at or near Baptiste, easterly to Renfrew, not exceeding 75 miles, was revoked. Baptiste is the name of a station near the present terminus of the I.B. and O. Ry., and Renfrew is the point where its terminus is to be situated to conform with the subsidy vote of the Ontario Legislature.

The Toronto and Nipissing Eastern Extension Ry. was incorporated by the Ontario Legislature in 1880, with power to construct a railway from a point on the Georgian Bay to Ottawa. In 1884 the name of the company was changed to the Irondale, Bancroft and Ottawa Ry., and its powers have been confirmed and extended from time to time. By one statute it was provided that the terminus of the line should be at Renfrew, and one of the subsidy grants provided for the construction of the line from Bird's Creek, the present terminus, easterly, either by the I.B. and O. Ry., or by the Toronto, Lindsay and Pembroke Ry. By an act of the Ontario Legislature passed in 1907 the payment of the subsidy for the eastern extension of the line was extended to 1910. The line extends from I.B. and O. Junction on the G.T.R. line to Haliburton, via Irondale, to Baptiste, near Bancroft, 50 miles. (July, 1905, pg. 285.)

Kettle Valley Lines.—The Dominion Parliament at its last session revoked the subsidy of \$3,200 a mile, increasing conditionally to \$6,400 a mile, voted in 1906, for a line from Grand Forks, B.C., up the North Fork, and the East or West Fork of the Kettle River, not exceeding 50 miles. The Minister of Railways said in the House of Commons, when the vote was under discussion, that a 20 mile section of the line, which is being constructed under the charter of the Kettle River Valley Ry., is under construction, and that the total mileage which the company had in contemplation was probably over 200. The company operates a line from Grand Forks, B.C., to Republic, Wash., and has completed plans for the extension of the line from Republic to Spokane. (May, pg. 331.)

Lac Seul, Rat Portage and Keewatin Ry.—At the last session of the Dominion Parliament, a subsidy was voted towards the construction of a line of railway from a point at or near Kenora, Ont., to the line of the National Transcontinental Ry., not exceeding a distance of 18 miles. (May, pg. 331.)

L'Avenir and Melbourne Ry.—At the last session of the Dominion Parliament a sub-

sidy at the usual rate, and upon the usual conditions, was voted towards the construction of a line of railway from Melbourne to Drummondville, Que., not to exceed 28 miles in length. (June, pg. 403.)

Little Nation Ry.—A subsidy was voted last session of the Dominion Parliament for the construction of a railway from Papineauville, on the C.P.R., towards Nominique, Que., for a distance not exceeding 30 miles. It was stated in the course of the discussion that the Little Nation Ry. Co. had not made formal application for the subsidy, when it was decided to recommend one, but it was available for that company. (July, pg. 471.)

Lotbiniere and Megantic Ry.—The Dominion Parliament last session voted subsidies in lieu of those granted in 1906, as follows: For a line to extend its railway southerly from a point at or near Lyster, Que., to or near Lime Ridge, Dudswell tp., a distance not exceeding 50 miles; and for a line from a point on its line in the township of Inverness to the Quebec Bridge, not exceeding 30 miles. (June, pg. 403.)

MacLeod, Cardston and Montana Ry.—At the last session of the Dominion Parliament a subsidy was voted towards the construction of a railway from MacLeod, Alta., via Cardston, towards a point on the International boundary, west of range 21, not to exceed 45 miles in length. (June, pg. 405.)

Manitoulin and North Shore Ry.—In 1906 the Dominion Parliament voted subsidies to the M. and N.S. Ry., towards the construction of a number of lines of railway in the vicinity of Sudbury, and connecting the mainland of Ontario with Little Current, Manitoulin Island. At the recent session of the Dominion Parliament these subsidies were revoked, a provision being inserted in the act authorizing the granting of the subsidies to the Canada Central Ry., in lieu of the M. and N.S. Ry., with the consent of that company and subject to the approval of the Governor in Council. The lines subsidized are as follows: From a point on the railway between Little Current and Sudbury, westerly towards the Algoma Central and Hudson's Bay Ry., not exceeding 100 miles, from Little Current, crossing the C.P.R. at or near Stanley, and thence to Sudbury, not exceeding 64 miles; from a point at or near Sudbury, northerly, not exceeding 30 miles. The company has constructed 16.50 miles of line connecting Sudbury with a number of mining properties, and with a pulp mill at Spanish River. (June, pg. 405.)

Margaree Coal and Ry. Co.—At the last session of the Dominion Parliament subsidies were voted for the construction of the following lines of railway, in lieu of those totalling 38 miles granted in 1907: From near Orangedale, N.S., on the Intercolonial Ry., via the east side of the village of Lake Ainslie and Ste. Rosa, to Chimney Corner Cove, N.S., not exceeding 40 miles; and for a line from the Intercolonial Ry. between Orangedale and Point Tupper to Caribou Cove on Inhabitants Bay or River, not exceeding four miles. (Aug., 1907, pg. 563.)

Maritime Coal, Ry. and Power Co.—The Dominion Parliament at its recent session voted a subsidy of \$3,200 a mile, with the usual provision for its being increased up to \$6,400 a mile, for the extension of the company's lines from Chignecto to a point on Northumberland Straits, not exceeding 25 miles, and for a line from Joggins Mines to a point on Chignecto Bay, N.S., not exceeding one mile. (Sept., 1907, pg. 663.)

Matane and Gaspé Ry.—In 1906 the Dominion Parliament voted a subsidy towards the construction of a section of 30 miles

of its projected railway, and at the recent session voted a subsidy in lieu thereof, for a line from Ste. Flavie, on the Intercolonial Ry., to Matane, Que., a distance not exceeding 38 miles.

A contract is reported to have been let to H. J. Beemer & Co., New York, for the construction of the line between Ste. Flavie and Matane, with side tracks, etc. A further report states that the contractor began work at Ste. Flavie Aug. 5. Following are the officers and directors for the current year: President, Hon. P. A. Choquette; Secretary, R. Dupont; other directors: J. G. Scott, Dr. Ross, M.P.; C. A. Gauvreau, M.P.; D. Caron, M.P.; Rev. J. Soucy, H. J. Beemer, of New York; H. J. Lyons, of Montreal; A. Fortin. (June, pg. 405.)

New Brunswick Coal and Ry. Co.—J. R. Stone, one of the Commissioners for the operation of this railway on behalf of the New Brunswick Government, on his return to St. John, after an inspection of the line in company with P. S. Archibald, C.E., the other commissioner, said the principal work of betterment now going on was the ballasting of the line. About 100 carloads per day were being obtained from the Belleisle ballast pit, but the funds at the disposal of the Commissioners would not permit them to do more than about one-half of the ballasting necessary during the current season. (Aug., pg. 547.)

Nipissing Central Ry.—At the last session of the Dominion Parliament a subsidy upon the usual terms and conditions was voted towards the construction of a line from a point on the Temiskaming and Northern Ontario Ry. near New Liskeard, Ont., to a point in the township of Guigues, Que., not exceeding 13 miles. (May, pg. 353.)

North-Eastern Ry.—At the last session of the Dominion Parliament a subsidy was voted in aid of the construction of a line, from a point east of Lake Temiskaming, at or near Ville Marie, Que., easterly for a distance not exceeding 25 miles.

North Shore Ry.—A subsidy at the usual rate was voted at the last session of the Dominion Parliament to this company, which took over the line of the Beersville Coal and Ry. Co., towards the construction of the following lines: From Beersville to Brown's Landing, seven miles, and for a branch from the main line to Mount Carlyle, 2.50 miles. The object of the extension to Brown's Landing is to enable the company to ship the output of the Imperial and other coal mines, which its line serves, by water as well as by rail. (Mar., pg. 183.)

Ontario Northern and Timagami Ry.—The Dominion Parliament last session granted a revote of the subsidy voted in 1906 towards the construction of this railway, viz., for a line from near Sturgeon Falls, Ont., in a northwesterly direction to a point on the western shore of Lake Timagami, a distance not exceeding 50 miles. (April, 1906, pg. 193.)

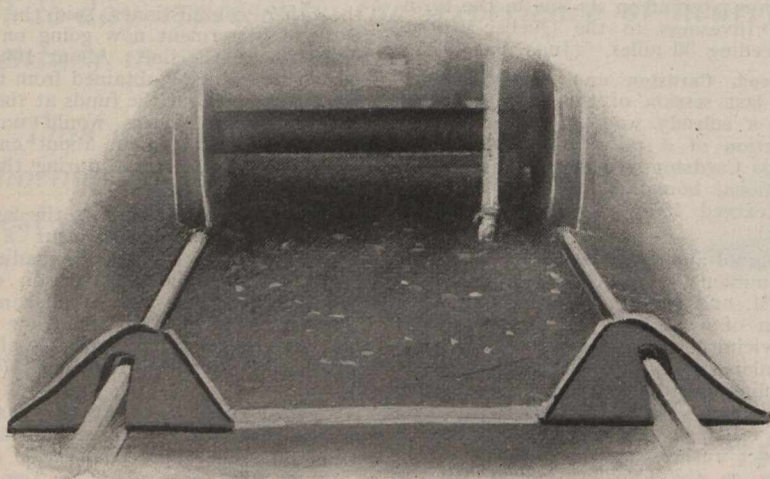
Owen Sound and Meaford Ry.—The subsidy voted at the session of the Dominion Parliament in 1906 for the construction of a line between Owen Sound and Meaford, Ont., not exceeding 30 miles, was revoked at the recent session. The Manitoulin and North Shore Ry. has charter powers to construct a railway between these points, but not having done anything to carry it out, Owen Sound people obtained a charter of incorporation with this title, and in 1906 was given power to enter into arrangements for the construction of the railway, if the M. and N.S. Ry. failed to start construction work within a given time. No work has been done to date, but there has been a lot of negotiation going on with various companies with a view of the line being constructed. (May, pg. 333.)

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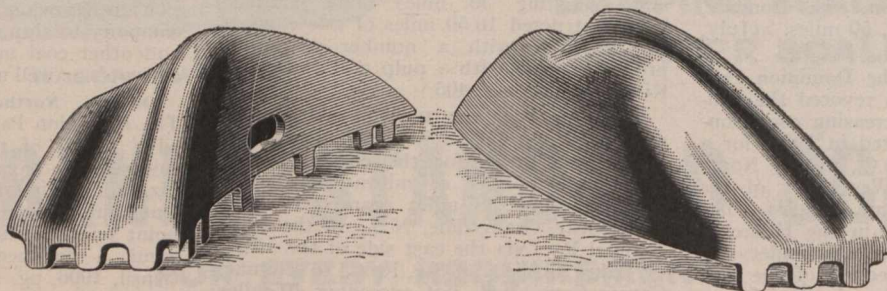


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Orford Mountain Ry.—We are advised that during the season of 1907 the company graded about three miles from Mansonville, Que., southerly towards North Troy, Vt., and that track was laid for 2.50 miles. The total distance from Mansonville to North Troy is 4.50 miles. It is expected that the extension will be completed this season. The work is heavy clay cuttings, with very little rock. The work is being done directly by the railway company, under the charge of R. K. Harris, Chief Engineer. (Aug., pg. 547.)

Port Arthur Terminal Railway.—The city council of Port Arthur, Ont., have had under discussion a project for the construction of a terminal railway. The proposition is that the city construct a line from the vicinity of Arthur St. to Bare Point, the purpose of which would be to give railway connection with the C.P.R., Canadian Northern Ry., and the G.T. Pacific, for any industries which may locate along the water front. The railway, being owned by the city, it would not be necessary to give away any street crossings or other rights, and at the same time connection would be given between the factories and the lines of all all companies doing business in the city.

Prince Edward Island Ry.—The bill passed at the recent session of the Dominion Parliament authorizes the Government, if it sees fit, to construct a branch about 13 miles, from Harmony, on the Souris branch, to Elmira. It will serve a very important district, where there are several sections thickly settled which are without railway communication. The line, it was estimated, would cost about \$400,000. The Prince Edward Island Legislature at its recent session passed a resolution asking for the construction of several branch lines, of which this was one. The Government has selected this branch for immediate construction, it being all that could be undertaken this year. The amount voted by Parliament for this work at the recent session was \$31,000. We are advised that construction will be started as soon as the surveys are completed.

In addition to these sums, and others previously recorded, the Dominion Parliament voted \$2,550 for land purchase, and \$10,000 for the survey of branch lines as follows: Montague to a point on the Murray Harbor branch; alternative routes from a point on the main line to New London; and from Stanley to the main line at Royalty Junction or Mount Stewart, or an intermediate point.

The amount awarded by C. Schreiber, C.M.G., sole arbitrator, to M. J. Haney on his contract for the construction of the Hillsboro River bridge, is \$164,633.33, which amount was voted at the last session of the Dominion Parliament. The total cost of the bridge to June 30, including the amount of the award, has been \$1,365,376.18. (Aug., pg. 547.)

Quebec Bridge and Ry. Co.—At the last session of the Dominion Parliament an act was passed authorizing the Governor in Council, pursuant to the terms and conditions of the agreement set out in the schedule of chap. 54 of the statutes of 1903, to exercise the right to take over the whole undertaking, assets, property and franchises of the Q.B. and Ry. Co. The second section authorizes the Minister of Railway and Canals to employ engineers to prepare plans and specifications for the reconstruction and completion of the bridge, or for the construction of a bridge to serve the same purpose as was intended to be served by the company's collapsed bridge, on the same or some other site at or near Quebec, as is recommended by the engineers appointed; and that the Minister shall apply to such work whatever sums may be voted therefor by Parliament, including the sum of \$25,000 voted at the recent session.

The agreement referred to provided that the Government having guaranteed the company's bonds, could at any time take over the property and undertaking of the company, upon giving one month's notice of its intention, paying the shareholders the amount of their stock at par value, not exceeding \$265,585.70, with simple interest at 5%, and an addition of 10% on the par value of fully paid-up shares, and assuming the approved obligations of the company for construction, operation and maintenance, according to the terms of the bonds and mortgage securing the same.

Under the terms of section 2 of the act, the Government, Aug. 13, appointed H. E. Vautelet, C.E., Montreal; M. FitzMaurice, C.M.G., London, Eng., and R. Mojeski, Chicago, Ill., to be the board of engineers to draw plans for the reconstruction of the bridge. H. E. Vautelet, who was formerly in the employ of the C.P.R., is the chairman of the board. (Aug., pg. 547.)

Quebec Central Ry.—At the last session of the Dominion Parliament a subsidy under the usual terms and conditions was voted for an extension of the line from St. George, to or towards Ste. Justine, Que., not exceeding 30 miles. (June, pg. 405.)

Quebec and New Brunswick Ry.—The Dominion Parliament last session voted a subsidy at the usual rate, and upon the usual conditions, towards the construction of a railway from Chaudiere Junction, on the Intercolonial Ry., to a point at or near the International boundary, not exceeding 80 miles, in lieu of a subsidy voted in 1901.

During the course of the discussion in the House of Commons it was stated that the line was originally projected to run from near Chaudiere Junction to Connors in N.B., where it was to connect with a line coming up the St. John River Valley. Some construction was done in New Brunswick about 1903. Since that date the National Transcontinental Ry. had been placed under construction, and the surveys for that line had included some portion of the right-of-way of this line. As a result the company had secured powers to move its line further to the south, so as to keep clear of the N.T. Ry. The subsidy for the New Brunswick end of the line was revoked in 1907, and the present vote was to revive the subsidy for the Quebec end of the line, making the conditions conform to the altered circumstances. The Minister of Public Works in supporting the subsidy said the people of the St. John Valley had been looking for the construction of a line of railway along the valley ever since railway construction had begun in Canada. When the Intercolonial Ry. was projected many thought that it would be constructed along the valley, but it was decided to carry the line along the north shore of New Brunswick. When the National Transcontinental Ry. was projected it was thought it would be carried along the valley, but after the surveys were made that line was located back from the river, going through the centre of the province. So eager were the people of the province for a line through the valley that the Legislature had authorized the Government to guarantee the bonds of any railway company constructing the line, to the extent of \$15,000 a mile, on condition that it became part of a trunk line. "As I understand the proposition of the gentlemen who, with Mr. Costigan, are promoting this charter and asking for this subsidy," said the Minister, "is that they will carry their line from the Chaudiere Junction near Quebec, cross the International boundary and go through the state of Maine at its northern part, where it is comparatively narrow, instead of going up around the angle of the St. Francis River in the province of New Brunswick. It will cross the northern part of

the state of Maine, and connect there with a road down the St. John Valley, and make this road a part of the St. John Valley system. I do not know whether that can be carried out; but I would say that if the line, as these gentlemen are proposing to have it constructed, is constructed to a point on the St. John in the vicinity of Grand Falls, it will give a great impetus to the construction of a line down the St. John Valley. If it does not form part of such a through scheme, it will never be built, because capitalists will not put their money into a local line. If built as a through scheme, it will be of enormous advantage to a country 290 miles in extent, and one of the most fertile portions of Canada, and which is to-day without the railway facilities enjoyed by most of the older sections of the Dominion." (June, pg. 405.)

Quinze and Blanche River Ry.—We are advised that the consignments of rails recently received at New Liskeard, Ont., and stated in press reports to be for a Liskeard Electric Ry., are for the Q. and B.R. Ry. The grading work being done at the first chute of the Quinze River is also being done for this company. The construction work is in charge of D. A. McNaughton. See Murray City to New Liskeard, Ont., (Aug., pg. 547.)

Red Deer to Rocky Mountain House.—The Dominion Parliament last session voted a subsidy towards the construction of 70 miles of railway from at or near the town of Red Deer, Alta., to a point on the North Saskatchewan River, near Rocky Mountain House.

St. Maurice Valley Ry.—At the recent session of the Dominion Parliament a subsidy was voted towards the construction of a line 28 miles in length from Three Rivers to Grand Mere, Que. (Aug., 1907, pg. 563.)

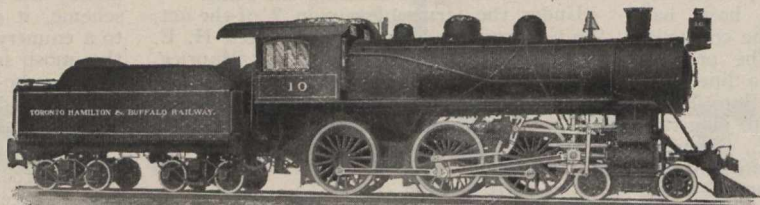
Southern Central Pacific Ry.—At the recent session of the Dominion Parliament a subsidy was voted to the S.C.P. Ry. Co., towards the construction of a railway from a point at or near Cowley, Alta., to the Highwood River, not exceeding 50 miles. It was stated that the charter of the S.C.P. Ry. was about to expire, and the Minister of Railways said if the company did not make progress the Government would be in a position to take up the question of construction with another company, which has a charter covering the same territory.

The S.C. Pacific Ry. Co. was incorporated by an act of the Dominion Parliament in 1903, for the purpose of constructing a railway from Vancouver, northerly and easterly via Kootenay Pass, to Old Man River, and thence to Churchill River on Hudson Bay. (June, 1903, pg. 218.) See also Alberta and British Columbia Ry.

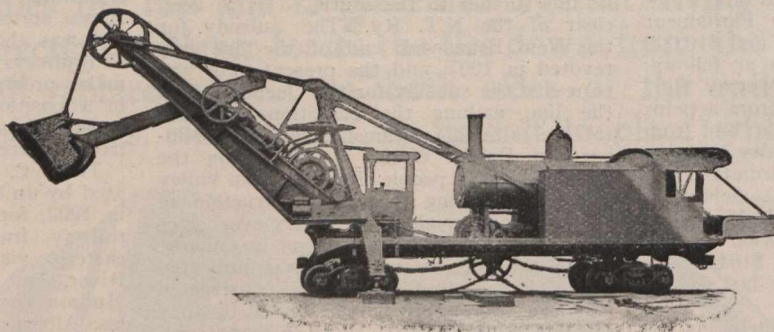
Thessalon and Northern Ry.—The Dominion Parliament last session voted a subsidy in aid of the construction of a line of railway, not to exceed four miles in length, from Thessalon, Ont., in a northerly direction. (Feb., pg. 101.)

Temiskaming and Northern Ontario Ry.—It was reported Aug. 14 that the line of the T. and N.O. Ry. was within 10 miles of Nellie Lake, and that if the weather remained favorable, track would be laid to the point of junction with the right-of-way of the National Transcontinental Ry. (Eastern Division G.T. Pacific Ry.) early in October.

The question of the construction of a joint station at North Bay for the T. & N.O. Ry. and the G.T.R. is under consideration. The present arrangement by which the G.T.R. and the T. and N.O. Ry. depend upon the C.P.R. for terminal facilities at North Bay is unsatisfactory, and is likely to be terminated very shortly. (Aug., pg. 549.)

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Trans-Canada Ry.—A survey party has been placed in the field with a view of locating a line from Roberval to the mining country through which the Chibougamo River runs, about 200 miles westerly. (July, pg. 473.)

Tusket Wedge Ry.—The Dominion Parliament at its recent session voted a subsidy of \$3,200 a mile, with the usual provision for an increase to \$6,400 a mile, for a line from Tusket Wedge to a point on the Halifax and South-Western Ry. near Riverdale, not exceeding eight miles. (April, pg. 247.)

Vancouver Island and Eastern Ry.—The railway subsidies act passed at the recent session of the Dominion Parliament makes provision for the payment of a subsidy upon the usual terms and conditions, towards the construction of a railway from a point upon the Esquimalt and Nanaimo Ry. near Campbell River, or Vancouver Island, B.C., towards Fort George, B.C., on the line of the G.T. Pacific Ry., now under construction for a distance not exceeding 100 miles. (July, pg. 473.)

Vancouver, Westminster and Yukon Ry.—A subsidy amounting to \$200,000 was voted last session of the Dominion Parliament towards the construction and completion of a railway bridge across Burrard Inlet, B.C. The estimated cost of the bridge is about \$1,250,000. The subsidy act also provides for the payment upon the usual terms and conditions of a grant towards the construction of a line of railway from Vancouver, for a distance not exceeding 100 miles, in the direction of Fort George, on the G.T. Pacific Ry. (Jan., pg. 23.)

York and Carleton Ry.—At the last session of the Dominion Parliament a subsidy at the rate of \$3,200 a mile, with the usual condition as to an increase to \$6,400 a mile, was voted in aid of the extension of this line from its present terminus to a junction with the Eastern Division G.T. Pacific Ry. (National Transcontinental Ry.), not exceeding nine miles. (Aug., pg. 549.)

The C.P.R. and the Customs Department.—An action has been entered in the Exchequer Court by the Department of Customs to recover from the C.P.R. an amount of \$236,206.70, for irregularities in connection with the passing of supplies, etc., through the customs during 1904-05. The amount is made up of three sums, viz., sums due on goods of which either no entries had been made, or on which it is alleged an undervaluation had been placed by the company's agent, amounting to \$44,406.70; the sum of \$31,900, claimed as double forfeiture on a charge of bridge material alleged to have been entered as scrap iron, and, finally, the sum of \$160,000 which the company had placed with the Government as bond for the faithful representing of goods carried by the company through the customs. The charges are somewhat similar to those made about two years ago, when it was discovered that D. Hobbs, who had charge of the work of passing goods through the customs for the C.P.R., had been defrauding the Government as well as the C.P.R. by falsifying entries, etc. Hobbs was found guilty and sentenced to seven years in the penitentiary.

Hon. J. A. Calder, a member of the Saskatchewan Government, has been appointed Commissioner of Railways, Telegraphs and Telephones, for that province.

The Canada North-West Land Co. will return a further amount of \$4 per share to its shareholders Oct. 15. After the last distribution of capital the outstanding stock was valued at \$294,073, representing 58,814.6 shares at \$5 a share. The company took over 1,928,318 acres of land from an English company in 1893, and at the end of Dec. had remaining 526,017 acres unsold.

Regulations Respecting Wooden Trestles.

The Board of Railway Commissioners has passed the following order no. 5103, July 31, and has rescinded order no. 3239, July 3, 1907. In pursuance of the powers conferred upon it by the Railway Act, secs. 30 and 269, and of all other powers possessed by the Board in that behalf:

Every railway company subject to the legislative authority of the Parliament of Canada, operating by steam power any railway or railways, any part or parts of which is or are constructed of or upon wooden trestles, shall during the months of May, June, July, August, September, and October of each year, provide, place, and keep a watchman, track-walker, fire alarm signals, ballast flooring, or fireproof paint, as hereinafter directed, for the purpose of protecting the said trestles from fire, and thereby preventing trains from being burned, derailed, or otherwise damaged at or on such trestles—each such company being allowed the option of adopting any one of the said foregoing methods of protection.

2. Every such company shall place and maintain at each end of every wooden trestle on its line or lines of railway, a barrel of a capacity not less than 45 gallons; and on every such trestle over 200 ft. long, shall place and maintain barrels of similar capacity at distances of not less than 150 ft.; provided, however, that pile trestles over streams or other bodies of water need not be furnished with any such barrels.

3. Every such company shall keep and maintain the said water-barrels in good repair and good condition for holding water and see that they are kept full of water at all times.

4. Every such company shall remove all brush and dead grass from beneath and around every such trestle, and keep the whole width of its right-of-way under and along every such trestle free from all kinds of combustible material.

5. Every such special watchman or track-walker, on or in the neighborhood of timber lands and in localities distant from settlement shall carry a pail, or satisfy himself that a pail is at each of the different trestles under his care, in such a place that it cannot be taken away or used for any other purpose than that for which it was provided.

6. Where the protection provided is by a track-walker, all trestles, long and short, shall be regularly inspected—two inspections to be made every 24 hrs. on main lines, and one every 24 hrs. on branch lines.

7. Every such special watchman or track-walker, whenever any such trestle is injured by fire, shall, as soon as possible thereafter, report the same to the roadmaster on whose division he is working; and in the event of any such barrel or pail not being in good and efficient condition for the holding of water, every such special watchman or track-walker having charge of the same shall promptly report such condition to the said roadmaster; and whenever the height of water in any such barrel is lowered by evaporation or otherwise, say, 10 ins. from the top of the barrel, every such special watchman or track-walker shall promptly report such condition to the said roadmaster.

8. Every such railway company failing or neglecting to comply with any of the foregoing regulations shall be subject to a penalty of \$30.

9. Every such special watchman or track-walker failing or neglecting to make inspection of any such trestle in accordance with the foregoing regulations, or failing or neglecting to make any of the reports hereinbefore required of him and as so required, shall be subject to a penalty of \$15 for each such failure or neglect.

10. That the order of the Board no. 3239, dated July 3, 1907, be rescinded.

Key Harbor Ore Docks, Etc.

The Canadian Northern Ontario Ry. has completed its ore docks, etc., at Key Harbor, Georgian Bay, for the shipment of iron ore from the mines at Moose Mountain.

The dock is reached from the Georgian Bay in four ranges, with ample room for large vessels at the turns and room to turn at west end of dock. Ranges and flags have already been set out by the Marine Department to mark the channel, and gas buoys are to be placed where necessary as soon as required.

The trestle approach, which is 1,600' long, varies from 10' to 30' in height, and is a standard 4 post timber trestle on rock foundation, bents 15' centre to centre, caps, posts and sills, 12" x 12"; braces, 3" x 10"; stringers, 8" x 16"; 3 under each rail; ties, 8" x 8", 4' apart; guard rail, 8" x 8". The trestle over ore stock pile is 500' long, and 30' high; spans, 12' centre to centre; timber, 12" x 12"; floor, 4" planking. The tunnel under trestle is 500' long and 6' deep, being constructed of timber 12" x 12" on the sides, tunnel 6' wide by 5' high, with A shaped roof on top 11' 3" high over all of 12" x 12" and 4" x 13" timbers, sheeted with 3" plank and with valve openings 12" x 24", 6' centre to centre on each side and at bottom of A shaped roof. The belt conveyor in tunnel is 36" wide and 1,096' long, with a capacity of 800 tons an hour. The belts are of 6 ply best grade rubber, made especially for the work with heavy wearing surface. The scale house is 47' x 8', equipped with an automatic and continuous weighing and recording machine. The conveyor from scale house to ore dock is a belt 3' wide and 950' long. The length of conveyor from scale house to ore dock is 465', the difference in elevation from lower end near stock pile to upper end on ore pockets is 65'. The conveyor trestle from stock pile to ore pockets is a three-post trestle on rock-filled timber cribs. Capacity of belt 800 tons an hour.

The ore docks have a capacity of 2,000 tons, with 20 shipping pockets with a storage capacity of 100 tons each. The ore dock is 440' x 28' and 4' above water, built of piles and backed by rock-filled timber crib and decked with 3" planking. The ore pockets are 240' x 24', and 57' 9" high above dock. Bents 6' centre to centre, 7 posts to each bent, sides of pockets lined with 3" plank, bottoms 4" plank with additional lining of 3" hardwood wearing surface.

The power plant, which is located in a concrete building 48' x 44', consists of 2 return tubular boilers 62" x 18", 150 lbs. steam pressure; one steam-driven 200 k.w. alternating current generator, 600 v. 200 r.p.m., direct connected to 17" x 20" automatic engine, 390 h.p. maximum capacity; one 10" x 7" x 12" duplex pump, 300 gals. a minute capacity for fire protection. One 50 h.p. and two 75 h.p. induction motors are located at discharge end of belting.

The low level dock is 50' x 26', built of piles capped with 12" x 12" timbers and decked with 3" planking, with pile track trestle approach about 500' long, so that cars can be run on to the dock for the transfer of freight or passengers. Height of dock above water 4', and depth of water 15'.

The chief engineering features of construction consist in bringing the ore from the mine by train on to the stock pile trestle and discharging it from the cars on to the ground in a long pile. Below the level of the ground under the centre of the trestle and running the whole length of it is the tunnel in which the endless rubber belt supported on rollers works. When the valves at foot of A shaped roof are opened by the operator inside, the ore (which has already been crushed at the mine to a size suitable for handling on a belt) is delivered

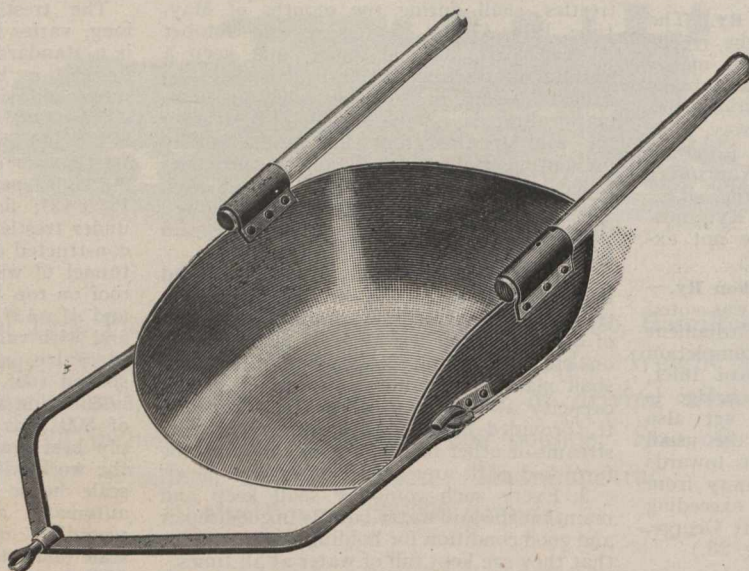
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- 1—50-ton Standard Gauge Locomotive with tender.
- 1—Combination Passenger Coach.
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- 2—Single Drum Horse Power Hoists.
- 1—No. 1 Railroad Plow.
- 6—No. 2 Wheel Scrapers.
- 6 Standard Gauge Two-Way "WESTERN" Pattern Dump Cars, 6 yd. capacity.
- 1—Blake Duplex Steam Pump, 6 x 4 x 6.
- 4—"WESTERN" Horse Cars, 1½ yd. Capacity, Side and End Dump.
- 2—Horizontal Boilers.
- 45—Tents, 12' x 15'.

Also a miscellaneous assortment of Tools, such as Bellows, Anvils, Hammers, Mattocks, Shovels, Wheelbarrows, etc., etc.

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by its own weight through sheet steel hoppers on to the belt, and is carried along on the belt and discharged on to another similar belt, which elevates the ore to the top of the ore pockets, a height of 65', and discharges it on to still another belt running along the top of the ore pockets, and this belt discharges the ore into any of the 20 ore pockets desired by means of a self-propelling dripper mounted on a suitable track for it to run on. From the pockets the ore is discharged into vessels by means of a gate at bottom of the pocket into a half-round spout about 4' wide and 30' long, made of sheet steel, which can be raised or lowered to suit vessels by a winch on top of the pockets. Just before the ore leaves the first or stock pile belt, it is weighed in the scale house as the belt travels along, and without the necessity for stopping the belt, by the continuous weigher already referred to.

The construction engineer was R. M. Pratt, of the Canadian Northern Ry. staff, and the contractors Mackenzie, Mann & Co., Ltd. The cost of construction was about \$500,000.00. Construction was commenced in May, 1907, under Hugh Sutherland, Executive Agent for the Canadian Northern Ry. at Winnipeg, and in October it was turned over to W. H. Grant, Manager of Construction, Mackenzie, Mann & Co.'s eastern lines. No work was done during Dec., 1907, or Jan. and Feb., 1908. From March 1 construction went on continuously, and the work was completed and the plant ready for ore shipments early in August.

September Birthdays.

Many happy returns of the day to—

G. W. Alexander, Local Treasurer G.T.R. Western Lines, Detroit, Mich., born at Lightcliff, Yorkshire, Eng., Sept. 10, 1859.

W. B. Bamford, District Freight Agent C.P.R., London, Ont., born at Belleville, Ont., Sept. 10, 1863.

W. D. Barclay, General Manager Halifax and South Western Ry., and Inverness Ry., and Coal Co., Halifax, N.S., born at Canipbellton, N.B., Sept. 23, 1852.

G. T. Bell, General Passenger and Ticket Agent G.T.R., Montreal, born there Sept. 7, 1861.

W. H. Biggar, K.C., General Solicitor G.T.R., Montreal, born at the Carrying Place, near Trenton, Ont., Sept. 19, 1852.

E. R. Bremner, ex-Division Freight Agent, Ottawa Division, G.T.R., Ottawa, born in Toronto, Sept. 9, 1875.

M. H. Brown, General Freight Agent, Ontario Division, C.P.R., Toronto, born at Victoria Square, Ont., Sept. 2, 1866.

W. G. Brownlee, General Transportation Manager G.T.R., Montreal, born at Lawrenceville, Ill., Sept. 9, 1858.

J. R. Bruce, Traffic Auditor Intercolonial Ry., Moncton, N.B., born at Portsoy, Banffshire, Scotland, Sept. 23, 1848.

W. B. Bulling, Assistant Freight Traffic Manager, Eastern Lines, C.P.R., Montreal, born there Sept. 16, 1858.

R. L. Burnap, Assistant General Freight Agent G.T.R., Chicago, Ill., born Sept. 20, 1872.

C. F. Burns, Auditor of Disbursements Intercolonial Ry., Moncton, N.B., born at Clements Port, N.S., Sept. 10, 1854.

A. D. Cartwright, Secretary Board of Railway Commissioners, Ottawa, born at Kingston, Ont., Sept. 20, 1864.

W. F. Egg, ex-City Passenger Agent C.P.R., Montreal, born at Plymouth, Eng. Sept. 7, 1859.

F. A. Folger, jr., Trainmaster Canadian Northern Ry., North Battleford, Sask., born at Kingston, Ont., Sept. 17, 1865.

C. B. Foster, District Passenger Agent, C.P.R., Toronto, born at Kingston, N.B., Sept. 30, 1871.

L. A. Hamilton, ex-Land Commissioner, C.P.R., born at Penetanguishene, Ont., Sept. 30, 1852.

L. B. Howland, President and General Manager Irondale, Bancroft and Ottawa Ry., Irondale, Ont., born at Lambton Mills, Ont., Sept. 2, 1869.

G. R. Huntingdon, General Superintendent Minneapolis, St. Paul and Sault Ste. Marie Ry., Minneapolis, Minn., born Sept., 1867.

J. E. Hutcheson, Superintendent and Purchasing Agent Ottawa Electric Ry., and President Canadian Street Railway Association, born at Brockville, Ont., Sept. 15, 1858.

W. H. Kelson, ex-General Storekeeper C.P.R., now of the W. H. Kelson Co., Montreal, born at Bath, Eng., Sept. 5, 1850.

R. E. Larmour, General Freight Agent Kootenay and Boundary Districts, C.P.R., Nelson, B.C., born at Brantford, Ont., Sept. 26, 1868.

H. D. Lumsden, C.E., Chief Engineer National Transcontinental Ry., Ottawa, born at Belhaire, Scotland, Sept. 7, 1844.

J. Bruce Macdonald, Director Niagara Navigation Co., born at Glengarry, Ont., Sept. 19, 1850.

J. F. Mundle, city freight agent C.P.R., Montreal, born at Prescott, Ont., Sept. 20, 1857.

B. S. Murray, Route Agent Canadian Express Co., London, Ont., born at Glenwood, N.Y., Sept. 17, 1856.

J. Osborne, General Superintendent Ontario Division C.P.R., Toronto, born at Montreal, Sept. 19, 1861.

S. S. Oliver, Engineer of Maintenance Canadian Northern Quebec Ry., and Quebec and Lake St. John Ry., Quebec, born there Sept. 9, 1858.

S. N. Parent, Chairman National Transcontinental Ry. Commission, Ottawa, Ont., born at Quebec, Sept. 12, 1855.

E. D. Parker, Assistant General Freight Agent Minneapolis, St. Paul and Sault Ste. Marie Ry., St. Paul, Minn., born at Granville, Ohio, Sept. 20, 1839.

J. Paul, General Freight Agent Niagara, St. Catharines and Toronto Ry., born in Euphrasia tp., Grey County, Ont., Sept. 13, 1858.

R. W. Perry, C.P.R. ticket agent, Bracebridge, Ont., born at Whithy, Ont., Sept. 2, 1850.

W. D. Robb, Superintendent Motive Power G.T.R., Montreal, born at Longueuil, Que., Sept. 21, 1857.

W. H. Rosevear, ex-General Car Accountant G.T.R., Montreal, born at Wadebridge, Cornwall, Eng., Sept. 26, 1837.

A. L. Smith, Superintendent C.P.R., White River, Ont., born at Toronto, Sept. 23, 1866.

E. W. Taylor, General Freight Agent Reid Newfoundland Co., born at Carbonear, Nfld., Sept. 8, 1870.

W. Whyte, 2nd Vice-President C.P.R., Winnipeg, born at Charleston, Scotland, Sept. 15, 1843.

H. A. Young, Traffic Manager Canadian Lake Line, Toronto, born at Brooklyn, N.Y., Sept. 1, 1864.

The directors of the East Kootenay Logging Ry. Co. announce that a call of \$25.52 per share has been made upon the holders of stock. E. S. Horne, Cranbrook, B.C., is Secretary.

As a result of a big forest fire in British Columbia, which raged for days, the towns of Fernie and Michel were practically destroyed Aug. 2. The loss to the Crow's Nest Pass Coal Co., owning the Morrissey, Fernie and Michel Ry., is placed at \$199,200; that of the Great Northern Ry., U.S., owning the Crow's Nest Southern Ry., is put at \$500,000, and that of the C.P.R. at about \$500,000.

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

Tobique Valley Ry.—The Dominion Parliament at the recent session voted a subsidy at the usual rate, and upon the usual conditions, for the construction of an extension of this line, operated by the C.P.R., from the present terminus at Plaster Rock to Riley's Creek, about 28 miles.

Ste. Agathe Southerly.—A subsidy at the usual rate, and upon the usual conditions, was voted last session of the Dominion Parliament for a company undertaking the construction of a line of railway from Ste. Agathe des Montes station on the C.P.R. line to Labelle and Nominique, Que., southerly, passing near Lake St. Joseph and Ste. Mary, for a distance of 15 miles, in lieu of the subsidy voted in 1906.

Land Purchases at Montreal.—The C.P.R. is reported to have recently made large purchases of land in Tetreauville and Longue Pointe, Que., and local reports state that it is intended to erect a rolling mill for the purpose of turning out spikes, nuts, rails, etc., and to construct wharves and docks for the accommodation of vessels. Interviewed on the subject Sir T. G. Shaughnessy said the company was always on the lookout for property that could be utilized to advantage. As to its use, nothing had been decided.

Kingston and Pembroke Ry.—The subsidy voted by the Dominion Parliament in 1906, for the construction of a line of railway from Sharbot Lake or Bathurst station, or between these points, via Lanark Village, to Carleton Place, Ont., not exceeding 41 miles, was revoked at the last session of the Dominion Parliament. Surveys were made and subsidies voted for this line prior to 1900, and the latter, together with the company's powers to construct the line, have been renewed from time to time.

Ontario Division Wooden Bridges.—Following the destruction of the wooden bridge at Dumfries, on the main line between Toronto and Windsor, Ont., Aug. 3, it has been decided that all wooden bridges on the line shall be replaced as speedily as possible by concrete and steel structures.

St. Mary's and Western Ontario Ry.—The work of the final completion of the line from Embro to St. Mary's, Ont., is about completed, and the roadbed is reported to be in good shape. The negotiations with the St. Mary's Town Council with respect to the erection of a station building in the town are still in progress, but it is believed that a decision will soon be reached.

The Dominion Parliament last session voted a subsidy at the usual rate towards the construction of a line of railway from Woodstock to Exeter, Ont., not exceeding 45 miles in length.

Walkerton and Lucknow Ry.—The second section of this line from Hanover to Walkerton, Ont., 18 miles, was opened for traffic Aug. 10. The station building at Walkerton is nearly completed.

Georgian Bay and Seaboard Ry.—The first section of this line to be constructed extends from Victoria Harbor, on Georgian Bay, to Coldwater station, on the company's recently completed Toronto-Sudbury branch, about 15 miles. The line is practically completed, and is expected to be opened for traffic in October.

Winnipeg Beach Branch.—The relaying of this branch with heavy rails has been completed. The mileage between Netley and the Beach was relaid in 1907 with 72-lb. steel, and this season the section from Netley to Winnipeg has been relaid with 85-lb. steel. The 56-lb. rails taken up will be utilized on some of the new branch lines.

Winnipeg Beach to Riverton.—A subsidy was granted last session of the Dominion



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Parliament towards the construction of a line from Winnipeg Beach, northerly to Gimli, Man., not exceeding 9.50 miles, and for a line from Gimli to Riverton, Man., not exceeding 25 miles.

Track was laid on the extension to Gimli in 1906, and a train service is being operated over it.

Sheho to Lanigan, Sask.—In connection with the progress of construction on the extension of the old Manitoba and Northwestern Ry., from Sheho, to a junction with the line into Saskatoon at Lanigan, Sask., W. Whyte, Second Vice-President, said the connection would be made in the fall. No provision had been made for the construction of a branch from this line to Prince Albert, as it was not yet in the present plans of the company to construct it.

Saskatoon Westerly.—Speaking at Saskatoon, Sask., recently, W. Whyte, Second Vice-President, said the line from Saskatoon to a junction with the branch of the Calgary and Edmonton Ry., running easterly from Wetaskiwin, Alta., would be completed this year as far as Wilkie, Sask., the second divisional point west, but he did not expect it would be completed right through. He did not know whether a line would be constructed to connect the Saskatoon line with the branch of the Calgary and Edmonton Ry., running easterly from Lacombe, Alta. No provision had been made as yet for the construction of such a line.

Moose Jaw Northwesterly.—At the last session of the Dominion Parliament a subsidy upon the usual terms was voted towards the construction of a line, not exceeding 123 miles in length, from Moose Jaw, Sask., in a northwesterly direction.

In a recent interview, W. Whyte, Second Vice-President, said the line from Moose Jaw, Sask., in the direction of the Lacombe branch of the Calgary and Edmonton Ry., would be pushed on to Outlook, Sask., this season. Outlook is a point west of the South Saskatchewan River, and 123 miles from Moose Jaw.

Calgary to Lethbridge.—We are advised that the survey being made by the C.P.R. between Calgary and Lethbridge, Alta., is merely a preliminary one, for the purpose of finding out the conditions of settlement, possible grades, etc., and that the matter is not, as yet, in a sufficiently advanced stage for any definite decision to be reached in regard to it. Replying to a deputation from the Calgary, Alta., Board of Trade recently, W. Whyte, Second Vice-President, said the line from Lethbridge into Calgary would most certainly be constructed at an early date, but he could not say that it would be commenced this season. The final location would, however, be made, and preparations made for starting construction next season.

Strathcona-Edmonton Bridge.—The Dominion Parliament last session voted an amount equal to 15% upon the amount expended upon the construction and completion of a bridge over the Saskatchewan River, connecting Strathcona and Edmonton, Alta., such percentage not to exceed \$100,000. The subsidy is voted to the C.P.R. as lessee of the Calgary and Edmonton Ry.

Reports are current at Edmonton that the company has abandoned its intention of constructing a bridge between Strathcona and Edmonton, and was making arrangements to secure an entrance into Edmonton over the bridge at Clover Bar, constructed for the G.T. Pacific Ry.

Belly River Bridge.—The masonry work for the bridge over the Belly River bridge, on the cut-off at Lethbridge, Alta., for the Crow's Nest branch, has been completed. Three of the steel spans have been erected, and the false work and the traveller for the

erection of the other spans is being got in place. The traveller will have a length of 189 ft., with an arm 108 ft. long, and have a lifting capacity of 15 tons.

British Columbia Southern Ry.—At the last session of the Dominion Parliament a subsidy upon the usual terms and conditions was voted to aid in the construction of a railway from Carmi to Penticton, B.C., not exceeding 50 miles. Carmi is situated close to Midway, the present terminal point of the B.C. Southern Ry., and surveys have been made for its extension to Penticton.

Nicola, Kamloops and Similkameen Ry.—The railway subsidies act passed last session of the Dominion Parliament provided for a grant in aid of the construction of a line of railway from Nicola to a point at or near Penticton, B.C., not exceeding 110 miles. The N.K. and S. Ry., which is leased to the C.P.R., is already in operation from Spence's Bridge to Nicola Lake, and surveys are in progress for its extension towards Penticton, consequently it will be in a position to take advantage of the subsidy voted.

Vancouver and Lulu Island Ry.—At the last session of the Dominion Parliament, a subsidy at the usual rate was voted towards the construction of a line from Eburne, on the V. and L.I. Ry., to New Westminster, B.C., not exceeding 9.65 miles. This line is under construction, and will be equipped for the operation of trains by electricity, the company having completed arrangements for its operation by the British Columbia Electric Ry., as an extension of the portion of the line already constructed.

Esquimalt and Nanaimo Ry.—The Dominion Parliament last session voted a subsidy towards the construction of a line from a point on the existing line near French Creek Bridge, to the village of Sandwich, B.C., not exceeding 41 miles, for a line from Sandwich to Campbell River, not exceeding 38 miles, and for a line from Cowichan Bay to Cowichan Lake, not exceeding 24 miles.

Tenders are under consideration for the grading and bridging for a distance of about 11 miles, from mileage 89, near Nanoose Bay, to French Creek. (Aug., pg. 549.)

Railways and the Supply of Cars.

The following subsections have been added to sec. 88 of the Manitoba Grain Act, relative to the supply of cars, at loading points, for the removal of grain:

3. In the case of a flag station or siding from which grain is shipped the Commissioner may in his discretion, and for such period or periods as he deems necessary, require the railway company to provide at such flag station or shipping siding a suitable person whose duties shall be: (a) to keep open for the use of shippers, at all times during the day, a car-order-book as provided under this Act, in which orders for cars may be entered in accordance with the provisions of this Act, (b) when the loading of cars is completed, to seal such car or cars; (c) to provide shippers with the regular form of grain shipping bill; and (d) when such grain shipping bill is properly filled out by the shipper, to hand it to the conductor of the train that picks up such car or cars, or place it where such conductor may get it. 4. This section shall not apply to sidings used exclusively for the passing of trains. 5. Every railway company which fails to comply with any requirement made by the Commissioner under s.s. 3 of this section, is guilty of an offence and liable, on summary conviction, to a penalty not exceeding \$1,000, and not less than \$500. 6. Every railway company shall supply car-order-books at all stations, flag stations and sidings where they are to be kept under this Act.

Sec. 89. An applicant may order a car or cars according to his requirements, of any of the standard sizes in use by the railway company, and in case he requires to order any special standard size of car, shall have such size stated by the station agent in the car-order-book, and the railway company shall furnish the size ordered to such applicant in his turn as soon as a car of such specified capacity can be furnished by the railway company at the point on the siding designated by the applicant in the car-order-book. In the event of the railway company furnishing a car or cars at any station, and such car or cars not being of the size required by the applicant first entitled thereto, such applicant shall not lose his priority, but shall be entitled to the first car of the size designated which can be delivered at such station at such applicant's disposal as aforesaid.

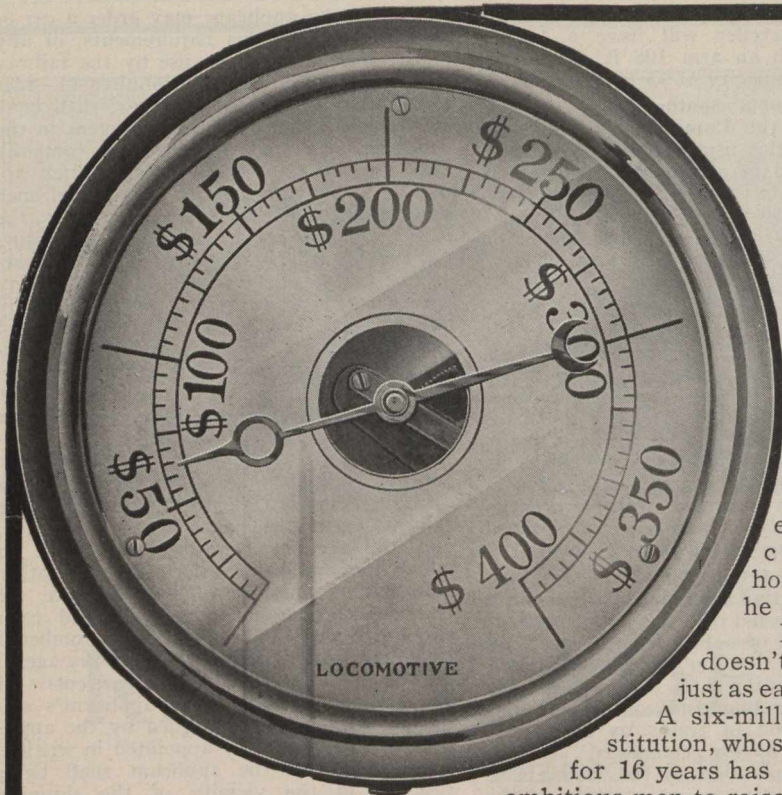
Sec. 90. The applicant or his agent duly appointed in writing shall furnish to the railway agent the name of the applicant, and the section, township and range in which the applicant resides, or such other sufficient designation of his residence for insertion in the car-order-book, and each car order shall be consecutively numbered in the car-order-book, by the railway agent, who shall fill in with ink all particulars of the application except the applicant's signature, which shall be signed by the applicant or his agent duly appointed in writing. 2. An agent of the applicant shall be a resident in the vicinity of the shipping point, and if the car order is signed by the agent of the applicant, the appointment shall be deposited with the railway agent.

The following addition is made to sec. 91: "...provided always that a car shall not be deemed to have been awarded to an applicant unless it is in a proper condition to receive grain. New sections have been added to the Act:

99A. The Commissioner shall have power in his discretion during a car shortage to direct the railroads to make an equitable distribution of empty grain cars to all stations in proportion to the amount of grain available for shipment from such stations.

99B. The Commissioner shall have power in his discretion to order cars to be supplied, contrary to the provisions of this Act, to elevators that are in danger of collapse, or in cases where the operator of any country elevator or warehouse reports in writing under oath that some portion of the grain in his elevator or warehouse is heated, and that in order to preserve the same it is necessary to ship such heated grain to the terminal elevator for treatment; provided, however, that no relief shall be granted in such last mentioned cases as long as the warehouseman has plenty of room in his building for the re-handling of such grain. 2. Upon granting relief as aforesaid the Commissioner shall submit a report of the facts thereof in each case to the Minister.

99C. Grain in carloads offered for shipment to points in Canada east of Winnipeg may be consigned "to be held at Winnipeg for orders" en route to its destination on the direct line of transit on the following conditions: 1. The shipper shall pay to the agent of the transportation company at the point of shipment the sum of \$3.00 per car. 2. The shipper shall endorse upon the consignment note and shipping receipt "This car to be held at Winnipeg for orders," with the name and address of some company, firm, or person resident in Winnipeg, who will accept advice from the carrier of its arrival in Winnipeg, and who will give to the carrier instructions on behalf of the owner for its disposal. 3. 24 hrs. free time after such advice of arrival shall be allowed the advisee in which to dispose of



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the property. 4. If the carrier, within 24 hrs.' free time referred to in par. 3, receives written directions for delivery within its Winnipeg-St. Boniface terminals, such delivery shall be made to team tracks or industrial spurs or sidings within its own terminals upon payment of the current grain rate in effect to Winnipeg or St. Boniface at the time of shipment, and surrender of the bill of lading. 5. The carrier may, in the absence of written instructions from the advisee for the disposal of the grain within the free time mentioned in par. 3, forward the grain to its destination as consigned. 6. Grain shipped "to be held at Winnipeg for orders" delivered in Winnipeg or St. Boniface, as provided for in par. 4, may be sent forward to any point in Canada east of Winnipeg within 6 months of its receipt at Winnipeg or St. Boniface at the balance of the through rate from the initial point to destination, as provided in the carrier's authorized tariff in force on the date of the initial shipment, plus 1c. per 100 lbs. terminal charges, less the \$3.00 per car mentioned in par. 1. 7. The detention of grain at Winnipeg-St. Boniface, under this section, shall not affect the application of the provisions of The Inspection and Safe Act with respect to such grain. 8. In case of the congestion of traffic caused by the operation of this section, the Board of Railway Commissioners may make an order suspending the operation of this section for the period mentioned in such order. 9. The provisions of this section shall have effect only from Dec. 15 in any year to Sept. 1 in the following year.

Canadian Northern Ry. Earnings, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-07, from July 1, 1907:

Earnings.	Expenses.	Net Earnings.	Increase or Decrease.
July. \$1,024,300	\$ 662,300	\$ 362,000	\$420,500+
Aug. 835,600	619,200	216,400	240,700+
Sept. 758,300	549,200	209,100	133,900+
Oct. 931,200	621,300	309,900	116,100+
Nov. 957,400	689,100	268,300	215,700+
Dec. 801,100	558,400	242,700	264,900+
Jan. 801,100	624,500	176,600	226,800+
Feb. 578,200	462,500	115,700	152,400+
Mar. 485,600	401,900	83,700	136,500+
Apr. 625,300	453,400	171,900	116,200+
May. 686,100	525,400	160,700	215,700+
June. 654,900	523,100	131,800	288,700-
July. 674,400	462,600	211,800	

\$9,012,400 \$6,528,400 \$2,484,000 \$1,519,300+

Approximate earnings for July, \$728,500, against \$939,500 for July, 1907.

Mileage operated, 2,874, against 2,554 in 1907.

C.P.R. Earnings, Expenses, etc.

Gross earnings, working expenses, net profits, increases or decreases over 1906-7, from July 1, 1907:

Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July \$7,008,274.46	\$4,501,421.80	\$2,506,852.66	\$135,041.58+
Aug. 7,010,177.40	4,439,922.25	2,570,255.15	107,695.95+
Sept. 6,423,452.68	4,272,099.33	2,151,353.35	286,578.28-
Oct. 7,071,047.39	4,390,729.95	2,680,317.44	104,509.87-
Nov. 6,953,967.56	4,308,933.35	2,445,034.21	181,911.27+
Dec. 6,418,576.38	4,341,386.80	2,077,189.58	188,404.76-
Jan. 4,498,560.80	3,874,569.02	623,991.78	75,664.17+
Feb. 4,129,044.09	3,771,947.48	357,096.61	264,891.51-
Mar. 5,424,931.26	4,123,901.77	1,301,029.49	944,706.73-
Apr. 5,497,736.30	3,775,501.86	1,722,234.44	644,691.43-
May. 5,392,570.16	3,711,074.92	1,681,495.24	827,862.77-
June. 5,555,835.04	3,880,339.17	1,675,495.87	739,610.41-

\$71,384,173.72 \$49,591,807.70 \$21,792,366.02 \$3,510,942.79-

Approximate earnings for July, \$6,196,000, against \$6,900,000 for July, 1907.

Mileage operated, 9,521.

The net results of the Company's operations for the year ended June 30, are as follows:

Gross earnings.....	\$71,384,173.72
Working expenses.....	49,591,807.70
Net earnings.....	\$21,792,366.02
Net earnings of steamships in excess of amounts included in monthly reports....	1,112,759.24
Income from other sources.....	1,541,874.03
Total net income.....	\$24,446,999.29
Deduct fixed charges.....	\$8,770,076.71
	\$15,676,922.58
Amount transferred to Steamship Replacement Fund.....	\$80,000
Contribution to Pension Fund.....	80,000
Net revenue available for dividends.....	\$14,796,922.58

After the payment of all dividends declared for the year, there is a surplus of \$5,579,715.48 to be carried forward.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross revenue for June, \$211,753.53; operating expenses, \$163,906.37; net revenue, \$47,847.16; against \$313,011.62 gross revenue; \$214,866.65 operating expenses; \$98,424.97 net revenue for June, 1907. Gross revenue for 12 months ended June 30, \$3,017,363.60; operating expenses, \$2,206,214.69; net revenue, \$811,148.91; interest on bonds, taxes, etc., \$1,167,810.09; deficit, \$356,661.18; against \$3,204,833.17 gross revenue; \$3,214,847.17 operating expenses; \$79,986.00 net revenue; \$1,135,521.95 interest on bonds, taxes, etc.; \$55,535.95 deficit for same period 1906-07. Approximate earnings for July, \$230,932, against \$320,995 for July, 1907.

MINERAL RANGE RD.—Gross revenue for June, \$70,134.87; operating expenses, \$59,583.84; net revenue, \$10,551.03; against \$67,643.70 gross revenue; \$50,121.05 operating expenses; \$17,522.65 net revenue for June, 1907. Gross revenue for 12 months ended June 30, \$810,393.98; operating expenses, \$688,864.98; net revenue, \$121,529.00; interest on bonds, taxes, etc., \$151,090.65; deficit, \$29,561.65; against \$787,915.51 gross revenue; \$806,447.45 operating expenses; \$201,468.06 net revenue; \$157,363.43 interest on bonds, taxes, etc.; \$44,104.63 surplus for same period 1906-07. Approximate earnings for July, \$71,199, against \$72,259 for July, 1907.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross revenue for June, \$920,752.83; operating expenses, \$443,690.35; net revenue, \$477,062.48; against \$1,159,700.34 gross revenue; \$719,015.65 operating expenses; \$440,774.69 net revenue for June, 1907. Gross revenue for 12 months ended June 30, \$11,509,857.32; operating expenses, \$7,115,964.91; net revenue, \$4,393,892.41; against \$12,892,079.03 gross revenue; \$7,433,548.79 operating expenses; \$5,458,530.24 net revenue for same period 1906-07. Approximate earnings for July, \$927,145, against \$1,102,152 for July, 1907.

Grand Trunk Ry. Earnings, Expenses, etc.

Subject to audit, the accounts for the half-year ended June 30 show the following results:

Working receipts.....	£2,919,200
Working expenses.....	2,137,300
Net receipts.....	£ 781,900
Net revenue charges for the half-year less credits.....	485,900
Balance.....	£ 296,000
Deduct Canada Atlantic Ry. deficiency for the half-year.....	£68,900
Deduct Detroit, Grand Haven and Milwaukee Ry. deficiency for the half-year.....	46,600
Surplus.....	£180,500

This surplus of £180,500 added to the balance of £6,700 from Dec., 1907, makes a total of £187,200 available for dividend, which will admit of the payment of the full dividend for the half-year on the 4% guaranteed stock, leaving a balance of about £1,600 to be carried forward. The accounts of the G.T. Western Ry. for the year ended June 30 show a surplus sufficient to provide for the interest on the first mortgage bonds, and leave a balance of about £13,100.

Approximate earnings for July, \$3,320,114, against \$3,950,937 for July, 1907.

Report on Car Efficiency.—The committee on car efficiency of the American Railway Association has issued its report on car surpluses and shortages to Aug. 5. The total of surplus cars for the date of the report is 281,621, a decrease of 27,059 since the previous report. Of this decrease 6,505 are box cars, 21,195 coal and gondola cars, while surplus flat cars increased about a thousand. Shop reports indicate an increase of about 5,000 in the number of bad order cars, leaving a net improvement of 22,000 cars. The figures for group 11, which covers Canadian lines, show six lines reporting with the following surpluses: 6,683 box cars, 711 flat cars, 463 coal, gondola and hopper cars, and 1,646 other cars, a total of 9,503 cars, against a surplus of 10,530 cars July 22. There were no shortages reported on the Canadian lines since June 24.

The number of the employees of the Intercolonial Ry. pensioned under the provisions of the Provident Fund is 162, and of the employees of the Prince Edward Island Ry., 12. Since Jan. 1, applications for pensions have been received from 45 employees of the railways.

The Canadian Northern Ontario Ry. has issued its standard passenger tariff C.N.O. no. 14, C.R.C. no. 26, cancelling C.N.O. no. 1, C.R.C. no. 1. The tariff affects the company's line between Toronto, Sudbury, and Moose Mountain, the rate being 3c. a mile. The company has also issued its standard freight mileage tariff, C.N.O. no. 44, C.R.C. no. 74, cancelling C.N.O. no. 1, C.R.C. no. 1.

Railway Finance, Meetings, etc.

Alberta Ry. and Irrigation Co.—Gross railway earnings for 12 months ended June 30, \$223,966, against \$190,335, for the same period 1906-07.

Algoma Central and Hudson Bay Ry.—The press reports recently circulated that the C.P.R. would acquire the A.C. and H.B. Ry., as the result of some dealings with the securities of the Lake Superior Corporation, which owns the line, have been officially denied. Later reports state that the steel plant will be acquired by the United States Steel Trust, and that the railway will go to Mackenzie, Mann & Co., for incorporation with the Canadian Northern Ry. system.

Atlantic and Lake Superior Ry.—Baie des Chaleurs Ry.—A meeting of holders of certificates of participation in the Atlantic and Lake Superior Ry. participation fund was held in London, Eng., July 30, for the purpose of authorizing the acquisition of shares in the Baie des Chaleurs Ry. and the A. and L.S. Ry., in exchange for certificates of participation, and for the purpose of authorizing the Royal Trust Co., as trustee for the certificates of participation, to tender for the purchase of the railways, which have been ordered to be sold by the Exchequer Court of Canada.

Canadian Northern Ontario Ry.—A mortgage dated June 24, made by the C.N.O. Ry. to the National Trust Co., Toronto, and the British Empire Trust Co., London, Eng., securing an issue of 3½% debenture stock to the amount of £1,615,068, 9s. 7d., upon the company's line between Toronto and Sudbury, has been deposited with the Secretary of State, Ottawa.

Canadian Pacific Ry.—Dividends at the rate of 2% on preferred stock and of 3% on the common stock have been declared for the half-year ended June 30. An additional payment of one-half of 1% on the common stock will be paid at the same time out of interest on the proceeds of land sales.

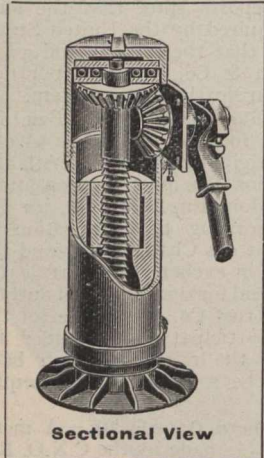
Dominion Atlantic Ry.—Gross earnings for June, \$104,700, against \$95,135 for June, 1907. Total earnings for 6 months ended June 30, \$468,700, against \$457,761 for same period 1907.

Grand Trunk Ry.—The directors, out of the profits for the half-year ended June 30, have decided to pay the dividends upon the guaranteed stocks only. The paid-up capital of the G.T.R. consists of five classes, ordinary, guaranteed, and first, second, and third preferred. There is £22,475,985 ordinary, £8,736,427 guaranteed, £3,420,000 first preferred, £2,530,000 second preferred, £7,168,055 third preferred, a total paid-up capital of £44,330,467. Dividends have never been paid on the ordinary stock. From 1894 to 1897, nothing was paid on the 4% guaranteed stock, but since 1898 the full 4% has been paid. In 1898 3% was paid on the first preferred, and the full dividends of 5% were paid 1899 to 1906 inclusive, the dividend periods being March and Sept. The Sept., 1904, dividend was passed, but 5% was paid on the first preferred in April, 1905, and 2½% in Oct., 1905. In 1906 and 1905 5% was paid. A dividend of 3¼% on the second preferred stock was paid in the year 1899, being the first in many years. In 1900 3% was paid, in 1901 4%, and in 1902 and 1903 5%. The semi-annual dividend of 2½% on the second preferred was paid Mar. 23, 1904, but the Sept. payment was omitted. In April, 1905, 5% was paid on the 2nd preferred and 2½% in Oct., 1905, which has since been the regular semi-annual rate to Oct., 1907, inclusive. On the third preferred stock 1% was paid in 1902, and 2% in 1903. A semi-annual dividend of 2% was paid Mar. 23, 1904, and the same on April 30, 1906. In April, 1907, 3% was paid.

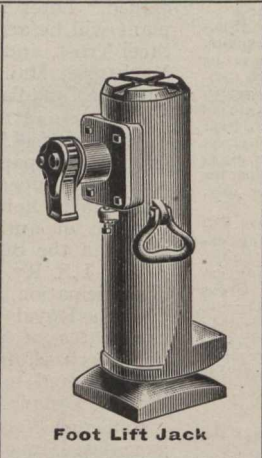
Intercolonial Ry.—The earnings of the Intercolonial Ry. for April amounted to

NORTON JACKS

ARE MADE IN CANADA AND SAVE YOU DELAY AND DUTY ON AMERICAN MADE JACKS.

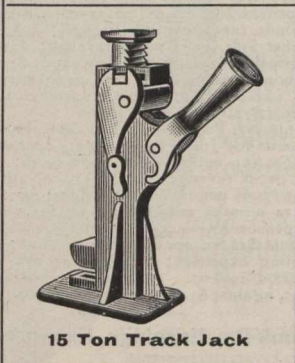


Sectional View

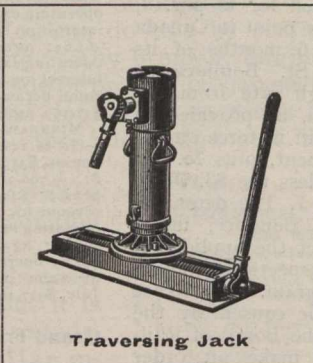


Foot Lift Jack

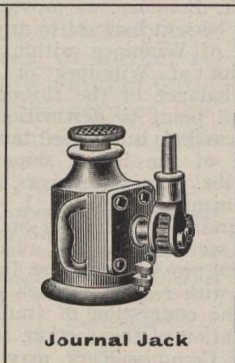
50 Styles 8 to 70 Tons Capacity
Carried in stock for IMMEDIATE DELIVERY



15 Ton Track Jack



Traversing Jack



Journal Jack

MANUFACTURED BY

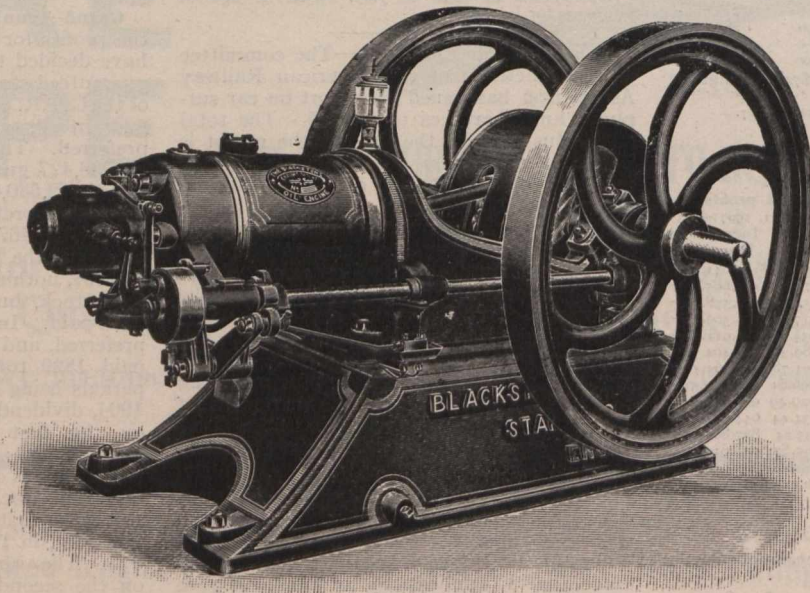
A. O. NORTON, COATICOOK, QUE.

Stock Carried by MUSSENS LIMITED, MONTREAL

BLACKSTONE OIL ENGINES

— ARE —

- Clean
- Simple
- Reliable
- Economical
- Self-contained
- Well-made



— HAVE NO —

- Fans
- Sparks
- Bad Odor
- Electric Battery
- Exterior Flame
- when operating

Blackstone Engine with Oil Tank in Base

CANADA FOUNDRY COMPANY, LIMITED

HEAD OFFICE AND WORKS, TORONTO, ONT.

DISTRICT OFFICES: Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Rosland

\$740,576.43, and for May to \$689,736.62, against \$817,952.34 for April, and \$799,095.95 for May, 1907. The working expenses for April were \$740,851.01, against \$669,380.90 in April, 1907; and for May, \$781,086.18, against \$715,888.88 for May, 1907.

New Brunswick and Prince Edward Island Ry.—The report for the year shows net operating earnings of \$1,427.74. The annual meeting was held at Sackville, N.B., Aug. 4. Following are officers and directors for the current year: President, Hon. J. Wood; General Manager and Treasurer, F. C. Harris; Secretary, H. C. Read; other directors: F. B. Black, W. Ogden, W. Milner, and H. Wood.

Quebec and Lake St. John Ry.—Gross receipts for April, \$147,988, against \$164,627 for April, 1907. Total earnings for 4 months ended April 30, \$324,312, against \$351,413 for same period 1907.

St. Mary's and Western Ontario Ry.—At the annual meeting of the shareholders of this company called for Sept. 1, a resolution is being submitted reducing the number of directors from eight to five. The company's railway as at present constructed extends from Embro to St. Mary's, and is being operated under lease by the C.P.R.

Toronto, Hamilton and Buffalo Ry.—Gross earnings for June, \$61,436, against \$75,322 for June, 1907. Total earnings for 12 months ended June 30, \$853,891, against \$853,985 for same period 1906-07.

Vancouver, Victoria and Eastern Ry and Navigation Co.—See Vancouver, Westminster and Yukon Ry.

Vancouver, Westminster and Yukon Ry.—The property held by J. Hendry and his associates in Vancouver and New Westminster, together with the railway constructed between Vancouver and New Westminster B.C., under the charter of the V. W. and Y. Ry., was formally transferred to the Vancouver, Victoria and Eastern Ry., and Navigation Co., the British Columbia connection of the Great Northern Ry., U.S., July 29. The property transferred, which is valued at \$2,500,000, includes all the trackage and foreshore south of False Creek, and east of the Westminster Ave. bridge, and all the foreshore at the east end of the creek running as far back as the point intersected by Boundary Ave. on the north and Glen Drive on the south, in Vancouver. This foreshore is owned subject to an agreement with the city that the railway company shall commence construction within a year upon a spur line to Burrard Inlet. The property also includes about 2,000 ft. of waterfront on the south shore of Burrard Inlet.

The V.W. and Y. Ry. Co. retains possession of its charter rights to construct a railway from Vancouver to the Yukon Territory, for which surveys have been made.

White Pass and Yukon Ry.—Gross earnings for June, \$194,120. Total earnings for 12 months ended June 30, \$1,551,709.

A Railway to Hudson Bay.

The organization of the engineering parties to make a survey of a route to Hudson Bay, which the Department of Railways was authorized to make at the last session of the Dominion Parliament, was definitely undertaken Aug. 14, on the arrival at Winnipeg, Man., of —. Murphy and —. Law, two of the Government engineers, who will be the principal assistants to Jno. Armstrong, the Chief Engineer. Four parties have been organized, two of which will make a survey of the route between Pas Mission, Sask., the present terminus of the Canadian Northern Ry. line reaching out for the Bay, and Fort Churchill, and the other two will work from Lake Winnipeg, along the valley of the Nelson River to Port Nelson. The work is to be prosecuted from both ends of each route, so

that one party will go right through to the Bay before starting the actual survey. At Fort Churchill and at Port Nelson a careful examination will be made of the harbor facilities, and of the probable cost of the wharves, docks, aids to navigation, etc., which will have to be constructed for the accommodation of the steamships which it is hoped to attract to the new port. Before the reports of these survey parties the Government will decide which of the two routes is the more advantageous, prior to asking Parliament to sanction the construction of the line. The parties expect to have the work completed in about six months.

In an interview at Winnipeg, Aug. 12, D. D. Mann, Vice-President Canadian Northern Ry., said: "The Dominion Government will either have to subsidize the road to Hudson's Bay very heavily or build it themselves, on account of the uncertainty of navigation in the Bay, and the uncertainty of the road being a paying investment. In my judgment the Hudson's Bay railway will pay handsomely and will be a great commercial success. The financial people of the world will not take chances on a scheme like the Hudson's Bay railway. Like the man from Missouri, they say, 'Show me.' If they are shown that the road will be a success, then they will be ready to invest in it. The great advantage of the road to the Bay will be to the new country around the southern part of it, and it will also furnish a splendid route for sending out the cattle of the west. The first 150 miles of the country north of the Pas is fairly good, but the balance of the way to the Bay is poor. Whoever operates that road must have a system to feed it. The Hudson's Bay road will never be a success if operated either by an independent company or by the Government. In that case the road would only get the surplus wheat which would be handed over to them by other railways."

Canadian vs. U.S. Eastbound Rates.

A circular letter signed by shipowners trading from U.S. ports has been sent to the Trunk Line Association, representing the railroads engaged in moving grain east of Buffalo and Erie, as a consequence of its refusal to grant reductions in freight rates to enable them to export grain from U.S. ports, and to compete with the Canadian all water route to Montreal. The letter is as follows:

"The undersigned steamship companies operating vessels from New York, Boston, Philadelphia and Baltimore wish to again call the attention of the railroad companies to the unreasonable rates demanded by them on export grain from lake ports to the seaboard as compared with the rates that are being accepted by the railroad companies from the lake ports to Montreal. The present basis of the 'at and east' rate from Buffalo to New York and Boston is now 5½c., excluding elevation, against the rate from Georgian Bay points to Montreal of 3½c., including elevation, as the result of reductions made by the railroads to Montreal since the joint export grain agreement, and it is largely on account of this reduction that the port of Montreal has benefited tremendously in the movement of grain, whereas the American ports have handled practically no grain during the corresponding period. The present situation is a deplorable one, for which you are responsible, and is killing the steamship business from the four ports named, as we cannot expect any grain until Montreal has been fully supplied. Steamers have been withdrawn from all the ports named on account of their not being able to get cargoes, while Montreal is not only loading all the regular tonnage, but the favorable grain rates to that port are attracting tramp

steamers in addition to the regular lines. We again appeal to the railroad companies to adjust the situation and reduce their 'at and east' grain rate to a reasonable basis in order to partly meet the above competition, and we will take care of the balance."

A statement of the grain received and exported, for the week ended July 25, from U.S. ports and Montreal, shows that the amount exported from Montreal exceeds the combined exports of all the U.S. ports:

	Receipts bush.	Exports bush.
Baltimore.....	575,078	441,200
Boston.....	30,772	.....
Galveston.....	52,000	.....
New Orleans.....	12,000	.....
New York.....	933,500	400,500
Philadelphia.....	426,859	254,753
	2,030,209	1,096,453
Montreal.....	973,816	1,260,693

Warnings to Advertisers.

From Industrial Canada, Toronto.

Extract from report of committee of Canadian Manufacturers' Association: "Attention has been directed to a publication known as the 'Official Guide of the I.C.R.,' issued under authority from the Minister of Railways and Canals. This book contains a great deal of advertising, and upon investigation your committee is informed that it has been secured practically under false pretences. The book is issued entirely as a private enterprise, and the giving or withholding of advertising will neither hurt nor help any one who has business to transact with the I.C.R. or the Department of Railways and Canals. A letter has been obtained from the Minister to this effect, and it is now proposed to send a copy of same in confidence to all members of the Association who carried advertising in the last issue of the Guide."

From Canadian Machinery, Toronto.

"This is the time of the year when many annual publications are being gotten out nominally in the interests of transportation companies and other big concerns. They are usually called an 'Official Guide,' and claim to be issued under the authority of the president or general manager. The canvassers approach firms who supply or want to supply these corporations with products of one kind or another, and they hint that it is very much in the interests of the firm that they should advertise in this Guide, otherwise, they hint it may affect their business with the corporation. A couple of years ago, a letter was carried by one of these canvassers alleged to be signed by President Hays, of the Grand Trunk Ry., which was proved to be a forgery. There is another official guide now being prepared in the interests of one of the big railways, and claimed to be issued under the authority of the head of the road. A letter has been received from him which states distinctly that his corporation has nothing whatever to do with the publication. The book is issued entirely as a private enterprise, and the giving or withholding of an advertisement will neither help nor hurt any one who has business to transact with the corporation. When business men are approached by canvassers from publications of this sort, which they believe to be a fake, and most of them are, they should positively refuse to place any business, and should write at once to the head of the corporation and get his assurance that the statements made by the canvassers are correct. Certain big firms have been doing this, and in few, if any, cases, have they found the statements verified."

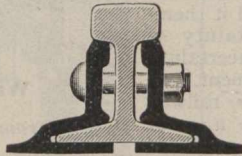
EDITOR'S NOTE—C. M. Hays is Second Vice-President and General Manager, not President, as stated by our contemporary.

ADDITIONAL SAFETY AND ECONOMY IN TRACK MAINTENANCE

has been proved by the use of Continuous, Weber and Wolhaupter base-supported rail joints—after ten (10) years' service, having a record of over **25,000 miles in use**—the extent of which is evidence of their excellence.

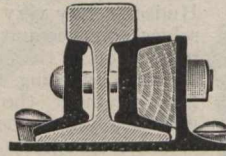
HIGHEST AWARDS

Paris, 1900;
Buffalo, 1901; St. Louis, 1904



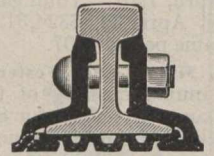
CONTINUOUS JOINT

Over
25,000
miles
in use



WEBER JOINT

Rolled
from Best
Quality
Steel



WOLHAUPTER JOINT

CATALOGUES AT AGENCIES

Baltimore, Md.
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St. Paul, Minn.

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Troy, N.Y.

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New York City.

THE RAIL JOINT COMPANY OF CANADA, LIMITED

OFFICES: BOARD OF TRADE BLDG., MONTREAL, CAN.

Makers of Rail Joints for Standard and Special Rail Sections, also Girder, Step or Compromise, and Insulating Rail Joints, protected by Patents in U.S., Canada and Mexico.

Pintsch Light Steam Heat

Car lighting by the Pintsch System with improved mantle lamps and by Vapor lighting system for branch lines. ∞ Gas broilers, and ranges. ∞ Buoys.



Car heating by controllable direct steam and water circulating systems steam tight couplers, traps, train pipe valves and other appliances. ∞ ∞ ∞

CHICAGO - BOSTON - ST. LOUIS - ATLANTA - PHILADELPHIA - MONTREAL - BERKELEY, CAL.

Ten-Wheeled Locomotives for the G.T.R.

The G.T.R. has received recently from the Baldwin Locomotive Works ten 10-wheeled locomotives, which are classed by the railway company as A 3. As the driving wheels are 73 ins. in diameter, they are particularly suitable for passenger service. The tractive force exerted by this design is 22,950 lbs. Although no unusual features enter into the construction of these locomotives, they are interesting as strictly modern examples of a type that has given admirable results in service. The cylinders are single expansion, double bolted in the vertical flanges to provide strength against breakage. They are equipped with balanced slide valves, which are driven by the Stephenson valve motion. The guides are of the alligator type, of hammered iron, and the crossheads are of cast steel with cast iron shoes, having tinned bearing surfaces. The connecting rods are of forged steel, the main rods being of I-section, while the coupling rods are rectangular in section. Cast steel is used for the main driving-

both sheets outward, and uniting them with a sleeve. A brick arch is provided, and it is supported on three water tubes each 3 ins. in diameter.

The tender frame is built of 10 in. steel channels. The trucks are of the arch bar type, with triple elliptic springs. The engine and tender truck wheels are steel tired with cast iron centres, and were supplied by the Standard Steel Works Co.

The principal dimensions of this locomotive are given in the following table. The accompanying illustration shows the general features of the design:

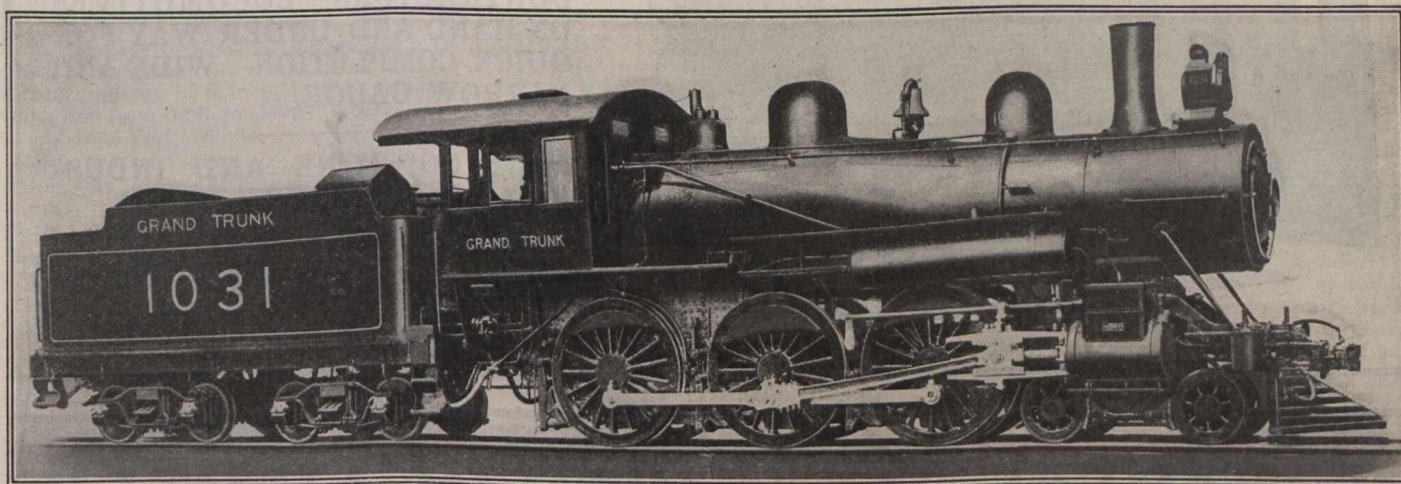
Cylinder.....	19" x 26"
Valve.....	Balanced.
Boiler, type.....	Wagon top.
" material.....	Steel.
" diameter.....	60 3/4"
" thickness of sheets.....	3/8", 1 1/2", 3/4"
" working pressure.....	210 lbs.
" fuel.....	Soft coal.
" staying.....	Radial.
Firebox, material.....	Steel.
" length.....	108 3/8"
" width.....	40 3/4"
" depth, front.....	72"
" depth, back.....	60"
" thickness of sheets, sides.....	3/8"
" " " back.....	3/8"

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

Ottawa Union Station.—The work of excavating for the foundations for the new union station at Ottawa will be proceeded with as soon as the site has been transferred to the company by the Government. W. Wainwright, Fourth Vice-President, stated Aug. 11 that he expected the foundations for both station and hotel would be completed before the winter. The architects were busy completing the detailed drawings, and all other arrangements were being completed for pushing ahead with the work.

Toronto Union Station.—The Toronto Board of Control has extended the time for the commencement of construction upon the new union station by the G.T.R. for a further period of three months from Aug. 22.

Buffalo and Lake Huron Ry.—The work of relaying the track on this line with 80-lb. steel is being carried out by the G.T.R., which operates it under lease. The section on which work is being carried on at present



TEN-WHEELED LOCOMOTIVE BUILT FOR THE G. T. R. BY THE BALDWIN LOCOMOTIVE WORKS.

wheel centres, while the front and back driving wheels have cast iron centres. All tires are secured by retaining rings. The rock shafts are placed between the first and second pairs of driving wheels, and are directly connected to the link blocks. With this arrangement, the use of transmission bars is avoided.

The main frames are of cast steel, provided with double front rails, which are bolted and keyed in place. The brake hanger bosses are cast in one piece with the frames. All the driving springs are underhung, and the driving equalization is continuous on each side of the locomotive. The upper frame rails are inclined between the second and third pairs of driving wheels, in order to give more room for a sufficiently deep firebox.

The boiler is of the radial stay wagon top type, with a narrow firebox, which is placed above the frames. The barrel is built up of three rings, the middle ring being tapered. The longitudinal seams on the first and second rings are butt jointed and sextuple riveted. The dome is placed on the third ring, which has a welded seam on the top centre line with a reinforcing liner inside.

The firebox is carried by sliding supports at the front and back, and an expansion link on each side. The grate slopes toward the front and the depth from the top of the grate to the bottom of the lowest tube is 26 ins. Three rows of expansion links support the front end of the crown. The fire door opening is formed by flanging

Firebox, thickness of sheets, crown.....	7/16"
" " " tube.....	1/2"
Water space, front.....	4"
" sides.....	3 1/2"
" back.....	3 1/2"
Tubes, material.....	Steel.
" thickness.....	125"
" number.....	270
" diameter.....	2"
" length.....	13' 6"
Heating surface, firebox.....	162 sq.
" tubes.....	1,893 sq.
" firebrick tubes.....	19 sq.
" total.....	2,074 sq.
" grate area.....	30.5 sq.
Driving wheels, outside diameter.....	73"
" inside diameter.....	66"
" journals, main.....	9" x 10"
" journals, others.....	9" x 10"
Engine truck wheels, front diameter.....	31"
" " journals.....	6 1/2" x 10 1/2"
Wheel base, driving.....	14' 0"
" rigid.....	14' 0"
" total engine.....	24' 4"
" total engine and tender.....	52' 0"
Weight, on driving wheels, estimated.....	126,000 lbs.
" on truck, front, estimated.....	42,000 lbs.
" total engine, estimated.....	168,000 lbs.
" total engine and tender, about.....	288,000 lbs.
Tender, wheels.....	No. 8
" wheels, diameter.....	34"
" journals.....	5 1/2" x 10"
" tank capacity, water.....	6,000 gals.
" tank capacity, coal.....	10 tons.

The Ontario Railway Signal Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of \$40,000 and office at Toronto, to acquire, hold and dispose of inventions for signalling and stopping railway trains; to manufacture and sell trucks, cars, etc., and all machinery for the use of power of all kinds. The provisional directors are: G. Russell, E. M. Lindsay and V. Waldoek, Toronto.

is from near Bright, to near Holmesville, Ont., a distance of 47 miles.

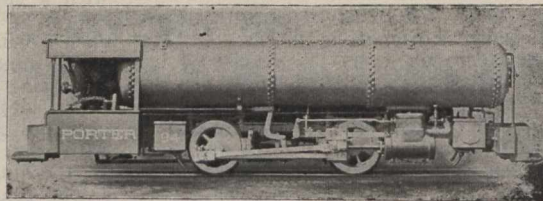
Stratford Shops.—The steel work on the new shops at Stratford, Ont., has been completed, and the old brick buildings, which for years did duty, have been demolished. The concrete and other work of erection is being pushed ahead.

London, Ont., Improvements.—The Mayor of London, Ont., in discussing the question of the G.T.R. improvements at that city recently said: "Mr. Hays told me that it would cost the city of London at least \$200,000 for the privileges the company would have given for nothing had the offer of the company been accepted two years ago. I had several chats with him, and he felt very confident that if the city took the matter to the Railway Commission they would receive infinitely better terms than were offered the city some time ago. He said that he would not oppose the city taking the matter to the Commission, as he felt confident that his company would be given better treatment than through direct negotiations. He pointed out that the Commission assessed the municipalities for benefits received, and the corporations must abide by the decision of the Board. I also had a talk with Mr. Fitzhugh in Quebec, who seemed more favorable than Mr. Hays. There is no doubt that the question is a live one with the company, but it will be some time before anything is done. The matter will be brought up before the G.T.R. officials shortly, and then something will be done."

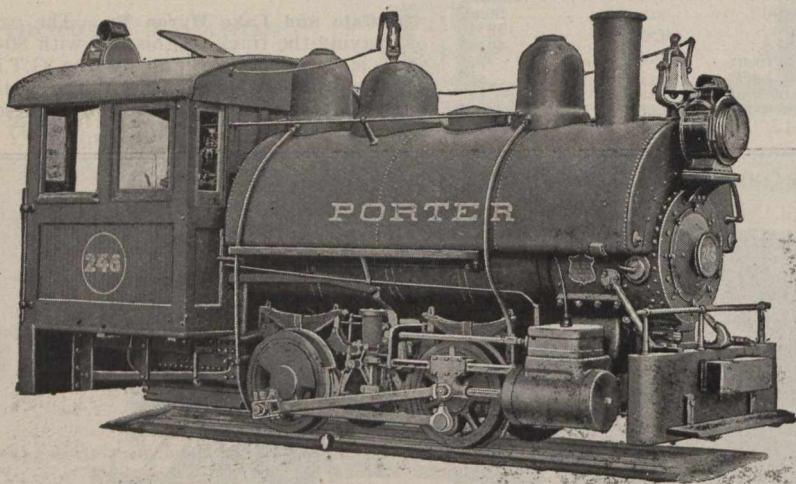
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LOCOMOTIVES**

STEAM AND COMPRESSED AIR

H. K. PORTER COMPANY
643 Wood Street, - Pittsburg, Penna.



COMPRESSED AIR LOCOMOTIVE



LATEST DESIGN CONTRACTORS' LOCOMOTIVE

ALL GAUGES. EVERY VARIETY OF DESIGN. FOR ALL PURPOSES.

CONTRACTORS' LOCOMOTIVES ON HAND AND UNDER WAY FOR QUICK COMPLETION. WIDE AND NARROW GAUGE.

LOGGING, MINE AND INDUSTRIAL LOCOMOTIVES.

"TENTH EDITION CATALOGUE JUST PRINTED, MAILED FREE TO MINE, RAILWAY OR INDUSTRIAL OFFICIALS; OR TO OTHERS ON RECEIPT OF FIFTY CENTS."

MONTREAL STEEL WORKS, LIMITED

POINT ST. CHARLES, - - MONTREAL, CANADA

MANUFACTURERS OF

STEEL CASTINGS (Acid Open Hearth System) **SWITCHES and TRACK WORK** for Steam and Electric Roads

SPRINGS of all kinds **MANGANESE STEEL CASTINGS** for wearing Parts, insuring Great Hardness and Durability

INTERLOCKING PLANTS **TRUCKS FOR ELECTRIC CARS**

Agents for Canada for

THOS. FIRTH & SONS, LIMITED, SHEFFIELD, ENGLAND

"Speedicut" High Speed Steel, Tool Steel, Axe Steel, Saw Steel, Files, etc. A large stock carried in our warehouse.

Agents for Canada for

BARROW HÆMATITE STEEL CO., BARROW-IN-FURNESS, ENGLAND

Quotations for Tee Rails, Fish Plates, etc., promptly furnished. Catalogues sent on application.

Orders by the Railway Commissioners.

Beginning with June, 1904, we have published in each issue summaries of orders passed by the Board of Railway Commissioners, so that subscribers who have filed our paper have a continuous record of the Board's proceedings.

Complete copies of any of the orders summarized below, or of others previously passed by the Commission, will be furnished for 25 cents, cash to accompany requests for copies in all cases.

5042. July 21.—Authorizing Bell Telephone Co. to erect wires across C.N.Q.R. at St. Charles Borromeo St., Joliette, Que.

5043. 5044. July 21.—Authorizing Oro Telephone Co. to erect wires across G.T.R. at two points in Oro tp., Ont.

5045. July 21.—Authorizing J., F. & M. Contant, L'Epiphanie parish, and A. A. Grauger, of Montreal, to carry a highway across C.P.R. in parish L'Epiphanie, Que.

5046. July 21.—Authorizing Temiscouata Ry. to construct bridge at mileage 5 over public road at Green River, Que.

5047. July 21.—Authorizing C.P.R. to construct additional track on lane in block 67, Calgary, Alta.

5048. July 21.—Authorizing C.P.R. to open for traffic portion of its double track from Garwood to Kenora, mileage 140.5 to 145.5, from Ignace, Ont.; from Vermillion to Gilbert, mileage 89.8 to 97.9, from Ignace, Ont.; and from Buda to Dexter, mileage 40.4 to 54.0 from Fort William, Ont.

5049. July 21.—Authorizing Town of Palmerston, Ont., to lay water mains under G.T.R.

5050. July 22.—Authorizing Temiscouata Ry. to construct bridge at mileage 60 over Pole River, Que.

5051. July 22.—Authorizing Temiscouata Ry. to construct bridge at mileage 5, over Green River, Que.

5052. July 22.—Authorizing J. H. Wilcox to lay gas pipe under G.T.R. at Onondaga station, Ont.

5053. July 21.—Authorizing McKillop, Logan & Hibbert Telephone Co. to erect telephone wires across G.T.R. at Main St., Dublin, Ont.

5054. July 21.—Authorizing Welland County Telephone Co. to place wires under M.C.Rd. at public crossing between lots 10 and 11, Bertie tp., Ont.

5055, 5056. July 21.—Authorizing J. L. Benn, Long Lake, Ont., to erect telephone wires across K. & P. R. at Tyrone's crossing, near Sharbot Lake, and at Hinchinbrooke, Ont.

5057. July 22.—Authorizing C.P.R. to make change in the line of its Bulyea branch, near Bulyea, Sask.

5058. July 21.—Authorizing Welland Co. Telephone Co. to erect wires under M.C. Rd. at Black Creek, Ont.

5059-5061. July 21.—Authorizing J. L. Benn, of Long Lake, Ont., to erect telephone wires across K. & P. Ry. ¼ mile north of Godfrey station, 1 mile north of Verona, and at Sharbot Lake station, Ont.

5062. July 21.—Authorizing Hamilton Cataract, Power, Light and Traction Co. to erect electric transmission lines across G.T.R. to Berlin Machine and Tool Co. Works, Ltd., Barton tp., Ont.

5063-5066. July 21.—Authorizing G.T.P.R. to construct bridges east of Portage la Prairie, Man., west of Portage la Prairie, over the North Saskatchewan River, and over the South Saskatchewan River, near Saskatoon, Sask.

5067. July 22.—Authorizing C.P.R. to change the line of its Regina, Saskatoon and North Saskatchewan branch.

5068. July 22.—Authorizing Bell Tel. Co. to erect wires across the P.M. Rd. at public crossing ¾ mile south of Oldcastle station, Ont.

5069. July 22.—Authorizing location of C.P.R. station at Rapide de l'Original, Que.

5070. July 22.—Authorizing C.P.R. to open for traffic that portion of the second track of its Smith's Falls section between St. Anne's and Vaudreuil, Que., 3.96 miles, and from Kemptville Jct. to Smith's Falls, Ont.

5071-5077. July 23.—Authorizing C.P.R. to reconstruct following bridges: 117.68 White River section, 40.8 Newport section, 24.56 Chapleau section, 31.2 Emory Creek, Cascade section, 55.86 Chapleau section, 51.54 Nipigon section, and 15.6, Yamaska River, Newport section.

5078. July 23.—Authorizing Central Telephone Association to erect wires across C.P.R. at three different points in Ont.

5079. June 17.—Ordering G.T.R. to agree on joint freight tariffs with O. and N.Y.R. between stations on the O. and N.Y.R. and the G.T.R. This order is given in full on page 639.

5080. July 24.—Rescinding order of July 15, 1908, granting leave to N.P. Telephone Co. to erect wires across C.P.R. near McAdam Jct., N.B.

5081. July 24.—Authorizing Bell Telephone Co. to erect wires across C.N.O.R. at public crossing 1¼ miles n.w. of James Bay Jct., Ont.

5082. July 21.—Authorizing T. M. McFadden, Pickering, Ont., to erect telephone wire across G.T.R. at Rosebank, Ont.

5083. July 24.—Authorizing New Brunswick Telephone Co. to erect aerial wires across C.P.R. tracks between stations, Edmundston, N.B.

5084. July 24.—Authorizing Temiscouata Ry. to construct a deck plate girder span, structure no. 10, at mileage 21¾, where its railway crosses highway in the province of Quebec.

5085. July 24.—Authorizing Leeds and Grenville Independent Telephone Co. to erect aerial wires across G.T.R. tracks at road leading from Algonquin to Brockville, between 6th and 7th concessions, Elizabethtown tp., Ont.

5086. July 24.—Authorizing C.P.R. to construct and operate a branch line or spur from point on centre line of main line of the said branch to Thomas Abriel's premises, Nakusp, B.C.

5087. July 22.—Authorizing G.T.R. to construct the Midland branch of its railway across two highways in Lindsay, Ont.

5088. July 23.—Authorizing C.P.R. to construct branch line or spur to Dr. Wyman's premises, Kent, N.B.

5089. July 24.—Authorizing G.T.R. to operate its trains across drawbridge between Hamilton and Niagara Falls, Ont., without being brought to a stop.

5090. July 28.—Authorizing G.T.R. to construct and operate a spur to the Gurney Foundry Co.'s premises in York County, Ont.

5091. July 28.—Authorizing C.N. Quebec Ry. to construct spur to the Lakefield Portland Cement Co., Pointe aux Trembles, Que.

5092. July 30.—Authorizing Malahide and Bayham Telephone Co-operative Association to cross G.T.R. tracks between lots 15 and 16, 11th con., Bayham tp., Elgin Co., Ont.

5093. July 28.—Authorizing C.P.R. to construct and operate a spur across a portion of 6th and 5th Streets, and a lane in block 25, Grand Forks, B.C.

5094. July 28.—Amending order no. 4766, May 27, 1908, ordering C.P.R. to install bell at the crossing where its railway crosses Dorchester St., Quebec, Que., extending time until July 31, 1908.

5095. July 28.—Ordering C.N.R. to erect and maintain such fences, gates and cattle-

guards along the portions of its railway between Roblin and Togo and Togo and Runnymede, which shall be suitable and sufficient to prevent cattle and other animals from getting upon its railway.

5096. July 28.—Authorizing G.T. Pacific Ry. to operate that portion of its railway from Saskatoon, Sask., to Scott, Sask., 115 miles.

5097. July 28.—Authorizing J. S. Warren and F. M. Holland, of the Kettle River Valley Ry., to prepare and issue tariffs of tolls to be charged on traffic carried by that railway.

5098. July 29.—Authorizing Chatham, Wallaceburg and Lake Erie Ry. to operate its trains over G.T.R. crossing at William St., Chatham, Ont.

5099. July 28.—Authorizing C.P.R. to lay tracks for a siding across Denison Ave., Weston, Ont.

5100. July 14.—Authorizing G.T.R. to construct and operate a branch line or siding from lot 1, west of Bond St., Brantford, Ont., upon Pearl St., and lot 1, east of McMurray St., to Schultz Brothers' premises.

5101. July 29.—Authorizing the municipality of Notre Dame du Perpetuel Secours de Charny, Que., to construct a public highway across G.T.R. tracks on P. Fontaine's property.

5102. July 29.—Authorizing G.T.R. to cross C.P.R. tracks, Owen Sound section, east of Weston Road, West Toronto, Ont.

5103. July 30.—Ordering railway companies subject to the jurisdiction of the Board, during May, June, July, August, September and October of each year, to provide, place and keep a watchman, track-walker, fire alarm signals, ballast flooring, or fireproof paint, for the purpose of protecting trestles from fire and thereby preventing trains from being burned, derailed or otherwise damaged at or on such trestles, each such company being allowed the option of adopting any one of the said methods of protection. See pg. 621.

5104. July 29.—Approving revised location of G.T. Pacific Ry. from sec. 23, tp. 51, rge. 20, to sec. 1, tp. 52, rge. 21, west of 4th mer., North Alberta.

5105. July 29.—Approving revised location of G.T. Pacific Ry. station in sec. 35, tp. 53, rge. 25, west of 4th mer., Alberta.

5106. July 29.—Rescinding order no. 1174, Dec. 4, 1906, approving rates from Montreal and points within the Montreal terminal group of stations to Boston, Mass. See pg. 639.

5107. July 28.—Ordering G.T.R. to install an electric bell with automatic cut-out at the public highway crossing, northerly from Pitt St., Cornwall, Ont., being the highway immediately west of the G.T.R. station.

5108. July 30.—Authorizing C.N.R. to open for the carriage of traffic that portion of its railway from a point in lot 29, sec. 21, McIrvine tp., to the International boundary near Pither's Point, and forming a proposed connection between the C.N.R. and the Duluth, Rainy Lake and Winnipeg Ry., 1.51 miles.

5109. July 30.—Authorizing C.P.R. to construct and operate a branch line or spur to St. Andrew's, Man., from its Winnipeg Beach branch.

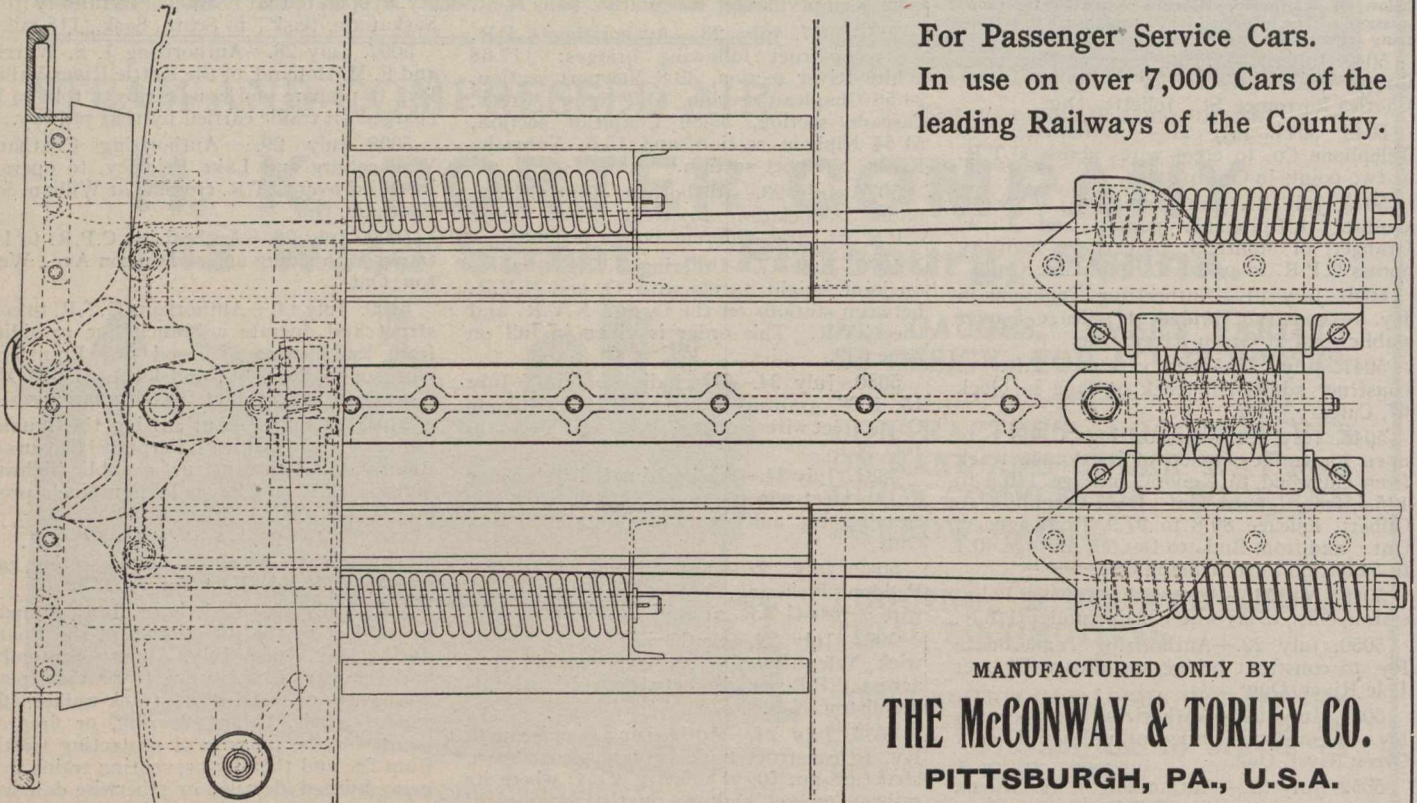
5110. July 29.—Authorizing the city of Hull, Que., to construct a highway across C.P.R. tracks near Mountain Road.

5111. July 30.—Authorizing Edmonton, Yukon and Pacific Ry. to construct and operate a spur to the City Power House and Exhibition Grounds, Edmonton, Alta., crossing Calgary and McLeod Avenues.

5112. July 29.—Authorizing C.N. Ontario Ry., for 90 days from July 29, 1908, to use the crossing with the G.T.R. in Hawkesbury, Ont., for construction purposes.

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5113. July 29.—Authorizing Toronto and York Radial Ry. to cross G.T.R. tracks at Sutton, Ont.

5114. July 21.—Dismissing application of G.T.R. for authority to construct a branch line or spur along Neebing Ave., from Montreal St. to Kaministikwia River, Fort William, Ont.

5115. July 28.—Ordering G.T.R. to provide, construct and maintain at its own expense such works and appliances as are necessary for the safety of the public at its level highway crossing at Reid St., Peterboro, Ont.

5116. July 30.—Ordering Toronto, Hamilton and Buffalo Ry. and C.P.R. to refund to the Plymouth Cordage Co. excess in the charges paid. See page 639.

5117. July 30.—Authorizing certain agents other than officials of railway companies, acting jointly for two or more companies, to act for the several companies by power of attorney, for the filing of certain tariffs of freight or passenger tolls. See pg. 639.

5118. July 31.—Authorizing the Department of Public Works, Saskatchewan, to construct a highway across C.P.R. right-of-way, Souris branch, on the extension, southerly, of Main St., Oxbow, Sask.

5119. Mch. 12.—Dismissing the application of F. A. Cutting, Boston, Mass., in connection with alleged discrimination in favor of Quebec and Ontario, against New Brunswick, by the C.P.R. See pg. 639.

5120. Aug. 1.—Authorizing James Bay Ry. to place its line or tracks across the C.P.R. tracks, near Wanapitei, Ont.

5121. July 31.—Authorizing Norfolk Gas Co. to lay gas main under G.T.R. tracks between Nelson and Chapman Sts., Port Dover, Ont.

5122. July 16.—Authorizing Brantford and Hamilton Electric Ry. to open for traffic that portion of its line between Ancaster Village and Brantford, Ont.

5123. July 31.—Authorizing C.P.R. to construct a branch line or spur from a point on its line about 400 ft. east of the easterly limit of Duncan St., running in a southerly and westerly direction and reconnecting with its right-of-way about 150 ft. west of the westerly limit of Vickers St., Fort William, Ont.

5124. Aug. 5.—Authorizing Manitoba Government to erect telephone wires across C.P.R. tracks at a point on Portage Ave. 200 yards south of Headingly, Man.

5125. Aug. 5.—Authorizing C.P.R. to open for traffic the second track of three portions of its line in Ontario.

5126. Aug. 5.—Approving Esquimalt and Nanaimo Ry. Co.'s by-law authorizing the Assistant Freight Traffic Manager to prepare and issue tariff of tolls to be charged as provided by the Railway Act.

5127. Aug. 6.—Authorizing Bell Telephone Co. to erect aerial wires across C.P.R. tracks at public crossing near Parry Sound station, Ont.

5128. Aug. 5.—Authorizing Bell Telephone Co. to erect aerial wires across G.T.R. tracks at public crossing 1¼ miles north of Hyde Park station, Ont.

5129. Aug. 5.—Authorizing Farmers' Telephone Co. to erect wires across C.P.R. tracks at Fifth Ave., Hartland, N.B.

5130. Aug. 5.—Authorizing Chatham Gas Co. to lay gas mains under G.T.R. tracks at George and Lacroix Sts., Chatham, Ont.

5131. Aug. 5.—Amending order no. 2916, May 1, 1907, authorizing C.P.R. to close public crossing and open another in lieu thereof at lot cadastral 340, on the west side of the Petite Riviere du Loup, near Louisville, St. Antoine de la Riviere du Loup Parish, Maskinonge Co., Que.

5132. Mar. 27.—Authorizing G.T.R. to construct two branch lines or spurs from its line on Bethune St., Peterboro, Ont., (1) crossing Bethune St. to lot 9 north of Dalhousie St., (2) crossing Bethune St. to lot 9 north of Wolfe St.

5133. July 31.—Authorizing Brockville Water Commissioners to lay, at their own expense, water main under G.T.R. tracks, St. Bartholomew St., Brockville, Ont.

5134. Aug. 5.—Authorizing G.T. Pacific Ry. to operate on its track crossing C.N.R. bridge at Regina, Sask.

5135. Aug. 5.—Authorizing C.P.R. to construct two branch lines or spurs at Cardigan, N.B.

5136. Aug. 5.—Authorizing C.P.R. to operate its trains over the Qu'Appelle, Long Lake and Saskatchewan Ry. and Steamboat Co.'s tracks without being brought to a stop.

5137. Aug. 6.—Authorizing C.P.R. to construct a branch line or spur in Grand Forks, B.C., to the Kettle Valley Lumber Co.'s premises.

5138. Aug. 6.—Approving location of Toronto and Niagara Power Co. transmission line on Beach Road, Nelson tp., Halton Co., Ont.

5139. Aug. 6.—Authorizing the City of Toronto to lay water pipes under G.T.R. Northern Division tracks, Royce Ave., Toronto.

5140. Aug. 5.—Amending items 15 and 23, pgs. 23 and 52 of the Canadian Classification, re classification of printers' cabinets, frames, etc. See pg. 639.

5141. Aug. 7.—Authorizing G.T. Pacific Ry. to open for traffic that portion of its line from mileage 54, Portage la Prairie, Man., to mileage 675, Battle River, Sask.

5142. Aug. 7.—Authorizing G.T. Pacific Ry. to operate that portion of its line from Earl to Scott, Sask., for the purpose of moving a party of settlers.

5143. Aug. 7.—Approving deviation of C.N. Quebec Ry. location between station 1417, 49E, to 1473, 39.7, between mileage 36 and 38 west from Quebec Bridge, Cap Sante Parish, Portneuf Co., Que.

5144. Aug. 7.—Authorizing C.P.R. to construct a branch line or spur to the Pacific Cartage Co.'s premises, Calgary, Alta.

5145. Aug. 5.—Authorizing C.P.R. to construct highway in Tillsonburg, Ont., across G.T.R. tracks, and across C.P.R. and M.C. Rd. joint tracks and lands.

5146. Aug. 6.—Authorizing Walkerton and Lucknow Ry. to open for traffic that portion of its railway between mileage 27.5, Hanover, and mileage 37.7, Walkerton, Ont.

5147. Aug. 11.—Authorizing St. Catharines Gas Co. to lay 3" gas main under G.T.R. tracks, Page St., St. Catharines, Ont.

5148. Aug. 7.—Amending order 5027, June 30, 1908, authorizing the C.P.R. to operate a branch line to Riley & Julian's premises, sec. 21, tp. 12, range 9, Man., by striking out the word "northeast" in line 18 of the recital part and line 7 of the operative part.

5149. Aug. 7.—Amending order 4018, Nov. 16, 1907, authorizing G.T. Pacific Ry. to construct its railway across certain highways in Saskatchewan from mile 0.00 to mile 34.541, by striking out the figures 216 in line 4 of the operative part, and substituting therefor the figures 261.

5150. Aug. 7.—Authorizing C.P.R. to construct a branch line or spur in rg. 1, Campbell tp., Labelle Co., Que.

5151. Aug. 7.—Approving Brantford and Hamilton Electric Ry. Co.'s by-law authorizing G. E. Waller, General Freight and Passenger Agent, to prepare and issue tolls to be charged for all traffic carried by the company.

5152. Aug. 7.—Authorizing Northern Pipe Line Co. to lay a 6" pressure pipe under C.P.R. tracks, Wallaceburg, Ont.

5154. Aug. 11.—Authorizing Bell Telephone Co. to erect aerial wires across G.T.R. tracks, Elizabeth St., St. Mary's, Ont.

5155. Aug. 11.—Authorizing C.P.R. to open for traffic that portion of the diversion of the New Brunswick Ry. Co.'s Edmundston branch, between mileage 33.1 and 33.7, and the Grand River bridge.

5156 to 5160. Aug. 11.—Authorizing Wallace municipality to erect its telephone wires across C.P.R. tracks at 5 points in Manitoba.

5161. Aug. 11.—Authorizing Uxbridge and Scott Telephone Co. to erect aerial wires across G.T.R. tracks at 7th con., Uxbridge, or Main St., Uxbridge, Ont.

5162. Aug. 13.—Authorizing C.P.R. to reconstruct bridge 73.1 on the Laggan section of its line, Alta.

5163. Aug. 13.—Authorizing C.P.R. to reconstruct bridge 37.0 on the White River section of its line, Thunder Bay district, Ont.

5164. Aug. 12.—Authorizing Notre Dame de Perpetuel Secours du Charney municipality, Que., to construct at its own expense a highway across G.T.R. tracks on P. Fontaine's property.

5165. Aug. 12.—Approving C.N. Ontario Ry. standard passenger tariff C.R.C. 26, cancelling its standard passenger tariff 1, between Toronto and Sudbury, Ont.

5166. Aug. 12.—Approving C.N. Ontario Ry. standard freight tariff C.R.C. 74, cancelling its standard freight tariff 1, between Toronto and Sudbury, Ont.

5167. Aug. 11.—Authorizing C.P.R. to construct a branch line or spur to T. Abriel's premises, Nakusp, B.C.

5168. Aug. 13.—Approving C.P.R. standard freight tariff, applying between Toronto and Sudbury, Ont.

5169. Aug. 13.—Authorizing C.P.R. to operate its trains over the interlocking plant where its line crosses the G.T.R. near Asylum, London, Ont.

5170. Aug. 5.—Authorizing Oxford Oil and Gas Co., to lay a main under C.P.R. near Innerkip station, Ont.

5171. Aug. 14.—Authorizing Central Telephone Association to erect wires across G.T.R. tracks at 4 different points in Ontario.

5172. Aug. 14.—Authorizing G.N.W. Telegraph Co. to erect wires across C.P.R. tracks at the camp grounds, Petewawa, Ont.

5173. Aug. 14.—Authorizing Lang Farmers' Mutual Telephone Co. to erect wires across C.P.R. tracks at Lang, Sask.

5174. Aug. 14.—Authorizing corrected plans of the Kettle River Valley Ry., showing location of line from Grand Forks northwesterly to Gloucester, Divs. 1 and 2, B.C.

5175. Aug. 13.—Amending order 5133, July 31, 1908, authorizing Brockville Water Commissioners to lay a 6" water main under G.T.R. tracks, Bartholomew St., Brockville, Ont.

5176. Aug. 14.—Authorizing corrected plans of the Kettle River Valley Ry., showing location of North Fork extension in Divs. 1 and 2, B.C.

5177. Aug. 5.—Approving proposed rearrangement of C.N.R. signalling equipment and gates at Queen St. crossing, Toronto, Ont.

5178. Aug. 14.—Authorizing C.P.R. to construct a branch line or spur to Great West Coal Co.'s premises, Roche Percee, Sask.

5179. July 29.—Authorizing the Wollaston municipality to construct diverted highway across Central Ontario Ry.'s tracks, lot, 11, con 8, Wollaston tp., Ont.

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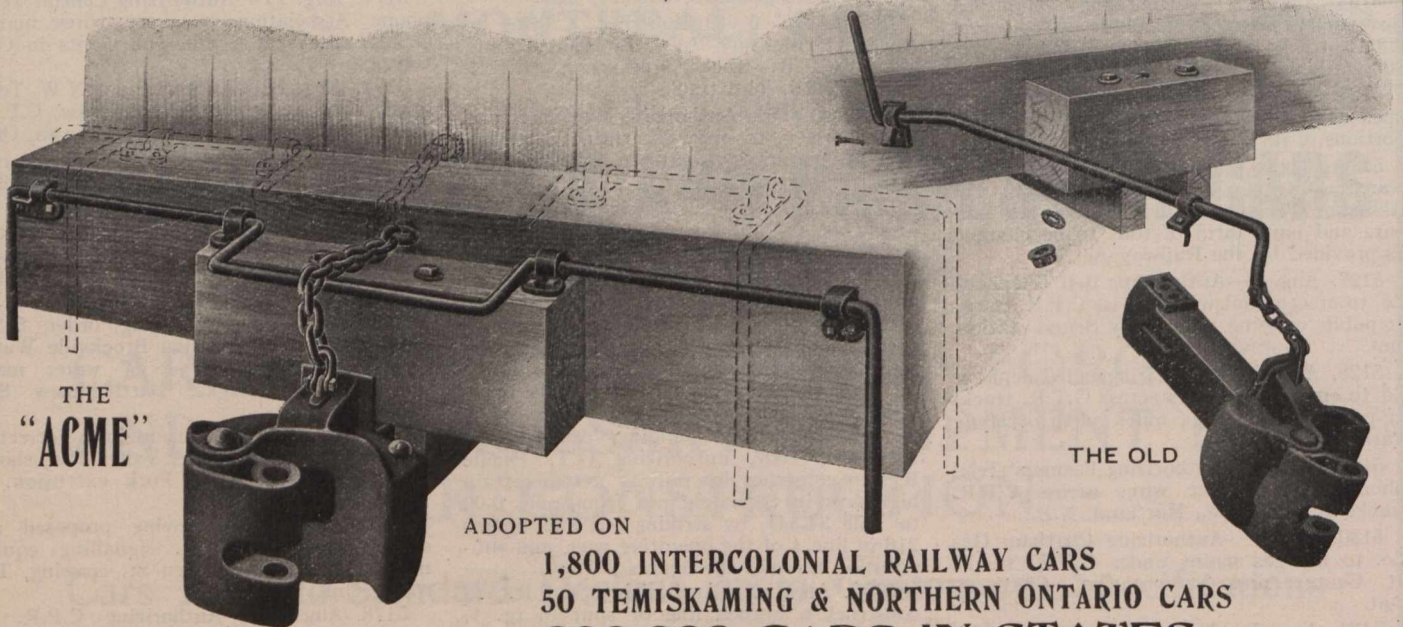
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300,000 CARS IN STATES

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5180. Aug. 18.—Authorizing Bell Telephone Co. to erect aerial wires across G.T.R. tracks at public crossing, Queen St., Ailsa Craig, Ont.

5181 to 5187. Aug. 14.—Authorizing Woodworth municipality to erect wires across C.P.R. tracks at 7 points in Manitoba.

5188, 5189. Aug. 14.—Authorizing Lang Farmers' Mutual Telephone Co. to erect wires across C.P.R. tracks at 2 points in Saskatchewan.

5190 to 5192. Aug. 18.—Authorizing Bell Telephone Co. to erect wires under G.T.R. tracks at 3 points in Ontario.

5193. Aug. 18.—Approving revised location of G.T. Pacific Ry. from Prince Rupert easterly, mile 0.00 to mile 10.64, Coast District, B.C.

National Transcontinental Railway.

Rapid progress is reported to have been made with the construction of the section of the line between Moncton and Chipman, N.B. The grading is well advanced, a spur line has been laid to a ballast pit near Salisbury, and temporary lines have been laid to permit of the working of steam shovels and construction trains. The contractors' plant on the section includes five steam shovels, 15 narrow gauge locomotives, 120 five-yard cars, 20 convertible cars, 80,000 lbs. capacity; 10 flat cars, 80,000 lbs. capacity, and four concrete mixing plants. It is expected that the track will be ready for laying the permanent rails early in Sept.

S. N. Parent, Chairman of the Commission in charge of the construction of the railway, was at La Tuque, Que., Aug. 12, selecting the site for the yards and divisional buildings at that point.

J. H. Reynolds, President of the Reynolds Construction Co., which has the contract for the construction of the first 150 miles of the line east of the junction with the Temiskaming and Northern Ontario Ry., said that there were over 1,200 men engaged in clearing and grading, and that he expected to get the track laid by the end of the year; it would require another year to do the ballasting and to clean up the line. There was not a great deal of hard work on the 150 miles, the amount of rock work being small. A number of bridges had to be built, the substructures of which would be concrete. The bridge over the Abitibi River is said to be about 1,200 ft. long, and at a height of about 200 ft. above the river. The point of junction with the Temiskaming and Northern Ontario Ry. is about eight miles west of the crossing of the Abitibi River.

The Commissioners are asking for tenders for the supply of 44,447 gross tons of 80-lb. steel rails, for delivery at various points on the mileage under contract.

GRAND TRUNK PACIFIC RY.

On July 30 a special train left Winnipeg, Man., carrying F. W. Morse, Vice-President and General Manager, and other officials, on a trip of inspection over the line. The train went to the end of the steel at Battle River, a point 675 miles west of Winnipeg. Mr. Morse completed arrangements for the opening of a regular train service over portions of the line, which went into operation in Aug., to a point about 50 miles west of Saskatoon, Sask.

The bridge over the Battle River is well advanced, and steel rails and other material are being collected there so that track-laying may be resumed as soon as the bridge is ready. At Edmonton track has been laid to the bridge across the Saskatchewan River at Clover Bar, and as soon as the superstructure of the bridge is completed track-laying will be resumed on the roadbed

in the direction of Battle River. The distance from the Battle River to the Saskatchewan River at Clover Bar is 112 miles. It is expected that the line will be completed through to Edmonton early in Nov. On the section from Edmonton westerly to Wolfe River good progress is being made with the grading, and one stretch of about 60 miles is expected to be completed by Christmas.

From Prince Rupert, B.C., it is reported that the right-of-way has been cleared easterly for the first 50 miles, and that the clearing on the second 50 miles is well under way. It is announced that the town-site of Prince Rupert will be placed on the market shortly. This announcement is made concurrently with the announcement that F. W. Morse has effected a settlement of some differences with the British Columbia Government over the waterfront sites. The water frontage is in all 28,500 ft. The Government by the original agreements got 8,500 ft. of this. By the agreement now consummated this is divided into five strips of unequal length, ranging from 1,000 ft. to 3,000 ft. and located at points which, in the opinion of the Government engineers, will prove of strategic importance for the development of the northern city. The railway obtains all the land required for terminal purposes, but ceded the Government 23 acres in other parts of the townsite for the surplusage of land they receive, en bloc.

PACIFIC NORTHERN AND OMINCEA RY.

The railway subsidies act passed last session of the Dominion Parliament provided for the aiding upon the usual terms and conditions, of a line of railway from Kittimat to the Telkwa River, B.C., a distance not exceeding 110 miles. (Aug., pg. 557.)

G.T. PACIFIC BRANCH LINES.

The Dominion Parliament last session voted a subsidy at the rate of \$3,200 a mile, with the usual provisions as to an increase to \$6,400 a mile, towards the construction of a railway from Montreal, northerly to a junction with the National Transcontinental Ry. (Eastern Division G.T. Pacific Ry.), not exceeding a distance of 200 miles. It transpired in the course of the discussion that the application for the subsidy stands in the name of the Premier, and that it was being asked for as a result of a very large deputation which waited on the Government from the city of Montreal. The Minister of Railways said unless it was the G.T. Branch Lines Co., he did not know what company would be in a position to construct this line; the policy of the Government was to give the bonus to the first company that will show its readiness and ability to construct the railway.

A subsidy on the same terms was also voted for the construction of the line, now nearly completed, and known as the Lake Superior Branch, extending from Fort William and Port Arthur, Ont., to a junction with the National Transcontinental Ry. (Eastern Division G.T. Pacific Ry.), a total not exceeding 220 miles.

During June, 28 men were killed and 32 injured in the course of their employment in railway work in Canada. Of the fatalities 7 were due to being run over, 10 to explosions of dynamite, 2 each to derailments, to being struck by passing objects, and to being caught between cars, 1 each to a fall, to suffocation by gasolene fumes, to being struck by train, and 2 to drowning. Of the non-fatal accidents, 8 were due to being run over, 7 to derailments, 6 to falls, 4 each to being caught between cars and to falling materials, 1 each to flying material, to an explosion of dynamite, and to machinery.

Buffalo and Lake Huron Railway Co.

Following is the report for the half-year ended June 30, 1908: After providing for the interest on the first and second mortgage bonds, the available balance, as shown by the revenue account, including the amount brought forward from the previous half-year, was £14,654 18s. 8d., enabling the directors to pay the usual dividend of 5s. 3d. per share, and leave a balance of £870 5s. 5d. to be carried forward as against £813 8s. 6d. Since issuing the last report the company's investments have been changed by the sale of 3 Buffalo and Lake Huron shares and £1,000 G.T.R. perpetual 4% consolidated debenture stock, and the purchase of \$7,000 Northern Pacific Ry. 3% general lien railway and land grant gold bonds.

BALANCE SHEET, JUNE 30, 1908.

	£	s.	d.
SHARE CAPITAL: 52,513 ordinary shares of £10 each, fully paid...	525,130	0	0
BONDED DEBT:			
First mortgage 5½%			
£100 Bonds.....	£297,600		
Second mortgage 5½%			
£100 Bonds.....	466,158		
	763,758	0	0
Interest on bonds accrued from Mar. 1 to June 30.....	14,002	4	8
Dividends unclaimed.....	1,101	8	6
Interest unclaimed.....	3,949	4	11
Sundry creditors.....	176	15	8
Balance from Revenue Account.....	14,654	18	8
	<u>£1,322,772</u>	<u>12</u>	<u>5</u>

Cost of property on transfer of undertaking to the G.T.R. Co. on lease, after deducting all expenses in connection with the transfer... 1,278,882 10 5

	£	s.	d.
Investments:			
Buffalo & Lake Huron Ry. Co. 5½% first mortgage bonds... £	600	0	0
5½% second mortgage bonds.....	11,866	13	4
Bond scrip & share fractions.....	27	16	0
7,000 Northern Pacific Ry. 3% general lien railway and land grant gold bonds.....	1,400	0	0
	£13,894	9	4

Cost price.....	8,062	17	8
Cash at bankers.....	827	4	4
Rental to June 30, 1908, due from the G.T.R. Co., payable September 1, 1908.....	35,000	0	0
	<u>£1,322,772</u>	<u>12</u>	<u>5</u>

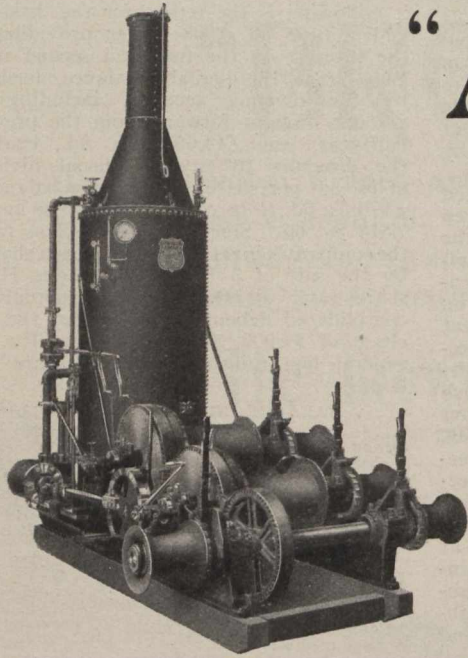
REVENUE ACCOUNT.

	£	s.	d.
Balance as shown in last half-year's report.....	£14,598	1	9
Less 75th dividend on share capital, at 5s. 3d. per share.....	13,784	13	3
	813	8	6
Interest on investments.....	377	10	5
Interest on deposit at bankers.....	12	9	3
Rental to June 30, 1908, payable by the G.T.R. Co., on September 1, 1908.....	35,000	0	0
	<u>£36,203</u>	<u>8</u>	<u>2</u>

	£	s.	d.
Interest payable as under:			
5½% on £297,600 1st mortgage bonds... £	8,184	0	0
5½% on £466,158 2nd mortgage bonds.	12,819	6	11
	21,003	6	11
London office rent and management expenses £	350	0	0
Directors' remunerat'n.	150	0	0
Miscellaneous expenses.	20	19	7
Auditors' fee.....	21	0	0
Law expenses.....	3	3	0
	545	2	7
Balance available for dividend.....	14,654	18	8
	<u>£36,203</u>	<u>8</u>	<u>2</u>

The directors for the current year are: M. H. Maxwell, Chairman; E. Ashwell, Liverpool, Eng., and J. M. Syngé, Heswall, Eng.

The Engineers' Club of Toronto recently visited Peterboro, Ont., inspecting the lift lock, etc., and after a trip through the Trent canal and the Kawartha lakes returned to Toronto.



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THE ELECTRIC HEADLIGHT

The following letter was received under date of May 8, 1908, from Mr. J. W. Cleary, Travelling Engineer Pyle-National Electric Headlight Co.:

"I learn from _____ the Master Mechanic here, that an engineer running between _____ and _____ discovered a broken rail with the Pyle-National Electric Headlight and made the stop without ditching his train. One or two pairs of wheels got off, but that was a small affair to what it would have been where a foot of the rail was broken off. Also an engineer running east of here found some cars shoved out on the main line. He saw them with the 'Electric' and made the stop without hitting them."

PYLE-NATIONAL ELECTRIC HEADLIGHT CO.
MONADNOCK, CHICAGO

Railway Commissioners' Traffic Orders.

4988. July 8.—This order, re interswitching charges, was published in full in our Aug. issue. We are officially advised that it will become effective Sept. 1.

CHANGES IN FREIGHT CLASSIFICATION.

5022. July 7.—In the matter of the application of the Canadian Freight Association for the approval of its proposed supplement 1 to Canadian Classification 13. Upon reading what has been alleged in support of the application and on behalf of the Canadian Manufacturers' Association, and upon the report of its Chief Traffic Officer, the Board orders that the changes and additions embodied in the proposed supplement 3 (filed as no. 1) to Canadian Classification 13 be approved, subject to the following conditions, namely:

(a) That the proposed changes with respect to automobiles be suspended pending the decision with respect to the proposed reclassification of automobiles in the so-called official classification territory;

(b) That the proposed advance in the minimum weight for petroleum and petroleum products, including compounded petroleum oils and greases, in carloads, from 24,000 to 26,000 lbs. per carload, be struck out as being contrary to rule 1 of the classification, which rule, with respect to special provision, contemplates reductions only;

(c) That the proposed changes with respect to brushes be altered to read as follows:

- Brushes, toilet, boxed... Less than carload, 1st Class.
- Brushes; not otherwise specified:
- In bales or bundles... Less than carload, 1st Class.
- In boxes... Less than carload, 2nd Class.
- Brushes, all kinds, carloads, minimum, 20,000 lbs., 4th Class.

(d) That the proposed changes with respect to empty barrels, etc., be altered to read as follows:

- Barrels, casks, kegs, empty; carloads, prepaid:
- In box or stock cars,—
- Ale and beer, minimum, 20,000 lbs. ... 10th Class.
- Not otherwise specified, minimum 14,000 lbs., 7th Class.

Racked platform cars, 4,000 lbs. per car greater than for box or stock cars, as above.
And the Board further orders that the said supplement become effective within three weeks from the date of the receipt of the order by the Chairman of the Advisory Committee of the Association, or, in his absence, by his representative.

G.T.R. OVERCHARGE ON LUMBER.

5029. July 16.—In the matter of the complaint of A. Barnet & Co., of Brule Lake station, Ont., complaining of the action of the G.T.R. Co. in increasing its rate on lumber between Brule Lake station and Ottawa, from 7c. per 100 lbs. to 9½c. per 100 lbs., and applying for an order directing the G.T.R. to refund to the Montreal Lumber Company at Ottawa any freightage paid by it in excess of the said 7c. rate. Upon reading what has been alleged in support of the application, and on behalf of the G.T.R., and upon the report of its Chief Traffic Officer, the Board orders the G.T.R. to refund to the Montreal Lumber Co., Ltd., \$332.07, being the total amount of the overcharge complained of.

G.T.R. JOINT TARIFFS WITH O. & N.Y.R.

5079. June 17.—In the matter of the complaint of the Ottawa and New York Ry. Co. against the cancellation by the G.T.R. Co. of certain joint freight tariffs heretofore in force between stations on the applicant company's line of railway and the G.T.R., and asking that the G.T.R. be enjoined from carrying the proposed cancellation into effect. Upon reading what has been alleged in support of the application and on behalf of the G.T.R., and upon the report of its Chief Traffic Officer, the Board orders that the said railway companies agree forthwith on joint tariffs for freight

traffic interchanged at or near Cornwall, Ont., which originates at or is destined to local points on the O. & N.Y. Ry., to replace the joint tariffs cancelled by the G.T.R., the said joint tariffs to be lower than the sum of the local tariffs of the said companies respectively to and from Cornwall. And the Board further orders that the said joint tariffs be published and filed with no greater delay than may be necessary for the purpose of entering into the said agreement and the subsequent compilation and publication.

MONTREAL-BOSTON BALANCED RATION RATES.

5106. July 29.—In the matter of the joint application of the Freight Traffic Managers of the C.P.R. Co. and the G.T.R. Co. under sec. 29 of the Railway Act, for an order rescinding the order of the Board, no. 1174, dated Dec. 14, 1906, approving the rate of 10½c. per 100 lbs., being the rate which the said railway companies carried the balanced ration, otherwise compressed food or fodder, in carloads, from Montreal and points within the Montreal terminal group of stations, to Boston, Mass. Upon the report and recommendation of its Chief Traffic Officer, the Board orders that the said order be rescinded.

REFUNDS BY C.P.R. AND T. H. & B. RY.

5116. July 30.—In the matter of the complaint of the Plymouth Cordage Co., complaining that the rate exacted by the Toronto, Hamilton and Buffalo Ry. Co. and the C.P.R. Co., on two carloads of binder twine, for export, shipped from Welland, Ont., to Montreal, Que., was excessive, and applying for an order directing the said companies to refund the excess so charged. Whereas it appears that the rate charged the complainants on the said shipment from Welland to Montreal was 22c. per 100 lbs., and the rate that should have been charged under the Board's order dated July 25, 1905, in what is known as the Dominion Millers' Export Rate case, was 15½c. per 100 lbs. Upon the report and recommendation of its Chief Traffic Officer the Board orders: (1) That the railway companies be required to refund to the complainants the difference between the rate charged, namely 22c. per 100 lbs., and 15½c. per 100 lbs.

(2) That interest on the amount of the difference between the rates herein referred to, at the rate of 5% per annum, be paid by the railway companies to the complainants, the same to be estimated from the date the said excess in the charges was paid, until the date when the amount of the said overcharge is refunded.

FILING OF TARIFFS OF TOLLS BY ATTORNEYS

5117. July 30.—Whereas, certain railway companies subject to the legislative authority of the Parliament of Canada have found it convenient for certain tariffs of freight or passenger tolls to be filed with this Board by agents, other than officials of the companies, acting jointly for two or more companies; and whereas no objection seems to exist to the continuation of the said arrangement, the Board orders: (1) That the said arrangement may be continued until otherwise ordered, provided that the said joint agents be duly authorized to act for the several companies by power of attorney, the original of which shall be filed with the Board and bear a number with the prefix "C.R.C. no. P.A." in the upper right hand corner.

(2) That the said power of attorney be in the following form:

"C.R.C. no. P.A.
..... Company.

KNOW ALL MEN BY THESE PRESENTS:

That the..... Company has made, constituted, and appointed, and

by these presents does make, constitute, and appoint..... its true and lawful attorney and agent for the said company, and in its name, place, and stead, to file certain tariffs of freight (or passenger) tolls, to wit (here describe the particular series), and supplements thereto, as required of railway companies by the Railway Act of the Dominion of Canada, and by the regulations of the Board of Railway Commissioners for Canada; and the said..... Company does hereby give and grant unto its said attorney and agent full power and authority to do and perform all and every act and thing above specified as fully to all intents and purposes as if the same were done and performed by the said company, hereby ratifying and confirming all that its said agent and attorney may lawfully do by virtue thereof, and assuming full responsibility for the acts and neglects of its said attorney and agent hereunder.

This power of attorney shall continue in force until revoked by formal and official notice of revocation placed in the hands of the Board of Railway Commissioners for Canada at Ottawa at least 10 days before the said notice shall become effective.

By.....
(Witness).....
Dated at.....
this..... day of..... A.D....."

ALLEGED C.P.R. DISCRIMINATION.

5119. Mar. 12.—In the matter of the complaint of F. A. Cutting, Boston, Mass., under sec. 315 of the Railway Act, complaining that the C.P.R. Co. unjustly discriminates in favor of the provinces of Quebec and Ontario, and against the province of New Brunswick, in refusing to carry tan bark from its stations in New Brunswick destined to New England points, at the same rates as it charges for lumber, and allowing the same rates on tan bark from points in the provinces of Quebec and Ontario as are charged on lumber. Upon the hearing of Counsel and tanners in the province of New Brunswick and the Railway Co., the evidence adduced, and what was alleged; and upon the report of its Chief Traffic Officer, the Board orders that the complaint in this proceeding be dismissed.

MILLER & RICHARDS' COMPLAINT.

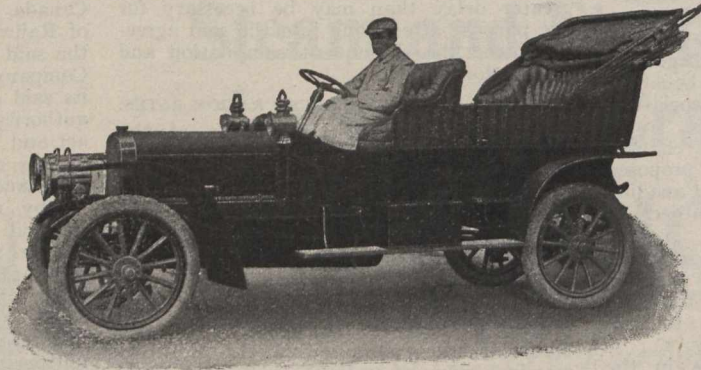
5140. Aug. 5.—In the matter of the complaint of Miller and Richards, Winnipeg, Man., alleging that the classification of printers' type cabinets, printers' type cases, and printers' imposing stone tables, in the Canadian classification, at 1½ times first-class for less than carload shipments, is unreasonable, and asking that the Board direct that the said articles be placed in a lower class in the said classification: Upon the consent of W. R. MacInnes, Chairman of the Advisory Committee of the Canadian Freight Association, on behalf of the said Association, and of complainants; and upon the recommendation of its Chief Traffic Officer, the Board orders that items 15 and 33, 23 and 52, of the Canadian classification, be eliminated, and the following substituted therefor in the next following supplement thereto:

	L.C.L.
Furniture cabinets, printers', crated, O.R.B. & C., or boxed.....	1
Frames, imposing stone, printers', crated, O.R.B. & C., or boxed.....	1
Imposing stone frames and cabinets combined, crated, O.R.B. & C., or boxed.....	1
Printers' cases, in bundles, racks, or crates, O.R. B. & C.....	1
Printers' case stands and racks, crated, O.R.B. & C., or boxed.....	1

Minneapolis, St. Paul and Sault Ste. Marie Ry.—The directors have declared the half-yearly dividends of 3½ per cent. on preferred stock and 3 per cent. on common stock

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CARS
ONLY**
From 14 to 75 H.P.



45 H.P. Six-Cylinder Car.

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**MOTOR DELIVERY WAGONS, OMNIBUSES
LORRIES**

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POLSON IRON WORKS LIMITED, TORONTO

THE HAMILTON STEEL & IRON CO.
HAMILTON, CANADA. LIMITED



**RAILWAY AXLES
ANGLE BARS AND
TRACK SPIKES**

FORGINGS—MARINE AND RAILROAD
IN ROUGH, ROUGH-TURNED OR SMOOTH FINISHED. SPECIALTY OF
HEAVY FORGINGS

PIG IRON, IRON AND STEEL BARS.

Railway Rolling Stock Notes.

The G.T. Pacific Ry., up to Aug. 1, has placed orders for rolling stock as follows: 6 mail and express coaches, 12 baggage cars, 18 second-class baggage and smoking coaches, 10 second-class and 18 first-class coaches, 6 sleeping coaches, 7,425 box cars, 1,000 flat cars, 700 ballast cars, 45 cabooses, 50 mogul passenger locomotives, 37 construction locomotives, 10 steam shovels, and 659 miscellaneous construction cars.

The Eastern British Columbia Ry. has ordered 2 consolidation freight locomotives from the Montreal Locomotive Works. Following are chief particulars:

Cylinders.....	20" by 28"
Drivers, diar.....	51"
Boilers, diar.....	74" and 77"
pressure.....	210 lbs.
Firebox.....	107" by 62 1/4"
Tubes.....	360 2" diar. by 12' 9 3/4" long
Driving wheel base.....	14' 6"
Wheel base, engine.....	22' 3"
" " and tender.....	54' 9"
Weight on engine truck.....	19,000 lbs.
" drivers.....	165,000 lbs.
" of tender.....	108,000 lbs.
" engine, total.....	184,000 lbs.
Tank capacity.....	5,500 U.S. galls.

The Michigan Central Rd. has placed an order for 3 passenger locomotives, Pacific type, with the Montreal Locomotive Works. Following are chief particulars:

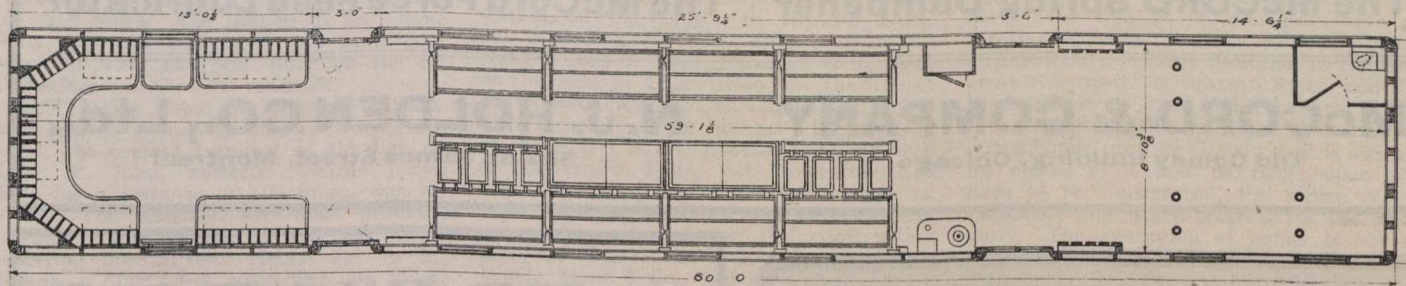
Cylinders.....	22" by 26"
Drivers.....	75" diar.

ped with Westinghouse air brakes and air signals, automatic coupler buffing device, and straight steam heating apparatus. The interiors of the cars have been constructed in accordance with plans approved by the Comptroller of the Railway Mail Service, and do not differ materially from those of the ordinary mail cars, excepting that they are fitted with sorting boxes, tables, drawers and bag racks of the most improved and convenient type, and also with letter sorting indicator, which enables the station to be shown in either direction in which the train may be moving. The heating is also arranged so that the heat under the sorting boxes is reduced to a minimum. A plan view of the car is given on this page, showing the dimensions, etc.

Railways Under Provincial Laws.

The Dominion Railway Act of 1903 was made by sec. 5 to apply to "all persons, companies and railways, other than Government railways, within the legislative authority of the Parliament of Canada. The following railways have been constructed under the authority of acts of the several provincial legislatures, and are subject to the provisions of the Railway Act as provided in sections 6 and 7 only. These sections provide (sec. 6): "Where any railway, the construction or operation

	Miles	Miles
Nova Scotia Southern Ry.....	22.00	96.00
Liverpool and Milton Ry.....		5.50
Middleton and Victoria Beach Ry.....		41.00
Midland Ry. of Nova Scotia.....		59.00
New Glasgow Iron, Coal and Ry. Co.....		12.50
Sydney and Louisburg Ry.....		53.99
NEW BRUNSWICK.—		
Buctouche and Moncton Ry.....		32.00
Caraquet Ry.....		68.00
Central Ry. of N.B. (now N. B. Coal and Ry. Co.).....		59.66
Gulf Shore Ry.....		16.78
Hampton and St. Martin's Ry.....		30.00
Kent Northern Ry.....		27.00
Restigouche and Western Ry. (now International Ry. of N.B.).....		29.00
St. John Bridge and Ry. Extension Co. (leased to C.P.R.).....		2.00
York and Carleton Ry.....		5.75
QUEBEC.—		
L'Assumption Ry. (now abandoned).....		3.50
Lotbiniere and Megantic Ry.....		30.34
Phillipsburg Ry. and Quarry Co.....		7.50
Quebec and Lake St. John Ry.....		244.00
Quebec Central Ry.....		213.50
ONTARIO.—		
Brockville, Westport and Northwestern Ry.....		45.00
Carillon and Grenville Ry.....		13.00
Manitoulin and North Shore Ry.....		16.00
Magnetawan Ry.....		1.91
Nosbonsing and Nipissing Ry.....		5.50
Ontario, Belmont and Northern Ry. (now Marmora Ry. and Mining Co., leased to Central Ontario Ry.).....		9.60
Pembroke Southern Ry. (leased to Canada Atlantic Ry.).....		20.90
Temiskaming and Northern Ontario Ry.....		—
BRITISH COLUMBIA —		
Crow's Nest Southern Ry.....		53.20
Kaslo and Slocan Ry.....		31.08
Lenora-Mount Sicker Ry.....		11.50



GRAND TRUNK RAILWAY 60 FT. MAIL CAR.

Boilers.....	72" and 75"
pressure.....	200 lbs.
Firebox.....	108" by 75 1/4"
Tubes.....	394 2" diar. by 21 ft. long
Driving wheel base.....	13 ft.
Wheel base, engine.....	33' 7 1/2"
" " and tender.....	63' 11"
Weight on engine truck.....	46,000 lbs.
" drivers.....	146,000 lbs.
" trailer.....	43,000 lbs.
Weight of tender.....	145,000 lbs.
" engine, total.....	235,000 lbs.
Tank capacity.....	7,000 U.S. galls.

Following are chief dimensions and details of special equipment of the 10 ten-wheel passenger locomotives the C.P.R. is constructing at its Angus, Montreal, shops:

Weight on drivers.....	141,000 lbs.
" total.....	190,000 lbs.
Cylinders.....	22 1/2" by 28"
Drivers.....	63" diar.
Boiler, type.....	Wagon top
" pressure.....	180 lbs.
Heating surface, total.....	2,418 sq. ft.
Tubes, number and diar.....	240 2", 24 5"
" length.....	14' 3"
Firebox.....	8' 6 1/2" by 5' 0 1/2"
Grate area.....	40 sq. ft.
Tank capacity.....	5,000 Imp. galls.
Coal capacity.....	10 tons
Air brakes.....	Westinghouse automatic
Axles.....	Mild steel
Brake beams.....	Simplex truss
" shoes.....	C.P.R. standard
Couplers.....	Tower
Headlights.....	C.P.R. standard electric
Journal bearings.....	C.P.R. standard
Springs.....	C.P.R. standard crucible
Steam heating.....	Gold system
Tires.....	Krupp crucible
Wheel centres.....	Cast steel
Superheater.....	Vaughan-Horsey

The G.T.R. has placed in service, on the Montreal-Toronto run, two mail cars which have recently been constructed at its Point St. Charles shops. The cars are built on 6-wheeled trucks, having 38 ins. steel-tired wheels, with cast iron centres, and are equip-

of which is authorized by a special act passed by the Legislature of any province, is declared, by any act of the Parliament of Canada, to be a work for the general advantage of Canada, this act shall apply to such railway, and to the company constructing or operating the same, to the exclusion of such of the provisions of the said special act as are inconsistent with this act, and in lieu of any general railway act of the province"; (sec. 7): "The provisions of this act in respect of tolls, tariffs, and joint tariffs shall, so far as they are applicable, extend to the traffic carried by any company by sea or by inland water between any ports or places in Canada, if the company owns, charters, uses, maintains or works, or is a party to any arrangement for using, maintaining or working vessels for carrying traffic by sea or by inland water between any such ports or places; (2) The provisions of this act in respect of tolls shall, in so far as they are applicable, extend and apply to (a) any company which has power under any special act to construct, maintain and operate any bridge or tunnel for railway purposes, or for railway and traffic purposes, and to charge tolls for traffic carried over, upon or through such structure by any railway; and (b) the traffic so carried over upon or through such structure."

Following is a complete list of railways which were constructed under provincial charters and to which the Railway Act applies as modified by these sections:

	Miles	Miles
NOVA SCOTIA.—		
Cape Breton Ry.....		31.00
Halifax and South Western Ry.—		
Nova Scotia Central Ry.....		74.00

Morrissey, Fernie and Michel Ry.....	10.85
New Westminster Southern Ry.....	24.10
Victoria and Sidney Ry.....	16.26
Victoria Terminal Ry. and Ferry Co.....	18.40
Wellington Colliery Ry.....	10.75

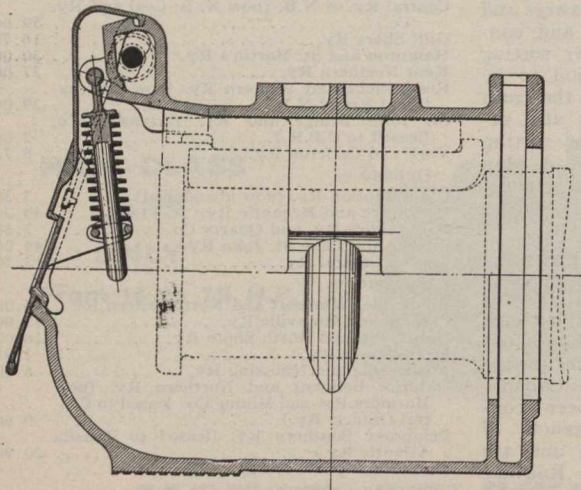
The Locomotive Engineers Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of \$60,000, and office at St. Thomas, to erect and carry on lodge rooms, for the use of locomotive engineers and trainmen, throughout Ontario. The provisional directors are: J. J. Worden, J. Collinson, R. A. Ray, N. Vail, C.W. Knight, G. Wilson, D. C. Walker, C. L. Wilson, and D. Miller, all locomotive engineers, St. Thomas.

The Standard Railway Equipment Co. of Canada, Ltd., has been incorporated under the Dominion Companies Act, with a capital of \$49,000 and office at Montreal, to manufacture and deal in equipments, appliances, and specialties for railway cars, tramcars, etc., and mechanical devices for train equipment. The provisional directors are: F. H. Markey, W. W. Skinner, R. C. Grant, Montreal; G. G. Hyde, C. E. Hyde, Westmount, Que.

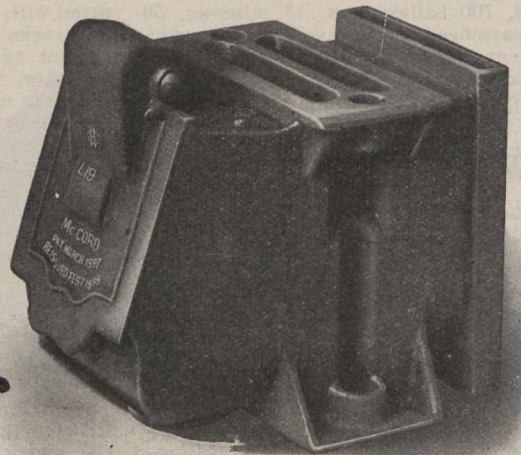
The Universal Signal Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of \$1,000,000 and office at Toronto, to acquire, hold and dispose of inventions for signalling and stopping railway trains; to manufacture trucks, cars, etc., and all machinery for the use of power of all kinds. The provisional directors are: T. R. Meredith, G. E. Foster, J. A. Street, J. A. McEvoy, G. Russell, E. M. Lindsay, V. Waldock, Toronto.

THE McCORD MALLEABLE IRON JOURNAL BOX

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STRONGEST,
LIGHTEST,
TIGHTEST
BOX MADE



The McCORD Draft Gear
The McCORD Spring Dampener

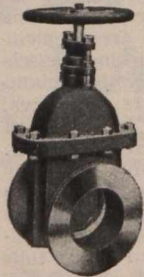
The McKIM Gasket
The McCord Force Feed Lubricator

McCORD & COMPANY
Old Colony Building, Chicago

N. J. HOLDEN CO., Ltd.,
302 St. James Street, Montreal

KERR'S GLOBE AND GATE VALVES

STRICTLY
HIGH GRADE.
TESTED &
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THE KERR ENGINE CO. LIMITED
VALVE AND HYDRANT MANUFACTURERS
WALKERVILLE, ONT.

The EDWARDS STEEL TRAP DOOR

for Passenger Cars of Wood or Steel construction, is a device which should receive your careful investigation and consideration. Prices and Blue Prints promptly supplied.

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are standard on the leading Railway Systems, moderate in price, minimum cost of maintenance. We are also makers of Metal Sash and Tin Barrel Spring Rollers for Passenger Car Equipment.

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THE O. M. EDWARDS CO.
SYRACUSE, N. Y., U. S. A.

Canadian Northern Ry. Construction.

St. John Valley Ry.—The railway subsidies act passed at the last session of the Dominion Parliament provided for the granting of financial aid towards the construction of the following lines of railway: From Westfield to St. John, N.B., not exceeding 14 miles; from Gagetown to Fredericton, N.B., not exceeding 40 miles; and from a point between Centreville and Woodstock, to a point at or near Grand Falls, N.B., not exceeding 55 miles. These subsidies cover a considerable portion of the route of the line which the New Brunswick Legislature has authorized the Government to give a guarantee of bonds to the extent of \$15,000 a mile, and for the construction of which negotiations have been opened with Mackenzie, Mann & Co., with a view to the line becoming part of the Canadian Northern Ry. system.

Quebec and Lake St. John Ry.—The Dominion Parliament at its recent session voted subsidies in aid of the following branch lines: From Valcartier station to St. Catherines, Que., not exceeding 3.8 miles; from Valcartier station towards Gosford, not exceeding 5.50 miles; from the end of the 35th mile of the branch to La Tuque, on the River St. Maurice, to La Tuque Falls, not exceeding five miles; and from a point on the La Tuque branch to the steamboat landing near La Tuque, not exceeding 1.6 miles; a total not exceeding 20.9 miles. The branch to La Tuque Falls has been completed and some construction work has been done on the St. Catherines and Gosford branches.

The subsidy voted in 1906 for the construction of a line of railway from Roberval, the present terminal of the line on Lake St. John, westerly towards James Bay, for a distance of 100 miles, was revoked. The subsidy act also provided for grants towards the construction of the following lines: From Hebertville to St. Joseph d'Alma, not exceeding 10 miles; and for a line from Chicoutimi, south or south-east, not exceeding five miles.

Canadian Northern Quebec Ry.—The Dominion Parliament last session voted a subsidy to the C.N.Q. Ry for a line from near Garneau Jct. to Quebec, with a branch to or towards the Quebec Bridge, not exceeding 83 miles, in lieu of the subsidy, for a distance not exceeding 70 miles, voted to the Great Northern Ry. of Canada in 1906. A subsidy was also voted to the C.N.Q. Ry. towards the cost of the construction of a line from Montreal, Que., to Hawkesbury, Ont., not exceeding 65 miles; and to the Great Northern Ry. of Canada, which is one of the constituent companies of the C.N.Q. Ry., towards the construction of a line from St. Jerome to Charlemagne (Bout de L'Ile), Que., a distance not to exceed 22 miles.

In 1906 the Dominion Parliament voted a subsidy to the G.N. Ry. of Canada towards the construction of a line from or near Arundel, to a point in the united townships of Preston and Hartwell, Que., not exceeding 30 miles in length; and for a line connecting its Montford and Gatineau line with the main line at St. Jerome, not exceeding 15.2 miles. These subsidies were revoked at the last session of the Dominion Parliament to the C.N.Q. Ry.

Of these several lines work is in progress upon the cut-off from Garneau Jct. to Quebec, with the branch to the Quebec Bridge, and the line to St. Jerome has been completed to the junction with the Montford branch. The extension of this branch has not yet been gone on with, and beyond surveys nothing has been done upon the projected lines from Montreal to St. Jerome, and from Montreal to Hawkesbury.

Canadian Northern Ontario Ry.—At the last session of the Dominion Parliament a

subsidy at the usual rate and upon the usual conditions was voted towards the construction of a line from Hawkesbury to Ottawa, Ont. The construction of this line, which is an extension of the C.N.Q. Ry., is well advanced.

W. Mackenzie, President, and D. D. Mann, Vice-President, C.N. Ry., had a conference with C.P.R. and G.T.R. officials at the Toronto Union Station, Aug. 18, and it is understood that arrangements are being completed for the entry of the C.N.O. Ry. trains into Toronto over the C.P.R. instead of over the G.T.R. tracks as at present.

We are advised that the proposed branch from Udney, on the Toronto-Sudbury line, into Orillia, Ont., will be constructed this season.

To aid in the construction of the line from Sudbury Junction to Hutton Mines, Ont., the Dominion Parliament at its recent session made provision for the payment of a minimum subsidy of \$3,200 a mile, increasing to \$6,400 a mile as the cost exceeds \$15,000 a mile, the length of line so aided not to exceed 30 miles. The line has been constructed and was opened for traffic July 3.

Nipigon Ry.—The subsidies voted by the Dominion Parliament to the N. Ry. in 1906, for the construction of in all 80 miles of line, were revoked at the recent session, the mileage being divided as follows: From near Nipigon station, on the C.P.R., to Nipigon Lake, not exceeding 30 miles; from a point on Nipigon Bay of Lake Superior, to a point on the west of Lake Helen, on the line of the Nipigon Ry., not exceeding 3.50 miles; from a point on the line near the crossing of the Fraser River to Lake Jesse, by way of Cameron's Falls, not exceeding 1.50 miles; from a point on the north shore of Lake Nipigon northerly, not exceeding 45 miles. The charter for the construction of these lines is now controlled by Mackenzie, Mann & Co. (Ltd.), on behalf of the Canadian Northern Ry. It is understood that some portion of these lines will be utilized when the company's line to connect the line west of Port Arthur with the C.N.O. Ry. at Sudbury is constructed.

Canadian Northern Ry.—In connection with the work of betterment on the C.N. Ry. between Port Arthur, Ont., and Winnipeg, Pease Bros., of Port Arthur, have been given a contract for a section near Kabaigon, a point 57 miles west of the Lake terminal. In referring to this contract the Railroad Age Gazette of Aug. 7 places the contractors at work at Wabigoon, Ont., which is a point not on the C.N. Ry., but on the C.P.R., 202 miles from Port Arthur, and approximately about 150 miles westerly and northerly from Kabaigon, where the work is being done.

Tracklaying has been started on the Goose Lake line, and it is expected that the line will be opened from Saskatoon to Goose Lake, Sask., this fall. Some portion of the route graded during 1907 has been abandoned, and a new location made.

At the last session of the Dominion Parliament an act was passed guaranteeing the bonds of the company to the extent of \$13,000 a mile towards the construction of the following lines: From near Regina, Sask., to the western boundary of Manitoba, there connecting with the company's branch from Brandon, a distance of 152 miles; from near Saskatoon, Sask., southerly and westerly towards Calgary, Alta., 175 miles; from near Prince Albert, Sask., by way of Battleford and Battleford Junction, to Battleford, Sask., excluding, however, the mileage between North Battleford and Battleford Junction, not exceeding 135 miles; from the company's Thunder Hill branch at or near the western boundary of Manitoba in a generally westerly direc-

tion towards Rosthern, for a distance not exceeding 100 miles; and for an extension of the company's Rosburn line from the western boundary of Manitoba in a north-westerly direction, for a distance not exceeding 50 miles. The first mentioned of these lines is completed, and it is understood that the Goose Lake branch, now under construction, will ultimately be extended to Calgary, and so earn the second mentioned guarantee. Nothing has been done, except in the way of surveys, in connection with the projected Prince Albert-Battleford line. The extension of the Thunder Hill branch will give a line about midway between the main line to Edmonton and the Prince Albert line, and the company's maps show that a line is projected on the eastern bank of the Saskatchewan River to connect all the three lines. The projected extension of the Rosburn branch will carry it towards a junction with the Gilbert Plains-Edmonton line.

Edmonton, Yukon and Pacific Ry.—The Dominion Parliament last session passed an act guaranteeing the bonds of the company to the extent of \$13,000 a mile for the first 50 miles of line, and to the extent of \$25,000 a mile for a further distance of 100 miles at the rate of 3½%, payable half-yearly, the principal to be re-payable in 50 years. The line to be constructed is to start from a point on the company's line, or on the line of the Edmonton and Slave Lake Ry., at or near Edmonton or Strathcona, Alta., and to proceed thence in a generally westerly direction to the coal areas at or near the Brazeau River, and the headquarters of the McLeod River. The act guarantees the principal and interest of the bonds, and the Government is secured by means of a first mortgage upon the lines to be constructed, the rolling stock, franchises and other property of the company. The guarantee of bonds is not to be given until the Edmonton, Yukon and Pacific Ry. has become amalgamated with the Canadian Northern Ry., with the latter title, nor until the amalgamated company has made itself liable for the payment of the principal and interest of the securities so guaranteed. (Aug., pg. 545.)

Railway Lands Patented.—Letters patent covering lands in the western provinces were issued to railways during May as follows:—

	Aces.
Canadian Northern Ry.....	5,763.00
C.P.R. grants.....	454.00
C.P.R. grants, Souris branch.....	969.68
G.T. Pacific Ry. grants.....	303.51
Manitoba South Western Col. Ry.....	160.00

7,650.19

Board of Railway Commissioners.—The next sittings of the Board will be held at Ottawa, Sept. 1, when a large number of cases have been set down for disposal. One of considerable importance is the application of the G.T.R. for a declaration as to what are "works of necessity" for railways under the Lord's Day Act. The Dominion Parliament at its recent session voted \$13,000 for the maintenance and operation of the Board, exclusive of an amount of \$25,000 authorized by statute.

National Transcontinental Ry. Contracts.—A press report states that a contract has been awarded to O'Brien and MacDougall, Ottawa, for the construction of a section of the line between Lake Superior Junction and Nipigon, 150 miles. Among the sections for which tenders were recently invited were: from the western end of Fauquier Bros.' contract north of Lake Nipigon, Ont., westerly to Dog Lake, about 126 miles; and from Dog Lake to mile 2.6 west of Peninsula Crossing, by alternative routes, 23.76 miles by the northerly and 24.13 by the southerly route, and it is evidently to these two sections the report refers.

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W. E. DAVIS, Passenger Traffic Manager, MONTREAL.

G. T. BELL, General Passenger and Ticket Agent, MONTREAL, QUE.

MAINLY ABOUT PEOPLE.

R. Bickerdike, M.P., sailed on the s.s. Canada, Aug. 1, from Montreal, on a trip to Europe.

J. Powell, Chief Draughtsman G.T.R., Montreal, sailed for Great Britain recently for a short vacation.

Sir Thos. G. Shaughnessy returned to Montreal, Aug. 20, from St. Andrew's, N.B., where he had spent a fortnight's holidays.

W. D. Robb, Superintendent of Motive Power, G.T.R., and Mrs. Robb, have returned to Montreal, after a two months' trip to Europe.

J. E. Webb, Toronto, contractor for the St. Mary's and Western Ontario Ry., has made an assignment for the benefit of his creditors.

W. Downie, General Superintendent Atlantic Division, C.P.R., returned to St. John, N.B., July 28, from a trip to the Pacific Coast.

The engagement is announced of Miss K. Mackenzie, daughter of W. Mackenzie, President Canadian Northern Ry., to W. Beardmore, Toronto.

L. Dion, who for over twenty years was baggage-master on the G.T.R. between Island Pond, Vt., and Montreal, died at Montreal, Aug. 8.

G. M. Bosworth, Fourth Vice-President G.T.R., went to Ogdensburg, N.Y., Aug. 7, to attend the funeral of his mother, who died there Aug. 9.

J. J. Hill, chairman of the directors Great Northern Ry., had one of his hands nearly torn off in the wheel of an automobile, at Grasson, Minn., Aug. 16.

H. G. Elliott, Assistant General Passenger Agent G.T.R., returned to Montreal, Aug. 5, from a trip to Australia and New Zealand for the benefit of his health.

H. C. Hammond, President Northern Navigation Co., underwent an operation for a serious affection of the throat, at his residence in Toronto, Aug. 21.

M. A. Rice, bridge construction foreman G. T. Pacific Ry., fell from a girder going up on a bridge near Portage la Prairie, Man., July 27, and was killed.

Miss M. S. Robson, daughter of W. T. Robson, C.P.R. Advertising Agent, died while on a visit to her grandfather, Col. Silvester, at Lindsay, Ont., Aug. 13.

W. Mackenzie, President Canadian Northern Ry., was one of the Canadian gentlemen presented to the King at the recent levee at Buckingham Palace, London, Eng.

Miss E. G. King, daughter of C. L. King, G.T.R. station agent at Kincardine, Ont., was married in Toronto, Aug. 5, to Rev. F. E. Powell, rector of Holy Trinity, Chesley, Ont.

F. Dane, one of the Commissioners of the Temiskaming and Northern Ontario Ry., received news, July 27, from Bangor, Ireland, of the death of his father, Wm. Dane.

A. O. R. Huddell was presented with an onyx clock by the treasury staff of the G.T.R., Montreal, Aug. 9, on retiring from the company's service. Mr. Huddell held the position of cashier.

I. Frost, foreman of the carpenter and pattern shop of the G.T.R., Toronto, was presented with a purse of gold by his fellow employes, Aug. 17, on the occasion of his leaving the company's service.

The sum of \$1,666.66, equal to two months' salary, was voted as a gratuity to the widow of the late A. C. Killam, K.C., Chairman of the Board of Railway Commissioners, at the recent session of the Dominion Parliament.

J. L. Riel, engaged on the construction staff of the G.T. Pacific Ry., Winnipeg,

Man., died in the hospital there July 31. He was only son of Louis Riel, the leader of risings in the Northwest in 1869 and 1885.

W. D. Reid, President Reid Newfoundland Co., returned to St. John's, Nfld., Aug. 7, after having spent some time in Montreal arranging the affairs of the company, consequent upon the death of Sir Robt. G. Reid.

J. D. Robb, formerly in the Intercolonial Ry. service, and latterly engaged with E. A. Walberg, on the contract for erection of the Intercolonial Ry. shops at Moncton, N.B., died in the hospital there recently.

R. W. Leonard, C.E., has offered to erect a hospital for consumptives at St. Catharines, Ont., on condition that the Daughters of the Empire will provide the equipment and work out a plan for its maintenance.

A. J. Bailey, formerly Superintendent G.T.R. Bridge and Building Department, Stratford, Ont., died there Aug. 14, aged 74. Mr. Bailey, who had been for over forty years in the G.T.R. service, retired from active work in 1896.

Guy Tombs, General Freight and Passenger Agent Canadian Northern Quebec Ry., and Quebec and Lake St. John Ry., left Montreal Aug. 7 on a trip over the Canadian Northern Ry. lines in Ontario and the Prairie provinces.

J. H. Mathers, Locomotive Foreman, C.P.R. shops, Crow's Nest, B.C., was presented with an address and a purse of gold, Aug. 14, by his fellow-employees, on resigning his position, to take service with another company in the U.S.

D. McNicoll, Vice-President C.P.R., returned to Montreal July 31, after a two months' holiday trip through England and Scotland. He was accompanied from Liverpool by A. Piers, the manager of the company's steamship lines.

R. Newton, the C.P.R. brakeman who was sentenced to nine months' imprisonment for negligence, causing a collision at Guelph Junction, Ont., in April, was released from Milton jail, Aug. 5, on order of the Department of Justice, Ottawa.

M. J. Butler, Deputy Minister and Chief Engineer Department of Railways and Canals, returned to Ottawa, Aug. 5, after having been absent for some weeks for the benefit of his health. He was accompanied by Mrs. Butler and his two daughters.

V. Pelletier, engaged on the staff of the Intercolonial Ry.'s City Passenger Agent, Montreal, will, it is reported, be appointed aide-de-camp to his uncle, Sir C. A. P. Pelletier, on the latter's accession to the office of Lieut.-Governor of Quebec, early in Sept.

W. E. Davis, Passenger Traffic Manager G.T.R., who has also been appointed Passenger Traffic Manager G.T. Pacific Ry., was appointed to that position on the G.T.R., May 1, 1900, prior to which he had been successively Assistant General Passenger Agent, and General Passenger Agent, same road.

R. R. Jamieson, General Superintendent Central Division C.P.R., Winnipeg, Man., accompanied by his family, spent a few days at Westover, near Galt, Ont., early in August, at the residence of his father and mother, who celebrated the sixtieth anniversary of their wedding during the winter.

D. N. Stanton, railway contractor, who died recently in New York, aged 81, constructed some sections of the G.T.R., and was a promoter of the old Canada Atlantic Ry., which was acquired by J. R. Booth, of Ottawa, and amalgamated with the Ottawa, Arnprior and Parry Sound Ry., as the Canada Atlantic Ry.

Jas. Hunter, Assistant Deputy Minister Department of Public Works, will shortly receive the appointment of Deputy Minister, succeeding the late F. Gelinas, and A. St. Laurent, who was engineer in charge of the survey of the route of the projected Georgian Bay canal for the Government, will be given the position of Assistant Deputy Minister.

M. Talbot, who has been appointed Vice-President and General Manager of the Alaska-Pacific Steamship Co., Seattle, Wash., is a native of Wyton, Middlesex County, Ont., and commenced his career as a railway and transportation officer in London, Ont., about 25 years ago. Latterly he has been General Manager of the Columbia Northern Ry., and of the Portland and Astoria Navigation Co., with office at Portland, Ore.

Among the guests at the official dinner given by the Prince of Wales on board the warship Exmouth at Quebec, July 29, were Sir G. Drummond, Sir H. M. Allan, Hon. G. P. Graham, Hon. Jas. Dunsmuir, Hon. L. P. Brodeur, Rear-Admiral Kingsmill, and the Earl of Ranfurly. The latter is an Irish nobleman, and is President of the Atlantic, Quebec and Western Ry.

John Proctor, of Hamilton, Ont., died at his Scottish residence, where he usually spent the summer, Aug. 18. For many years he was engaged in the railway supply business, and was also identified with the promotion of the Wellington, Grey and Bruce Ry., and the Hamilton Northwestern Ry., as well as with the marine interests of Hamilton. One of his sons, Charles, is Travelling Passenger Agent G.T.R., with headquarters at Toronto.

W. S. Tilston, who has recently been appointed Chief of the Montreal Board of Trade Transportation Bureau, was born in Manchester, Eng., April 14, 1877. He entered railway service in 1889, in the office of the Division Freight Agent G.T.R., Toronto, and served there as Secretary, Rate Clerk, and Chief Clerk, to Oct. 1, 1906, when he was appointed Chief Clerk Import Freight Agent's office, C.P.R., Montreal, which position he held up to the date of his present appointment.

A young man who stated that he was a son of Sir Thos. G. Shaughnessy, President C.P.R., made an attempt to commit suicide at Seattle, Wash., July 30, in connection with his arrest for uttering a forged cheque for \$10,000 at North Yakima, and for robbing a drunken man some time previously at Spokane. About five years ago a young man victimized a number of hotels and business people in the state of Washington, by means of forged cheques, and by his representation that he was a son or nephew of one or other of the officers of the C.P.R.

G. T. Bell, General Passenger and Ticket Agent G.T.R., who has also been appointed to a similar position on the G.T. Pacific Ry., was born at Montreal Sept. 7, 1861. He entered railway service in 1878, since which he has been consecutively: 1878 to Nov., 1880, clerk Car Mileage Office, Great Western Ry.; Nov., 1880, to Nov., 1882, stenographer to General Passenger Agent and Rate Clerk, same line; Nov., 1882, to 1884, chief clerk to Assistant General Passenger Agent G.T.R.; Jan. 1, 1884, to April 25, 1892, chief clerk to General Passenger Agent; April 25, 1892, to April, 1896, Assistant General Passenger Agent at Montreal; April, 1896, to August, 1899, Assistant General Passenger and Ticket Agent at Montreal; Aug., 1899, to May, 1900, First Assistant General Passenger and Ticket Agent at Chicago; May, 1900, General Passenger and Ticket Agent at Montreal.

J. E. Quick, General Baggage Agent G.T.R., who has also been appointed General Baggage Agent G.T. Pacific Ry., was born July 10, 1851, at Richmond, N.Y., and entered railway service in 1871, since when

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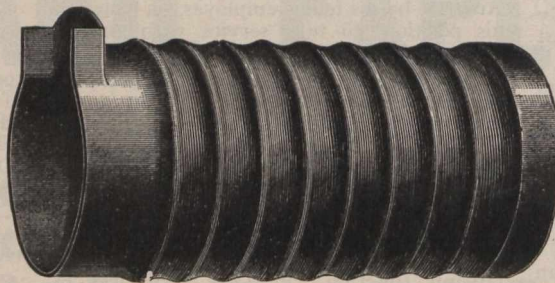
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Double Coil Jointless Fire-proof Steel Heater

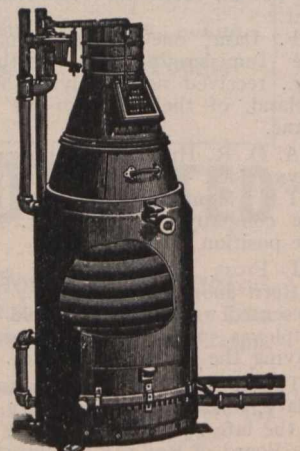
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Single Coil Jointless Flexible Steel Fire-proof Heater.

he has been consecutively: 1871 to 1874, baggagemaster and supply clerk, Port Huron and Lake Michigan Ry., now part of the G.T.R. system; 1874 to 1876, General Baggage Agent and Ticket Clerk, same road; 1876 to 1884, Agent, Port Huron, Mich., and General Baggage Agent, Chicago and Grand Trunk Ry.; 1884 to April 15, 1896, General Baggage Agent same road and Detroit, Grand Haven and Milwaukee Ry.; April 15, 1896, to date, General Baggage Agent G.T. Ry. system, with headquarters at Toronto. Mr. Quick has been secretary of the American Association of General Baggage Agents since 1885.

D. McNicoll, Vice-President and General Manager C.P.R., completed his 42nd year of railway service Aug. 20. He was born at Arbroath, Scotland, April 7, 1852, and entered the North British Ry. service Aug. 20, 1866, since when he has been consecutively, to 1873, clerk Goods Manager's office, North British Ry., in Scotland; 1873 to 1874, similar position with the Midland Ry. in England; 1874, billing clerk Northern Ry. of Canada, at Collingwood, Ont.; 1874 to 1881, chief clerk in office of General Manager, Toronto, Grey and Bruce Ry.; 1882 to 1883, General Freight and Passenger Agent, same road; 1883 to 1889, General Passenger Agent Eastern and Ontario Division C.P.R.; 1889 to Jan., 1896, General Passenger Agent all lines and steamships, C.P.R.; Jan., 1896, to April, 1899, Passenger Traffic Manager C.P.R.; April, 1899, to April, 1900, Assistant General Manager C.P.R.; April, 1900, to Dec., 1903, 2nd Vice-President and General Manager C.P.R.; in 1903 he was elected a director and Dec., 1903, Vice-President of the company, while he was also elected a member of the Executive Committee, Oct. 3, 1906.

Capt. Thos. Donnelly, Secretary of the Donnelly Wrecking and Salvage Co., Ltd., Kingston, Ont., who died there Aug. 24, was born at Garden Island, Ont., Dec. 27, 1856. He entered marine life at an early age, and went through a course at White's Naval School, Bristol, Eng., subsequently obtaining a British Master's certificate, and at the age of 21 was captain of the schooner Prussia, operating across the Atlantic Ocean. Among appointments which he held are: Government Inspector of Hulls, Government Examiner of Masters and Mates, Chief Inspector for Inland Lloyds and the Bureau Veritas. He was also interested in the organization of the Canadian Lake and Ocean Navigation Co., of which he was the first Superintendent. Later he became Secretary of the Donnelly Wrecking and Salvage Co., with which his father and brother were associated, and which has accomplished several of the largest and most difficult salvage operations on the continent. He took an active part in the proceedings of the Dominion Marine Association. He is survived by a widow and four children, and a brother, John, who conducts the operations of the Donnelly Co.

C. A. Cotterell, whose appointment as Chief Train Dispatcher, District 5, Central Division, C.P.R., was announced in our Aug. issue, was born at Enden, Eng., Jan. 18, 1877, and came to Canada at an early age, where he was educated. He entered railway service as messenger boy C.P.R., Windsor St. station, Montreal, June, 1888, and served there in various capacities until Feb., 1894, since when he has been: Feb. to Apr., 1894, night operator C.P.R., St. Constant, Que.; Apr., 1894, to July, 1896, Station Agent same road, East Richford, Vt.; July, 1896, to July, 1898, Operator and Agent, successively at Montreal Jct., Farnham, St. John's, Westmount, Windsor St. station, Montreal, and other points, same road; July, 1898, to Feb., 1901, Dispatcher C.P.R. Crow's Nest branch, successively at McLeod, Alta., and Cranbrook, B.C., also agent at McLeod, Alta., Cranbrook

and Fernie, B.C.; Feb., 1901, to Aug., 1903, Dispatcher and Acting Chief Dispatcher C.P.R., Fort William, Ont.; Aug., 1903, to Apr., 1904, Chief Dispatcher C.P.R., Regina, Sask.; Apr., 1904, to Sept., 1906, Dispatcher and subsequently Chief Dispatcher C.P.R., Fort William, Ont.; Sept., 1906, to May, 1908, Chief Dispatcher Great Northern Ry., U.S., at Spokane, Wash.; May to June 25, 1908, General Foreman C.P.R., Plunkett Pit.

W. H. Grant, whose portrait appears on the first page of this issue, was born at Acton, Ont., Dec. 8, 1858. He commenced railway construction work with D. D. Mann in 1882, and with the exception of eight years which he spent in Winnipeg, Calgary, and British Columbia, he has since been continuously employed in railway work, first with Mr. Mann, and later with Mackenzie, Mann & Co. During this time he has acted as accountant, superintendent and Manager of Construction. He was with Mr. Mann on the latter's contracts on the C.P.R. main line on the prairies and in the British Columbia mountains, and constructed 75 miles of the main line of the old Manitoba and Northwestern Ry., and the Russell and Rapid City branches. He laid the track on the 40 miles of the old Winnipeg and Hudson Bay Ry., and had charge of one section of Mackenzie & Mann's contracts on the C.P.R. short line through Maine. During the construction of the Ontario and Rainy River Ry. he was superintendent of the grading and bridging from Port Arthur to Fort Frances. After the completion of that line in 1902 he was sent to Nova Scotia, where he constructed 247 miles of line, which is now comprised in the Halifax and Southwestern Ry. In 1907 he was appointed Manager of Construction for Mackenzie, Mann & Co.'s lines east of Port Arthur, with headquarters in Toronto. Altogether he has had charge of the construction of 680 miles of that company's system.

The Imperial service medal has been granted to the following retired employees of the Intercolonial Ry., in recognition of long and meritorious service: John Adams, tankman; John Aiken, Jean Forgues, switchmen; R. Anderson, F. Demers, J. Donahoe, A. H. McDonald, M. McDonald, J. Ouellet, trackmen; F. Archibald, I. Devault, P. Thibideau, fitters; P. Ashe, H. Brown, J. Christal, C. B. Dunham, J. Ennis, T. King, J. Mason, J. Millman, section foremen; A. Barbeau, T. Buchanan, T. Carson, C. C. Davison, E. Gamache, T. McLean, J. F. Sayre, foremen; W. H. Bell, A. McKelvie, car inspectors; J. Brown, A. Clements, J. McDonald, G. T. Mellish, W. Pickering, R. A. Steeves, carpenters; W. Bulmer, J. Fogarty, W. Hayden, machinists; J. W. Cole, J. McArthur, J. McDowell, J. H. Moore, T. W. Prince, A. Shickle, M. Tobin, enginemen; G. Collard, G. Murdock, brakemen; C. Davey, A. Fitzpatrick, sectionmen; D. Driscoll, P. Driscoll, J. McAnulty, D. McDonald, M. Morrison, E. P. Shaw, porters; Eliza Flanagan, charwoman; J. Forbes, baggageman; A. Fraser, J. E. Gooldrup, blacksmiths; J. Gillard, T. Hogan, M. Jones, watchmen; J. Good, upholsterer; W. Grant, laborer; I. B. Humphrey, H. Palmer, E. St. Onge, stationmasters; W. Kelly, J. Millican, A. Rannin, conductors; G. Langlois, car oiler; P. P. LeBlanc, painter's assistant; A. McDonald, crossing watchman; A. Madore, car repairer; J. H. Magee, tinsmith; J. Morgan, freight porter; E. L. Perkins, storekeeper; E. Price, toolkeeper; R. M. Scott, rest-room keeper; I. G. Stevens, policeman; P. Sullivan, car cleaner.

M. H. Folger, who died at Kingston, Ont., Aug. 15, was born at Cape Vincent, N.Y., Mar. 22, 1841, and went to Kingston in 1863. He was connected with a number of transportation and industrial companies, and his well-known integrity, keen insight and business acumen made him much sought after

by commercial men on both sides of the boundary. Of the companies with which he was more intimately connected are the St. Lawrence River Steamboat Co., and the Thousand Islands Steamboat Co., the Kingston Light, Heat and Power Co., the Kingston and Pembroke Ry. Co., and the Kingston, Portsmouth and Catarqui Electric Ry. Co. The late Mr. Folger and his brother were the chief promoters of the Kingston and Pembroke Ry., now a part of the C.P.R. system, and in the construction days though, owing to the difficulties encountered, eight contractors, one after another, either failed or withdrew from the contract, they were not deterred, but placed the contract with Chisholm, McDonald & O'Brien, who eventually carried out the work successfully. In recent years Mr. Folger gradually retired from active participation in the management of the various concerns in which he was interested, but retained up to the time of his death, the presidency of the St. Lawrence River and Thousand Islands Steamboat Cos., in addition to which he acted as U.S. Vice-Consul for the Kingston District. He is survived by three sons, two of whom, connected with the marine interests, Howard being the General Manager St. Lawrence River Steamboat Co., and the Thousand Islands Steamboat Co., and Benjamin W., being Manager Niagara Navigation Co., Toronto.

General Passenger Agents' Convention.

The 33rd annual convention of the American Association of General Passenger and Ticket Agents will open in Toronto Sept. 22, at 11 a.m. After routine business reports will be presented from various committees, etc., and there will be reports from co-operating associations, including the Canadian Ticket Agents' Association, which will be represented by W. Jackson, C.P.R. Ticket Agent, Clinton, Ont. C. F. Bielman, Traffic Manager White Star Line, Detroit, Mich., will give an address on "Passenger Carrying Lake and River Lines of North America," and S. Moody, General Passenger Agent Pennsylvania Lines west of Pittsburg, will also give an address.

A local committee, of which B. W. Folger, Manager of the Niagara Navigation Co., is chairman, has arranged an entertainment programme as follows: Sept. 22, Addresses of welcome by the Dominion Minister of Railways, the Premier of Ontario, and the Mayor of Toronto; 4 p.m., automobile ride round city as guests of the city; 8 p.m., dinner for members of the Association tendered by Canadian National Exhibition Association; 8.15 p.m., theatre party for ladies at Royal Alexandra Theatre. Sept. 23, 11 a.m., street car ride round town for the ladies, arranged by the terminal transportation lines of Toronto; 4 p.m., sail around harbor and tea at Royal Canadian Yacht Club; 8 p.m., theatre party for all at Shea's Theatre.

Two special trains will be run, one from New York via Lehigh Valley and G.T.R., the other from Chicago, via G.T.R. On the night of Sept. 23, the members and their ladies will leave as the guests of the G.T.R. to spend a couple of days at Lake of Bays and Timagami.

Temiscouata Ry.—Traffic receipts for July, \$22,717.80. Total receipts for 7 months ended July 31, \$123,327.26.

The Canadian Ticket Agents' Association will hold its annual outing at Detroit, Mich., Oct. 6-8. The headquarters will be at the Hotel Cadillac, where the business meeting will be held Oct. 6. On the evening of that day, instead of the usual dinner, there will be a Dutch luncheon with vaudeville, etc., and the ladies will be given a theatre party. A programme of entertainment and excursions is being arranged for the other two days.

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The use of **OUR STEEL BACK SHOE** will mean a saving in brake shoe maintenance, brake heads and brake beams.

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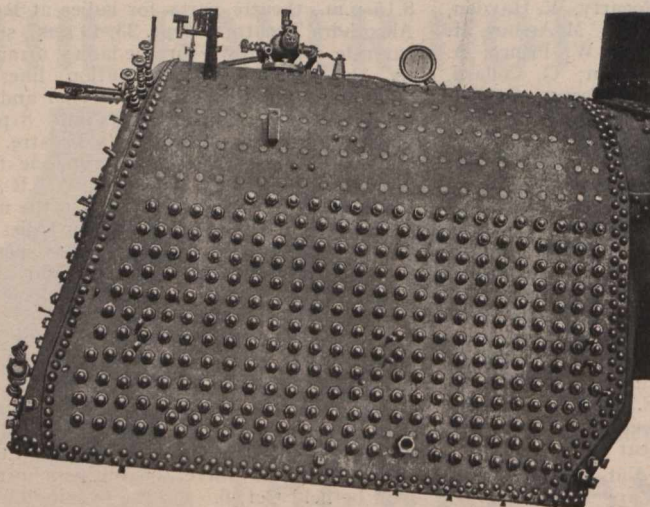
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TORONTO, ONT.

AGENTS FOR THE

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The Intercolonial Railway Shops.

By C. F. Bristol, Stud. Can. Soc. C. E.

The new I.C.R. shops are located about a mile from Moncton station, on the main line to Montreal. The site is on a plateau, about 60' above sea level, and although nearly flat, slopes gently to the southward in the direction of a small creek. As shown on the plan, two main sidings, with numerous branches and spurs, facilitate shunting and render ready access to all buildings and yards. The two passenger car shops are long and narrow, and so designed that cars may be placed transversely in each shop. These two buildings are parallel to each other and at right angles to the main line, with 18 tracks in each. Cars may be readily transferred from any track in one shop to any track in the other by means of the electric transfer table between the two shops. The stores and office building, power house, producer gas house, freight car shop, planing mill, lumber shed, and dry kiln are all laid out parallel to the main line of the railway, and are all served by side tracks. The planing mill is situated convenient to the passenger car shop and freight car shop. The locomotive shops comprise the machine shop and annex, boiler shop, boiler erecting shop, engine erecting shop, and smith shop, all under one roof. The four latter shops are parallel to the main line, but at right angles to the machine shop.

A notable feature in connection with the engine erecting shop is the arrangement of the pits. The main pit runs almost the entire length of the shop, while the track is continued across the machine and passenger car shops into the paint shop, where locomotives may be painted should the erecting shop be crowded. The side pits are all laid at an oblique angle to the main pit, and this arrangement provides greater facilities for stripping and repairing engines.

The foundations rest on firm, dry, red clay. The pressure on the clay under the column footings and foundations was not allowed to exceed three tons per sq. ft. The foundations are of 1-3-5 concrete, with a 3" batter on each face, and wherever the load is concentrated, as in the case of side columns, the width of the foundation is increased proportionately. The column footings are in the form of truncated pyramids.

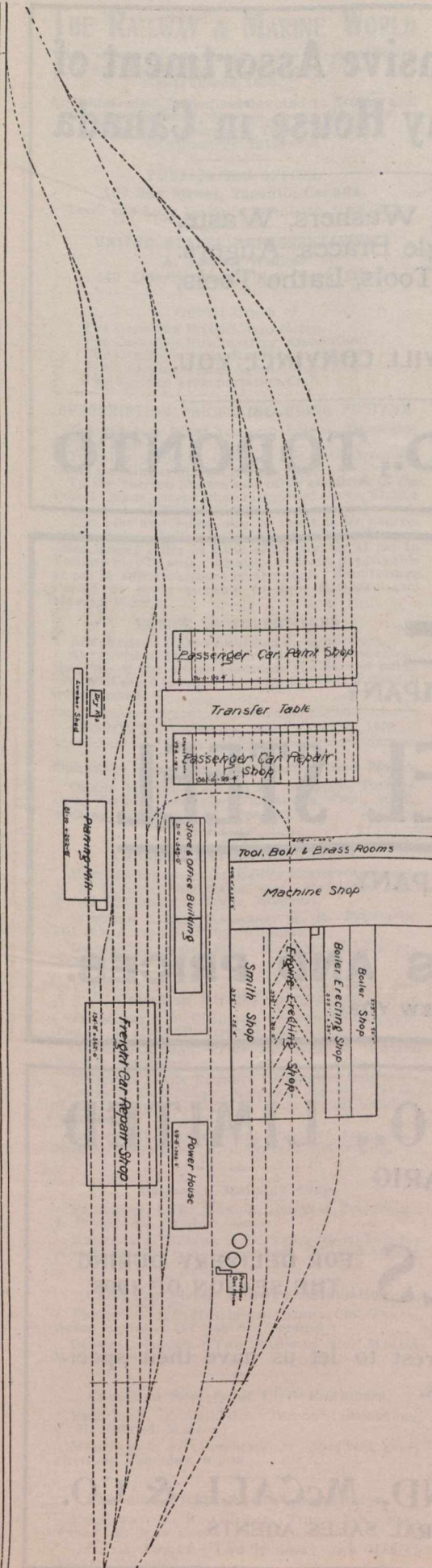
THE FREIGHT CAR SHOP is 134' 8" by 362'. Two rows of columns divide the shop into three bays, each 44' wide, and each containing two tracks through the entire length of the shop. In addition to these there are several narrow gauge tracks for small trucks. The first wall course is 4' high by 24" thick on the ends, and 12" on the sides, this being increased to 20" at the side columns or pilasters. The upper outside edge of this first course has a 4" bevel running completely around the building. Expansion joints divide the wall into sections of 40'. On the sides, with 20' centres, extending from the first wall course to the roof, are the concrete pilasters, 4' 8" wide and 16" thick, with a small projection on each side which serves as a casing for the window frames. The space between the pilasters is entirely glass, except a strip 2' 3" wide, which is made up of 2" x 4" spruce studding, covered on both sides with expanded metal lath and plastered with Portland cement mortar.

In each end are six doors, 12' wide by 16' high, and above the doors the walls are only 12" thick, with the exception of the lintels, which are 6" thick and 8' high. The reinforcement in the lintels consists of horizontal steel rods laid 18" centre to centre, and vertical rods, with 2' centres, extending into the cornice. Each alternate row of horizontal rods through the lintels is carried completely across the building. A number

of vertical rods is also run up in the concrete about 2" from the sides of the windows, in the ends of the monitor, and also in the thin portion of the wall at each side of the doors, where recesses are left for the door frames. The centre columns are made up of two 8" channels held together by riveted lattice work, while steel trusses support the roof and form the monitor. The ends of each row of purlins are firmly imbedded in the end walls, while the two outside rows are completely imbedded in the concrete cornice. The outside vertical members of the trusses and monitor are imbedded in the concrete pilaster. The outside purlins surrounded by the concrete cornice serve as a very efficient reinforcement, but small bent rods of steel were also placed near the face of the cornice three feet apart. The roof slab consists of cinder concrete, 1-2-4 mix. The slab forms a knee on each side of the I beam purlins, and completely covers the upper flange and half of the web, thus giving them lateral support. The reinforcement in the roof slab is electrically-welded wire cloth, 10" x 4" mesh. The transverse wires are about 3/8" diameter, and the longitudinal wires about 1/8" diameter. This reinforcement is arranged so as to come 1/2" from the bottom of the slab at the centre of the span between the purlins, and 1/2" from the top of the slab at a point over the purlins. The bottom plane of the concrete slab is 1/2" below the plane of the top flanges of the purlins. A thin layer of cement mortar is spread over the cinder slab to cover up the sharp projections, and over this a thin layer of pitch. Three plies of roofing felt are laid longitudinally, then hot pitch poured thereon, and the whole covered with a layer of gravel. At the edge of the roof the felt is well nailed to wooden strips imbedded in the cornice. The weight of the gravel and the adhesion of the pitch securely hold the felt to the roof, and obviate the use of transverse nailing strips. The monitor, 44' wide and 8' high, with continuous side lights, pivoted, extends the full length of the shop. The vertical members of the monitor truss are imbedded in small concrete columns similar in shape to the large side columns. Two rows of skylights on each side of the roof, with galvanized iron frame, on a 6" concrete wall 2' high, furnish additional light.

The planing mill is 81' 10" x 202' 8", and is constructed practically the same as the freight car repair shop, except that outside steel columns are imbedded in concrete side columns, and that the monitor only comes within twenty feet of the ends of the building. Hence, the trusses at these points were designed to carry the monitor end walls. The steel columns were set up first and well guyed, then the trusses were riveted in position and the purlins laid. No anchor bolts were used to hold the columns, as the forms were built around them to form the concrete pilaster. The cornice forms were next placed, and the column and cornice forms were filled with concrete in one operation.

THE PASSENGER CAR AND PAINT SHOPS are each 361' 8" x 100'. The cabinet shop is elevated half a story in one end of the passenger car shop, on what is termed the mezzanine floor. In the car paint shop, on a similar floor, are the upholstery and varnish rooms. These buildings are constructed entirely of reinforced concrete, and being exactly similar, the same forms were used for both. The column footings are built independently of the columns, and have 3/8" square steel rods, 3' long, projecting about 18" above the top, thus giving a firm bond between the footings and the



(Continued on page 653.)

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(Continued from page 649)

columns. The columns are 14" square, with chamfered corners and knee braced at the girder connections. Eight twisted steel bars, four of which are $\frac{5}{8}$ " square, and four $\frac{3}{8}$ " square, arranged alternately and spaced equidistant in a circle, are enclosed in a helix of 4" pitch and 10" diameter, formed by a $\frac{1}{2}$ " x $\frac{1}{8}$ " steel band, the whole reinforcement extending from end to end of the column. The bars and helix are wired together at the intersections, resulting in a very strong and neat reinforcement.

In the first wall course, which is 16" thick, with the upper outside edge bevelled, both horizontal and vertical reinforcement is used, consisting of $\frac{3}{8}$ " square steel rods. The vertical rods project about 6", ensuring a firm bond with the next course. The balance of the wall is 12" thick, and is almost all in the form of wall columns, with interstices for windows and doors, 60% of the wall area being of glass. The reinforcement in these wall columns consists of $\frac{3}{8}$ " round and $\frac{1}{2}$ " square bars, placed horizontally and vertically, and all wired together to form a coarse mesh. The window lintels, 6" thick by 2' high and 12' long, have two $\frac{5}{8}$ " square twisted steel bars 20' long laid near the bottom, and two $\frac{3}{8}$ " round bars each 20' long, one in the centre and the other near the top. These bars extend 4' each way into the side wall columns so that they are securely fixed. The door lintels are smaller, but of practically the same construction.

The mezzanine floor in the south end of each building is supported by a transverse girder resting on four columns, and a number of secondary beams at right angles to the girder. The secondary beams are carried by the transverse girder and the end wall columns, while the 4" floor slab is taken as the flange of the beams. $\frac{5}{8}$ " square twisted steel bars, 20' long, and laid with 12" centres, constitute the slab reinforcement, and are placed about $\frac{1}{2}$ " above the bottom of the slab. The reinforcement in the beams and girder is similar to that used in the roof girders and beams described below.

The roof is carried by six longitudinal



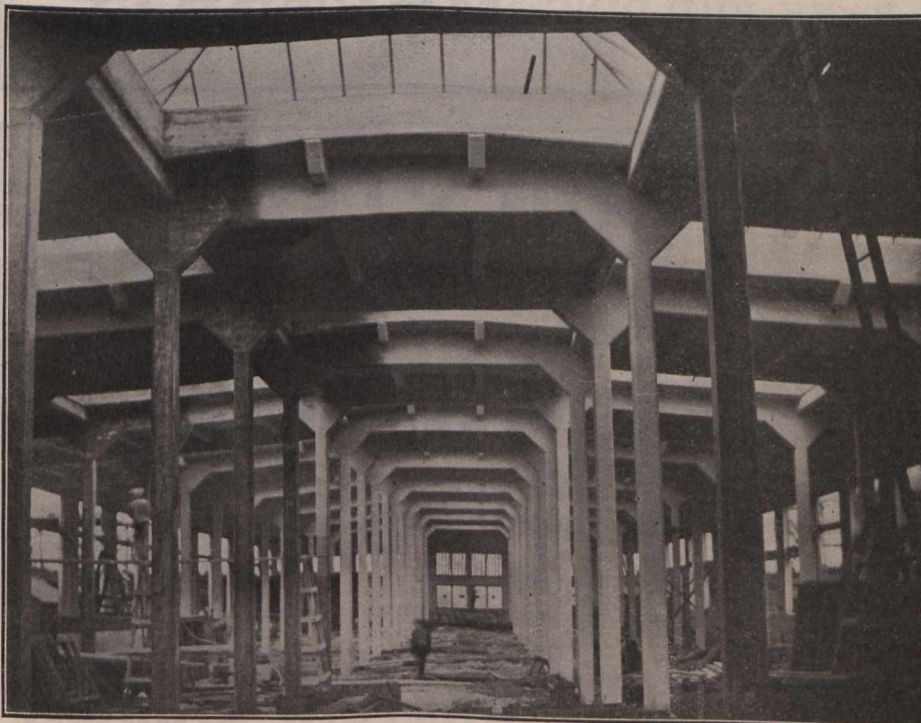
FREIGHT CAR REPAIR SHOP, INTERCOLONIAL RY., MONCTON, N.B.

rows of columns, including the side wall columns. The rows of columns are 20' between centres, while the columns in each row are 18' apart, centre to centre. Each transverse row of columns carries a continuous roof girder, and the girders carry secondary beams spaced 6' 4" apart and at right angles to the girders. The 3" roof slab rests on the top of the beams and girders, and is figured as one piece with them, serving as the flange. Where the continuity of the secondary beams running longitudinally is broken by openings for the skylights, the beams project about 2' 6" from the girder in the form of short cantilevers, which support the skylight walls.

The concrete for the foundation, column footings and lower portions of the wall

was mixed in the proportion of one part of cement, two of sand, and six of gravel; for the interior columns, there was used one part cement, one part sand, and four parts gravel, which had to pass a $\frac{3}{4}$ " screen, but five parts of gravel were used for the wall columns, beams, girders, and roof slab. A richer concrete was used in the centre columns in order to give the greater strength necessary. All the concrete was "wet mix" and thoroughly tamped. The tamping rod consisted of a piece of gas pipe, in one end of which a thin steel blade about 5" wide was welded. This blade was always shoved down into the concrete, close to the form. By this means all the stones in the concrete were pushed back from the faces of the forms, permitting the fine sand, etc., to form the outside surface. This tamping always resulted in uniform smooth surfaces when well done. Of course, the 3" roof slab could not be tamped in this way, but it was well stirred by the shovels and straight edges run over the surface and the rough places smoothed off with a float. The reinforcement in the girders consists of four twisted steel bars $\frac{3}{4}$ " square, extending across the span between each pair of columns and lapping about 1' with the reinforcement in the next span. Six $\frac{3}{8}$ " square stirrups were wired to the four twisted bars at each end, so that the complete reinforcement for each span could be easily handled and laid in position in one piece. In the secondary beams, the reinforcement is made up of three $\frac{5}{8}$ " square twisted steel bars and wired together with the stirrups. At an angle of 45° two $\frac{5}{8}$ " square twisted bars 5' long are thrust down into the knee brace on each side of the column, while three $\frac{3}{8}$ " square twisted rods are laid in the slab over each column. The slab reinforcement on the passenger car shop consists of no. 10 gauge 3" mesh expanded metal, while on the passenger car paint shop $\frac{3}{8}$ " square twisted rods are laid transversely with 12" centres.

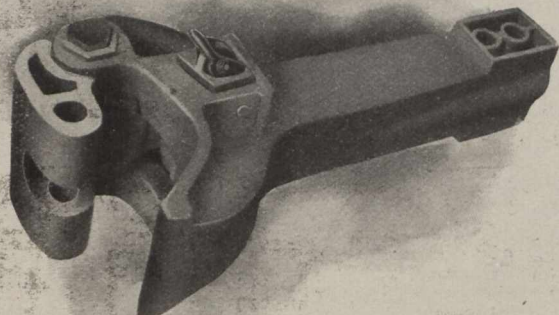
The forms for the walls, side columns, etc., employed in the construction of these buildings consists of 1 $\frac{3}{4}$ " t. and g. spruce boards, planed on one side, and strongly bound together by means of 3" x 6" cleats spaced about 24" centres. The outside and inside forms are held together by $\frac{3}{8}$ " bolts



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and kept equidistant by either wooden or concrete spacers. The wooden spacers were knocked out and thrown aside as the concrete was brought up to their level. Oblique timbers, for additional bracing, were also used. The centre column forms were constructed on the same principle, i.e., 1 3/4" t. and g. lumber held together by cleats, and the cleats on each side being bolted to one another. The side pieces were kept apart by long bulkheads, which formed the other two sides. The moulds for the girders and beams were made up of 1 3/4" t. and g. boards. Openings were cut in the sides of the girder forms to receive the secondary beam forms, while cleats and cross-bar formed a yoke to support the form. The secondary beam forms, in addition to the sides and bottom pieces, had longitudinal carrying pieces, which were nailed to the vertical cleats to carry the roof panel joists. The box forming the knee brace was fastened on to the column form at cross pieces by means of four uprights. Each pair of these uprights was held in position by a bolt running through the column. Two transverse rows of wall and centre column forms were first set up, levelled and braced in position, without lining up. Then the knee brace boxes were dropped into place and fastened to the four uprights with a few nails. The columns and boxes being then in one piece the girder sides were dropped into position, cleats fitting up tight to the sloping bottom of knee brace. When the girder bottom was dropped into position it acted as the spacer to the two side forms, while the secondary beam forms, when dropped into place, acted as side braces. The joists for carrying the roof panels were next put in place across the carrying pieces on the secondary beams and nailed. Finally, the roof panels, which were composed of 1" t. and g. stuff, were laid over the joists. Forms for half of the building, plus one extra panel, were made up, and when completely put together, the whole was lined and levelled. The extra panel was left up when the shift from north half to south half was made, in order to fasten the forms after the first shift.

STORES AND OFFICE BUILDING. The first floor and basement of the stores and office building is intended for the local and general stores department, and the second story, over the western half, will be utilized for the offices of the stores department and Superintendent of Motive Power. An exterior wall, 9' from the sides of the building and about 4 1/2' above ground, supports a reinforced concrete slab platform along the sides of the building. The platform is also continued out 25' on the east end with a ramp for trucks on each side. The reinforcement in this platform slab is made up of 3/8" square twisted bars 9' 5" long and 5" centres, laid transversely, and 3/8" round bars 18" centre to centre, longitudinally. In addition to this the outside edge is protected by a 4" x 6" steel angle. The reinforcement in the exterior and interior walls, forming the first course above the foundation, consists of 3/8" round horizontal rods 12" centres, and 3/8" square vertical rods 3' centre to centre, projecting above the floor level. These rods are all wired together forming a coarse mesh, and are expected to overcome cracking from the expansion and contraction of the concrete. The pedestals supporting the columns have eighteen 3/4" square twisted bars, 4' 8" long, laid "criss-cross" nine each way, about 4" from the bottom. Also two 1/2" square bars project about 9" above the basement floor line to ensure a firm bond with the base of the columns. The columns supporting the floors and roof are square with bevelled corners, and the reinforcement consists of eight vertical rods set equidistant in a circle, with

1/2" x 1/8" flat steel band wired to the vertical bars in the form of a spiral of 3" pitch.

The floors are of all concrete construction, in the form of slabs stiffened by ribs. These ribs are a series of heavy transverse girders resting on the centre and wall columns, and a similar series of secondary beams at right angles to, and supported by the main or transverse girders. The floor slabs, with the girders and beams supporting them, are moulded in place in one piece. Twisted square bar reinforcement is used altogether for the floors, girders, and beams. The tension bars in the transverse girders on the first floor consist of six 1" square twisted bars, while in the secondary beams only five 3/4" square twisted bars are used. Five 1" square bars in the girders and four 3/4" bars in the secondary beams comprise the tension bars for the second floor. In the roof, five 5/8" bars in the girders and four 1/2" bars in the secondary beams form the reinforcement. All tension bars in the floor and roof ribs are tightly wired to the stirrups and were generally made up as shown in illustration opposite.

The forms for this building were made on the same principle as those described under passenger car shops. Forms were made up for half of the first floor, plus an extra panel. The first floor was moulded in two shifts, and the second floor over half of the building in the third shift. For the roof the same girder and beam forms were used, but tilted up, and the increased length was obtained by increasing the length of the forms by means of wedges, and finished in two shifts in like manner. New column forms, however, had to be made each time, as the columns for the different floors diminished in size and increased in length for the upper portions of the building. The same panels were used each shift for the different floors and roof, although considerable repairing and patching was found necessary, due to shrinkage, rough usage, etc. Both the storeroom and office floors are finished with 1/8" t. & g. hardwood flooring, fastened to 3" x 2" nailing strips spaced 16" centres, and laid transversely to the building, the intervening space between the floor slab and hardwood flooring being filled with fine dry ashes.

A slag cement was used in all the concrete below the ground line. The important factor in favor of this cement, from a contractor's standpoint, was that it cost about \$1 a barrel less than the Portland cement, f.o.b. cars Moncton. An average taken from a month's tests is as follows: Assuming 500 lbs. per sq. in. as the standard tensile strength of a good Portland cement, this slag cement gave an average result of about 58% at 7 days and at 28 days about 85% of the standard, although some individual tests ran very close to the 500 lbs. per sq. in. When given a longer period than 28 days in which to set the tensile strength indicates a still greater increase, but for want of time very few tests were made on briquettes over 28 days old. Where a large amount of concrete work is being carried on it is a question whether the use of this cement is economical, as it is slow in setting, thereby retarding the progress of taking down and setting up forms. In several instances, during cold, damp weather, this cement took six days to set.

In the floors and roofs of these large reinforced concrete buildings, the transverse girders are all continuous. The concrete was deposited transversely to the building, but as strips of only 40' to 50' could be laid in a day, numerous joints necessarily occurred in the secondary beams. In making these joints, the system followed was of great importance, as the efficiency of the beam depended on the position of the joint and the care with which it was made. The

outer edge of each day's deposit terminated as nearly as possible at the points of counter-flexure in the secondary beams. A "wet mix" was used for this work, and the semi-fluid concrete was allowed to run into the trough or beam form, taking a sloping shape as the cement set. Each morning, before the mixers were started, the face of the joint was prepared as follows: The concrete was cut away slightly, and the surface of the joint was swept clean and sprinkled with water; finally, just before the first batch was deposited, the joint was coated with a thin grout. A joint made in the manner described above will give approximately 88% of the strength of a solid beam.

THE LOCOMOTIVE PLANT includes five shops, viz.: The machine shop, 131' 6" x 408' x 36' high, divided into two bays by a centre line of columns, each bay being served with an overhead electric travelling crane of ten tons capacity. This shop has an annex 44' x 408'. The smith shop, at right angles to the machine shop, is 75' x 375' x 37' high. Water gas will be used for the different furnaces. Jib cranes are to be placed conveniently near the several fires and furnaces, while a track through the centre of the shop permits the handling of heavy work by means of trucks. The engine erecting shop, separated from the smith shop by a partition, is 80' x 375' x 50' high. Two 60-ton electric travelling cranes are to be installed for moving and placing locomotives. Through the centre runs a surface track with a shallow concrete pit. On each side of this central track are eight side tracks with pits arranged herring-bone style. These side tracks are designed to accommodate engines requiring heavy repairs, and this form of layout provides ample space for overhauling. This leaves the central track free for light repair work, and obviates the necessity of lifting one engine over another. Between the engine erecting shop and boiler shop walls is a space 25' wide, which permits of additional side lights. The boiler shop is 100' x 375', divided into two bays by a row of columns down the centre. The bay intended for boiler erection is 44' high, and the west end of it contains the riveting tower, 25' long by 75' high. A 35-ton electric travelling crane is to be installed in this bay, and a 30-ton crane in the riveting tower to serve the bull riveter. The tool bay is severed by means of a 10-ton electric travelling crane, which traverses the entire length of the shop. In addition to this, jib cranes are to be placed convenient to the different tools.

These buildings are of structural steel framing. The columns rest on concrete pedestals spaced 25' centre to centre throughout. The side walls, for a distance of 5' above the ground, are of concrete, and at each exterior column, extending up to the cornice, is concrete pilaster. The 6" partitions between the various shops are of reinforced concrete. In the smith shop the ground is brought to grade and filled with selected filling, rolled, and rammed. The floor in the engine erecting shop consists of 3" hemlock plank spiked to 4" x 6" sills, spaced 2' 9" centres, and resting upon a 4" layer of concrete. The boiler shop has 3" hemlock plank on 6" x 6" cedar sills laid 3' apart, while in the machine shop 2" hemlock plank is nailed to 3" x 3" nailing strips resting upon a 3 1/2" layer of concrete. The roof slab is composed of four inches of cinder concrete, reinforced by 3/8" square twisted steel rods 12" centre to centre. On the upper sides of all skylights situated on the slope of the roof, the slab is raised to form a cricket to shed water freely. Side lights comprise a large percentage of the outer wall area, while numerous skylights

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supply additional light. The machine shop is well under way, but beyond the foundations, nothing has been done to the balance of the locomotive shops, which will not be completed for some months.

THE POWER HOUSE is built on the same principle as the planing mill, viz.: steel columns imbedded in concrete pilaster, and steel trusses to support the roof. The engine room and boiler room are each 69' x 100', and separated by a reinforced concrete wall. The floor in the engine room consists of 7/8" maple flooring, overlying 2" hemlock planks spiked to 3" x 3" nailing strips imbedded in a 3 1/2" layer of concrete. In the boiler room the floor is of tar macadam, laid on a 6" course of gravel, well rammed and rolled. The boiler equipment consists of four Babcock & Wilcox water tube boilers of 250 h.p. each, arranged in two batteries, while the necessary space is reserved for a third battery. Fuel economizers, and a feed water heater and pump, are installed to take care of the feed water. An induced draft plant forms part of the equipment, also a 1,000-gallon u.w. pump. In this room, a fan, direct connected to an auxiliary engine, supplied the heat required in the freight car shop. The coal bins are arranged along the side of the building in front of the boilers.

The engine and generator equipment is as follows: Two horizontal double-acting gas engines, normal rating 500 b.h.p. each, adapted to drive two 300 k.w. direct-connected, sixty-cycle a.c. generators. These generators are three-phase, 1,500 r.p.m., and 220 volts. In addition to these machines there will be two 70 k.w.d.c. belt-driven generators of 250 volts and 875 r.p.m. The gas engines are driven by producer gas, which is to be manufactured in the producer gas house, situated near the power house. The gas for the furnaces in the smith shop will be water gas, also manufactured in the gas house. The gas generators will convert continuously about 1,000 lbs. of coal per hour, generating therefrom about 18 cu. ft. of water gas for the furnaces, and about 55 cu. ft. of producer gas for the engines.

The shops are heated by the hot blast system, using exhaust steam from the auxiliary engines and pumps, supplemented by live steam from the boilers. Fans, direct connected with engines, force the hot air through concrete conduits, furnished with risers in the walls. These risers discharge close to the floor near the windows. The sewerage system is extensive, consisting of one main 2,800 feet long, emptying into a small creek which flows to the Petitcodiac River. This is a concrete pipe, egg section, 3 1/2' high by 3' wide, with an 8" wall. From the main sewer, branches, varying from 20" to 6" diameter, extend past the various shops to receive the drainage from the down pipes, porous tiles along the foundations, shop drains, etc. The two main branches consist of 20" concrete pipe, while 12" and 6" vitrified clay pipes are used for the others. Wherever a line of pipe discharges into a branch or main sewer, concrete catch basins are provided.

The interior surface of the walls, concrete columns, and ceilings are painted with cold water paint, applied with a spraying machine, giving a very white finish, and increasing materially the brightness and lighting effect of the buildings. The steel columns and trusses are painted a dark red, while the window frames and doors are covered with a light drab paint.

For each roof the snow and wind load was estimated at the minimum of 20 lbs. per square foot, vertical load. The design is intended to facilitate the removal of snow by the wind, but in event of the snow load becoming twice as great as assumed, the increased unit stress in the steel would not be great. However, all of the roofs during construction were loaded beyond

this minimum, showing no signs of injury to them.

THE CONSTRUCTION MACHINERY OR PLANT consists of eight mixers, both yard and half-yard sizes, located convenient to the various buildings. Where the concrete had to be elevated, the mixer discharged into a bucket which was hoisted up an elevator and dumped automatically into a hopper, from which the mix could be taken by barrows. Both the mixers and hoisting machinery were driven by small donkey engines. Two gas engines were also used, one for twisting the steel and the other for pumping. Two derricks, with 60' booms, and one with a 90' boom, were used for steel erection, while a travelling yard crane, with a 40' boom, was used for unloading and other purposes.

W. A. Bowden, of the Department of Railways and Canals, is the Designing Engineer of all these buildings. The economic handling of material between the various shops was the prime factor in determining their location in relation to each other, and they are so placed as to enable any shop to be enlarged without interfering with the future extension of any of the others.

The foregoing paper was read before the Canadian Society of Civil Engineers recently.

Taxes Paid by Railways.

H. J. Pettypiece, ex-member of the Ontario Legislature, whose hobby is increased taxation of railways, has published the following statement of taxes paid by various railway companies for the year ended June 30, 1907:

Alberta Ry. and Irrigation Co.	\$ 3,355.95
Algoma Central and Hudson Bay.	904.32
Bedlington and Nelson.	1,291.04
Brandon, Saskatchewan, and Hudson Bay.	1,350.00
Brockville, Westport, and Northwestern Canada Southern.	5,813.20
Canadian Pacific.	55,882.60
Canadian Northern.	677,322.99
Canadian Northern Ontario.	34,464.27
Canadian Northern Quebec.	858.84
Crow's Nest outhern.	10,870.91
Central Ontario.	5,058.24
Dominion Atlantic.	3,156.50
Esquimalt and Nanaimo.	828.90
G.T.R. in Canada.	2,070.27
G.T.R. (Canada Atlantic).	435,295.82
Halifax and Southwestern.	33,480.81
Iroindale, Bancroft, and Ottawa.	25.00
Kaslo and Slocan.	155.81
Kingston and Pembroke.	3,448.00
Klondyke Mines.	2,957.68
Lake Erie and Detroit River.	101.25
Liverpool and Milton.	24,245.20
Lotbiniere and Megantic.	20.56
Maganetawan River.	606.45
Manitoulin and North Shore.	85.70
Massawippi Valley.	79.25
Montreal and Atlantic.	1,946.56
Montreal and Province Line.	3,991.60
Montreal and Wilmont Junction.	1,529.69
Morrissey, Fernie and Michel.	289.94
Midland of Manitoba.	521.91
Nelson and Fort Sheppard.	1,350.00
New Westminster Southern.	5,691.78
Ottawa and New York.	858.06
Philipsburg Ry. and Quarry Co.	1,422.80
Quebec, Montreal and Southern.	60.00
Quebec and Lake St. John.	1,708.23
Quebec Ry. Light and Power Co.	8,503.76
Red Mountain.	14,049.14
Stanstead, Shefford, and Chambly.	1,387.28
St. Clair Tunnel.	291.65
St. Lawrence and Adirondack.	831.89
Temiskaming and Northern Ontario.	2,845.00
Toronto, Hamilton, and Buffalo.	393.37
Vancouver Victoria, and Eastern.	4,130.73
Vancouver, Westminster, and Yukon.	6,277.67
Victoria and Sydney.	5,360.44
Victoria Terminal Ry. and Ferry Co.	1,567.19
	1,043.56

Temiskaming and Northern Ontario Ry.—Gross earnings for June, \$89,132.96; operating expenses, \$58,559.92; net earnings, \$30,573.04. Total earnings for six months ended June 30, \$372,158.62. Approximate earnings for July, \$96,400.

Mrs. E. T. Boland, wife of the western agent of the Robt. Reford Co., died in Toronto recently.

TRANSPORTATION APPOINTMENTS.

The information under this head, which is almost entirely gathered from official sources, is compiled with the greatest care, so as to ensure absolute accuracy. Any of our readers who may notice any error in our announcements will confer a favor by advising us.

Canadian Northern Ontario Ry.—W. R. Kelly has been appointed Trainmaster. Office, Parry Sound, Ont.

C. L. Webster has been appointed Master Mechanic. Office, Parry Sound, Ont.

W. B. Clearwater has been appointed Roadmaster. Office, Parry Sound, Ont.

Canadian Northern Quebec Ry.—A. F. Dion, heretofore Local Freight Agent, Quebec, and Lake St. John Ry., Quebec, has been appointed Local Freight Agent, C.N.Q.R., Montreal, vice S. F. Beamish.

Canadian Northern Ry.—F. Knight, heretofore Locomotive Foreman, Edmonton, Alta., has been appointed Locomotive Foreman, Port Arthur, Ont., succeeding G. H. Hedge, appointed Assistant Master Mechanic at Winnipeg, as announced in our July issue.

D. MacNicol, leading hand Port Arthur, Ont., shops, has been appointed Locomotive Foreman, Brandon, Man., succeeding W. M. Armstrong, transferred.

W. M. Armstrong, Locomotive Foreman, Brandon, Man., has been appointed Locomotive Foreman, Edmonton, Alta., succeeding F. Knight, transferred.

Canadian Pacific Ry.—R. King, heretofore Agent at McAdam Jct., N.B., has been appointed Terminal Agent, West St. John, N.B., succeeding J. R. Gilliland, appointed Superintendent Montreal Terminals, as announced in our July issue.

F. H. Cogswell, Chief of the Tariff Bureau, is reported to have resigned to take service in the M.C.R. Freight Department, Detroit, Mich.

M. J. Tarry has been appointed Passenger Agent at Niagara Falls, N.Y., vice R. F. Schornstein. Mr. Tarry will remain at Niagara Falls until Sept. 30. During the winter D. Isaacs will probably represent the company there.

G. C. Wilson has been appointed acting City Freight Agent, Buffalo, N.Y., succeeding W. S. Nevins, resigned.

T. J. Wall is reported to have been appointed Travelling Passenger Agent, with headquarters at St. Louis, Mo., vice W. S. Merchant.

F. Nason has been appointed City Passenger Agent, San Francisco, Cal., succeeding W. C. Clawson, resigned.

H. T. Wilgress, who has been transferred from Kobe, Japan, to the Yokohama office, as announced in our Aug. issue, has been appointed chief assistant to the Manager of the Trans-Pacific Steamship Line.

Grand Trunk Pacific Ry.—G. C. Dunn, formerly Division Engineer, National Transcontinental Ry., at St. John, N.B., has been appointed District Engineer for the G.T. Pacific Ry., with headquarters at St. John.

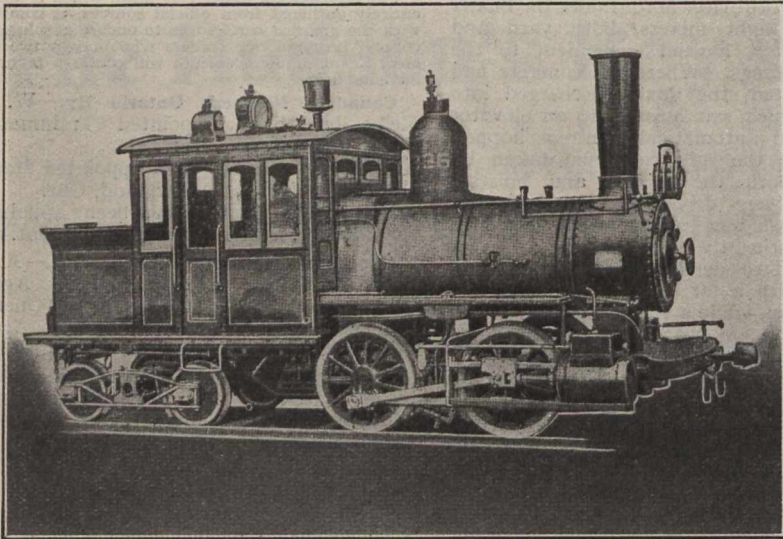
W. E. Davis, Passenger Traffic Manager G.T.R., has also been appointed to a similar position G.T.P.R. Office, Montreal.

G. T. Bell, General Passenger and Ticket Agent, G.T.R., has also been appointed to a similar position G.T.P.R. Office, Montreal.

J. E. Quick, General Baggage Agent, G.T.R., has also been appointed to a similar position G.T.P.R. Office, Toronto.

D. W. Steeper has been appointed acting Trainmaster Lake Superior Branch. Office, Westport, Ont.

H. H. Brewer, heretofore Superintendent Lake Superior Division, Westport, Ont., has been appointed General Superintendent, in charge of transportation, with headquarters at Winnipeg, succeeding O. O. Winter, resigned.

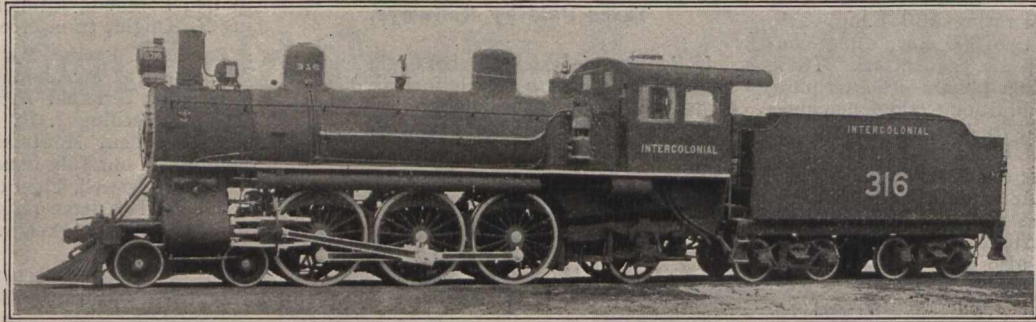


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T. P. White has been appointed Car Service Agent, with headquarters at Winnipeg.

A press report states that S. Smith has been appointed Superintendent of Construction at Portage la Prairie, Man., succeeding O. Weeks, resigned.

J. A. Mitchell, heretofore Locomotive Foreman, G.T.R., Stratford, Ont., has been appointed General Foreman G.T.P.R., at Rivers, Man., with charge of Rivers shop and all matters pertaining to the motive power and car department there, succeeding W. M. Saxton, who has been transferred to Biggar, Sask.

W. C. C. Mehan, heretofore Superintendent Quebec, Montreal & Southern Ry., has been appointed Superintendent G.T.P.R. Office, Melville, Sask.

W. C. Cauthers has been appointed Chief Dispatcher lines west of Winnipeg. Office, Melville, Sask.

Grand Trunk Ry.—The following agents have been appointed: N. Clark, Beaconsfield, Que.; R. W. Groves, Markham, Ont.; W. J. Smith, Huntsville, Ont.; P. M. Major, Price, Ont.; P. F. Madden, Kinburn, Ont.; A. E. Campbell, Glasgow, Ont.; J. J. Freeman, Brule Lake, Ont.; R. R. McConnell, Haslett, Mich.; P. H. Swain, Stillwell, Mich.

Intercolonial Ry.—John Stewart, Inspector of Locomotives and Cars, has resigned, and has resumed work as a locomotive engineer. It is said the position of Inspector of Locomotives and Cars has been abolished.

J. Stewart, Travelling Auditor, has resigned.

Lake Superior Corporation.—W. C. Franz, heretofore General Manager Kanawha and West Virginia Rd., Charleston, W. Va., has been appointed General Manager of the Lake Superior Corporation and its subsidiary companies, including the Algoma Central and Hudson Bay Ry. Office, Sault Ste. Marie, Ont.

Wabash Rd.—J. D. McNamara, heretofore Assistant General Passenger Agent, has been appointed General Passenger Agent, with headquarters at St. Louis, Mo., vice C. S. Crane, assigned to other duties.

C. S. Crane has been appointed General Foreign Passenger Agent, reporting to the General Traffic Manager. Office, St. Louis, Mo.

C. H. Stinson, heretofore Assistant General Freight Agent, has been appointed General Freight Agent. Office, St. Louis, Mo.

W. F. Schmidt, heretofore Industrial Commissioner, has been appointed Assistant General Freight Agent, in charge of Fast Freight Line Traffic. Office, St. Louis, Mo. The office of Industrial Commissioner has been abolished.

H. E. Watts, heretofore District Freight and Passenger Agent, Moberly, Mo., has been appointed Assistant General Freight Agent, Office, St. Louis, Mo. He will have charge of all matters pertaining to the local business of the road, and will also assume charge of and handle matters which have heretofore been under the jurisdiction of the Industrial Commissioner. Office, St. Louis, Mo.

D. and H. Lines in Canada.

The Delaware and Hudson Co. owns and operates two railways in Canada, and in the report of the directors for the year 1907 there is given details of the organization, etc., of these lines—the Quebec, Montreal and Southern Ry., and the Napierville Junction Ry.

QUEBEC, MONTREAL AND SOUTHERN RY. CO.

This company is the successor to the Quebec Southern Ry. Co., incorporated in Canada in July, 1900. The Q.S.R. Co. acquired the East Richelieu Valley Ry. as of May 30, 1900, and on Aug. 7, 1900, acquired

the United Counties Ry., the combined railways extending from Noyan Jct. to St. Robert (Bellevue Jct.), 82.83 miles, with trackage rights over the South Shore Ry. for five miles, from St. Robert to Sorel, Que. An agreement, dated Jan. 24, 1902, was made between the Quebec Southern and the South Shore Ry. Cos., covering an amalgamation of the two companies under the name of the Quebec Southern Ry. Co. The South Shore Ry. operated a line of 62 miles from St. Lambert to Pierreville, and possessed a right-of-way from St. Francis River at Pierreville easterly across the Nicolet River to St. Gregoire, on the G.T.R., a distance of over 22 miles. The completed railway under this amalgamation aggregates 144 miles.

MILEAGE—Shore Division, St. Lambert to	
Pierreville.....	62
Southern Division, Sorel to	
Noyan Jct.....	82
Total main track.....	144
Total sidings.....	13.03
Total present mileage.....	157.03
Under construction, Pierreville to Ste. Philomene.....	48.50
GRAND TOTAL.....	205.53

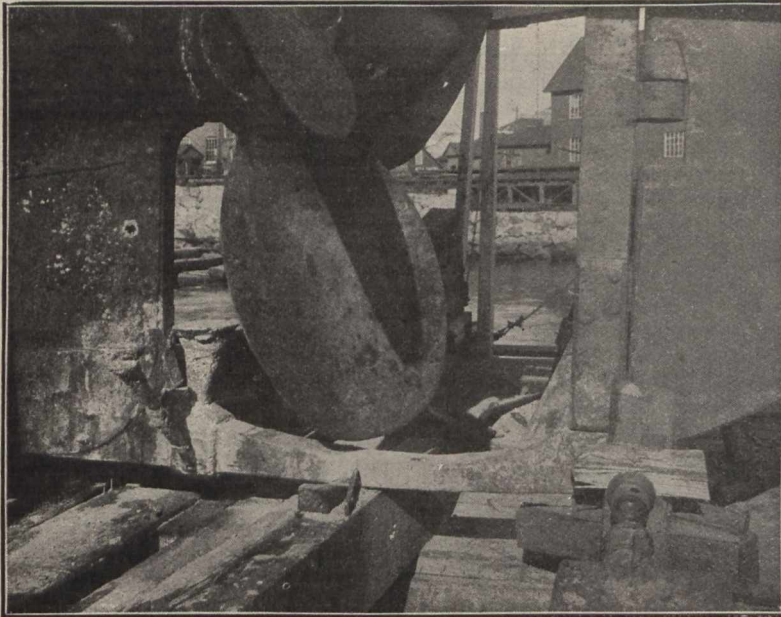
The line leaving the point of intersection with the G.T.R. main track, about 400 feet south of St. Lambert station, near the east end of the Victoria Bridge over the St. Lawrence River, curves to the northeast, and then along and upon the level lands bordering the St. Lawrence, and with undulating gradients and light curvature passing through Longueuil, Boucherville, Vercheres, St. Antoine, Contrecoeur, St. Roch, Lanoraie, to Sorel, at the confluence of the Richelieu and St. Lawrence rivers. Thence, leaving the St. Lawrence and running southeasterly, passing through Bellevue Jct., Yamaska and St. Francois du Lac to Pierreville, on the east bank of the River St. Francois, the eastern terminus of the Shore Division. At Bellevue Jct., three miles north of St. Robert, five miles southeast of Sorel, the Southern Division diverges, and leaving a point of intersection with the main line of the Shore Division, extends southerly to St. Aime, passing through St. Robert; thence southwesterly, passing through St. Louis, St. Jules and St. Barnabe to St. Hyacinthe; thence passing through St. Damase, Caroline, Rougemont, St. Angele, with crossing of Central Vermont Ry., Mount Johnson to Iberville, crossing here the C.P.R. and Central Vermont tracks at grade; thence through Sabrevoise, Henryville, Clarenceville, and into Noyan Jct., connecting with the G.T.R. (formerly the Canada Atlantic) and the Rutland Rd., and terminating about 2,000 ft. west of Noyan station. The line of this division, leaving the waters of the St. Joseph River at Bellevue Jct., crosses a level country, enters the valley of the River Yamaska at St. Aime, and follows this river and its headwaters more or less closely up to the summit at Rougemont; thence down tributaries of the Richelieu to Iberville; thence along, and more or less on or near the east bank of the Richelieu, to Noyan Jct. It is expected that the extension from Pierreville to Ste. Philomene, 48½ miles, will be completed about July 1, 1908. Eventually the line will be extended on to Chaudiere Jct., where it will connect with the Quebec bridge; and there will also be an extension from Chaudiere Jct. to Pt. Levis, connecting with the docks at the latter point.

A chart annexed to the report shows the earnings as sufficient to cover the expense of operation and substantial returns may be expected with the completion of the extensions now under construction. The position of the Quebec, Montreal and Southern Ry. in relation to St. Lawrence River traffic, and that of the country north of it, is of importance. The extension to Ste.

Philomene, which is nearing completion, will connect at that point with the Lotbiniere and Megantic Ry. A branch from Becancourt to the St. Lawrence will enable the company to handle cars on floats from the pulp mills at Three Rivers and Batisson to the southern side of the river, thus avoiding the long haul around the north side, and will give the company the long haul on its own rails. The manufacturing interests now located on the D. & H.'s lines are large consumers of raw materials, particularly the paper interests, and their demand is constant and insistent, and its regularity of supply important. Three Rivers and the country north of it furnish large supplies of this material, and with such connections as suggested above the traffic could be secured and all interests greatly benefited and relieved. Wood pulp and pulp wood from Canada is necessary for their life, and if these industries are to remain on the D. & H. lines, and thrive, it seems incumbent upon the company to insure protection in the matter of their supplies; for, if not so protected by all-rail, single-owned lines, with equipment equal to their demands, they will be forced to seek their supplies through other channels or abandon their location. A large part of the wood now received by the D. & H. Co. by rail is moved over the Quebec, Montreal and Southern Ry.'s tracks. Large tracts of land have been purchased by these paper industries in Canada, which will furnish additional traffic. Figures are at hand which show tonnage and revenue to the D. & H. Co. from the paper mill industry, as follows:

FOR MILLS ON ITS LINE		REVENUE
Cords of wood annually, 740,500....		\$740,500 00
Tons of paper " 350,850....		438,562 50
Tons of pulp " 193,750....		193,750 00
Tons of coal " 347,600....		142,500 00
TOTAL.....		\$2,515,312 50
Add 10% on chemicals.....		251,531 25
GRAND TOTAL.....		\$2,766,843 75

In addition to the above, there is the revenue from the supplies for employes, and passenger revenue from those living on the D. & H. lines. The position of the Quebec, Montreal and Southern line, when completed to Quebec, lying as it does in the very heart of the most valuable traffic-producing section, south and north of the St. Lawrence River, should control about all of this traffic. In the hands of adverse interests, it would be difficult to obtain the raw material for the industries along the D. & H. lines, except on terms which would be very onerous. The connections with the wood-supplying sections of Canada, so essential to the success of the industries of the D. & H. Co., might be cut off. It would preclude the D. & H. Co. from reaching with advantage to other lines in its territory with which the Q., M. & S.R. now has connection. The paper companies are placing orders for thousands of tons of wood pulp which move via Quebec, C.P.R. to Montreal, and G.T.R. to Rouse's Point, and over the D. & H. to destination. The connection at Quebec with the Quebec and Lake St. John Ry. will be of valuable advantage in handling of pulp wood and wood pulp shipments from points on the latter line covering 245 miles north and east of Quebec, and tapping large sections of spruce lands. With the completion of the Q., M. and S. R. extension to Quebec, a large part of this traffic can be taken from the Q. & L. S. J. Ry. at Quebec, giving the entire revenue to the Q., M. & S. and the D. & H. companies. In return traffic northbound, the shipments of coal would be increased. In addition to Montreal supply, the entire section along the line to Quebec would be supplied, and tonnage sent into Quebec. The Q., M. & S. line, via St. Lambert, St. Constant and Rouse's Point will be 19.3 miles, and the Q., M. & S. line, via Noyan



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and Rouse's Point, is 23.3 miles shorter, Quebec to New York, than any line at present operated. Negotiations are under way with the G.T.R. for trackage rights between Rouse's Point and Noyan; between St. Constant and St. Lambert, and for a special agreement covering Q., M. & S. Ry. trains, between St. Lambert and Montreal.

NAPIERVILLE JUNCTION RAILWAY.

The construction of this railway was originally undertaken by the Pacific Construction Co., and was afterwards turned over to the Napierville Jct. Ry. Co. The entire property, with all rights, franchises and privileges, was purchased by the D. & H. Co. April 9, 1907, for \$615,680.56. The road extends from Rouse's Point, N.Y., at a point of connection with the D. & H. Co.'s railway, to a point of intersection with the C.P.R. and with the G.T.R. Massena Springs branch at St. Constant, 20 miles southwest of Montreal, and 13½ miles west of St. Lambert, at south end of Victoria Bridge. The mileage is as follows: Total length of main track, 28.35 miles; total length of sidings, 3.00 miles; total trackage, 31.35 miles. In the construction of this line, that portion between the point of intersection of the D. & H. main line at Rouse's Point, and the boundary line between the U.S. and Canada, 1.1 miles, was built by the D. & H. Co., and the portion between the boundary line and the intersection of the G.T.R. at St. Constant Jct., 27.25 miles, was built by the Napierville Junction Ry. Co. Negotiations are under way with the G.T.R. for trackage rights between St. Constant and Montreal. The Napierville Junction Ry. reduces the distance between Rouse's Point and Montreal by 7 miles.

From an operating standpoint, it would seem that the agricultural character of the country tributary to the road should develop a fair local business. The several towns, with considerable population, and that increased by the coming of the road, will give good passenger revenue, and the line as a link in connecting the D. & H. Co.'s line and the Q., M. & S.R. at St. Lambert will enjoy its proportion of the traffic which will follow the completion of the Q., M. & S.R. into Quebec. This line affords a direct connection with the C.P.R., and will enable a distribution of the company's coal to the territory served by that road.

Railways in Nova Scotia.

The report of the Provincial Engineer for Nova Scotia, R. McColl, for the year ended Sept. 30, 1907, gives particulars of the work of the department in connection with the general supervision of the construction and operation of subsidized railways. The expenditure on railway subsidies and loans during the period under review was \$584,791.35, against \$200,000 in 1900. The mileage of railways in operation at the end of the period was 631, against 391 in 1904, and 167 in 1900; while in 1907 there were 324 miles of line under construction against 309 in 1904 and 118 in 1900.

The 631 miles of line cover only those railways which come within the Railway Act of Nova Scotia, in addition to which there are in the province 467 miles of the Intercolonial Ry. under the control of the Department of Railways, and the Dominion Atlantic Ry., 221 miles, which comes under the control of the Board of Railway Commissioners. The list of subsidized railways shows an increase of 15 miles over the figures for 1905-06. An examination of the returns of these lines shows that with the exception of the Cape Breton Ry. and the Nova Scotia Steel and Coal Co.'s Ry., all the lines show a net profit. The net profits of all the railways amount to about \$150,000, which for the

total mileage shows about \$290 a mile a year. The average earnings amount to nearly \$1,800 a mile a year. The receipts per mile of line vary very much, the variation being largely in proportion to the quantity of coal carried. The Canada Coal and Ry. Co., the Inverness Ry. and Coal Co., the Cumberland Coal and Ry. Co., and the Sydney and Louisburg Ry., vary from \$10,000 a mile for the last to \$3,000 a mile for the two first-named, while the Halifax and South Western Ry., where very little coal is carried, only shows an earning capacity of \$850 a mile. The Provincial Engineer says: "Speaking generally, therefore, it would seem that while practically all our railways are not only paying operating expenses but a fair amount of profit, except where there is a large quantity of coal, or other such freight to be carried, the average Nova Scotia railway will not earn more than from \$1,000 to \$2,000 per mile of railway, of which probably not more than 20% will be net earnings. If, however, there is any large amount of coal to be shipped the receipts per mile and the net profits are likely to be pretty high. We must not conclude, however, that because the net earnings of any road are not very great, that this road is of little or no benefit for that reason. For example, the Halifax and South-Western earned during the past year something over \$300,000, of which the net earnings to the company were about 10%, or \$30,000. The saving, however, to the public by the reduction in the cost of transportation, more especially in passenger traffic, has probably been more than double this amount, and while the profits to the company have been only \$30,000, the cost of transportation to the people along this line of railway has probably been reduced by \$300,000 by the construction of this road, or about \$1,000 for every mile of road constructed. The matter of the earning capacity of a railway is one that does not receive sufficient attention, not only from the public, but very often from the railway men and promoters generally.

"The cost of the construction of railways in the province on an average varies very little, especially where the roads are built on the same standard, the variation being probably not more than 20%, so that the fixed charges for capital and interest on any two roads differ very slightly, but as will be seen by the above earnings, not only the gross receipts per mile but the net receipts also vary very much, so that the value of the road depends largely upon the amount of traffic. The cost of construction as a rule varies very slightly, but the amount of traffic varies greatly, and its importance is paramount. For this reason the question of traffic should bear a much more important part in deciding the location of the road than the physical character of the country. Of course, where through traffic is heavy it is of the utmost importance to get a line as straight and with gradients as light as possible, but on the average road the securing the local traffic by some slight divergence from the straight line is much more important, and in the location of the line this should really receive more consideration than anything else. In the same way there should be considerable flexibility allowed in the construction of the road as to the standard adopted. While it is of the utmost importance, as before stated, in the case of heavy freight traffic to reduce the gradients as much as possible so as to enable heavy trains to be hauled, in the case of a section of country where the freight traffic is light and the passenger traffic is likely to be heavy, it is of much more importance to adopt a line that will accommodate the greatest number of people irrespective of a little increase in length or the use of a few heavy gradients, to adopting a line of higher

standard as regards gradients and curvature which would not sufficiently accommodate the public so as to induce traffic. For this reason, while I consider that any money is well spent on a careful location of a line to reduce the quantities and cost of construction, it is even more important in projecting a line of railway to consider the question of having it located so as to best serve the transportation interests of the section of country through which it passes, and more time should be given to this matter."

There was a slight reduction in the cost of operation per train mile as compared with 1906, and a comparison with the cost in other parts of the Dominion speaks well for the economic management of the lines of the province. The question of the oversight of the operation of the railways is now becoming a very important part of the work of the Department, and will have to receive greater attention in future. During the early part of the year it was reported that a number of forest fires had been started by the railways, and that the act regarding the placing of screens on the locomotives to prevent sparks was not being obeyed by the different companies. An inspector was sent to examine locomotives, and under his directions the defects were remedied, and there had been no further fires.

During the year eight persons were killed and 12 injured through accidents in connection with the operation of steam railways. Not a single passenger, however, was injured on any of the railways of the province during the year. The report also notes a marked improvement in the promptness of the railway companies in reporting accidents.

Railway Organization in India.

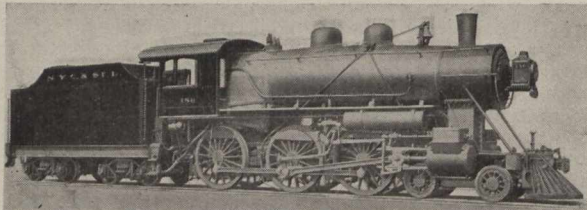
By George R. Birch, Woodstock, N.B.

In view of the present wide interest being taken in railway matters, more especially with reference to the numerous unfortunate accidents that have lately occurred, in regard to their administration and working, a short article giving roughly the system on which railways are worked out in India, a country in which railway conditions more nearly approach this than any other, may be of interest. Briefly, the administrative work is divided among three departments, traffic, engineering and locomotive, and as on all but comparatively small lines it has been found impossible to exercise efficient active control from one center, the work has been decentralised as much as possible, and the line split up into districts, each averaging some 400 miles in length, on each of which an official of each of the three departments named is stationed. These officials are directly responsible for the working of the district, each in his own department, to their respective chiefs at headquarters, a pretty wide latitude, however, being allowed them as to the subjects necessary to be referred. Their titles, District Traffic Superintendent, District Engineer, and District Locomotive Superintendent, practically denote their respective duties; thus, the traffic officer is responsible for the collection, handling, and moving of all passengers and freight; the district engineer for the maintenance of the permanent way, stations and all company's property—this last a considerable item, as the railways provide quarters for all their staff, and the district locomotive superintendent for the maintenance and provision of power and the water supply in connection therewith. Each official has his own office and deals with all staff in his department, and though of necessity engineering and locomotives are at the orders of traffic, there is no question of one departmental official being subordinate to another. This division of administration

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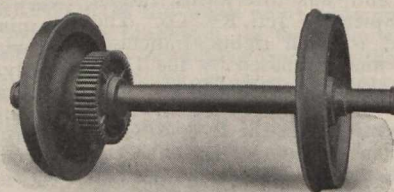
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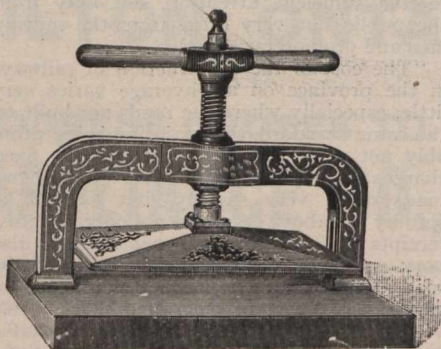
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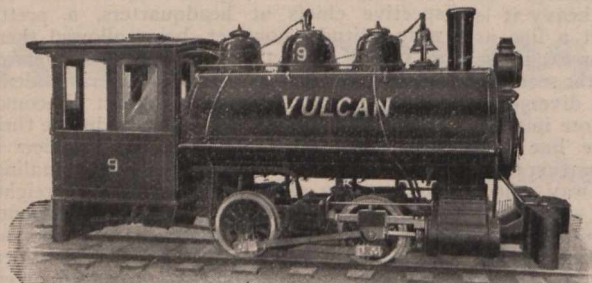


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means practically that each branch of the service is in the hands of a specialist; the traffic officer has to undergo a very thorough training in all the branches, transport and commercial, of his department; the engineering representative must be a qualified engineer, actually the majority of these men on Indian Railways are Royal Indian Engineering College (Coopers Hill) men, and the locomotive superintendent is an eminently practical official who has served his apprenticeship in one of the large railway shops in Great Britain and worked his way through. There are, of course, side departments necessary to the life of a railway, such as audit, printing, supply, medical, and carriage and wagon, but with the exception of the two last-named these are all situated at headquarters, and have merely a representative attached to each department on each district. The medical department has its own districts, each in charge of a duly qualified doctor, who attends to sanitation and the health of the employes on his district, and the carriage and wagon department maintains a small staff at all junction and large stations, who attend to petty repairs and routine departmental work such as cleaning, lighting and oiling of stock.

So much for the administration. The working of the line being practically in the hands of natives, a large amount of European supervision is necessary, and is exercised as follows, to take traffic first: Each district superintendent has under him two assistant superintendents, one in charge of the commercial work of the district, i.e., the collection of passengers and freight, adjustment of local rates, and all claims in connection with loss, delay or damage; the other has charge of the operating or transport work, i.e., the supply and movement of all passenger and freight stock, subject to a general control from headquarters; he also has direct control of the traffic staff on the district. Next there are as a rule three outdoor inspectors, two on the transport and one on the commercial side, who have to be constantly on the move over the district and who carry out a systematic check each station, the two former watching particularly the working of trains and stations and the latter canvassing for traffic. The audit department also has an inspector on each district who checks the books at each station periodically on behalf of his department. This brings us down to the actual stations, at each of which, taking two way stations, the staff is divided into two way stations, the staff is divided into two batches, clerical and menial, the former consisting of the station master and his assistants, generally two, and the latter of the points and signal staff. The station master deals personally with all freight and passenger returns, and exercises a general control of the work of the station; his assistants, who work turn about, attend to the telegraph work, all stations being connected by wire, and the receiving and despatching of trains; the menials, under the orders of the assistants, work the signals with which all stations are fitted, handle freight and passengers' luggage, and keep the station clean generally. Owing to caste prejudices some six to nine men have to be employed on this work, but this large staff is counteracted by the low rate of wage prevailing, viz., \$1½ to \$3 monthly, according to length of service. All stations are worked on the absolute block system, that is, no train may leave a station to follow another until the first is within the protection of the signals of the station ahead. A system of line clear books is kept up at each station, in which the departure time of all trains from the stations on either side is entered, together with their arrival time, and these books are most carefully checked by the inspectors on their visits. On the more progressive lines an

elaborate electrical signal system has been brought into use, which makes it impossible for the starting signal to be given for a train until the preceding train by passing over a treadle within the protection of the signals of the station ahead completes the electrical circuit and releases the wires; this system has answered well, and as the cost is not great, is being pretty generally adopted.

The district engineer has, as a rule, three junior engineers under him, each in charge of a section of the district with a small office apiece, who are directly responsible for the maintenance of the road and upkeep and construction of buildings on their lengths; they in turn have under their orders two or three inspectors of permanent way, whose title denotes their work, and who are stationed about 50 miles apart, and generally two clerks of works who see to repairs to station and living quarters, and supervise contractors on construction of new buildings; all of these are Europeans, the section foreman and gangs on the road and under the carriage and works department being natives.

The locomotive superintendent on most districts has no assistant and not often an inspector, he being able to divide his time fairly equally between his office and the road. His district generally comprises two or more stations, at which engines change and where there are small locomotive repair shops at which a locomotive foreman is stationed, who is responsible for the supply of power at his station as required; the superintendent himself arranging the balancing of power on the district, and having direct and absolute control of all locomotive staff on the district.

[We do not agree with our contributor's statement that railway conditions in India more nearly approach Canada than those of any country, but we are pleased to publish his article, which is of very general interest.—Editor RAILWAY AND MARINE WORLD.]

It is stated that the contract for the construction of 150 miles of the Abitibi section of the National Transcontinental Ry., awarded to the G.T. Pacific Ry. Co., and sublet to the Reynolds Construction Co., is to be cancelled owing to the inadequate progress which it is claimed is being made with the work.

J. Somerville, second vice-president of the Intercolonial Association of Machinists, who represented the men on the recent board of conciliation in connection with the complaints of C.P.R. employes, and who was responsible for the minority report in connection therewith, is reported to have been arrested at Ottawa for trespassing on C.P.R. property.

The Trunk Lines Association of the U.S. has declined to accede to the request of the trans-Atlantic steamship companies for a reduction in grain rates to the seaboard, to enable them to compete with the Montreal route. The association says that the reduction necessary to equalize the rates of competitive all-water routes to Montreal would result in rates being wholly unremunerative.

A press report states that a Commission has been appointed, consisting of E. Tiffin, General Traffic Manager; D. A. Storey, General Freight Agent, Intercolonial Ry., and U. A. Bowden, Engineer of the Department of Railways, to investigate the condition and business prospects of the various branch lines connecting with the Intercolonial Ry. in Nova Scotia, New Brunswick and Quebec, with a view to the acquisition, by purchase or lease, of those which may be operated with profit to the Intercolonial Ry., and with benefit to the districts through which they run.

ELECTRIC RAILWAYS.

Mt. McKay & Kakabeka Falls Ry.

Chief Railway Commissioner Mabee gave the following judgment July 22 in re the application of the Mount McKay and Kakabeka Falls Ry. Co., and the G.T. Pacific Ry. Co., the C.P.R. Co., and the C.N.R. Co., in respect to crossing matters at Fort William, Ont.:

This application presents important matters for consideration and the disposition I propose making of it may not be the wisest, but it has been long delayed, and the matter must be disposed of. A subway at James St. has been proposed, and if constructed, the closing of Heath St. is then recommended, and the traffic that now goes by Heath St. diverted to the subway—if this were done, then part of the cost of the work might well be imposed upon the steam roads. The Fort William Council refuses to close Heath St. by by-law, and assume liability to the landowners that would be affected by the closing of that street, but suggests that the Board order the closing of that street. I could not make such a direction without requiring that compensation should be made to all landowners injured by such closing, and if this were done, and the land damages arising therefrom made a part of the cost of the subway, it is admitted that the expense involved would be out of all proportion to the benefits that might be expected to accrue. Other serious difficulties arise in considering the closing of Heath St. By agreement between the C.P. Ry. Co. and the Council of Fort William, Heath St. carries the traffic of other streets that have been closed, and the railway company built an overhead passenger bridge in connection with establishing existing conditions at the point in question. Those arrangements, I think, should not, at the present at least, be disturbed. So if the closing of Heath St. is a necessary part of the subway proposition in order to make some show of reason for assessing the steam roads with part of the cost, and I think it is, then the subway is out of the question, unless the applicants can persuade the other parties concerned to contribute to the cost of the work, or prefer to construct the subway at their own expense.

Now, I think the electric road must have an entrance into the city; and if there is to be no subway, I consider the route proposed by the applicants, between the brick yard corner and Gore St., the only one possible. Hence the disposition of the matter will be that the applicants be granted permission to cross the Canadian Northern Ry. spur and G.T. Pacific tracks on Montreal St., and the G.T.P. and C.P. spurs and C.P. and Canadian Northern lines on Yonge St. All the main lines, and most, if not all, of the spurs crossed by the applicants are senior to them; so, of course, all expense involved in the crossings, protective appliances, maintenance, and operation must be borne by the applicants. There must be half interlockers installed at the three main line crossings; and the formal order, when drawn, will contain all proper protective, operative, and engineering features that the Board's engineer may suggest, subject to the Board's approval.

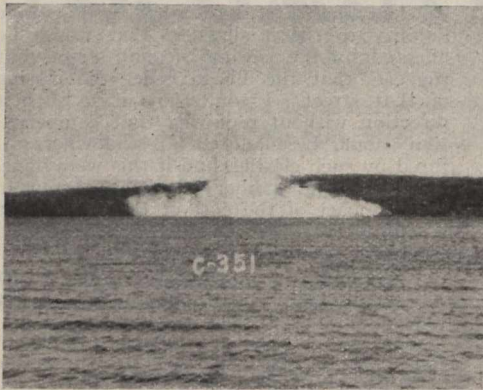
The foregoing may at once be communicated to all interested parties, and an order will forthwith issue embodying the same, unless the applicants, the three steam railway companies, and the Fort William Council decide among themselves some other solution of the problem, or unless the applicants prefer to construct the subway on James St. at their own expense. The applicants, however, need not be delayed in their operations by the foregoing suggestion, and may, unless the Board upon

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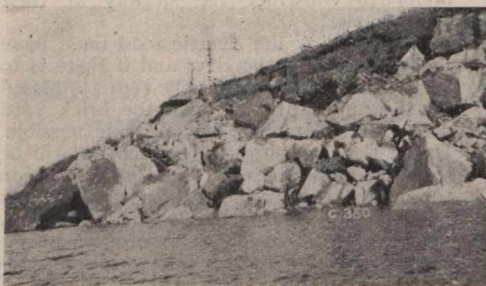
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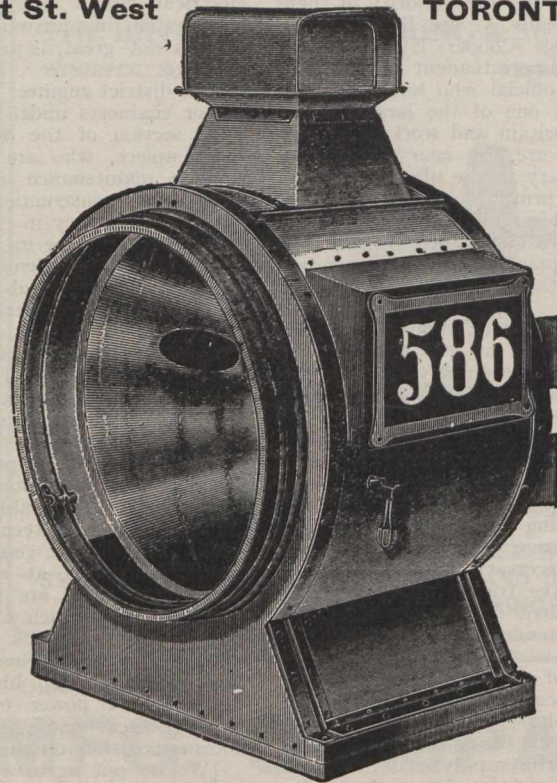
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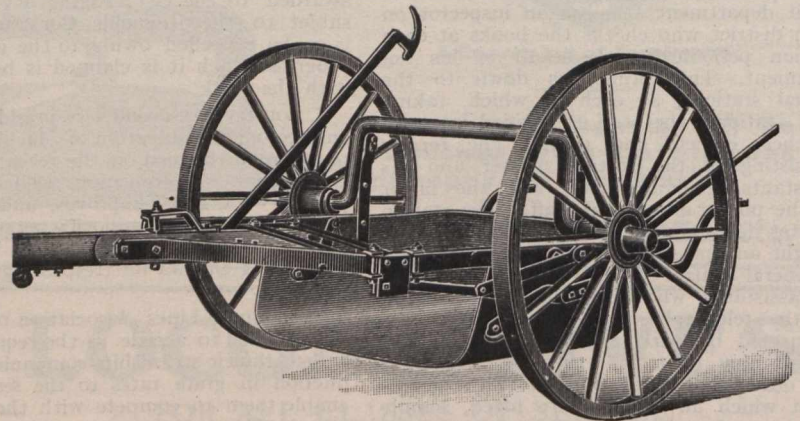
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application otherwise directs, at once proceed with the work along Montreal and Yonge Sts.

Some other crossings are involved in the application, but the President of the electric railway stated that some negotiations were on foot respecting the location of the road upon streets other than those shown upon the plan. The Board may be advised as to the result, and, unless the parties agree, will at once dispose of the questions involved in those other crossings. Plans for interlockers must be at once submitted by the applicants.

Projects, Construction and Betterments.

The British Columbia Electric Ry. has placed an order for the installation of a large storage battery for its Victoria plant. The estimated cost is placed at \$75,000. The company has decided to proceed at once with the construction of the extension to Ross Bay cemetery, Victoria. This extension will make connection with the Fort St. line at Cook St., and will go along Cook St., terminating probably at the road-way leading to Foul Bay beach. The estimated cost of the extension is \$40,000. (Aug., pg. 583).

Crow's Nest and Prairie Electric Ry.—This is the title of a company incorporated by the Alberta Legislature with power to construct an electric railway from near the western end of Crow's Nest Lake easterly through or near to Coleman, Blairmore, Frank, Bellevue, Lundbreck, and Cowley, to Pincher Creek. The company has power to issue \$150,000 of capital stock, and bonds to the amount of \$10,000 a mile of railway, and to enter into agreements with other companies for various purposes. The head offices are at Coleman, Alta., and the provisional directors are: A. Cameron, D. J. McIntyre, W. R. McRae, Coleman; T. Smith, Frank, Alta.; J. H. Schofield, Pincher Creek, Alta.

Dunnville, Wellandport and Beamsville Electric Ry.—Survey parties started out Aug. 3, to make further surveys for this projected line. The line as now proposed would run from Dunnville to Beamsville, via Wellandport and St. Anne's, Ont. At Beamsville, connection would be made with the Hamilton, Grimsby and Beamsville Electric Ry. Jas. A. Ross, Wellandport, Ont., is President of the company. (July, pg. 509).

Edmonton-Strathcona.—At a meeting held July 30, arrangements were made between the Edmonton City Council, and the Strathcona Radial Tramway Co., by which that company's charter is transferred to the council. The S.R.T. Co. had a charter and franchises for the construction of an electric railway in Strathcona, and extending to Edmonton, the franchise being for a period of 30 years.

The Edmonton City Council has under construction an electric railway in the city. Over two miles of track have been laid on Jasper Ave., First St., and Namayo St., and there are on hand ties, rails and other material for a considerable extension. The proposal under discussion was that the Strathcona Radial Ry. would complete certain connecting lines, and that the Edmonton Council would operate the whole under its charter. The additional construction would include a single-track extension from Jasper Ave. to 21st St., a single-track extension on Namayo Ave. to Albert Ave., some distance beyond Norwood boulevard; the line to Strathcona would leave Jasper Ave. at 9th St., run to Saskatchewan Ave., down that avenue past the Provincial Government buildings to Currie St., on the Ross flats, up Currie St. to the bridge and on through Strathcona to the Provincial University. (Aug., pg. 583).

Fort William, Ont.—The city council of Fort William has completed arrangements for constructing a second track on the Simpson St. and Syndicate Ave. lines, in that city, taken over from the Port Arthur City Council. The work is expected to be completed early in Oct.

Lethbridge Radial Tramway Co.—This is the title of a company incorporated by the Alberta Legislature with power to construct lines of communication for the carriage of "passengers and freight by means of electricity or by such motive power except steam, as the company may, from time to time, deem expedient." The lines which the company may construct are from Lethbridge to Raymond, Alta.; Lethbridge to Stafford, and from Lethbridge to tp. 9 or 10, in ranges 20 and 21, west of the fourth meridian. The company must not lay its tracks along any public street or highway except with the consent of the municipality, and the approval of the Minister of Public Works. The company has a capital of \$100,000, has power to issue bonds to the amount of \$10,000 a mile, and is authorized to enter into agreements with any person or company having right and authority to construct and operate street railways or tramways within 80 miles of Lethbridge. The company's head office is at Lethbridge, and the provisional directors are: W. Henderson, C. F. P. Conybeare, M. Freeman, F. H. Newburn, H. T. Cherry, W. Hardy, and B. M. Jones, Lethbridge.

Montreal and Southern Counties Ry.—Considerable progress has been made with the negotiations for a franchise in Longueuil, Que. The principal clause in the by-law under consideration by the town council provides for a contract for 21 years, for the first 10 years of which the company would be free of taxation and water rates. The town would also provide a free site. The cost of the removal of snow is to be divided evenly between the council and the company, and the fares chargeable are not to exceed those now charged by the steam railways. It is also provided that there will be a 30-minute service on weekdays between 5 and 9 a.m., and between 5 and 7 p.m., and hourly service at other times. The by-law also specifies the routes to be followed. Before the by-law is finally passed the company has to lay before the council copies of its contract with the city of Montreal, and with the G.T.R., respecting the construction and operation of its line across the Victoria Bridge and into Montreal. (Aug., pg. 583).

Montreal Park and Island Ry.—The new line constructed by the company through the town of Notre Dame de Grace, and which was opened for traffic Aug. 13, runs for about two miles through the newly created town of Notre Dame de Grace, the western end of the line being in sight of the C.P.R. station at Montreal West. (Aug., pg. 583).

Ontario West Shore Ry.—Work on the construction of this line between Goderich and Kincardine, Ont., was reported to have commenced Aug. 18 at Port Albert, and at Eighteen Mile River. At Prince Albert a long and deep cut will have to be made, and it is on this that work has been started. V. M. Roberts is Chief Engineer in charge of construction, and the company at present is doing its own construction work.

J. W. Moyes, President of the company, stated Aug. 12, that he hoped soon to be in a position to discuss the extension of the company's line in the direction of Stratford. (July, pg. 509).

The Ottawa Electric Ry. Co. has concluded the purchase of an area of land on Cobourg St., for the purpose of erecting car barns. It is intended to go on with the erection of these at an early date. (Aug., pg. 583).

Red Deer Ry.—This is the title of a company incorporated by the Alberta Legislature, with power to construct a railway to be operated by electricity, compressed air, gasolene and any other motive power approved by the Minister of Public Works, in the town of Red Deer, and thence eastward to Content, with a branch to the coal fields on the Red Deer River; from Content northeasterly to Nevis, and from any point in Red Deer to such points outside as may be approved by the Minister of Public Works. The lines to be constructed may be carried along or across any public street or highway, with the consent of the municipality and the approval of the Minister of Public Works, subject to such conditions as may be necessary. The capital stock of the company is fixed at \$100,000, and power is given to issue bonds to the extent of \$15,000 a mile. The company may enter into agreements with other companies, and is given various incidental powers. Its head offices are at Red Deer, and the provisional directors are: G. W. Smith, J. J. Gaetz, F. W. Galbraith, W. A. Moore, J. C. Moore, Red Deer.

St. John Ry.—The Intercolonial Ry. has been engaged in effecting some improvements on the bridge carrying Stanley St. across the line in St. John, N.B. On Aug. 14, the St. J. Ry. secured a stoppage of the work on the ground that the gradient would be so altered as to interfere with the operations of its electric railway. Neither the city or the street railway desired the alteration, and all that the company desired in interfering with the work was an assurance that the Government would bear the expense of any alteration which would have to be made in the street railway tracks. (June, pg. 431).

St. Thomas Street Ry.—The estimate submitted to the city council of St. Thomas, Ont., for the extension of the street railway system to Port Stanley, does not include equipment, but provides for the utilization of electric power from the lines to be constructed by the Ontario Government from Niagara. The cost of the roadbed is placed at \$6,638 a mile, or \$46,466 for the seven miles, with \$3,000 additional for bridges, and \$1,500 additional for turn-outs; the cost of the overhead work is placed at \$11,690, and \$5,000 is added for incidentals, which makes the total estimated cost of the line \$67,950. (June, pg. 431).

Toronto Ry.—In the work of relaying the street railway tracks on Bloor St. West, the company is using T rails instead of girder rails. The City Engineer, when questioned about the matter at a meeting of the Board of Control, said the company was using the T rail on all new lines, and upon reconstructions in all parts of the city, with the exception of the downtown lines. The T rail, in his opinion, was as good as the girder rail. (July, pg. 509).

Toronto Suburban Ry.—The matter of the extension of the company's franchise has been discussed at several meetings of the West Toronto City Council recently. On Aug. 11, G. C. Royce, Manager, stated that the company desired to extend its line from the present terminus at the corner of Keele and Dundas streets to Swansea, via Keele, Annette and Elizabeth streets. The company did not want an extension of the franchise over all the old route, only for that part on Keele St. north, and the new line. Aug. 17, the Mayor outlined a route which would be more satisfactory to the council than the one suggested by the Manager, and in an interview Aug. 20, the Mayor said the council was determined never to grant an extension of the franchise to the company. The question came up again at a meeting Aug. 24.

Electric Ry. Finance, Meetings, Etc.

Berlin and Bridgeport Electric St. Ry.—Following are the officers and directors for the current year: President, W. H. Breithaupt; Vice-President, J. S. Anthes; Secretary, A. Millar; other directors, L. J. Breithaupt, G. Shirk. The annual meeting was held Aug. 10, but the directors do not issue an annual report.

British Columbia Electric Ry.—Gross earnings for June, \$157,727; operating expenses, \$96,729; net earnings, \$60,998; renewal funds, \$10,750; income from investments, \$11,036; against \$132,168 gross earnings; \$76,989 operating expenses (including provision for loss occasioned by accident on Lulu Island line); \$55,179 net earnings; \$9,325 renewal funds; \$9,536 income from investments, for June, 1907. Total earnings for 12 months ended June 30, \$1,962,924; net earnings, \$912,928; against \$1,449,287 total earnings; \$698,111 net earnings for same period 1906-07.

Galt, Preston and Hespeler Ry.—It is understood that although the Board of Railway Commissioners has recommended the Governor in Council to approve and sanction the conveyance and lease of the line, and of the Preston and Berlin Ry., to the Berlin, Wellesley, Waterloo and Lake Huron Ry., the actual transfer is not likely to take place for some time. It is also understood that Parliament will be asked to authorize a change in the name of the B.W.W. and L.H. Ry.

Grand Valley Ry.—An action has been entered by J. S. Clark, on behalf of himself and other bondholders and shareholders, for an injunction restraining the G.V. Ry. Co. from selling its property, franchises, etc., to M. A. Verner, Pittsburg, Pa. It is alleged that W. S. Dinnick, A. J. Pattison, J. J. Warren, E. T. Fox, J. S. King, J. Firstbrook, J. R. Stratton, Toronto, and J. G. Wallace, Woodstock, Ont., who are joined with the company as defendants, obtained control of the company by unfair and fraudulent methods, and that they or some of them are receiving personal gains by making the sale to Mr. Verner.

A writ has been issued by the Metropolitan National Bank, of Pittsburg, Pa., against the G. V. Ry., to recover \$875, claimed to be due on account of interest coupons.

Halifax Electric Tramway Co.—Receipts for July, \$19,188.65, against \$18,281.00 for July, 1907. Total receipts for 7 months ended July 31, \$99,765.45, against \$95,651.10 for same period 1907.

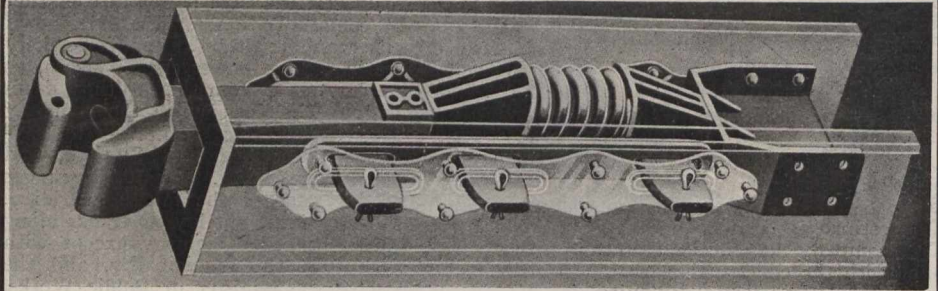
Hamilton Street Ry.—At a special meeting of the city council, Aug. 19, it was decided to submit the by-law approving a new agreement with the Street Ry. Co. to a vote of the taxpayers Sept. 16. The agreement provides among other things that the city percentage shall be reduced from 8% to 6% on all earnings over \$316,000.

Kingston, Portsmouth and Cataragui St. Ry.—The Kingston, Ont., City Council has under consideration a by-law for submission to the taxpayers, providing for the purchase of the K.P. and C. St. R., and its operation as a municipal enterprise.

London St. Ry.—Gross earnings for June, \$20,634.52; operating expenses, \$14,131.43; net earnings, \$6,503.09; fixed charges, \$2,279.00; surplus, \$4,224.09; against \$22,302.82 gross earnings; \$14,868.32 operating expenses; \$7,434.50 net earnings; \$5,196.03 surplus, for June 1907. Total earnings for 6 months ended June 30, \$106,991.42; operating expenses, \$81,060.02; net earnings, \$25,931.40; fixed charges, \$13,873.82; surplus, \$12,057.38; against \$107,432.36 total earnings; \$81,248.71 operating expenses; \$26,183.65 net earnings; \$13,395.04 fixed charges; \$12,798.61 surplus; for same period 1907.

Montreal St. Ry.—Gross earnings for July, \$326,524.39; operating expenses, \$162,-

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QUEBEC AND LAKE ST. JOHN from Quebec City to the Upper Ste. Maurice, St. John and the Saguenay.

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THE INVERNESS skirting Gulf of St. Lawrence shore of Cape Breton Island.

CANADIAN NORTHERN traversing the Superior Divide largely along the historic Dawson Route. Through Manitoba to Saskatchewan, on to Edmonton and to the gateway of the Real Northwest.

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413.90; net earnings, \$164,110.49; city percentage on earnings, \$32,317.33; interest on bonds and loans, \$16,583.23; contingent for renewals, \$15,667.66; rent leased lines, \$444.43; surplus, \$99,097.84; against \$339,756.45 gross earnings; \$175,946.86 operating expenses; \$163,809.59 net earnings; \$32,070.40 city percentage on earnings; \$18,873.41 interest on bonds and loans; \$16,449.09 contingent for renewals; \$339.96 rent leased lines; \$96,076.73 surplus for July, 1907. Total earnings for 10 months ended July 31, \$2,999,287.92; operating expenses, \$1,814,423.44; net earnings, \$1,184,859.48; standing charges, \$515,888.75; surplus, \$668,970.73; against \$2,834,644.35 total earnings; \$1,761,545.18 operating expenses; \$1,073,099.17 net earnings; \$457,347.08 standing charges; \$615,752.09 surplus for same period 1906-07.

Port Arthur Electric Ry.—A cheque for \$52,000 has been signed by the Fort William, Ont., city council, payable to the Port Arthur city council, as the purchase price of that portion of the P.A. Electric Ry., within the city of Fort William.

Toronto Ry.—W. Mackenzie, President Toronto Ry., on his return from London, Eng., Aug. 3, said the Toronto Power Co. had successfully floated an issue of \$2,500,000 of debentures guaranteed by the T. Ry. Co. The T. P. Co. took over the Electrical Development Co., explained Mr. Mackenzie, and the Power Co. itself is owned by the T. Ry. Co.

Car earnings for July, \$299,245.75, against \$300,591.66 for July, 1907. Total earnings for 7 months ended July 31, \$1,972,393.61, against \$1,876,870.90 for same period 1907.

Windsor, Essex and Lake Shore Rapid Ry.—There has been deposited with the Provincial Secretary at Toronto, two mortgage deeds of the company's property, dated May 4 and May 30, respectively.

Electric Railway Notes.

The Ottawa Electric Ry. is having two pay-as-you-enter cars constructed. The first of these has been placed in service.

R. H. Sperling, General Manager B.C. Electric Ry., returned to Vancouver, B.C., Aug. 15, from a trip to Great Britain.

H. R. Mitchell, chief clerk of the Toronto and York Radial Ry., Toronto, was drowned, while bathing, at Honey Harbor, Ont., Aug. 2.

The London, Ont., city council decided Aug. 17 that the question of allowing the operation of a street car service in the city on Sundays shall be submitted to a vote of the people.

H. N. Bartlett, Superintendent of the Quebec Ry., Light and Power Co., Citadel Division, was presented with a gold stick pin with crest in diamonds and enamel, by the Prince of Wales during his recent visit to Quebec.

The Edmonton, Alta., city council has placed an order for seven 20-cross seat centre-aisle semi-convertible, double-truck electric cars with the Ottawa Car Co., Ottawa, Ont. Two cars are to be delivered early in Sept., and the remaining five in Oct.

W. N. Warburton, until recently manager of the Windsor, Essex and Lake Shore Rapid Ry., and prior to that Manager of the Chatham, Wallaceburg and Lake Erie Ry., has moved from Chatham to Hamilton, Ont., where he will engage in private business.

The Toronto Ry. on some of its lines has adopted a system of stopping the cars in the middle of a block in order to collect fares. This is being done in order to put a stop to the practice of people getting on the cars, riding for a short distance and getting off before the conductor has time to collect the fares.

F. H. McGuigan, formerly Fourth Vice-President G.T.R., has entered into an agreement with the Ontario Government for the construction of a power transmission line from Niagara to various points in the province. The power is to be supplied to municipalities and sold by them to electric railways and industrial concerns.

The coroner's jury which investigated the circumstances attending the death of F. Donovan, at Chatham, Ont., found a verdict, Aug. 17, to the effect that he came to his death "through injuries received in a rear-end collision between cars 14 and 8 of the Chatham, Wallaceburg and Lake Erie Ry., and that the collision occurred through the negligence of the C. W. and L.E.R. Co. in allowing overcrowded cars to run too closely together."

Elevators and the Grain Acts.

An act to amend the Manitoba Grain Act was passed at the recent session of the Dominion Parliament. Par. h, sec. 2, is repealed, and the following substituted therefor: "Public terminal elevator" includes every elevator located at any point declared by the Minister to be a terminal, and 'terminal elevator' in the provisions of this Act relating to terminal elevators and warehouses, includes a warehouse." Pars. i, j, and k, are added to sec. 2: (i) "Eastern transfer elevator" means any elevator east of Fort William and Port Arthur which receives western grain for storage or re-shipment for a compensation. Sec. 3 is repealed and a new one substituted, providing that the Act shall apply to the Manitoba Inspection Division comprising Manitoba, Saskatchewan, Alberta, the Northwest Territories, and that portion of Ontario lying west of and including Port Arthur. Secs. 10 to 16 are repealed, and the heading between secs. 16 and 17 is struck out and "Public Terminal Elevators, Eastern Transfer Elevators and Warehouses" substituted. A new section is substituted for sec. 19, providing that no discrimination shall be made between persons desiring to avail themselves of warehouse facilities; every public terminal elevator warehouseman in the Manitoba Inspection Division shall receive any grain tendered to him in a dry and suitable condition for warehousing, in the usual manner in which terminal elevators are accustomed to receive grain; grain so received shall in all cases be inspected and graded by a duly authorized inspector and stored with grain of a similar grade; no grain shall leave a public terminal point without being officially weighed unless the owner or his agent orders otherwise; every eastern transfer elevator warehouseman shall receive for storage western grain tendered him through the ordinary channels of transportation, in such parcels or lots as are shipped; every eastern transfer elevator warehouseman shall keep a correct record of each parcel or lot of grain received, noting the name of the boat and number of the hold from which taken, or the number of the car, the billed weight, the actual weight as weighed in by him and shortage or overage, the number of the bin in which stored, and in case of a transfer in the elevator the number of the bin to which transferred, the date of shipment out of elevator with the number of car or name of boat and number of hold, and in all cases where a certificate of grade accompanies a lot or parcel of grain the identity of such certificate with the lot or parcel of grain shall be preserved; he shall keep a correct record of the name of the shipper, the party to be advised of the shipment and the consignee; the identity of each parcel or lot of western grain shipped to an eastern transfer elevator shall be preserved, except that different

parcels or lots of the same grades may be binned together when there is not sufficient space in the elevator to keep the parcels or lots separate; in no case, whether in a public terminal elevator in the Manitoba Inspection Division or in an eastern transfer elevator, shall grain of different grades be mixed together while in store; every public terminal warehouseman in the Manitoba Inspection Division shall clean all grain received by him on which the inspector has set dockage for cleaning, except all rejected grades, which shall be cleaned only upon the request of the owner; every public terminal warehouseman in the Manitoba Inspection Division shall pay or make allowance to the owner for all domestic grain of a commercial value in screenings on all cars graded by the inspector clean, to clean for domestic grain, as set forth in sec. 135 of The Inspection and Sale Act, as amended by ch. 36 R.S.C. 1908, to the quantity assessed by the inspector; every public terminal warehouseman in the Manitoba Inspection Division shall insure against fire, with companies satisfactory to the Commissioner, all grain received, handled or stored by him, provided always that this subsection shall not apply to eastern transfer warehousemen. Sec. 20 is amended by the substitution of the words "shipping receipt, or bill of lading, or both, as the case may be," for the words, "railway shipping receipt." Sec. 29 is repealed, the new section providing that the owner, lessee or manager of every public terminal elevator shall furnish at such times and in such manner, as the Commissioner may prescribe, a verified statement in writing, (a) in the case of a public terminal elevator in the Manitoba Inspection Division, as to the condition and management of so much of the business of such owner, lessee or manager as relates to such elevator; (b) in the case of an eastern transfer elevator, as to the amount, condition and management of the business done in western grain by the elevator. Sec. 35 is replaced by a new section providing, in case a terminal warehouseman in the Manitoba Inspection Division considers that any portion of the grain in his elevator is out of condition or becoming so, he shall consult the resident official grain inspector, or his authorized deputy, who shall examine the grain in question, and if he finds it out of condition or becoming so, and if he is of the opinion that it can be brought back to condition, or further deterioration prevented, he may order it to be re-elevated, at the expense of the owner of the grain, and if it is found that the condition of the grain is such that it cannot be brought back to condition, or further deterioration prevented by re-elevating, he shall give notice to the Commissioner and the grain owner. Sec. 38 provides that when grain has been declared to be out of condition and the owner does not remove it within one month of the date of such notice, the warehouseman may, after having given public notice as provided, sell the grain at the expense and on account of the owner, placing such proceeds against all charges accrued, and the owner of the grain shall be liable for any deficiency. Sec. 40 declares that nothing contained in secs. 34 to 39 inclusive, nor in secs. 43 and 44 shall be construed as to permit any warehouseman to deliver any grain stored in a special bin or by itself to anyone but the owner of the lot, or upon his written authority. The following is added to subsection 1, sec. 56: "In the case only of grain in special bin, should the storage receipts and lawful charges against the grain not be delivered or paid at the time of the billing of the car, the elevator operator may hold the bill of lading until the owner has surrendered the storage receipts therefor and paid all lawful storage charges

due thereon: provided that it shall be an offence under this Act for the elevator operator to sell or dispose of such bill of lading without the consent of the owner of the grain, the bill of lading to be made out in all cases in the name of the owner of the grain shipped"; and sec. 60 is amended by the following addition: "Except in the case of accidental damage to, or the accidental destruction of, any public country elevator in which grain has been accepted for general storage as herein provided, if the person operating it, when called upon to do so by the owner of the grain, fails to account for the grain in accordance with the terms of the warehouse receipt given under the provisions of this Act or of the further orders of the owner, he shall be deemed guilty of an offence under sec. 355 of the Criminal Code, and shall be liable to the penalties therein provided and, in addition, to the forfeiture of his license." A new section is substituted for sec. 70, in part as follows: When ordered by the Commissioner, any person operating a public country elevator or warehouse under this Act shall, immediately after the end of each month in which the elevator or warehouse shall have been operated, furnish in writing to the Commissioner, a return or statement showing: (a) the amount of grain on hand in the elevator at the commencement of such month, and the total amount of warehouse receipts at that time outstanding in respect of the said grain; (b) the total amount of warehouse receipts issued, the total amount of warehouse receipts surrendered by the holders thereof, and the total amount of warehouse receipts outstanding; (c) the amount of grain received and stored in the elevator or warehouse; (d) the amount of grain delivered or shipped from the elevator or warehouse, and (e) the amount of grain on hand in the elevator or warehouse at the expiration of such month. A penalty of not less than \$50, and not more than \$1,000, is provided for the making of a false

THE CANADIAN PACIFIC RAILWAY CO.

Dividends for the half-year ended 30th June, 1908, have been declared as follows:

- On the Preference Stock, Two per cent.
- On the Common Stock, Three per cent.

A further sum equal to one-half of one per cent. on the Common Stock will be paid thereon at the same time out of interest on the proceeds of land sales.

Warrants for the Common Stock dividend will be mailed on 30th September next to shareholders of record at the closing of the books in Montreal, New York and London respectively. The Preference Stock dividend will be paid on Thursday, October 1st next, to Shareholders of record at the closing of the books at the Company's London Office, No. 62 Charing Cross, London, S.W.

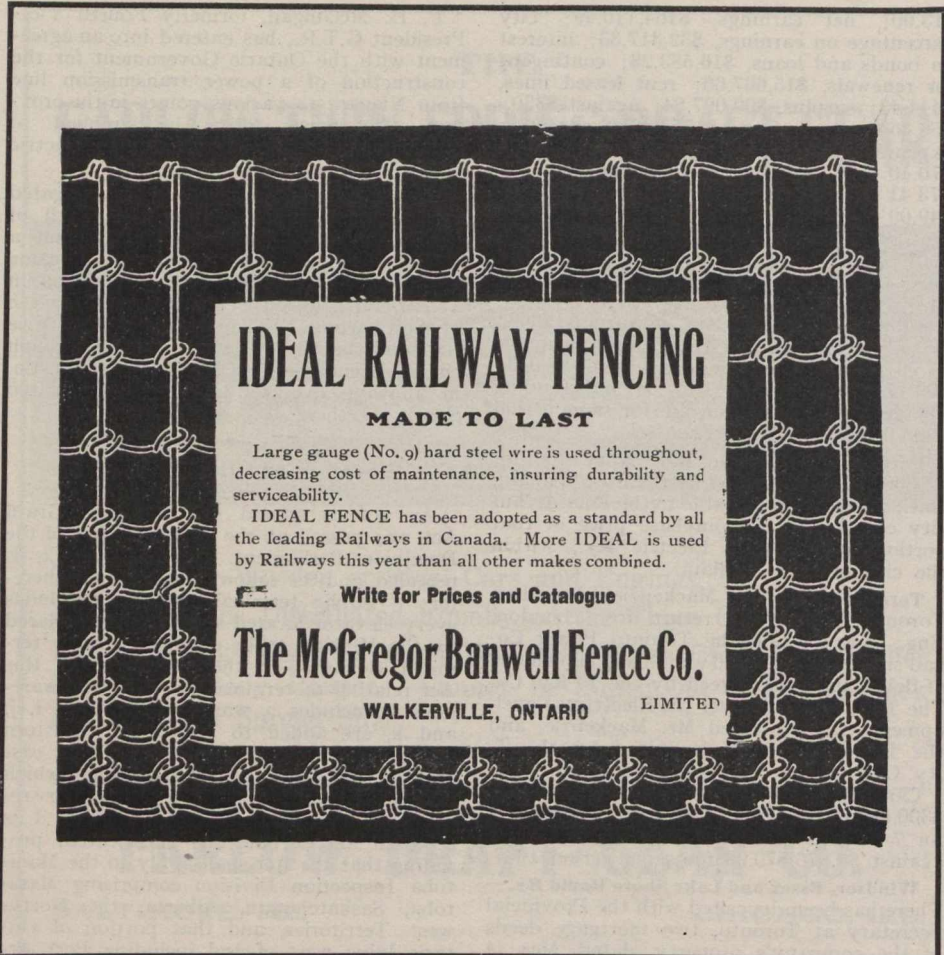
The Common Stock Transfer Books will close in Montreal, New York and London, at 3 p.m., on Tuesday, September 1st. The Preference Stock Books will also close at 3 p.m., on Tuesday, September 1st.

All books will be reopened on Thursday, October 8th next.

By order of the Board,
W. R. BAKER,
 Secretary.

Montreal, 10th August, 1908.

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TORONTO **CANADA**

return. Under the heading of General Provisions, a penalty ranging from \$500 to \$1,000 is provided for any person operating a country elevator, and entering into a combination for the pooling or division of earnings or receipts. The Act, which was assented to on July 20, comes into operation Sept. 1, together with the Inspection and Sale of Grain Amendment Act, a resume of which was given in our July issue.

Grain Elevator Notes.

The Cardston Milling Co., Ltd., Cardston, Alta., is erecting an elevator there.

The Canadian Elevator Co. will shortly build an elevator at Foam Lake, Sask.

Cameron Bros., Strathcona, Alta., it is said, are to erect an elevator at Tofield, Alta.

The G.T.R. elevator at Tiffin, Ont., will be completed in time to receive grain this season.

An elevator is being erected near Lethbridge, Alta., on the line of the Alberta Ry. and Irrigation Co.

It is stated that an elevator is to be built at Granum, Alta., by the Claresholm Lumber and Grain Co.

The Oxbow Farmers' Elevator and Trading Co., Ltd., of Saskatchewan, has increased its capital from \$10,000 to \$15,000.

A press report states that the G.T. Pacific Ry. has decided to erect an elevator of 30,000 bush. capacity at Waldron, Sask.

The Estevan Farmers' Elevator and Trading Co., of Manitoba, has decided to build an additional elevator of about 40,000 bush.

An elevator at Keelwill, Sask., and another at Guernsey, Sask., each of 30,000 bush., will, it is reported, be erected by T. S. Matheson.

The Farmers' Milling Co., Ltd., recently incorporated at Duck Lake, Man., with a capital of \$25,000, is proposing to erect a mill and elevator there.

The Smith Grain Co., Ltd., of Winnipeg, Man., is about to change its name to the Inland Grain Co., Ltd., and to increase its capital from \$40,000 to \$75,000.

A press report states that eight elevators are to be erected at once in Saskatchewan, with E. E. Head, of Minneapolis, Minn., in charge of the construction work.

With the completion of the work on the C.P.R. elevator D at Fort William, Ont., the total elevator capacity at that point will be 12,650,000 bush., making, it is said, the fifth of the elevator points on the continent. Elevator D will have a capacity of 3,400,000 bush.

A. A. Bowen, Kemptville, Ont., has been appointed Government Inspector of Grain and Weighmaster, his duties being to visit eastern transfer elevators to look into the weighing of grain, and to investigate complaints formulated by the Dominion Marine Association regarding shortages.

A report from Winnipeg states that fewer elevators are being built this year than usual. This, it is claimed, is partly due to the operation of the law regarding the supply of cars by railway companies, whereby farmers may hold cars at certain points until it suits their convenience to utilize them.

The question of a raise in insurance rates on grain in elevators is again to the fore, and it is anticipated that an increase will come into effect during the current season. The Underwriters' Association is dealing with the matter, and is considering whether the business is paying at the present rates.

The Montreal Harbor Commissioners are providing additional conveyors from the

central elevator, so that vessels lying at any of the berths on the long piers can be loaded without being moved. It is anticipated that the whole work will be completed and in operation before the Montreal season closes.

The Pembina Municipality Farmers' Elevator Co., Ltd., has been incorporated under the Manitoba Companies Act, with a capital of \$5,000, and office at Manitou. A contract has been awarded for the construction of a 40,000 bush. elevator. The officers of the company are: President, L. Armstrong; Secretary-Treasurer, H. Burke.

The State Elevator Co., Ltd., has been incorporated under the Dominion Companies Act, with a capital of \$100,000, and office at Winnipeg, Man., to acquire, build and operate elevators, grain warehouses, etc., and to carry on business connected therewith. The provisional directors are: K. B. Stoddart, J. Stewart, T. L. Hartley, Winnipeg, Man.; Sir W. B. Bowring, W. B. Stoddart, Liverpool, Eng.; L. B. Stoddart, New York.

Ontario and Manitoba Flour Mills, Ltd., has been incorporated under the Dominion Companies Act, with a capital of \$750,000 and office at Ottawa, to carry on the business of selling, storing and shipping grain, etc.; to build, purchase or otherwise acquire and operate elevators, steam and other vessels, etc., and to carry on a transportation business on the lakes and rivers. The provisional directors are: A. W. Fraser, J. G. Gibson, J. Mulhall, H. H. Williams, A. G. Mather, N. J. Ker, Ottawa.

A. J. McIntyre, Superintendent of Construction of Government elevators, is reported to have said recently that the Government elevator at St. John, N.B., had not proved a great success on account of the long haul necessary to bring the grain to port. In connection with the Port Colborne, Ont., elevator, he is stated to have said: "The elevator will be of the greatest importance to Canada, for through its erection the immense grain trade from the west will be transported through Canada to the ports at Montreal and St. John instead of going to New York from Buffalo."

The Montreal Harbor Commissioners' elevator is credited with having created a record in speed of unloading a vessel, by removing 80,000 bush. of wheat from the s.s. A. D. Davidson in 8½ hrs. The previous record is stated to have been held by the G.T.R. elevator there, by the removal of 77,000 bush. in 9¾ hrs. Since the foregoing the G.T.R. elevator has made a further record. In one day of 9½ hrs., 75,749 bush. was taken from the s.s. Robert Wallace, while at the same time 140,710 bush. was taken from cars, and 288,623 bush. loaded into ocean-going vessels, making a total of 505,082 bush. in one day.

The Western Canada Flour Mills Co., Ltd., has recently issued 6% first mortgage bonds, amounting to £225,000, due in 1928, in London, Eng. The company is an amalgamation of the Lake Huron and Manitoba Milling Co., Goderich, Ont., and the Kelly Milling Co., of Brandon, Man., and was incorporated under the Ontario Companies Act in 1905. It owns 66 elevators along the lines of the C.N.R. and C.P.R. in Ontario, Manitoba and Saskatchewan. The officers and directors are: President, A. Kelly; Vice-President and General Manager, S. A. McGaw; Secretary, A. J. Mitchell; other directors, Z. A. Lash, K.C.; D. B. Hanna, A. D. Davidson and J. Wright.

The Allan Steamship Line has recently made representations to the Minister of Public Works, regarding the provision of facilities for the shipment of grain at St. John, N.B. With the new wharves, which will be ready for use by the opening of the winter season, no facilities for grain shipments have been provided, and it is estimated

that the construction of conveyors from the C.P.R. elevator to the new wharves would cost about \$90,000. In this connection Hon. W. Pugsley recently stated: "In view of the probable large movement of grain through St. John during the coming winter, I have felt that it would be a serious detriment not only to St. John, but to the Canadian grain trade, if adequate facilities were not provided. I have therefore taken the matter up with the C.P.R., and plans and specifications are being prepared which will give me a close estimate of the cost, and in a very short time I expect to be in a position to complete arrangements for the commencement of work so as to provide these necessary facilities for next winter's business."

The Governor-General in Council has approved the Montreal Harbor Commissioners' amendments to by-laws relating to elevator charges at that port. The charges on grain ex steamer or barge, for elevating and weighing, are ¼c. a bush., and for storage for 20 days' including delivery to vessel, ¼c. a bush.; on grain ex cars, oats, elevating and storage for 10 days, ½c. a bush.; all other grain, elevating and storage for 10 days, ¾c. a bush.; succeeding terms of 10 days on all grain ex steamer, barge, or car, ¼c. a bush.; on export grain ex cars, elevating, 10 days' storage and delivery to ocean steamer through carrier or otherwise at the Commissioners' option, 9/10c. a bush.; loading on cars, \$1 a car; cleaning grain, ½c. a bush.; turning grain, ¼c. a bush.; floating grain from elevator to alongside steamer in harbor, ¾c. a bush.; for the winter storage from Nov. 15 to May 15, including elevating and delivery, when charges at regular rates amount to 1½c. a bush., no further charge will be made; grain stored during winter months remaining in the elevator after May 15, charged ¼c. a bush. for each succeeding 10 days or portion thereof in addition to charges already accrued; all grain subject to official inspection, and 40c. a car charged in addition to storage charges.

MARINE DEPARTMENT.

Notices to Mariners.

No. 64. July 22.—163. Atlantic Ocean, derelict reported. 164. Nova Scotia, southwest coast, off south end of Bon Portage Island, bell buoy replaced by whistling buoy. 165. Nova Scotia, south coast, Port Latour, buoys established. 166. Nova Scotia, south coast, Nixonmate shoal, bell buoy established.

No. 65. July 22.—167. Ontario, Canadian list of lights and fog signals, new edition. 168. Ontario, Georgian Bay, Parry Sound approach, Spruce shoal, gas-lighted beacon, gas buoy removed.

No. 66. July 25.—169. New Brunswick, east coast, Shippigan Gully, change in position of range lights. 170. Newfoundland, east coast, St. John's harbor entrance, Fort Amherst, change in fog alarm.

No. 67. July 28.—171. British Columbia, Chatham Sound, rock on northern side of Brown passage. 172. British Columbia, Dixon entrance, position and description of Celestial reef.

No. 68. July 30.—173. Ontario, Georgian Bay, Key Inlet, description, plan, beacons, buoyage, sailing directions.

No. 69. Aug. 4.—174. Ontario, Georgian Bay, Parry Sound, Three Mile Point, gas beacon established.

No. 70. Aug. 5.—175. New Brunswick, south coast, Bay of Fundy, Chignecto Channel, Cumberland Basin, Peck Point, fog alarm established. 176. Nova Scotia, Cape Breton Island, east coast, Sydney harbor,

THE INTERNATIONAL MARINE SIGNAL CO.

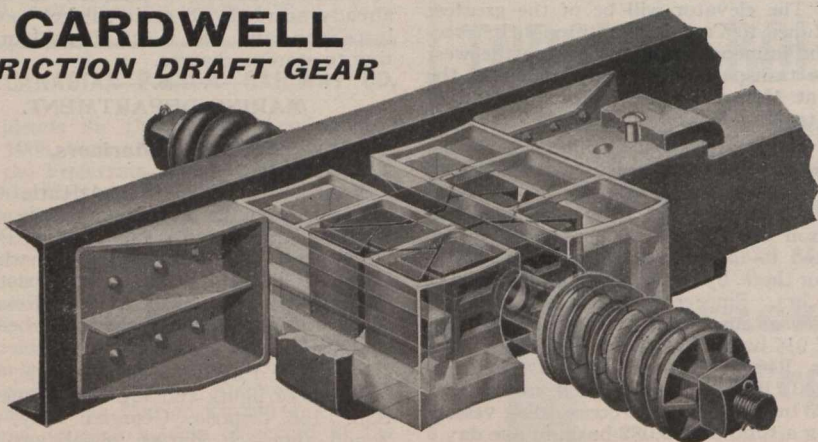
OTTAWA, CANADA

MANUFACTURERS OF

Automatic Acetylene Gas Buoys, Beacons and Fog Signals.

Mariners describe our lighted buoys as "floating lighthouses."

CARDWELL FRICTION DRAFT GEAR



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**Locomotive, Tender
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bar, Buffer and
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of all kinds

**Street
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Springs**
from the largest
to the smallest

Manufactured by

B. J. COGHLIN & CO., 432 St. Paul St., Montreal, Can.

SUBMARINE SIGNALS

Captain Watt, of the
LUSITANIA, in an
official report on Sub-
marine Signals, says :

"Nearly all my sea life
I have been looking for-
ward to getting the assist-
ance of a reliable sound
signal. Now I feel that
we have got it, and all
that is required, in my
opinion, is its universal
application."

Full Particulars on
Application to the

Submarine Signal

COMPANY

BOSTON, MASS.

off southeast bar, gas buoy established. 177 Newfoundland, east coast, Notre Dame Bay, Fortune harbor, light established.

No. 71. Aug. 6.—178. Ontario, Lake Ontario, Kingston, light discontinued. 179. Ontario, Lake Erie, Detroit River mouth, wreck removed. 180. Ontario, Lake Huron, Goderich, lights improved, back light pole replaced by tower.

No. 72. Aug. 7.—181. New Brunswick, Bay of Fundy, Campobello Island, Head harbor, temporary light. 182. New Brunswick, Chaleur Bay, Miscou Island, Birch Point, intended change in character of light. 183. Nova Scotia, south coast, off entrance to St. Margaret Bay, Horseshoe Ledge, bell buoy established.

No. 73. Aug. 15.—184. Nova Scotia, Avon River, Mitchener Point, lighthouse established. 185. New Brunswick, east coast, Kouchibouguac Bay, Kouchibouguac River, range lights established.

No. 74. Aug. 18.—186. New Brunswick, St. John River, Wilmot Bluff light station,

change in position of light, tower erected. 187. New Brunswick, Chaleur Bay, Miscou Island, Birch Point, temporary light. 188. Newfoundland, east coast, Notre Dame Bay, Leading Ticks, lighthouse established. 189. Newfoundland, east coast, Notre Dame Bay, Little Bay Island, lighthouse established.

No. 75. Aug. 20.—190. Quebec—River St. Lawrence, Red Islet bank, hydrographic information. 191. Quebec, River St. Lawrence, ship channel between Quebec and Montreal, Port St. Francis, change in position of front range light, back range tower rebuilt.

No. 76. Aug. 22.—192.—Quebec, River St. Lawrence, Crane Island, lighthouse rebuilt. 193.—Quebec, River St. Lawrence, Cap Charles, lower back light discontinued. 194.—Newfoundland, Labrador coast, surveying marks, protection requested.

No. 77. Aug. 24.—195.—British Columbia, Chatham Sound, chart, southern approach to Prince Rupert harbor, and entrance to North Skeena Passage, issued. 196.—British

Columbia, Chatham Sound, Skeena River, Middle Passage, hydrographic information.

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

No. 31. Aug. 1.—1289. St. Clair River, Sarnia, shoal, light buoy established.

Vessels Removed from the Register.—The following vessels were removed from the register during July, for the reasons assigned: Steam, Aberdeen, Winnipeg, 26 tons, broken up; Bonito, Ottawa, 12 tons, broken up; Rambler, Port Arthur, 3 tons, broken up; Thomas Free Battle, St. Catharines, Ont., 19 tons, burnt; Sailing: Bessie, Sydney, N.S., 20 tons, wrecked; Black Prince, Halifax, N.S., 18 tons, broken up; Dorothy M. Porter, Windsor, N.S., 168 tons, transferred to Nfld.; Edith R. Balcom, Lunenburg, N.S., 100 tons, wrecked; Fisher River, Winnipeg, 111 tons, broken up; Frank, Gaspé, Que., 54 tons, broken up; Fred Jackson, Liverpool, N.S., 198 tons, lost; Pleasantville, Liverpool, N.S., 98 tons, broken up; Ranger, Gaspé, Que., 14 tons.

LIST OF STEAM VESSELS REGISTERED IN CANADA DURING JULY, 1908.

Name.	No.	Where and When Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Port of Registry	Owners.
Alanbee.....	126,088	Vancouver, B.C., 1908.....	Screw, 3 N.H.P.....	35.9	10.1	5.2	15	10	Vancouver.....	R. P. McLennan, Vancouver, B.C.
Bessie Butler.....	122,564	Peterboro, Ont., 1907.....	" 20 ".....	78.0	17.6	....	77	52	Peterboro.....	Department of Railways and Canals, Ottawa, Ont.
Bob Hall.....	122,563	" ".....	" 16 ".....	49.0	12.6	....	27	18	" ".....	Department of Railways and Canals, Ottawa, Ont.
Bon Ami.....	122,436	Manitowoc, Wis., U.S., 1902	" 24 ".....	105.0	24.5	8.0	245	142	Sault Ste. Marie.....	St. Joe Island and Sault Line, Ltd., Sault Ste. Marie, Ont.
Bonsel.....	122,449	Shelburne, N.S., 1908.....	" 1 ".....	35.9	7.6	3.0	6	4	St. John.....	G. E. Gandy & H. A. Allison, St. John, N.B.
Charlie Gilley.....	126,175	N. Westminster, B.C., 1908.....	" 16 ".....	33.9	10.0	4.7	10	6	New Westminster.....	G. D. Brymner, New Westminster, B.C.
D. C. Whitney.....	122,435	St. Clair, Mich., U.S., 1882.....	" 88 ".....	240.0	40.0	22.0	1490	1290	Sault Ste. Marie.....	J. Ganley, Sault Ste. Marie, Ont.
Elsie M.....	122,550	Collingwood, Ont., 1908.....	" 8 ".....	54.0	11.7	7.0	28	19	Collingwood.....	D. McInnes, Meaford, Ont.
F. N. McCrear.....	126,122	Kingston, Ont., 1908.....	" 3 ".....	47.8	11.0	5.0	19	10	Kingston.....	J. H. Davis, Kingston, Ont.
Fernie.....	126,099	Vancouver, B.C., 1908.....	" 5 ".....	37.6	8.4	3.3	8	6	Vancouver.....	D. Burns, Vancouver, B.C.
Geo. Emerson.....	122,437	Buffalo, N.Y., U.S., 1888.....	" 8 ".....	61.0	14.7	6.0	31	21	Sault Ste. Marie.....	T. Ganley, Sault Ste. Marie, Ont.
Glympse.....	126,124	Kingston, Ont., 1908.....	" 8 ".....	38.2	8.6	3.7	9	6	Kingston.....	J. H. Davis, Kingston, Ont.
Grande Ligne.....	126,153	Montreal, Que., 1907.....	" 24 ".....	67.3	18.1	8.3	70	38	Montreal.....	F. Lemoine, Montreal, Que.
J. C. Bruce.....	126,175	Vancouver, B.C., 1908.....	" 1 ".....	43.0	9.1	3.7	17	11	New Westminster.....	J. C. Bruce, New Westminster, B.C.
J. Howard.....	122,626	Newcastle, N.B., 1908.....	" 10 ".....	48.0	11.5	5.0	16	11	Chatham.....	T. W. Crocker, Newcastle, N.B.
Jeanne D'Arc.....	126,146	Sorel, Que., 1908.....	" 3 ".....	96.2	22.3	6.5	105	69	Sorel.....	A. Thiaville, Sorel, Que.
Kerland.....	126,172	New Westminster, B.C. 1907	" 25 ".....	39.5	8.9	4.8	11	7	New Westminster.....	W. J. Kerr & W. W. Irwin, New Westminster, B.C.
Klahum.....	126,202	Vancouver, B.C., 1907.....	" 1 ".....	31.5	9.0	3.6	11	7	Vancouver.....	E. D. Taylor, Vancouver, B.C.
Kobe.....	126,204	Steveston, B.C., 1908.....	" 3 ".....	41.0	10.0	4.1	15	10	" ".....	H. Yamachita, Steveston, B.C.
Lady Sybil.....	85,406	Greenock, Scotland, 1908.....	" 173 ".....	165.0	28.1	18.7	676	352	Magdalen Island.....	Magdalen Islands Steamship Co., Ltd., Halifax, N.S.
Lib.....	126,155	Montreal, Que., 1908.....	" 48 ".....	62.5	14.1	5.6	31	15	Montreal.....	T. Gauthier, Montreal, Que.
Little Ada.....	47,655	Renfrew, Scotland, 1863.....	" 24 ".....	112.0	18.1	16.2	236	122	Quebec.....	R. F. Grant, Three Rivers, Que.
Marion.....	122,527	Bay City, Mich., U.S., 1899.....	" 3 ".....	36.0	9.0	4.5	13	9	Vancouver.....	Jervis Inlet Lumber Co., Vancouver, B.C.
Mina W.....	126,174	Vancouver, B.C., 1908.....	" 11 ".....	35.5	9.1	3.7	7	5	New Westminster.....	J. W. Wise, New Westminster, B.C.
Nipigon.....	117,090	Collingwood, Ont., 1908.....	" 6 ".....	56.8	9.6	7.0	36	24	Collingwood.....	L. Villeneuve & A. Robertson, Nipigon, Ont.
Noreensha.....	126,090	Vancouver, B.C., 1908.....	" 1 ".....	29.6	8.0	3.0	5	3	Vancouver.....	W. Farrell, Vancouver, B.C.
No. 26.....	124,261	Kirkintilloch, Scot., 1908.....	" 28 ".....	68.8	15.1	8.1	49	..	Quebec.....	J. Stewart & W. Fulton, Glasgow, Scotland.
Oscar C.....	122,640	Kingston, Ont., 1908.....	" 4 ".....	47.8	10.9	5.0	18	9	Kingston.....	J. B. Oliver, Magog, Que.
P.M.A.....	126,061	Egmont Bay, P.E.I., 1906.....	" 18 ".....	37.5	12.5	5.2	15	12	Charlottetown.....	P. A. Arsenault, St. Chrysostome, P.E.I.
P. Mellon Flyer.....	126,203	Vancouver, B.C., 1908.....	" 3 ".....	37.7	10.8	4.8	15	10	Vancouver.....	G. E. Cates, Vancouver, B.C.
Pusher.....	122,630	Little Branch, N.B., 1903.....	Paddle, 3.....	28.0	10.0	2.0	15	9	Chatham.....	P. England, Chatham, N.B.
Rexton.....	122,625	Rexton, N.B., 1908.....	" 5 ".....	64.0	14.0	4.0	35	22	" ".....	J. M. Burns, Rexton, N.B.
Schwalbe.....	126,108	Mahone Bay, N.S., 1908.....	Screw, 40.....	44.8	12.0	7.0	..	17	Lunenburg.....	B. A. Wentzell, Halifax, N.S.
Splash.....	122,628	Chatham, N.B., 1908.....	Paddle, 1.....	31.0	10.0	2.0	18	12	Chatham.....	P. England, Chatham, N.B.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA DURING JULY, 1908.

Name.	No.	Where and When Built.	Rig.	Length	B'dth.	Depth.	Gross Tons.	Reg. tons.	Port of Registry.	Owners.
CityDredge No. 3.....	125,978	Toronto, Ont., 1908.....	Scow	110.0	30.1	7.3	.....	306	Toronto.....	The City of Toronto.
Cluster.....	122,629	Rexton, N.B., 1908.....	Schr.	33.0	12.0	4.6	.....	10	Chatham.....	G. Gallant, Rexton, N.B.
Crouzier B.....	122,428	Chezetcook, N.S., 1908.....	"	50.0	16.9	6.0	.....	26	Halifax.....	J. Bellefontaine, Chezetcook, N.S.
Excavator.....	122,627	Chatham, N.B., 1908.....	Dred.	38.0	13.0	3.0	.....	13	Chatham.....	P. England, Chatham, N.B.
Fleetly.....	126,109	Bridgewater, N.S., 1908.....	Schr.	108.5	29.0	10.6	.....	174	Lunenburg.....	S. Creaser, La Have, N.S.
General Laurie.....	126,182	Allendale N.S., 1908.....	"	112.6	29.2	10.5	.....	198	Shelburne.....	W. MacMillan, Lockeport, N.S.
Georgia E.....	100,874	Cambridge, N.B., 1893.....	"	81.0	27.0	6.0	.....	95	Weymouth.....	D. N. Messenger, Barton, N.S.
H.S.M.C.....	126,201	Vancouver, B.C., 1906.....	Scow	83.0	28.9	6.8	.....	155	Vancouver.....	B.C. Mills Timber & Trading Co., Vancouver, B.C.
Hilda Brannen.....	122,239	Port Clyde, N.S., 1908.....	Sloop	29.2	12.0	4.9	.....	10	Barrington.....	W. N. Brannen, Woods Harbour, N.S.
Keene.....	122,562	Birdsalls, Ont., 1907.....	Barge	80.0	18.0	4.0	.....	48	Peterboro.....	F. Burnet and J. D. Simpson, Birdsalls, Ont.
Kennebecasis.....	122,446	Gondola Point, N.B., 1907.....	Ferry	38.2	16.8	2.3	.....	10	St. John, N.B.....	W. A. Pill, Gondola Point, N.B.
La Berard.....	126,154	Sorel, Que., 1907.....	Barge	103.7	22.6	14.5	.....	233	Montreal.....	J. Berard, Montreal, Que.
M. O'Toole.....	122,186	Louisburg, N.S., 1908.....	Schr.	51.6	15.5	6.9	.....	32	Arichat.....	V. O'Toole, Louisburg, N.S.
M. M. Mosher.....	126,107	Mahone Bay, N.S., 1906.....	"	90.8	23.4	9.8	.....	73	Lunenburg.....	W. Duff, Lunenburg, N.S.
Vandyke.....	126,171	N. Westminster, B.C., 1907.....	Dred.	67.0	23.5	5.0	.....	157	New Westminster.....	J. W. Pike, Vancouver, B.C.
W. F. Foley.....	122,581	Tusket Wedge, N.S., 1908.....	Schr.	69.0	19.6	8.0	.....	51	Yarmouth.....	H. T. LeBlanc, Tusket Wedge, N.S.

Atlantic and Pacific Ocean Marine.

The Dominion Government s.s. Arctic left Quebec recently, in charge of Capt. Bernier, on a two years' cruise in Ungava and Baffin Bays.

The Allan Line s.s. Hesperian, arriving at Glasgow, Scotland, Aug. 10, created a record for the route, occupying 6 days, 8 hrs., on the voyage.

The Cunard Line s.s. Mauretania has been docked and will undergo a complete overhauling. It is said her speed will be increased to 27 knots.

Manchester Liners Ltd. has decided to place three additional vessels on the Canada-Manchester, Eng., route, and will probably inaugurate a weekly service.

The New Zealand Government has declined to renew its share of the subsidy granted to the Canadian-Australian line, as the service is considered of no value to New Zealand.

The s.s. Volturno, bound from Rotterdam to New York, put in at Halifax, N.S., Aug. 4 and landed the crew of the French fishing schooner Champagne, rescued in the open sea.

Press reports state that the Dominion Government will ask the C.P.R. and the Allan Line to join their steamship services and place five 25-knot vessels on what is termed the "all-red" route, under a subsidy.

The French Trans-Atlantic Co. has stated that, subject to the growth of trade between Canada and France warranting it, on the conclusion of the proposed treaty, it will inaugurate a direct line between the two countries.

The New Zealand Government has expressed its willingness to pay an annual subsidy of £75,000 for a British steamship service between Great Britain and New Zealand, by way of Canada, with 18-knot vessels, on the Pacific.

The Dominion Line s.s. Southwark, which sailed from Montreal Aug. 8, ran aground at Bras Point, near the Strait of Belle Isle, Aug. 11. She was released on the following day and proceeded on her voyage, the damage sustained being too slight to interfere with her passage.

As the result of recent negotiations the Allan, Atlantic, C.P.R., Dominion and Donaldson Steamship Lines have arranged to carry 10 Canadian school teachers on each vessel sailing to Europe after Sept. 1, as second-class passengers at the rate of \$25 a head for the round trip.

The C.P.R. s.s. Empress of Britain occupied 6 days, 3 hrs., 25 mins., in the voyage from Liverpool dock to Quebec dock recently, this constituting a record run from port to port; while about the same time the Empress of Ireland, on the eastward trip, from dock to dock, took a little over 6 days.

H. G. Elliott, Assistant General Passenger and Ticket Agent, G.T.R., is reported to have said recently in Vancouver, on his return from Australia: "The probability is that ultimately the G.T. Pacific Ry. will have a service by water to the east, either independently or in connection with some line already in existence."

The International Mercantile Marine Co. recently purchased the Oceanic Steamship Co.'s s.s. Gothic, and has changed its name to Gothland. She will be operated in the service of the Red Star Line. She was built at Belfast, Ireland, in 1893, her dimensions being: Length, 490 ft.; breadth, 53 ft.; depth of hold, 33 ft.

The Cunard Line s.s. Lusitania created new trans-Atlantic records Aug. 20, when she completed the trip in 4 days, 15 hrs., the previous record being 4 days, 18 hrs., 40 mins. The average speed for the voyage was 25.05 knots an hour against 25.01, and the longest 24 hours' run was 650 knots, at an average of 25.66 knots an hour.

C.P.R. LANDS

THE CANADIAN PACIFIC RAILWAY COMPANY have 9,000,000 acres of selected lands for sale in Manitoba, Saskatchewan and Alberta.

Maps, as enumerated below, showing these lands in detail, will be sent free on application.
 Map No. 1—Winnipeg to Second Meridian..... \$ 8.00 to \$15.00 per acre.
 Map No. 2—South-Eastern Saskatchewan, 2nd to 3rd Meridians..... 10.00 to 25.00 per acre.
 Map No. 3—Main Line, 3rd Meridian to Range 10 W., 4th Meridian (generally) 8.00 " "
 Map No. 5—South Western Alberta..... 8.00 to 15.00 per acre.
 Map No. 6—Part of Alberta—Edmonton, Battle and Saskatchewan Rivers Districts—4th Meridian to Range 7, West 5th Meridian..... 10.00 to 25.00 per acre.
 Map No. 7—Part of Western Saskatchewan, 3rd to 4th Meridians... 10.00 to 25.00 per acre.
 All prices are subject to change without notice.

TERMS OF PAYMENT

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

160 Acres at \$ 8.00 per acre, cash payment	\$191.70	first year's interest	\$65.28	and nine instalments of	\$160.00
" " " 9.00 " " "	215.70	" " " "	73.46	" " "	180.00
" " " 10.00 " " "	239.70	" " " "	81.62	" " "	200.00
" " " 11.00 " " "	263.60	" " " "	89.78	" " "	220.00
" " " 12.00 " " "	287.60	" " " "	97.96	" " "	240.00
" " " 13.00 " " "	311.55	" " " "	106.10	" " "	260.00
" " " 14.00 " " "	335.60	" " " "	114.32	" " "	280.00
" " " 15.00 " " "	359.50	" " " "	122.44	" " "	300.00

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

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

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International Railway (trolleys), connecting with Niagara Navigation Co. steamers at Queenston, to or from Toronto, pass the door.

IMPORTANT

Guests coming to the Hotel should see to it that they are taken to The Clifton Hotel, CANADIAN SIDE, and also that their mail is addressed "Care of The Clifton Hotel, Niagara Falls, CANADA." To insure prompt delivery, don't forget to make CANADA plain in the address.

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HAMILTON, ONT.

The Allan Line s.s. *Corean*, which has been laid up for some time, having been superseded by more modern vessels, has been sold to foreigners. She was built at Sunderland, Eng., in 1881, with engines having cylinders 48 and 84 ins. diam., by 54 ins. stroke, of 432 n.h.p. Her dimensions are: Length, 360.1 ft.; breadth, 41 ft.; depth, 23 ft.; tonnage, 3,488 gross, 2,259 register.

The Union Steamship Co. of New Zealand's s.s. *Makura* was launched recently on the Clyde, Scotland, and it is anticipated that she will have a trial run during Sept. She has triple-expansion engines, capable of doing 18 knots an hour; her dimensions are: Length, 470 ft.; breadth, 58 ft.; depth, 35 ft.; tonnage, 8,000 gross. She will sail from Great Britain for Australia in Oct., and will make her maiden trip to Canada about March, 1909.

The C.P.R. s.s. *Mount Temple*, which was wrecked on Ironbound Island, N.S., Nov. 30, has been overhauled and repaired at Newport News, N.Y., and left the dry dock there recently for Montreal. The vessel, which was abandoned to the underwriters, was floated, April 15, by the Halifax Salvage Association. The method adopted was of considerable interest, as it was the first time such a course had been pursued on the Atlantic coast. The holds were all pumped out, made air-tight, and the vessel raised by means of compressed air.

It is reported that the Cunard Line intends to eliminate Queenstown, Ireland, as a port of call on the trans-Atlantic trip, in favor of Plymouth, Eng. There is no confirmation of this, nor is any likely. The Cunard steamships receive large subsidies from the British Government for conveying the mails, and Queenstown is specifically mentioned as the landing port for the mails, and so long as the subsidy grants are so made, so long will Queenstown be retained as a port of call.

As the result of a memorial from Victoria and Vancouver shippers, an enquiry is being held by the Deputy Minister of Trade and Commerce into the manner in which the Canadian-Mexican Steamship Line is being conducted. It is alleged that there is a discrimination against local shippers. The company receives an annual subsidy of \$50,000 from the Dominion Government to maintain an efficient service for passengers, mails and freight between Canada and Mexico, making 12 trips a year.

A press report states that an experiment in the conveyance of freight from Japan to New York recently, resulted in C.P.R. landing its consignment first at the latter city. It is said that the C.P.R. s.s. *Monteagle*, the Japanese s.s. *Tosa Maru*, and the Pacific Mail s.s. *China*, left Yokohama, Japan, together, each with a portion of a silk cargo, bound, respectively, for Vancouver, Seattle and San Francisco. The first-named reached Vancouver Aug. 4, the two others arriving at their ports on Aug. 6 and 7; and the C.P.R. making delivery in New York two days ahead of the others.

In connection with the recent report that the various transcontinental railways on the American continent had decided to withdraw their Pacific steamship services, Sir Thos. G. Shaughnessy, President of the C.P.R., is reported to have said: "Probably some of the transcontinental railways that established steamship connections on the Pacific Ocean in recent years, with announcements that they could afford to carry all sorts of heavy commodities from eastern centres to the Pacific coast and thence by steamship to Australia, China and Japan in competition with all-water routes, have discovered that policy was not a profitable one and are withdrawing. The C.P.R. has been engaged in the trade for 20 years, has not attempted to do the impossible, and will go right along in the same old way."

Maritime Provinces and Newfoundland.

The s.s. *Arcadia* has been undergoing extensive repairs at New Glasgow, N.S.

T. E. King, a well-known Nova Scotia shipmaster, died at Windsor, N.S., Aug. 18.

The s.s. *Roebling* has been undergoing repairs to her machinery and hull at Halifax, N.S.

The Washademoak Steamship Co. is said to be about to purchase a steamboat to replace the s.s. *Aberdeen*.

Tenders were received, Aug. 14, by the Public Works Department, for repairs to Dixon's Wharf, Grand Manan, N.B.

Tenders were received by the Public Works Department, Aug. 10, for the construction of a low water wharf at Burton, N.B.

Tenders were received by the Public Works Department, Aug. 21, for the construction of a wharf at McPherson's Cove, N.S.

Capt. W. Buchanan, formerly commander of the *Pickford* and *Black* s.s. *Ocamo*, died at Grand Pré, N.S., recently, aged 57.

L. D. Shaffner, Annapolis, N.S., recently launched his twenty-first vessel there. She is named *C. D. Pickles*, and is 450 tons register.

The Newfoundland schooners *Victor*, *Mary Francis* and *Stella*, anchored near Isle au Bois, were driven ashore during a gale Aug. 3, and became total wrecks.

J. McGill, Shelburne, N.S., launched a schooner named *Albert J. Lutz* there Aug. 6. Her dimensions are: Length, 102.6 ft.; breadth, 23 ft.; depth, 10.4 ft.

A schooner named *Willena Gertrude* was launched at Parrsboro, N.S., Aug. 12. Her dimensions are: Length, 132.1 ft.; breadth, 32.4 ft.; depth, 11.2 ft.; 271 tons register.

The King's wharf at St. John's, Nfld., collapsed recently, caused, it is stated, by the gradual decay of the piling. It is estimated the cost to replace it will be about \$10,000.

The contract for repairing the Norwegian s.s. *Ocean*, which grounded near Sydney, N.S., recently, has been awarded to the Halifax Dry Dock Co., where she has been docked.

G. D. Campbell, Weymouth Bridge, N.S., is applying to the Governor-General in Council for approval of plans, etc., for a proposed addition to the wharf on the Sissiboo River there.

Contracts have been awarded to the Maritime Dredging and Construction Co. and the Dominion Dredging Co., for dredging work at Digby and Yarmouth, N.S., respectively.

It is reported that, as the result of the recent severe storm along the Labrador Coast, 34 schooners were wrecked and became total losses. No loss of life, however, occurred.

The Reid Newfoundland Co.'s s.s. *Regulus* is now undergoing repairs, a decision in the matter between the company and the underwriters in London, Eng., having been arrived at.

It is anticipated that dredging work will be undertaken at Courtenay Bay, St. John, N.B., shortly, should it be decided to make St. John the Atlantic terminal of the National Transcontinental Ry.

The Dominion Minister of Public Works recently stated that the plans and specifications for the proposed new Government wharf at St. John, N.B., were complete, and tenders would shortly be called for.

The Reid Newfoundland Co.'s s.s. *Bruce*, which recently ran ashore on Baldwin's Reef, Port aux Basques, has been released uninjured, after the removal of her cargo, and has resumed her sailings.

Three French fishing schooners, which left Cancale, France, for Newfoundland in March,

and which have not since been heard of, have been given up as lost, together, with their crews, numbering 78 men.

The Dominion Government s.s. *Lady Laurier* has recently been engaged in the examination of gas buoys, etc., off the N.S. coast, and is now being utilized for the annual inspection of the east coast lights.

The schooner *Alice Gertrude*, owned by the Canada Sealing Co., Halifax, N.S., is offered for sale. She was built at La Have, N.S., in 1902, her dimensions being: Length, 83.4 ft.; breadth, 22.3 ft.; depth, 9.4 ft.; tonnage, 81 gross.

A schooner named *King Josiah* was launched at Parrsboro, N.S., recently, for J. Soley, Lower Economy, to be used between N.S. ports and the United States. Her dimensions are: Length, 98.1 ft.; breadth, 28.7 ft.; depth, 8.9 ft.; 147 tons register.

J. Mackenzie, a well-known deep sea captain of Nova Scotia, died at Halifax Aug. 2. He at one time commanded a vessel trading with India and China, and latterly was part owner of barques trading on the N.S. coast. He retired from active service in 1893.

The Governor-General in Council has ordered that the limits of the pilotage district of Pictou, N.S., as established Mar. 23, 1874, be extended to include Northumberland Strait, from Cape George, N.S., on the east, to Point Prim, P.E.I., on the west.

A considerable quantity of cargo from the Thomson Line s.s. *Arcola*, recently wrecked near St. Paul's Island, has been landed at North Sydney by the s.s. *Amphitrite*, which is continuing the work of salvage.

The U.S. schooner *Maggie* and *Mary*, of Gloucester, Mass., was run down during a fog off the Nova Scotia coast, Aug. 8, by the German training ship *Freya*, after which she immediately sank, 9 of a crew of 13, mostly of Newfoundland, being drowned.

J. Rainnie, keeper of the Green Island light in the Straits of Belle Isle, was found dead there recently, with a bullet wound in his head. The light not having been exhibited for several nights led to an investigation, with the foregoing result.

The steamboat *Christine*, at one time owned by Lord Strathcona, which was purchased by the Dominion Government last year, was recently in the Halifax dockyard, where her crew accommodation was increased and other repairs undertaken. She was subsequently attached to the Customs service.

The s.s. *Pors*, which ran ashore at Port Hood, N.S., early in Aug., was still high and dry on the beach at the end of the month, though several attempts had been made to re-float her. It is stated that before she can be moved, the sand in which she is embedded will have to be dredged out.

The Dominion Public Works Department has ordered a survey of the St. John River for 60 miles between Fredericton and Woodstock, N.B., to determine the extent and character of the shoals and rapids, with a view to the undertaking of the work necessary to make the river navigable between these points.

The Halifax Towboat Co. has acquired the steam tug *Scotsman* in England. She was built in 1903, and is a screw-driven vessel, with triple-expansion engines, capable of 11 knots an hour. Her dimensions are: Length, 112 ft.; breadth, 19 ft.; tonnage, 141 gross. She arrived at Halifax, N.S., by way of the Azores, Aug. 2.

The South Shore Steamship Co., St. John, N.B., is reported to be giving up business, and offering its steamship *Senlac* for sale. She is a wooden steamer driven by a screw, with engine of 66 n.h.p., built at St. John in 1904, her dimensions being:

THE CANADIAN BRIDGE CO., LIMITED

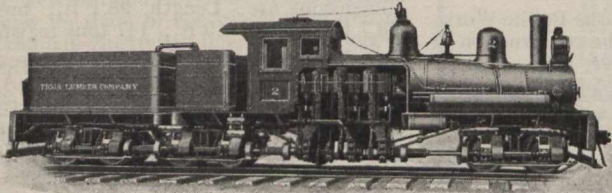
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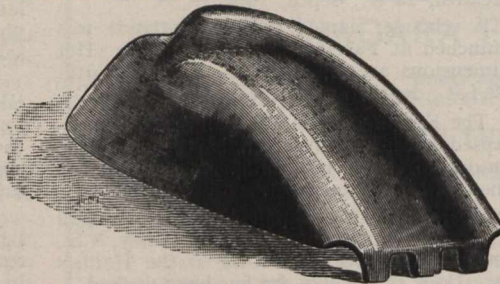
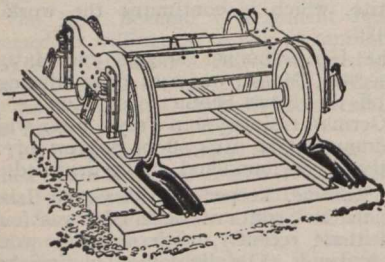
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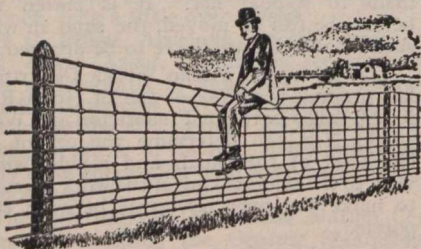


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Sailing from Philadelphia Saturdays.

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New York—London-via-Dover—
Antwerp

Sailing from New York Saturdays.

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41 KING ST. EAST, TORONTO.

length, 182.4 ft.; breadth, 33 ft.; depth, 16.1 ft.; tonnage, 1,011 gross, 615 register.

The Clifton Steamship Co. entertained a party of newspaper men on its new steamboat Premier, recently, with a trip on the Kennebecasis River to Rothesay, N.B., the route on which the vessel is to run. She was built at Clifton, N.B., in 1907, and is a paddle-wheel steamer, with engine of 4 1/4 n.h.p.; her dimensions are: Length, 64.9 ft.; breadth, 21.6 ft.; depth, 4.7 ft.; tonnage, 56 gross, 35 register.

The Lunenburg, N.S., schooner Mary A. Duff has been reported to be abandoned in a water-logged condition, with masts gone, about 900 miles east of Cape Sable. She left Lunenburg, Feb. 19, for Trinidad and, until the recent report, had not been heard of. There is nothing as yet to indicate the fate of the crew. She was built at Lunenburg in 1906, her dimensions being: Length, 94.9 ft.; breadth, 25.4 ft.; depth, 10.0 ft.; 90 tons register.

The Consolidated Steamship Lines, of which the Eastern Steamship Co., operating a steamship service between St. John, N.B., and Boston, Mass., is a subsidiary, has been reorganized, but owing to the large floating indebtedness of the Eastern Steamship Co., the plan does not expressly contemplate provision for its financial requirements. The reorganization committee, however, will acquire the stock of the company now held under the lien of the old mortgage, and reserves the right to transfer it to the new company to be used as security for a new bond issue, or for the general purposes of the company.

The s.s. Lady Sybil, which, as announced in our Aug. issue, has been chartered by the Interprovincial Navigation Co. to replace the wrecked s.s. Lady Eileen on the route between Campbellton and Gaspé ports, is owned by the Magdalen Islands Steamship Co., Halifax. She was built at Greenock, Scotland, quite recently, only arriving in this country this year; is designed to carry 415 tons on a mean draught of 11 ft., and was constructed to Lloyd's special survey and has a British Board of Trade passenger certificate. She is of the awning deck type, with two deck houses with 10 staterooms, and smoking room, wheel-house and captain's cabin above. The dining saloon is located aft, and on the main deck there are 6 staterooms, saloon and other cabins, with purser's office, pantry, galley, etc. There is accommodation for a total of 54 passengers. The machinery comprises electric lighting plant, steam steering gear, two winches, freight elevator, pumps, and triple-expansion engines, with cylinders 16, 26 1/2 and 43 ins. diam., by 30 ins. stroke, supplied with steam from a boiler 15 ft. by 11.6 ft., fitted with forced draught. Her dimensions are: Length, 165 ft.; breadth, 28 ft.; depth, moulded, 12.3 ft.

Province of Quebec Marine.

J. Scott has been appointed harbormaster at Cape Cove, Que.

The Department of Railways and Canals received tenders Aug. 31 for concrete walls, and for the widening of the Lachine Canal.

Work on the construction of a dam above the Chaudiere Falls was commenced Aug. 8. The contract, about \$250,000, is in the hands of Quinlan and Robinson, Montreal.

J. Cuttle, General Manager Montreal Transportation Co., sailed from Montreal Aug. 13 for England on business. He expects to return towards the end of September.

Press reports state that negotiations are in progress for a change in the control of the Montreal Transportation Co., but officials of the company say that there is nothing in it.

The Governor-General, accompanied by the Minister and Deputy Minister of Railways and Canals, started Aug. 18 on a trip of inspection over St. Lawrence and other canals in the Government s.s. Speedy.

The memorial to the late Hon. J. Young, the founder of Montreal as the national port of Canada, is now completed and in position. The official unveiling, which was to have been performed in June by the Governor-General, has been postponed until the fall.

The Quebec and Levis Boards of Trade, and the Quebec Manufacturers' Association, have prepared a number of suggestions to be submitted to a meeting of the Quebec and Levis Ferry Committee, in connection with the renewal of the ferry contract, to be held Sept. 8.

A winding-up order in the matter of the Quebec Navigation Co. was made in the Quebec Courts Aug. 19, on the company's petition. The liabilities are given as \$16,000, including \$8,000 due on the purchase of the s.s. Persia, V. E. Paradis, Quebec, was appointed provisional guardian.

The Montreal Harbor Commissioners have decided to place an up-to-date fire boat on the St. Lawrence in the harbor. A meeting is being arranged with a committee of the city council to discuss the question as to whether the city should bear a portion of the cost.

R. Baquet, President of the Quebec Corporation of Pilots, who piloted H.M.S. Indomitable up the St. Lawrence channel on the occasion of the recent Quebec Tercentenary celebrations, was summoned on board that vessel prior to its departure, and personally thanked for his services, and presented with a souvenir pin by H.R.H. the Prince of Wales.

The Magdalen Islands Development Co., Montreal, is being wound up under an order of the Quebec Courts. The company was incorporated in 1907, with an authorized capital of \$2,000,000, equally divided as to common and preferred stock, and a bond issue of \$500,000. It had power to engage in a general navigation business in addition to a number of other undertakings.

The Minister of Public Works was present at the recent sale of the Carrier, Laine Co.'s property at Levis, when the property was bought by the Bank of Montreal for \$380,000. This has given rise to the rumor that the Bank of Montreal was acting on behalf of the Dominion Government, which is credited with the intention of using the works as a marine machine shop for the repair and building of Government vessels.

A press report states that F. W. Cowie, who holds the position of Chief Engineer of the St. Lawrence Channel, as well as that of Chief Engineer to the Montreal Harbor Commissioners, is to relinquish the former post and devote his whole time to the duties of the latter, which position has increased considerably in importance of late. V. Forneret, Assistant Engineer, has been named as Mr. Cowie's successor as Chief Engineer of the St. Lawrence Channel.

The harbor returns of Montreal for July show a decrease in revenue, as compared with July, 1907, but for the season up to July 31, there is an increase of \$9,009.26, as compared with the same period last year. During the period ended July 31, 362 steam vessels of a total of 923,677 tons entered the port, against 350 of 910,972 tons for the same period last year. The revenue for July is as follows:

	1908	1907
Imports.....	\$ 33,000.00	\$ 38,000.00
Exports.....	15,000.00	11,500.00
Local traffic.....	3,649.42	6,173.75
	\$ 51,649.42	\$ 55,673.75

For period ended July 31:

	1908	1907
Imports.....	\$ 93,000.00	\$ 99,500.00
Exports.....	34,000.00	18,500.00
Local traffic.....	14,360.13	14,350.87
	\$141,360.13	\$132,350.87

Hon. L. P. Brodeur, Minister of Marine, accompanied by F. W. Cowie, Chief Engineer of the St. Lawrence ship channel, and a large party representing the Shipping Federation of Canada, Montreal Harbor Commissioners, Quebec Harbor Commissioners, Quebec Board of Trade, etc., opened the Beaujeu channel for traffic July 29. The removal of the Crane Island Flats, long a hindrance to the navigation of the channel, has been accomplished, and a depth of 30 ft. at extreme low tide obtained. The work was commenced July 29, 1906, and it is estimated that 1,000,000 cubic yards of clay and sand has been removed, at a cost, including the purchase of a dredge, of about \$1,000,000. For the guidance of navigators a new range of light buildings has been erected on Goose Island, to be known as the Hospital Rock range, and acetylene gas buoys installed at various points.

Ontario and the Great Lakes.

The Northern Navigation Co.'s new steamship, now under construction, will be named Pacific.

The dredging of Cobourg harbor is being proceeded with, the Hamilton dredge Chief being engaged on the work.

Following the recent grant of \$5,000 for the construction of a dock at New Liskeard, a dredge has been put to work to clear the channel.

Gore Bay has been created an outport of customs and warehousing port, under the survey of the port of Sault Ste. Marie, by order of the Governor-General in Council.

The Niagara Navigation Co.'s steamboat Chicora, after having her machinery overhauled at the Polson Iron Works, Toronto, was again placed in regular service early in August.

By order of the Governor-General in Council the name of the steamboat Ojibway, registered at Toronto, no. 100,038, described in the Canada Gazette as a "schooner," has been changed to Jasmine.

The U.S. steamship Daniel B. Meacham, from Ashtabula to Port Arthur, with coal, ran on the rocks at Passage Island recently, during a fog. She was subsequently floated and arrived in port under her own steam. Apart from two holes in her hull there was no damage.

Imperial Service Medals for long and meritorious service have been granted to J. Brydges, lock laborer, Corawall Canal; M. Corcoran, Lockmaster, Welland Canal; C. Milne, lock laborer, Rideau Canal; and J. B. Turcotte, seaman at Grosse Isle quarantine station, Que.

The Rideau Houseboat Association, Ltd., has been incorporated under the Ontario Companies Act, with a capital of \$5,000, and office at Kingston, to manufacture, buy and sell, and deal in houseboats and kindred craft. The provisional directors are: W. A. Hirsch, W. F. W. Veysey, and I. Niner, New York City.

The Western Steamship Co.'s s.s. J. A. McKee was launched at Wallsend-on-Tyne, Eng., recently. The christening ceremony was performed by the wife of one of the directors of the building company, acting for the daughter of Capt. W. J. Bassett, of Collingwood. Full description of the vessel was given in our June issue.

The shareholders of the Northern Navigation Co. of Ontario, at a special meeting in Toronto, Aug. 19, approved two by-laws

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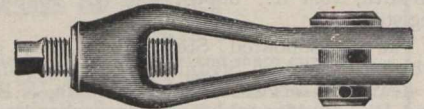
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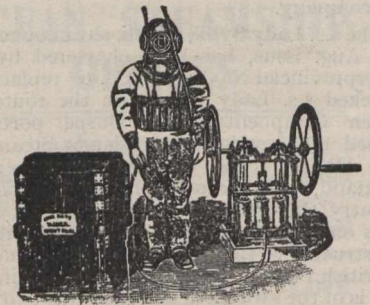
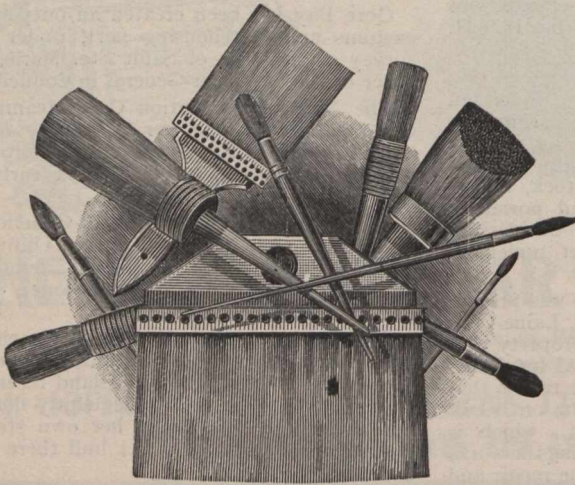
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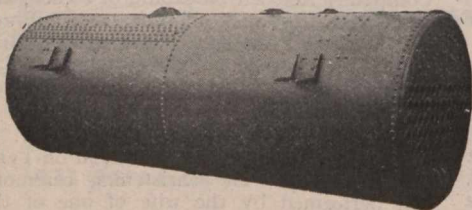
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DRILLS, TOOLS, ETC.

passed by the directors, one authorizing them to borrow money from any chartered bank for the purpose of transacting the company's business, the other authorizing the borrowing of \$500,000 by an issue of 5% bonds, to be secured by a mortgage on the company's vessels, including the one now under construction at Collingwood. It is expected the bonds will yield the company between 92 and 95.

The old schooner Erie Belle was destroyed by fire recently in Chippewa Creek, where she has lain dismantled for twelve years. After unloading on her last trip in 1896, the crew went on strike for unpaid wages at La Salle, and the captain sailed her to Chippewa, where she was seized at the instance of the mortgagees and subsequently sold to a firm of contractors who intended changing her to a scow, but abandoned the idea. She was built in 1873 at Port Burwell, her dimensions being: Length, 125.5 ft.; breadth, 24.4 ft.; depth, 9.8 ft.; tonnage, 275 register.

Manitoba, Saskatchewan, Alberta, Etc.

The name of the customs outport of Krahn, Man., has been changed by order of the Governor-General in Council to Haskett.

It has been recently stated that dredging work is to be undertaken shortly at Boundary Creek, Lake Winnipeg, with the intention of creating a harbor there. The Dominion Public Works Department has voted \$7,500 for the work, and it is said the Government will be asked for a grant towards the construction of a pier at that point.

The Dominion Fish Co.'s s.s. Premier was destroyed by fire Aug. 6, at Warren's Landing, Lake Winnipeg, and eight lives were lost, mostly those of passengers. It is stated that the vessel was caught in a storm and was driven on the rocks, where she keeled over and took fire. She was built at Selkirk, Man., in 1896, and was a screw steamer, with engine of 32 n.h.p. and of the following dimensions: Length, 126 ft.; breadth, 22.9 ft.; depth, 8.9 ft.; tonnage, 414 gross, 282 register. A sister ship, the Princess, was wrecked last year, and several lives were then lost.

The St. Andrew's lock and dam now being constructed near Winnipeg, is situated at the foot of St. Andrew's rapids in the Red River, 21½ miles below the city. The rapids extend for about 10 miles above the lock, the fall in that distance being 15 ft. Navigation in this part has been restricted to shallow draft boats, and only at periods of high water. By means of this dam the water level will be raised 21 feet above low water elevation, flooding out the rapids in the vicinity of Winnipeg. The dam, which is 800 ft. long between abutments, consists of a sub-structure built of concrete, and a superstructure or movable dam operated from a steel service bridge, by which control is kept on the upper water, maintaining it at a level of 21 feet above the water in the lower reach. The construction of a movable dam was found necessary so that surplus water could be carried off without flooding the surrounding country. This movable dam will be the first constructed in Canada, the type being a combination of existing dams now in operation in Europe. The service bridge from which the movable dam is operated is carried over the permanent dam by means of five piers about 134 ft. apart, and frames are lowered by means of travelling cranes, the lower end of the frames resting on cast steel sockets embedded in the concrete dam. Rolling curtains are lowered on the steel frames and the water raised to the desired level. Provision is also made to carry a highway bridge over the service bridge.

B.C. and Pacific Coast Marine.

The Union Steamship Co.'s s.s. Cariboo has recently arrived at Victoria, B.C., from Great Britain. Her dimensions are: Length, 163 ft.; breadth, 32 ft.; depth, 23 ft.

The Pacific Coast Fisheries, Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$300,000, to carry on a general fisheries business, and in connection therewith to construct, purchase and operate steam and other vessels.

The Prince Rupert Whaling Co., Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$400,000, to carry on a general whaling business, etc., and in connection therewith to own and operate steam and other vessels, and to act as general carriers, wreckers, etc.

The B.C. Marine Railways Co., Victoria, has deposited plans of a new wharf extension and marine railway which it is proposed to construct at Esquimalt, in connection with the company's present plant there, with the Dominion Government, and is asking approval for the same.

The Dominion Department of Agriculture is offering for sale by tender the Government quarantine steamship Earl, now lying off William Head, B.C. She is a screw-driven vessel with engine of 21 n.h.p.; was built at Vancouver, B.C., in 1890, and is of the following dimensions: Length, 72 ft.; breadth, 16 ft.; depth, 7 ft.; tonnage, 75 gross, 50 register.

The Queen Charlotte Islands and Jedway Syndicate, Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$50,000, to carry on a general mining, dredging, and refining business, and in connection therewith to own and operate steam and other vessels, wharves, docks, etc., and to carry on the business of carriers by land and water.

The Terminal Steam Navigation Co., Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$200,000, to purchase and take over the property and good-will of the Terminal Steamship Co., Ltd.; to purchase, build or otherwise acquire steam and other vessels and operate same for the conveyance of mails, merchandise, passengers, etc.; to acquire shore rights, wharves, piers, docks, elevators, etc., and to carry on the business of ship-owners, shipbuilders, wharfingers, forwarding agents, underwriters, and general carriers by land and water.

Marine Votes for 1908.

In addition to the amounts given on pg. 373 of our May issue, and pg. 597 of our Aug. issue, the Dominion Parliament, at its recent session, voted the following sums for various services connected with the marine interests. The votes have been made in connection with the Department of Railways and Canals, Public Works, Marine and Fisheries, and Trade and Commerce, and include sums voted on capital account.

STEAMSHIP PURCHASE OR CONSTRUCTION.

Further amount required for repairs to cruiser Princess.....	\$ 20,000.00
Purchase of gasoline launches for British Columbia (revote).....	4,000.00
Construction and completion of steamer for Pacific coast hydrographic survey (revote).....	45,750.00
Purchase or construction of steamer for Gulf and River St. Lawrence hydrographic survey to replace La Canadienne.....	50,000.00
Dominion steamers, further amount required, including repairing damages to Montcalm.....	100,000.00
Towards cost of steamer to replace Lansdowne for Bay of Fundy service.....	75,000.00
Purchase or reconstruction of steamer to replace Osprey.....	25,000.00
Purchase or reconstruction of steamer to replace Georgia.....	20,000.00

DREDGING PLANT, ETC.

New plant for Maritime Provinces.....	\$ 300,000.00
" " Ontario and Quebec.....	200,000.00
" " Saskatchewan & Alberta.....	30,000.00
" " British Columbia.....	150,000.00
Dredging work, Maritime Provinces.....	350,000.00
" " Ontario and Quebec.....	300,000.00

LIGHTHOUSES AND LIGHTSHIPS.

Lighthouses, maintenance and repairs..	80,000.00
Lightkeepers, salaries, etc.....	30,000.00
British Columbia trail, further amount..	40,000.00
Repairs to Gaspe coast maritime road..	2,000.00
Limekiln Crossing—To charter steamers for patrolling channel, further amount for the purchase of land, etc., at St. John, N.B., for the Marine Department	50,000.00
Maintenance and upkeep of dockyards..	10,600.00
Pilotage, further amount required for administration.....	1,550.00
Amount required to pay pensions.....	3,600.00
Signal service at Grosse Ile, L'Ilet and Amherst Island.....	1,000.00
Point Pelee, for establishing and maintaining a lightship.....	30,000.00

OCEAN AND MAIL SUBVENTIONS.

Mail service, Great Britain and Canada..	412,500.00
Service between Canada and Australia..	180,509.00
Service between Canada, Japan and China, additional.....	48,666.66
Additional amounts for various services between ports in the Maritime Provinces and Quebec.....	13,850.00

HARBOR AND RIVER WORKS.

Annapolis, N.S., additional for harbor..	25,000.00
Digby, N.S., additional for repairs, etc. Summerside, P.E.I., breakwater (revote, \$19,000).....	30,000.00
Charlottetown, P.E.I., harbor.....	25,000.00
Levis, Que., deep water harbor.....	40,000.00
Three Rivers, Que., deep water coal wharf	50,000.00
Burlington, Ont., channel piers improvement.....	20,000.00
Little Current channel, Ont., improvements.....	30,000.00
Victoria Harbor, Ont., improvements..	50,000.00
Tiffin, Ont., harbor improvements.....	75,000.00
Fraser River, B.C., ship channel, improvements and protective works.....	100,000.00
Piers and wharves, repairs and other improvements at 21 points in P.E.I.	65,650.00
Ditto, at 146 points in Nova Scotia.....	293,410.00
Ditto, at 41 points in New Brunswick	217,200.00
Ditto, at 124 points in Quebec.....	492,030.89
Ditto, at 78 points in Ontario.....	282,905.93
Ditto, at 5 points in Manitoba.....	22,500.00
Ditto, at 3 points in Sask. and Alta.	27,000.00
Ditto, at 24 points in British Columbia	147,584.85
Lewes and Yukon Rivers, additional...	2,500.00

CANALS.

BEAUHARNOIS.—Repairs to dykes.....	\$ 12,000.00
CARILLON.—Dam across slides (revote)..	140,000.00
CHAMBLY.—Rebuilding office.....	800.00
CORNWALL.—Land damages.....	495.00
Plan and boundaries.....	500.00
To pay interest for six years on deferred purchase of stone.....	2,386.09
Gate lifter.....	500.00
Repairs to break in bank.....	150,000.00
LACHINE.—Gatebars (revote).....	2,500.00
To pay loss of horse.....	225.00
Wall, St. Gabriel basin.....	325.00
Raising shed, St. Gabriel basin.....	2,750.00
Bridge, St. Elizabeth St.....	30,000.00
NORTH CHANNEL.—Final estimate.....	5,000.00
RIVER ST. LAWRENCE.—Removing of shoals west of upper entrance Galops Canal, (revote \$20,100).....	34,000.00
St. ANNE'S LOCK.—Gatebars (revote)...	200.00
St. OURS LOCK.—Gatebars (revote).....	250.00
St. PETER'S.—Rebuilding and extending lock.....	25,000.00
SOULANGES.—Gate lifter (revote).....	12,000.00
Gatebars (revote).....	500.00
Gratuity to widow of J. Bermingham..	141.68
TRENT.—To pay damages to properties caused by flooding.....	100,000.00
WELLAND.—Surveys.....	10,000.00
Dredging slides.....	30,000.00
Dock south of Welland.....	45,000.00
Port Colborne elevator staff.....	8,000.00

MISCELLANEOUS.

Compensation to W. Paul, jr., injured in Champlain-Préfontaine collision.....	\$ 7,000.00
Gratuity to mother of Jos. Carboneau, killed in service of Marine Department	500.00
Rewards for saving lives at wrecks....	8,000.00
Investigations into wrecks, additional..	3,000.00
Tidal service, further amounts required.	2,000.00
Steamboat inspection, further amount..	3,600.00
Immigrant shed, North Sydney, N.S....	2,000.00
St. John, N.B., Partridge Island quarantine station, additional for building..	3,400.00
Quebec: Improvements, renewals, etc., at carpenter's shop, Marine Department Agency.....	3,000.00
Quebec: To pay C.P.R. for account of alterations at Louise Embankment immigrant buildings.....	11,649.93

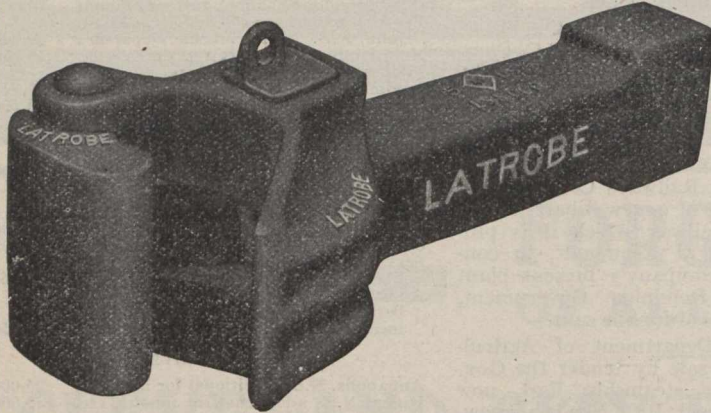
Dominion Canal Statistics.

The canal statistics for 1907, prepared by J. L. Payne, Comptroller of Statistics, recently issued by the Department of Railways and Canals, show that the waterborne traffic of the Dominion was the larg-

est on record. The total aggregated 20,543,639 tons, as compared with 10,523,185 tons in 1906, an increase of 95.2%. The increase during 10 years was 210.4%. The principal increase was in the business of the Sault Ste. Marie Canal, which showed an increase of 5,601,943 tons over 1906; the

total amount of traffic for 1907 being 12,175,982 tons, whereas in 1898 it was 2,757,937 tons. Of the total traffic passing through the Sault Ste. Marie Canal in 1907, 2,288,349 was Canadian and 9,887,633 tons U.S. tonnage; the former showing an increase of 467.3%, and the latter 315.6%, over the figures for 1898. The number of

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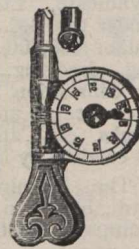
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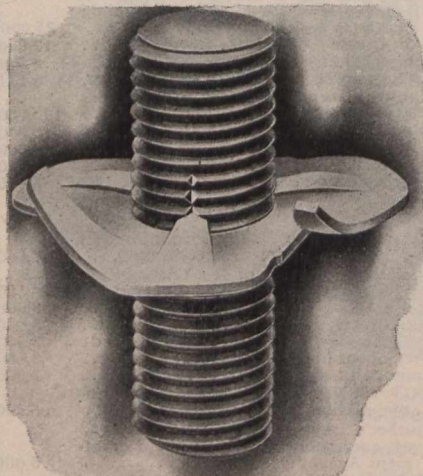
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vessel passages for 1907 was 6,153, compared with 3,712 in 1898, an increase of 65.7%, which, when compared with the increase in tonnage, shows that the carrying business of the upper lakes is developing a much larger type of vessel. The foregoing figures relate to the traffic passing through the Canadian canal alone, the combined tonnage passing through both canals, each of which is utilized by Canadian and U.S. vessels alike, was 70,393,196 tons. For the current year a change in the method of recording statistics is being adopted, the record of purely Canadian cargoes will be kept distinct from those of the U.S., on all Dominion canals.

Tonnage passing through the Dominion canals:

	1906 Tons	1907 Tons
From Canadian to Canadian ports.....	3,594,784	4,196,891
From Canadian to U.S. ports.....	862,013	1,117,830
From U.S. to U.S. ports.....	4,586,764	13,052,837
From U.S. to Canadian ports.....	1,479,624	2,176,081

Totals..... 10,523,185 20,543,639

There was a capital expenditure for the year ended Mar. 31, 1907, of \$91,734,718.21, apart from the outlay by the Imperial Government, the records of which were destroyed by fire in 1852. Following are details of the expenditure:

St. Peter's.....	\$ 648,547.14
Lachine.....	11,597,750.78
Beauharnois.....	1,636,690.26
St. Lawrence river and canals.....	3,311,840.80
Lake St. Louis.....	298,176.11
Lake St. Francis.....	75,906.71
Cornwall.....	7,224,284.70
Williamsburg.....	10,373,311.29
Welland.....	27,275,869.40
St. Anne's.....	1,170,215.63
Carillon and Grenville.....	4,182,092.96
Colbute.....	382,776.46
Rideau.....	4,085,889.21
St. Ours.....	121,537.65
Chambly.....	637,056.76
Murray.....	1,248,820.26
Trent.....	5,430,488.66
Tay.....	489,599.23
Sault Ste. Marie.....	4,639,180.62
Soulanges.....	6,904,683.58
Total.....	\$91,734,718.21

The total revenue, exclusive of hydraulic rents, was \$456,781.86, against \$379,549.70 for 1906. Passage through the Sault Ste. Marie canal is free.

Beeson's Marine Directory.—The volume of this standard directory of the marine interests of the Great Lakes, for 1908, being the twenty-second annual volume, has been issued. The book contains all the features which have in times past made it necessary to all connected with the lake marine, and devotes 15 pages to a new feature, viz., a descriptive list of all U.S. ports on the Great Lakes. The list of Canadian vessels operated on the Great Lakes and tributary waters, has been carefully compiled from information gathered from various sources, the Editor mentioning among others THE RAILWAY AND MARINE WORLD as having furnished "much that is of value in the compilation of this vessel list." The illustrations, as usual, form a feature of the volume, and this year they include: Drawings showing the dimensions of the locks on the Canadian canal systems; the power lifeboat built in the United States for the Banfield Creek life saving station, B.C., and the s.s. Carleton, built in Scotland for F. E. Hall & Co., Montreal.

During June, 4 men were killed and 12 injured in the course of their employment in navigation in Canada. Three of the fatalities were due to drowning and 1 to a fall. Of the non-fatal accidents, 4 each were due to falling materials, to falls, and 2 each to an explosion of gasoline and to machinery.

The Ottawa-Trold Collision.

Commander O. G. V. Spain, R.N., Dominion Wreck Commissioner, assisted by Capt. C. Koenig and J. Bain, held an enquiry recently into the causes of the collision between the Dominion Line s.s. Ottawa and the Norwegian s.s. Trold, May 10. The following judgment has been delivered, from which Capt. C. Koenig dissents: The s.s. Ottawa appears to have taken her departure from Fame Point and steered her course so as to pass through Cabot Straits, as was customary; this course was maintained and at no time altered, bright lookouts being kept; the weather was clear till 8.55 p.m., when it became hazy; the master of the Ottawa was at once promptly called, the engine room telegraph being put to standby; shortly after this, about 9.10 p.m. approximately, the weather became thick and foggy, the engines were slowed, the lookouts were doubled, and every possible precaution taken to avoid danger of collision, thus complying with art. 16 of the International Rules of the Road. Hearing a sound signal—one long blast—one or two points on the port bow, the engines of the Ottawa were stopped and reversed to stop the way of the vessel; at no time was the control of the Ottawa lost; she was kept directly on her course, blowing one long blast at intervals. Approximately at 9.30 p.m., the first sound signal from the s.s. Trold was heard—one long blast; shortly after this the collision took place. The court viewed the damage done to both vessels after the disaster, and found that the stem and bow plating of the Ottawa were intact and without a mark; abaft this the plating and frames are torn away and curled inboard. Therefore, the court deduces that the angle at the point of contact was small, the vessels clearing each other by backing. Had the Ottawa ported without seeing and knowing the position of the other vessel she would inevitably have been struck amidships in the most vulnerable point, and as she was carrying passengers, probably with very large loss of life. The court considers that the master and officers of the Ottawa acted judiciously, and did all they could for the safe navigation of the vessel. The s.s. Trold was bound from Sydney to Montreal with coal. It appears from the evidence that this vessel had been navigating in foggy and thick weather at full speed for some considerable time before the disaster occurred; it also appears that the Trold was not under control for some seven minutes; this the court views with dismay, as no seaworthy vessel should be uncontrollable for this period of time, unless her engines or steering gear are broken down; she was not kept on her course as proper seamanship would dictate, until the position of the other vessel was ascertained, but from the evidence, was allowed to fall off her course. The Trold, in the opinion of the court, was not properly manned; the chief engineer, who was on watch at the time of the collision, was alone in the engine room, and it is impossible for one man, without assistance, to attend to the many and various duties in the engine room of a large vessel when she is under way. There is no doubt that when those on board the Ottawa heard the first long blast from the Trold, she was on the Ottawa's port side, and had the officers of the Trold maintained control of their vessel and kept her on her course at a reasonable speed, the collision in all probability would not have occurred. The court therefore considers the master and officers of the s.s. Trold to blame for the collision.

In dissenting from this judgment, Capt. Koenig remarks: The Trold was on her way from Sydney to Montreal. It was proved

that she was steering badly, and when her engines were stopped she did not steer unless she went through the water from 5 to 6 knots an hour. I find that the officer in charge of the Trold before and at the time of the collision did not comply with art. 16 of the International Rules of the Road, which reads as follows:

"SPEED OF SHIPS TO BE MODERATED IN FOG.

"SPEED RESTRICTED IN FOG.—Art. 16.—Every vessel shall, in a fog, mist, falling snow, or heavy rain storms, go at a moderate speed, having careful regard to the existing circumstances and conditions.

"A STEAM VESSEL TO STOP IF ANOTHER VESSEL SIGNALLING FORWARD OF HER BEAM.—A steam vessel hearing apparently forward of her beam, the fog signal of a vessel, the position of which is not ascertained, shall, so far as the circumstances of the case admit, stop her engines, and then navigate with caution until danger of collision is over."

Under such circumstances, when a ship steers badly, it is the duty of the officer in charge to go slowly, so as to keep his own vessel under control, so she can steer. Sometime before the collision, it was proven that the Trold was uncontrollable, because she would not steer; her helm was hard aport and she was canting to port. The officer in charge should have kept headway on his vessel, so as to throw her head to starboard, instead of letting her cant to port and losing control of her, according to the evidence given. Therefore, the officer in charge failed to comply with art. 16 above mentioned, in not having navigated his ship with caution until danger of collision was over. It was also proved that the whistle of one long blast of the Ottawa was heard right ahead two or three times, and once on the starboard bow; the latter sound was heard on the starboard bow because she had canted to port. According to the long blasts with intervals the officer in charge should have complied with art. 18, to avoid collision, which article reads as follows:

"STEAM VESSELS MEETING.—Art. 18.—When two steam vessels are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other."

The hearing of the whistle of the Ottawa on the starboard bow of the Trold has proved that the Trold had canted and was canting to port, as none of the witnesses from the Ottawa said that the whistle of the Trold was heard from the starboard bow of the Ottawa; if the officer in charge of the Trold had complied with art. 16, above mentioned, keeping control of his ship, so as to navigate with caution, and also with art. 18, as to the whistle which was heard from right ahead, he would have kept the helm hard aport and the engine slow ahead, and he would thus have passed clear of the Ottawa. In my opinion the Trold was not properly manned. It was proved by the chief engineer of the Trold, who was on watch at the time of the collision, that he was alone in the engine room to attend to the engine telegraph bell, greasing of the engine, looking after the pumps and the firemen, writing the movements of the engine on the blackboard; in my opinion it is impossible for one man, without assistance, under such circumstances, to properly obey the orders given to him from the bridge through the telegraph bells, especially in narrow water. The s.s. Ottawa was on the way from Montreal to Liverpool loaded with general cargo. I am glad to say that she was well equipped and well manned, with good discipline on board. According to the evidence given by the captain, the officer in charge of the bridge and two lookout men, they heard a prolonged blast three times, with an interval of 30 seconds to 1 minute between each blast, on the port bow of their own ship. It was also proved that those long blasts were answered by the Ottawa by long blasts. The captain, knowing that

the blasts came from a steamer which was on the port bow, and also having answered the same by long blasts from the Ottawa, he did not comply with art. 18, to avoid collision as above mentioned. His ship was steering well, had a good steering-way on her; to avoid collision he should have altered his course to starboard, where she had ample room to do so, so that each ship

would have passed on the port side of the other. My opinion of the collision, after all the evidence given by the witnesses is taken into consideration, is that both ships are to blame, according to the articles of the International Rules of the Road as above mentioned.

Commander Spain comments on the dissenting judgment, as follows: The judg-

ment of the court in this case is not agreed with by one of the Assessors, Capt Koenig; the other Assessor, Capt. Bain, agrees with the court. I shall therefore read the opinion of the court and also the opinion of the dissenting Assessor. Arts. 18 and 28 of the International Rules of the Road, quoted by Capt. Koenig, in the opinion of the court have nothing to do with this particular case,

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as they only apply when vessels are in sight of each other. This was practically proven in a collision which occurred some years ago between the s.s. Vancouver and s.s. Lake Ontario, and the court judged the Vancouver to blame for having ported her helm in response to a supposed steering signal when approaching vessel or lights could not be seen. In the opinion of the court the s.s. Ottawa would not have been justified in changing her course until she had ascertained the position of the other vessel. The court is of the opinion that the Ottawa complied with art. 16, which is the only article pertinent to the case in question.

The Lake Champlain Route.

A. B. Fry, a member of the Board of Consulting Engineers, New York State Canals, read a paper on "A Consideration of the Champlain Canal and its Canadian Possibilities," at a conference on waterways, held recently at Albany, N.Y. After reviewing the development of the Hudson Valley and Lake Champlain water route connecting the ocean at New York with Canada, Mr. Fry proceeds to consider what it is proposed to do and what has been done on the Champlain under the Barge Canal Act, which became effective in 1904. The work comprises the construction of 10 locks, excluding the Troy lock, with a total lockage of 183.5 ft. from Albany to the lake, various works of river improvement, and new canal construction. Of the contracts which comprise this work, six, covering about 34 miles of river improvement and canal line, are well under way, and it is expected that within about three years it may be possible for a vessel of say not over 15 ft. freeboard, 11 ft. draft, not over 42 ft. beam, and 300 ft. long, to proceed from New York City to the head of Lake Champlain at Rouse's Point. Without considering the Canadian side of the question vast possibilities of trade expansion were opened up. The locks being constructed are 328 ft. long, 45 ft. wide, and have a depth of water of 12 ft., which will enable the best European canal practice to be followed. Assuming a proper hull construction and model, it is entirely practicable to infer the barge canal may have in service vessels capable of carrying from 1,000 to 1,500 tons of cargo or even more. A barge 300 ft. long, 40 ft. beam, and drawing 10 ft. of water, with a reasonable design of hull and provided with moderate steam power, should be able

to carry 2,500 tons or more of cargo. In considering the Canadian possibilities Mr. Fry says he does not hope to see New York the fall and spring harbor of Montreal as the result of the construction of the canal. Montreal, the commercial capital of Canada, lies 384 miles due north of New York. When the barge canal is completed vessels of 10 ft. draft will be able to navigate to Rouse's Point, within 50 miles by land of Montreal. Of the inland navigation between New York and Rouse's Point only 35 miles will be in land line or greatly restricted waterway, the remainder lying in the Hudson River and in Lake Champlain, with channels 200 ft. or more wide and 12 ft. deep, and for about 150 miles over 18 ft. deep.

He is a believer in the ultimate construction of the so-called Georgian Bay Canal, and it is therefore well for New Yorkers to look for the means by which, to the profit of Canada and themselves, such portions of the traffic to Montreal as would bear transshipment could go out via a canal to Lake Champlain, the Hudson, and the port of New York. The alleged dangers and difficulties of spring and fall navigation Mr. Fry considers too well known to need restating, but he is evidently inclined to exaggerate them, and the fact that much Canadian produce could be loaded in barges and steam propellers of fair tonnage for distribution is well worth remembering. It is a question of but a short time when the products heretofore obtained from the eastern forests of the U.S. must be replaced by the wood of Canada, and the abundant water powers along Lake Champlain and the northern frontier of the U.S. will encourage the establishment of new woodworking centres. What effect the construction of the Georgian Bay Canal would have on the commerce of Montreal, or what share a decent Champlain connection might bring to the United States, is a matter of conjecture. Even if the Georgian Bay Canal were not constructed, it is believed that by an expenditure of less than \$14,000,000 it is possible for either the Canadian Government or private parties to make navigable a direct waterway between Montreal and Lake Champlain via St. John's and the Richelieu River, for vessels that would carry 2,000 tons or more. At relatively small cost the present waterway in Canada between the St. Lawrence and Lake Champlain could be improved.

In the light of Mr. Fry's paper the following description of what the Canadian Government has done for the development of

navigation between Lake Champlain and the St. Lawrence River will be of interest.

The Richelieu and Lake Champlain system of navigation commences at Sorel, at the confluence of the St. Lawrence and Richelieu Rivers, 46 miles below Montreal, extends along the latter river, through the St. Ours lock, to the basin at Chambly, thence by the Chambly Canal to St. John's, and along the River Richelieu to Lake Champlain. The distance from Sorel to the International boundary line is 81 miles, divided as follows: Sorel to St. Ours lock, 14 miles; St. Ours lock to Chambly canal, 32 miles (inclusive of the lock 1/2 mile); Chambly canal, 12 miles; Chambly canal to International boundary, 23 miles. The St. Ours lock and dam is in the eastern channel of the river, the dimensions being: Lock, 200 ft. by 45 ft.; with a depth of 7 ft. on sill at low water; rise of lockage, 5 ft.; length of dam in eastern channel, 300 ft.; length of dam in western channel, 690 ft. Between St. Ours lock and Chambly Basin there is a navigable channel having a depth of 7 ft. The Chambly canal overcomes the rapids between Chambly and St. John's. The dimensions of the locks, etc., are: Guard lock 1 at St. John's, 122 ft. long; lift lock 2, 124 ft. long; lift locks 3, 4, 5 and 6, each 118 ft. long; lift locks 7, 8 and 9, combined, 125 ft. long; they have widths varying from 22 1/2 ft. to 24 ft.; with a depth of 7 ft. of water on the sills; the total rise or lockage being 74 ft. The canal has a breadth of 36 ft. at the bottom and of 60 ft. at the surface of the water. During the season of navigation of 1906 the traffic carried on the Chambly canal was 498,939 tons, an increase of 51,870 over 1905; the figures for the season of 1907 are not yet available.

A company with the title of the Lake Champlain and St. Lawrence Ship Canal Co. was incorporated by an act passed by the Dominion Parliament in 1898, with power to construct a canal from the south shore of the St. Lawrence River in Chambly county to the Chambly canal, or to the Richelieu River, as might be most convenient, to carry on a general navigation business and for other purposes. The provisional directors named in the act are: Hon. A. A. Thibaut, Hon. W. Owens, Hon. T. Berthiaume, R. Prefontaine, S. H. Ewing, A. J. Corriveau, H. A. A. Brault, R. Bickerdike, A. Haig-Sims, P. Galibert, C. Berger, T. T. Gauthier, W. G. Reid, Montreal; S. T. Willett, Chambly Canton, Que.; Hon. J. Girouard, M. Perrault, L. E. Morin, Longueuil, Que.; J. Ocain, A. MacDonald, St. John's, Que.; S. M. Weed, Plattsburg, N.Y.; C. F. Barger, J. W. Allison, New York City; C. H. Cummings, Mauch Chunk, Pa. The company obtained a renewal of its charter rights in 1902, when a number of changes were made in the provisional directorate. Efforts were made during that year to interest U.S. capital in the route, and some preliminary surveys were made. At the recent session of the Dominion Parliament an act was passed granting a further extension of two years to commence the work of construction and of five years to complete the canal.

A. B. Stanbury and W. R. Davis have been appointed Measuring Surveyors of Shipping for Toronto and Hamilton respectively.

P. E. Parent, District Engineer Marine Department, Quebec, left there Aug. 20, on the Government steamship Rouville, on a tour of inspection to Father Point, Bicquette and Saguenay.

The schooner Katherine V. Mills was launched at Granville Ferry, N.S., Aug. 19, and will be engaged in the West Indies trade. Her dimensions are: Length, 100 ft.; breadth, 30 ft.; depth of hold, 11 ft.; 200 tons register.

SAULT STE. MARIE CANALS TRAFFIC.

The following commerce passed through the Sault Ste. Marie canals in July:

ARTICLES.	CANADIAN CANAL	U.S. CANAL	TOTAL
Copper.....Eastbound.....Net tons	904	7,572	8,476
Grain.....".....Bushels	2,100,720	1,847,357	3,948,077
Building stone.....".....Net tons		577	577
Flour.....".....Barrels	193,846	341,441	535,287
Iron ore.....".....Net tons	1,003,183	3,369,709	4,372,892
Pig iron....."....."		3,256	3,256
Lumber.....".....M. ft. B.M.	3,067	67,498	70,565
Wheat.....".....Bushels	3,457,181	1,946,665	5,403,846
General merchandise.....".....Net tons	6,467	9,593	16,060
Passengers.....".....Number	4,427	3,717	8,144
Coal, hard.....Westbound.....Net tons	113,491	165,228	278,719
Coal, soft....."....."	459,988	1,368,869	1,828,857
Flour.....".....Barrels	265		265
Grain.....".....Bushels			
Manufactured iron.....".....Net tons	15,140	15,693	30,833
Iron ore.....".....Barrels	10,482	51,581	62,063
Salt.....".....Net tons	46,989	71,156	118,145
General merchandise.....".....Number	5,189	2,977	8,166
Vessel passages.....Number	869	1,677	2,546
Registered tonnage.....Net	1,497,473	3,640,895	5,138,368
Freight—Eastbound.....Net tons	1,178,380	3,643,901	4,822,281
" Westbound....."	637,187	1,628,681	2,265,868
Total freight....."	1,815,567	5,272,582	7,088,149

Stranding of the S.S. Portsmouth.

Commander O. G. V. Spain, R. N., Dominion Wreck Commissioner, with Captains C. Koenig and J. Bain as assessors, held an inquiry at Quebec, recently, into the cause of the stranding of the s.s. Portsmouth near Cape Chatte, on July 12. The following judgment has been given: The s.s. Portsmouth was bound from South Wales to Quebec with a cargo of coal for His Majesty's Atlantic fleet at Quebec. She was properly found in all the Board of Trade requirements and everything went well on the voyage across the ocean until 3.25 p.m. on July 12, when the ship struck the well-known reef about 4 miles east of Cape Chatte. The master, Capt. Roberts, after being for some 24 hours on deck continuously, and the weather being fine and clear, and sea smooth, left the deck in charge of the first officer, J. L. Marten, with instructions to keep the course, which was west $\frac{3}{4}$ north, and not to approach closer than $1\frac{1}{2}$ to 2 miles from the land. At 2.25 the first officer, being under a mistaken impression that he was too far from the land, altered the course to west, and continued on this course till the ship struck at the time above mentioned. The court is of the opinion that the casualty to the s.s. Portsmouth was caused by disobedience of the master's orders on the part of J. L. Marten, the first officer, in altering the course contrary to instructions and not informing the master be-

fore doing so. The first officer himself acknowledges that this was the cause and made an entry to that effect in the mate's official log after the accident. The court wishes to place on record the straightforward evidence given by the first officer, but cannot overlook his direct disobedience of orders, and therefore suspends the foreign sea-going Board of Trade certificate of first mate no. 034864, held by J. L. Marten, for a period of 12 months from July 12, 1908, the date of the casualty, but grants him a second mate's certificate during that period.

C. Stanton and L. Bance have been appointed Assistant Deputy Minister, and Chief Clerk, respectively, of the Dominion Department of Marine.

The Governor-General in Council has approved an addition to the tariff of tolls charged at Government wharfs, providing that on small lots of general merchandise shipped to one consignee, 4c. a cwt. may be charged.

The Mexican and Foreign Products Co., Ltd., has been incorporated under the Dominion Companies Act, with a capital of \$18,000, and office at Montreal, to carry on a general business as manufacturers' agents, warehousemen, forwarders, brokers, etc., and to acquire and operate warehouses, elevators, wharves, and vessels of all kinds necessary for the business of the company.

Among the Express Companies.

J. A. Hill has been appointed Assistant Auditor, Canadian Northern Ex. Co., Winnipeg, Man.

The Dominion Ex. Co. is now operating over the Temiskaming and Northern Ontario Ry. between Englehart and Matheson, Ont.

The Canadian Ex. Co. has opened new offices at Leamington, Port Arthur, Ruthven, Ont.; Murray Bay, Que.; and Royalty Junction, P.E.I.

The American Ex. Co.'s service is now in force on the Duluth, Rainy Lake and Winnipeg Ry. extension to Fort Frances, Ont., and an office opened there.

G. W. Waistell, heretofore cashier Dominion Ex. Co., Nelson, B.C., has been appointed agent at Rossland, B.C., and is succeeded by J. A. Lanigan from the Calgary, Alta., staff.

E. Allen, heretofore Assistant Superintendent western, northern, and southern divisions Canadian Ex. Co., has been appointed Superintendent, with headquarters at Toronto.

W. S. Stout, President and General Manager Dominion Ex. Co., was elected on the Executive Committee of the Expressmen's Mutual Benefit Association, at the recent convention held at Boston, Mass.

The Dominion Ex. Co.'s service has been placed on the following C.P.R. extensions: Between Bala and Romford; Linwood and

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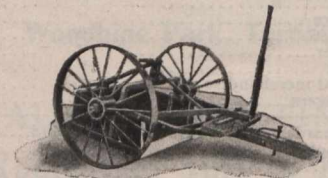
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W. A. Robinson, heretofore agent Canadian Ex. Co. at Brantford, Ont., has been appointed to Hamilton, Ont., succeeding J. H. Moore, resigned. A. H. Brown, heretofore at Mount Clement, Mich., has been appointed to the Brantford agency.

The appeal of the Reid Newfoundland Co. against the judgment of the Newfoundland Supreme Court, which upheld the imposition of a tax on the company's express business, was dismissed with costs, recently, by the Judicial Committee of the Privy Council.

Telegraph and Cable Matters.

The Canadian Northern Telegraph Co. has now offices at Lamont, Alta., and Sifton, Man.

N. Rabbits, who has been in the employ of the Anglo-American Telegraph Co. from boyhood, died at Brigus, Nfld., July 29, aged 53.

J. Kent, Manager C.P.R. Telegraph Department, returned to Montreal, July 30, after having spent a short vacation in the west.

T. Ellis, an operator engaged with the Direct Cable Co., died suddenly in the street in Halifax, N.S., Aug. 3. Prior to coming to Halifax he was in the company's office in Ireland.

The M.C. Rd. is reconstructing its telegraph line between Windsor and Niagara

Falls, Ont., the lease of which to the G.N.W. Telegraph Co. has been renewed for a further 30 years.

F. J. Mahon, until recently chief operator C.P.R. Telegraphs, Montreal, has been appointed Inspector of Telegraphs, and J. F. N. Caisse succeeds him as chief operator. They have been in the company's employ for 23 and 21 years respectively.

W. H. Allinson, senior train dispatcher, C.P.R., Toronto, is retiring under the pension rules, after 29 years' service with the company. He entered the service of the Credit Valley Ry. Co., now part of the C.P.R., in 1879, and for eleven years has been general chairman of the Order of Railroad Telegraphers on the C.P.R. system.

At the recent meetings of Railway Telegraph Superintendents in Montreal, a telegraph message, dated Nov. 22, 1848, sent from London, Ont., to St. Catharines, over the Toronto, Hamilton, Niagara and St. Catharines Line, was produced and read by W. Marshall, Superintendent of Telegraph Construction, C.P.R., Toronto.

The C.P.R. has opened telegraph offices at Burmis, Alta.; Smelter, B.C.; Warren, Man.; Barnesdale, Burwash, Byng Inlet, Dorking, Durham, Flesherton, Hanover, Muskoka, Naescootyong, Parry Sound, Peart, Pickerel, Point au Baril, Priceville, Rutter, Shawanagan, Still, Tralee, Ont.; Chelsea, Que.; and Asquith, Bender, El-

stowe, Enfold, Lockwood, Maryfield, Sedley, Stockholm, Sutherland, Viscount, Wilcox, and Windhorst, Sask.

The following sums were voted at the recent session of the Dominion Parliament on account of the Government telegraph lines, in addition to the amounts previously reported:

Cape Breton lines extensions.....	\$ 6,400
Quebec lines extensions.....	2,500
Edmonton-Athabasca line extension.....	10,000
Moose Jaw-Willow Branch line.....	3,350
Kamsack Indian Agency line.....	450
Qu'Appelle, Edmonton line.....	10,895
British Columbia lines.....	24,800
Lines in Yukon Territory.....	2,350
Additional amounts required for the operation and maintenance of various lines.....	52,600
Telegraph services generally, additional amounts.....	3,000

The fiftieth anniversary of the laying of the Atlantic cable was celebrated Aug. 16. This, of course, refers to the first cable over which a message was transmitted, but which broke after being in operation a few weeks. Some seven years later, the civil war intervening, the project was again taken up by the late Lord Kelvin, then William Thomson, and satisfactorily completed, since when there has been practically no interruption between Great Britain and America. Fifty years ago there was one cable and one company, with the tariff at £1 a word, and to-day there are 15 cables, 6 companies, and a tariff of 1s. a word, while it is anticipated that in the near future a 6d. tariff will be put in force.

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Toronto Bolt and Forging Co. Toronto.
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Mussens Limited Montreal.
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Chicago Railway Equipment Co. Chicago, Ill.
Dominion Car and Foundry Co. Montreal.
- Brake Shoes**
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Canadian Iron and Foundry Co. Montreal.
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Railway Materials Co. New York City.
- Brass and Copper Cloth**
The B. Greening Co. Hamilton, Ont.
- Bridge Numbers**
Acton Burrows Limited Toronto.
- Bridges**
Canada Foundry Co. Toronto.
Canadian Bri ge Co. Walkerville, Ont.
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- Buckets, Coal, Ore and Concrete**
Canadian Fairbanks Co., Ltd. Montreal.
- Bumping Posts**
McCord & Co. Chicago, Ill.
- Buoy Lighting**
Safety Car Heating and Lighting Co. . New York.
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- Cables, Electric and Feeder**
E. F. Phillips Electrical Works, Ltd. . . . Montreal.
The Wire and Cable Co. Montreal.
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American Brake Shoe & F'dry Co. . Mahwah, N.J.
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- Car Cleaner**
Modoc Soap Co. Philadelphia, Pa.
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Wm. C. Baker Heating & Supply Co. . New York.
Canadian Gold Car Heating & Light'g Co. Montreal.
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- Car Jacks**
Canadian Fairbanks Co., Ltd. Montreal.
F. H. Hopkins & Co. Montreal.
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Bliss Electric Car Lighting Co. . Milwaukee, Wis.
Canadian Cold Car Heating & Light'g Co. Montreal.
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Falls Hollow Staybolt Co. . Cuyahoga Falls, Ohio.
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Cleveland City Forge & Iron Co. . . Cleveland, O.
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F. H. Hopkins & Co. Montreal.
Mussens Limited. Montreal.
Toronto Pressed Steel Co. Toronto.
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American Hoist and Derrick Co. . . St. Paul, Minn.
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Canadian Fairbanks Co., Ltd. Montreal.
J. T. Gardner. Chicago, Ill.
F. H. Hopkins & Co. Montreal.
The W. H. Kelson Co. Montreal.
Mussens Limited. Montreal.
Toronto Pressed Steel Co. Toronto.
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Rice Lewis & Son. Toronto.
Toronto Pressed Steel Co. Toronto.
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Babcock & Wilcox (Ltd.) Montreal.
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Wolfe Brush Co. Pittsburg, Pa.
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McConway & Torley Co. Pittsburg, Pa.
National Malleable Castings Co. . Cleveland, Ohio.
Taylor & Arnold. Montreal.
Washburn Steel Castings & Coupler Co. . Minneapolis, Minn.
- Cranes, Locomotive**
American Hoist and Derrick Co. . . St. Paul, Minn.
- Cross Arms, Top Pins and Side Blocks**
Canadian General Electric Co. Toronto.
- Cross Arm Braces**
Canadian General Electric Co. Toronto.
Toronto Bolt and Forging Co. Toronto.
- Crossing Gates**
The N. L. Piper Railway Supply Co. . . Toronto.
- Crowbars**
B. J. Coghlin & Co. Montreal.
Toronto Bolt and Forging Co. Toronto.
- Culvert Pipe (Cast Iron)**
Gartshore-Thompson Pipe & F'dry Co. . Hamilton.
- Cuts**
Acton Burrows Limited. Toronto.
- Derailing Devices**
Hayes Track Appliance Co. Geneva, N.Y.
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Miller Bros. & Toms. Montreal.
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Butterfield & Co. Rock Island, Que.
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Farlow Draft Gear Co. Baltimore, Md.
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King-Lawson Car Co. New York.
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Dominion Bridge Co. Montreal.
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Hamilton Steel & Iron Co., Ltd. . Hamilton, Ont.
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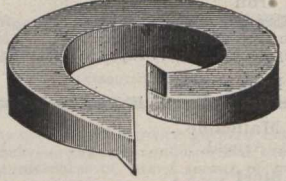
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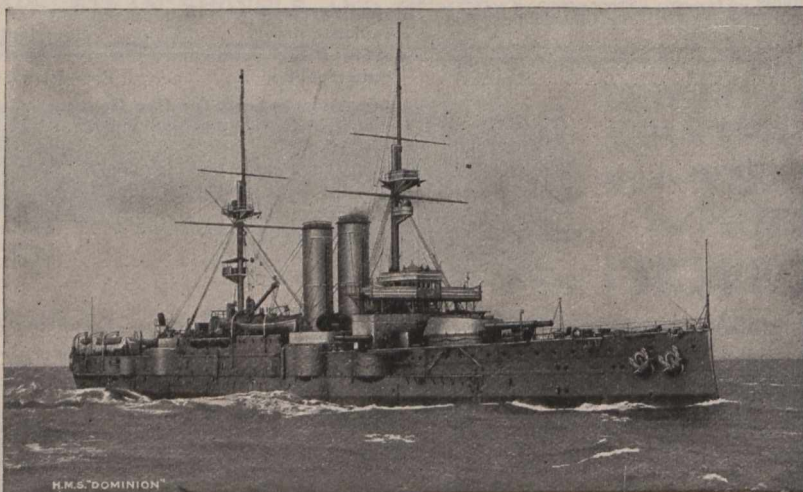
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- Turntable Motors**
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- Uniform Buttons**
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Kerr Engine Co. Walkerville, Ont.
- Valves, Brass Globe**
Kerr Engine Co. Walkerville, Ont.
- Valves, Iron and Brass**
Canada Foundry Co. Toronto.
Canadian Fairbanks Co. Montreal.
- Valves, Iron Gate**
Kerr Engine Co. Walkerville, Ont.
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Wolfe Brush Co. Pittsburg, Pa.
- Varnishes**
Canadian Oil Co. Toronto.
McCaskill, Dougall & Co. Montreal.
- Vessels**
Polson Iron Works. Toronto.
- Waste**
B. J. Coghlin & Co. Montreal.
N. L. Piper Railway Supply Co. Toronto.
- Water Pipe (Cast Iron)**
Gartshore-Thompson Pipe & Foundry Co. Hamilton.
- Water Softeners**
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