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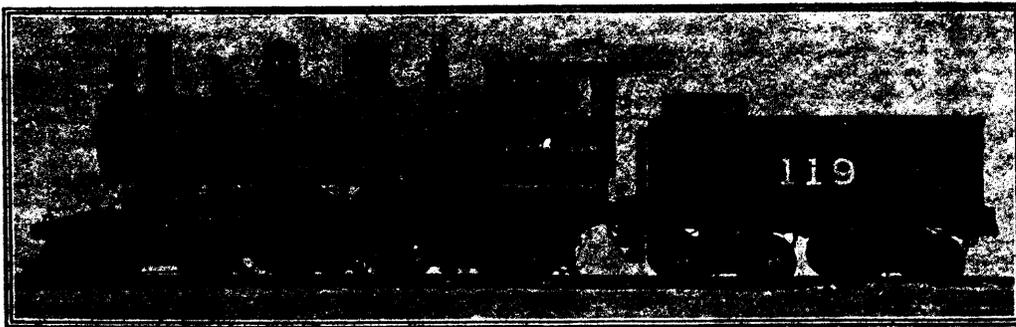
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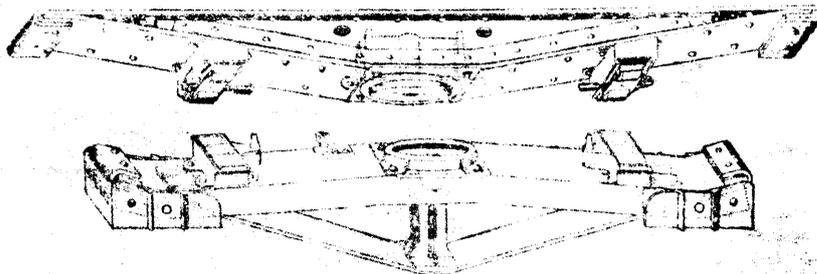
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RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska.—Construction is reported to have been started on the Alaska Central Rd., at Seward, on Resurrection bay, west of Copper river, to Atwood, on the Tanana river, about 420 miles. The contract is said to call for the completion of 125 miles in 1904.

Alberni and Cowichan Ry.—Application is being made at the current session of the B.C. Legislature by A. C. Rhinehart and others of Victoria, for an act incorporating a company to construct a railway from Alberni to Nanaimo, and from Alberni to other points in the Cowichan district of Vancouver island.

Beersville Coal and Ry. Co.—We were advised Dec. 4 that grading on the line from Adamsville, N.B., on the Intercolonial Ry. had been completed to the mines of the Imperial Coal Co. at Beersville, about seven miles, that track had been laid for four miles, and that it was expected to complete track-laying to the mines by the end of Dec. Brown Bros., Richibucto, N.B., were the contractors, and the first sod was turned Sept. 21. It is intended to extend the line to Brown's Landing, on the Richibucto river, and to establish a shipping port there, about 13 miles from Beersville, but this will not be gone on with at present. Surveys have been completed for a branch line of about three miles to the Canadian Coal and Manganese Co.'s mines, and it is expected that this will be completed in a few months. The Beersville Ry. will carry coal for the Imperial Coal Co., which controls several square miles of bituminous coal lands. The mines are expected to have an output of 200 tons a day this winter, which should be increased to 500 tons a day by Jan., 1905. The officers of the B. C. and Ry. Co. are: President, Dr. Hugo Von Hagen; Vice-President, M. F. Keith, M.D., Harcourt, N.B.; Secretary, Hon. C. W. Robinson; Treasurer, I. Purdy; General Manager, C. G. Polleys, Moncton, N.B., who is also President and General Manager of the Imperial Coal Co. (Dec., 1903, pg. 423.)

British Columbia Electric Ry.—In May an extension, consisting of a paint shop, washing shed and stores for line, track and car supplies, was added to the car barn; and in June, a covered platform, 120 feet by 16 ft., was added to the freight shed in Vancouver. A further addition, 115 ft. by 110 ft., to the car barn at Vancouver, was expected to be completed by Dec. 31. This addition will give an additional 80 ft. on all tracks. There has recently been completed 500 ft. of double-track, rendered necessary by the block pav-

ing of Hastings st., Vancouver. The rails are 7-ins., 70-lb. T-rails, in 60 ft. lengths, the joints reinforced by rivetting to the flange 3 ins. of inverted rail. The rails are set two inches in concrete stringers, 24 ins. by 14 ins., and tied together every 8 ft. with $\frac{7}{8}$ in. tie rods. At the intersection of Hastings st. and Westminster ave., Vancouver, a double-track through Y connection has been put in. About two miles of the interurban line has been re-laid with 56-lb. T rails. In the early part of the year there was completed at Vancouver a wharf 112 ft. by 36 ft., for storing car wheels.

Edmonton Street Ry.—A company has been incorporated under the Ontario Companies' Act, with the title of Edmonton Investments (Ltd.), with a capital of \$500,000, and head offices in Toronto, to deal in real estate, etc., and also to construct and operate tramways, etc. R. Secord, E. D. Grierson, O. W. Bishoprick, J. A. Powell, C. S. Wallis, J. B. Mercer, N. D. Beck, of Edmonton, are the incorporators.

The E. S. Ry. Co., which is practically the Edmonton town council, after considering a proposal made by W. G. Trethewey, for the construction of a street car line in the town, called a public meeting to discuss it. Mr. Trethewey's proposal was to construct two miles of line along Jasper ave., from the police barracks west, and a spur of one mile to a coal mine, and to operate a combined freight and passenger service; a 20-year franchise was asked for. Mr. Trethewey proposed to give 1,000 lots of an estate he is developing towards the construction of the line. At the meeting Mr. Trethewey explained his proposals, and O. M. Bigger, on behalf of eastern people asked how far the people of Edmonton were disposed to go in granting aid to a street railway, and what terms or restrictions it was desired to impose before he would submit a proposition. The meeting was practically unanimous in deciding that the franchise would not be disposed of. (Dec., 1903, pg. 423.)

Esquimalt and Nanaimo Ry.—We were advised Dec. 3 that nothing had been decided respecting the proposed extension from Wellington to Union Bay, B.C. (Dec., 1903, pg. 423.)

Fraser River Bridge.—Construction on the bridge over the Fraser river at New Westminster is practically completed, and it is expected that the track will be laid, and the railway connections made so that trains will be run over it early in the year. The highway portion of the bridge was expected to be ready for use by Jan. 1. In connection with the placing of the superstructure by the Dominion Bridge Co., the work of placing the 380-ft. span, and the fantail approach for the railway, some very interesting operations were carried out. The 380-ft. span is over the



THOMAS HENRY,

Traffic Manager, Richelieu and Ontario Navigation Co.

The construction of the Vancouver Power Co.'s plant is progressing favorably. The power house at Trout Lake, together with the transmission lines and substations at Burnaby and Vancouver are nearly completed, and it was expected to have 2,000 h.p. available for the B.C. Electric Co.'s purposes in Dec., 1903. (Oct., 1903, pg. 341.)

B.C. Mono-rail Railway.—Surveys are reported to be in progress in the Lardo-Duncan district of British Columbia for one or more lines to be operated on the mono-rail system. J. H. Gray, Victoria, B.C., has charge of surveys.

deepest portion of the river, and the fantail approach is over the river where it is 90 ft. deep. Under these circumstances it was decided to dispense with falsework and to float in the spans. The 380-ft. span was erected between the piers of the swing span, and four large scows were prepared to float out the span, which weighs over 800 tons. A substantial trestle work was erected on the scows, and at low tide they were floated into position under the completed span, two on either side of the pivot pier of the swing span. Having been securely fastened in position, the tide was left

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Marchand; Victoria, B.C., B. S. Oddy; Vancouver,
B.C., T. M. Heard; Lewis, E. Belanger; Sorel, A. L.
de Martigny; Owen Sound, J. M. Wilson.
NEXT ANNUAL MEETING of the Grand Council in
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RAILWAY DEVELOPMENT.

(Continued from page 1.)

to raise the scows, span and all. When the
span was raised clear of the piers, the scows
were towed clear, and to the position between
piers 3 and 4, where they were again anchor-
ed, and left for the receding tide to deposit
the span in its place. The whole operation
was completed in an hour. The fantail span
was built on the Brownsville shore and was
towed into position.

The Commissioner of Lands and Works,
replying to questions in the Legislature Dec.
3, said the engineer's estimate of the cost of
the bridge was \$936,314. There had been
expended to Dec. 1, \$578,279.28, leaving a
further sum of \$258,034.72, as the estimated
further cost. He also stated that the Govern-
ment had not entered into a contract, or
negotiations looking to a contract with any
railway company for the use of the bridge.

Granby Consolidated Mining, Smelting
and Power Co.—Application will be made at

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the current session of the B.C. Legislature for
an act amending the Company's charter of in-
corporation for the purpose of empowering it
to construct a tunnel or tunnels through the
mountain to its mines at Phenix, B.C. At
present the ore from the Company's mines is
handled at the mouth of the shaft and placed
in railway cars which have to make a long
detour and descend a considerable declivity
before reaching the smelter. In order to re-
duce the cost of handling the ore the company
proposes to drive a tunnel from near the
smelter, on the level into the mountain and
under its mines. Tracks will be laid in this
tunnel and cars run in under the mine, where
they will be loaded from the shaft, which will
be continued downwards. D. Whiteside,
Grand Forks, B.C., is solicitor for the Com-
pany, the President of which is S. H. C. Miner,
Granby, Que.

Great Northern Ry. (U.S.)—The proposed
G.N.R. hotel in Vancouver, B.C., will cost
about \$500,000 and will replace to a consid-
erable extent the Company's hotel at New
Westminster, B.C. The completion of the
Fraser river bridge will enable the Company
to run its trains into Vancouver, "leaving
New Westminster to look after itself as a side
station," as the Columbian, of that city,
puts it.

With the completion of the Fraser river
bridge, and a small piece of line being con-
structed by the Vancouver, Westminster,
Northern and Yukon Ry., the direct entrance

of the G.N.R. into Vancouver, B.C., is assured. The lines by which this is effected include the New Westminster Southern Ry., which extends from the International Boundary at Blaine, Wash., to the Fraser river, opposite New Westminster, B.C. This line was completed about 1890, and was acquired shortly afterwards by the G.N.R., which has since operated it. During 1903 a branch was built from Cloverdale, about six miles north of the International Boundary, to Port Guichon, at the mouth of the Fraser river, about 20 miles. From Port Guichon a steam transfer for passenger and freight cars is operated to Sidney, on the north end of the Saanich peninsula of Vancouver island, from which trains are run to Victoria over the old Victoria and Sidney Ry. This line was acquired by the Victoria Terminal Ry. and Ferry Co., which constructed some additional lines into Victoria and a terminal station there. In the early part of 1903 the V.T. Ry. and F. Co. was acquired in the interests of the G.N.R. To obtain a crossing of the Fraser river, the bridge built by the B.C. Government, and almost completed will be used. This bridge is available for the use of any railway company desiring to cross the Fraser river at New Westminster. Under the charter of the Vancouver, Westminster, Northern and Yukon Ry. there is being constructed, and also practically completed, a line from New Westminster to Vancouver, which will enter the latter city from the south by way of False Creek. This Company is practically a subsidiary of the G.N.R. (Oct., 1903, pg. 341.)

Guelph Junction Ry.—Representatives of the municipalities through which the projected extension of this line from Guelph to Goderich, Ont., will run, met at Goderich recently, the advocates of the northern and central routes meeting separately. At each gathering a resolution was passed recommending the adoption of the particular route running through their municipalities, and a second resolution pledging the representatives to do what was necessary to secure the passing of the by-laws granting the right of way through the several municipalities. (Dec., 1903, pg. 423.)

Halifax and Southwestern Ry.—In the course of the discussion on the speech of the Lieut.-Governor of Nova Scotia at the opening of the Legislature recently, Mr. Mackenzie, Mann & Co., were carrying on the work with characteristic energy, and that it was hoped to complete it in 1904. There had been a disposition to deflect the line away from the coast between Liverpool and Shelburne, on account of the shorter distance and easier construction, but the people desired a shore route through the settled country, and he was glad to know that the Provincial Engineer had been able to have surveyed a practicable route along the coast, which was only three or four miles further than that suggested by the contractors.

Application is being made at the current session of the Legislature for an act extending the time within which the line may be completed. In referring to this application Mr. Drysdale stated that upwards of \$1,000,000 had been spent on the line. The Caledonia branch of the old Central Ry. extending from New Germany to Caledonia, 22 miles, had been completed, and having passed Government inspection was now in operation. Of the 67 miles of line between Halifax and Mahone, 45 miles had been completed with the exception of the bridges. The contracts had been let for these structures and work on them would be hastened. There were on the ground rails, etc., for 73 miles of track. West of LaHave, between Bridgewater and Lunenburg, about three-fourths of the grading had been done. The Government was gratified at the rapid progress that had been made with the work. (Dec., 1903, pg. 423.)

Hamilton, Grimsby and Beamsville Electric Ry.—Application has been made to the Saltfleet, Ont., township council for permission to construct a spur line half-a-mile long to Van Wagner's beach, near Stoney Creek, where it is proposed to lay out a park. (Sept., 1903, pg. 305.)

Hamilton Radial Ry. (Electric).—Surveys are in progress at Oakville, Ont., in connection with the proposed extension of this line from its present terminus at Burlington towards Toronto. (Jan., 1903, pg. 23.)

Hampton and St. Martin's Ry.—This line, extending from Hampton, on the I.C.R., to St. Martin's, N.B., about 30 miles, has been placed in operation by the new company. The line ceased operations owing to continued deficits, and the new company was organized largely through the efforts of J. Merritt, of Merritt Bros., St. John, which firm is largely interested in lumbering along the line, and others resident at St. Martin's. Temporary repairs were made prior to again placing a train service in operation. The necessary rolling stock has been secured from the I.C.R. (Dec., 1903, pg. 423.)

Hudson's Bay to Buenos Ayres.—The incorporation papers filed on behalf of the Pan-American Rd. Co., at Guthrie, Ok., which desired to construct a railway from Hudson's Bay to Buenos Ayres, in the Argentine Republic, have been returned, the fees, it is stated, not having been paid. C. F. Beach, Jr., of London, Eng., was stated to be the principal promoter. (Sept., 1903, pg. 306.)

Huntsville and Lake of Bays Ry.—We were advised Dec. 12 that track was being laid on this mile of railway across the portage between the Lake of Bays and Peninsula lake, near Huntsville, Ont. (Dec., 1903, pg. 423.)

Intercolonial Ry.—The work of repairing the abutments along the Courtney bay branch at St. John, N.B., has been completed. The contract called for the partial reconstruction of one-third of the line, the work having to be done at three different points. About 500,000 ft. of timber was used in the work in addition to 4,500 yards of rock ballast and 1,500 yards of earth. P. S. McManus, of Sydney, was the contractor, the I.C.R. putting in new ties and relaying the rails. (Dec., 1903, pg. 425.)

Iroindale, Bancroft and Ottawa Ry.—L. B. Howland, President and General Manager, recently stated that arrangements had been completed for the final surveys for the extension of the line from its present terminus near Bancroft to Renfrew, Ont., about 75 miles. (Dec., 1903, pg. 425.)

James' Bay Ry.—Surveys have been in progress at different points between Parry Sound and Sudbury, Ont. The work is in charge of H. K. Wicksteed, C.E. A route has not been finally adopted, and nothing has been announced as to when construction will be gone on with.

The Dominion Parliament, at its recent session, voted \$3,200 a mile, with the usual conditions under which there may be an increase to \$6,400 a mile, for a line from Toronto, round the east side of Lake Simcoe, and via Parry Sound to Sudbury, not to exceed 265 miles. This subsidy was voted in lieu of those previously granted subsidizing 55 miles of line from Parry Sound towards James' Bay. (Oct., 1903, p. 342.)

Kettle Valley Lines.—Application will be made at the current session of the B.C. Legislature by the Grand Forks and Kettle River Ry. Co. for an act authorizing an extension of the existing line from Grand Forks for 50 miles up the north fork of the Kettle river, following the river valley. The G.F. and K. R. Ry. is the B.C. title under which the line from Grand Forks, B.C., to the International Boundary was constructed, which line was extended under a State charter to Republic,

Wash. The Dominion charter under which the company operates is that of the Kettle River Valley Ry. Co. (Dec., 1903, pg. 425.)

Kingston, Portsmouth and Cataract Electric Ry.—Application has been made for the extension of the switch on Princess st. to Clergy st., and the matter has been referred to the Kingston city solicitor.

Kitamaat to Yukon Boundary.—Application will be made at the current session of the B.C. Legislature for an act incorporating a company to construct a railway from Kitamaat, or some other suitable point on the Pacific coast northerly to Hazelton, thence to Atlin lake and northerly to the 60th parallel north latitude. R. G. Macpherson, M.P., Vancouver, recently had an interview with the Premier at Ottawa, to urge the early commencement of a B.C. seaport to Dawson, Yukon, and he states that he was given every encouragement to proceed with the project. The present application is in the interests of those for whom Mr. Macpherson is acting.

Lake Erie and Detroit River Ry.—The repair shops of this company, at present located at Walkerville, Ont., are to be removed, and are to be placed at St. Thomas, Ont., which is to be the point at which the rolling stock of the Pere Marquette Rd., which owns the L.E. and D.R. Ry., used in Canada will also be repaired. The agreement with the St. Thomas city council, which is subject to ratification by the taxpayers, provides for the erection of shops at a cost of \$75,000, and the installation of machinery to cost \$50,000, and the employment of not less than 100 hands. The city gives a bonus of \$20,000, freedom from taxes for ten years, and manufacturers' rates for water. A start has to be made within six months, and the shops are to be completed by Dec. 31. Permission has been given for laying some extra tracks across Wilson avenue, the city to have the right to lay an extra street car track across the railway at this point. (Oct., 1903, pg. 343.)

Lake Superior, Long Lake and Albany River Ry.—A meeting of shareholders for organization purposes and the election of directors and officers was called to be held in Toronto Dec. 14, but was adjourned.

Levis County Ry. (Electric).—Tracklaying has been completed on the extension of the line to the ferry landing at St. Romuald, Que., and the whole line from Levis to St. Romuald, 10½ miles, is now in operation. Pending the completion of the bridge at Etchemin cars are being run over the I.C.R. bridge. The substructure for the bridge has been completed. (Oct., 1903, pg. 343.)

Lindsay, Bobcaygeon and Pontypool Ry.—The Railway Committee of the Privy Council has approved of the plans submitted for the entrance of the line into Lindsay, Ont. The line will pass under the G.T.R. bridge, and will follow the river between that company's line and river to the site of the station as originally proposed. This will be a more expensive line to construct than the first one proposed. (Nov., 1903, pg. 389.)

Mabou and Gulf Ry.—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted for a line from Mabou coal mines to Glendyer, and thence to Orangedale, N.S., on the I.C.R., 34 miles, in substitution of a previous subsidy for 25 miles between Broad Cove and Orangedale; also for a line from the I.C.R. at or near Mine's Road station to the wharf at Caribou Cove, N.S., 4 miles. (Aug., 1903, pg. 269.)

Matane and Gaspé Ry.—A subsidy of \$3,200 a mile was voted at the recent session of the Dominion Parliament towards the construction of a railway from St. Octave on the I.C.R. to Matane, 30 miles. The M. and G. Ry. Co. is incorporated under a Quebec charter, and at the session of the Legislature in

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PRESIDENT.

1902 was given an extension of four years within which to construct its line. J. M. Lovell, M.L.A., Coaticook, Que., was one of the promoters. (April, 1902, pg. 141.)

The Medicine Hat and Northern Alberta Ry. has a charter for the construction of a railway and a number of branch lines from Medicine Hat, Alta., to the coal fields, and to the International Boundary, and to the B.C. boundary. At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of eight miles of line, from Medicine Hat to the coal fields in tp. 12 or 13, range 6, west of the 4th principal meridian. Hon. F. R. Latchford, Commissioner of Public Works for Ontario, and F. H. Phippen, Winnipeg, are among the incorporators. (Sept., 1903, pg. 307.)

Metropolitan Ry. (Electric)—An agreement has been reached between the city council and the company which will have the effect of putting a stop to the blocking of Yonge st., Toronto, at the C.P.R. tracks, by the loading and unloading of freight from the cars on to the street. An action had been entered to secure an injunction, but proceedings were stayed pending negotiations. Under the agreement the company will provide yard accommodation for its freight cars.

The surveys for the extension of the line from its present terminus at Newmarket to Jackson's Point, on Lake Simcoe, have been completed, and it is expected that construction will be commenced in the spring. (Oct., 1903, pg. 343.)

Middleton and Victoria Beach Ry.—We were recently advised that grading would be continued as long as the season would permit, and it was hoped to complete the work between Middleton and Bridgetown, N.S., before work ceased for the year. The Dominion Parliament at its last session voted a subsidy of \$3,200 a mile towards the construction of the line from Middleton to Victoria Beach, 41 miles. (Nov., 1903, pg. 390.)

The Midland Ry. has secured the power to construct a railway from Truro to Brule, or some other point on Northumberland strait, N.S., referred to previously under the title of the North Colchester Ry. Very little preliminary work has been done since the last report, but the engineering part of the work is in charge of P. S. Archibald, C.E., who will probably have the determining of the final location of the line. At the recent session of the Dominion Parliament a subsidy at the usual rate was voted for the construction of the line from Truro to Brule, 34 miles. We were recently advised that no decision had been reached as to when work on the extension would be commenced, but that certainly no construction would be gone on with before spring. (Oct., 1903, pg. 343.)

Midway and Vernon Ry.—The Dominion Parliament has voted \$3,200 a mile towards the construction of a railway from Midway to Vernon, B.C., about 150 miles. The M. and V.R. Co. was incorporated in B.C. in 1901, and secured a Dominion charter at the recent session of Parliament. J. H. Senkler, E. Bloomfield and A. P. Judge, Vancouver, B.C., are the incorporators. (Sept., 1903, pg. 309.)

Application is being made at the current session of the B.C. Legislature, extending the time for the commencement of the line to Jan. 1, 1905, and limiting the time for its completion to three years thereafter. The company also seeks power to extend its line to Kelowna, on Okanagan Lake.

Minudie Coal and Ry. Co.—A subsidy of \$3,200 a mile was voted at the last session of the Dominion Parliament for 6 miles of railway from the Joggins Ry. near River Herbert railway bridge to Minudie, Cumberland county, N.S. (Oct., 1903, pg. 343.)

Montreal Northern Ry.—The Dominion Parliament at its recent session voted a sub-

sidy of \$3,200 a mile towards the construction of a railway from Ste. Agathe des Montes station on the Labelle branch of the C.P.R., southerly, passing near Lakes St. Joseph and Ste. Marie for 15 miles. Lawton Wark, of New York, who is President of the M.N. Ry., started a number of industries at Ste. Agathe within the last two years, including a pulp mill, and did some grading for a railway. A winding-up order of the Howard Trust and Investment Co., which he organized to control his companies, was granted in Oct. (Oct., 1903, pg. 343.)

The Nepigon Ry. Co. was originally incorporated by the Ontario Legislature in 1899, the provisional directors being A. M. Wiley, A. McComber, T. Massey, T. A. Gorham, of Port Arthur, Ont., and P. Weidner, of Detroit, Mich. The Company was given power to construct a railway from Nepigon station, on the C.P.R., to the shores of Lake Nepigon. In 1902 the Legislature passed an amending act, naming F. S. Wiley, A. J. McComber, Jas. Whalen, of Port Arthur, Ont.; N. W. Rowell, K.C.; J. G. Shaw, of Toronto; P. Weidner, of Detroit, Mich., and M. B. Lloyd, of Minneapolis, Minn., as provisional directors, and changing the location of the line so that the company had power to construct a line from Nepigon bay on Lake Superior, at or near Nepigon station, of the C.P.R. transcontinental line, thence northerly and passing on the eastern side of Lake Nepigon to the Albany river; thence northeasterly to James bay, and also from some point on the line south of Lake Nepigon, southwesterly to Port Arthur and Fort William. The company was also authorized to carry on a general navigation business on the lakes and rivers adjacent to the railway and branches. In the same year a Dominion charter was obtained, the provisional directors named being the same as those in the amended Ontario act, with the exception of A. J. McComber, who was not named. The powers given the company were similar to those conferred by the Ontario act. The Ontario Legislature in the same year voted a subsidy of \$3,000 a mile towards the construction of 14 miles of railway from the C.P.R. line at Nepigon to near the head of the Long Portage, at which point the Nepigon Pulp Co. proposed to construct a pulp mill. Some of the promoters of the railway were connected with the pulp company, the President of which is J. R. Barber, M.L.A., of Georgetown, Ont. Surveys for this 14 miles of line were made in 1902 by R. A. Hazlewood, and a contract was let for getting out ties preparatory to starting construction in the spring. Nothing, however, was done, but early in 1903 the Ontario Government entered into a contract with the Canada Fish Co., by which the latter was to construct 40 miles of railway from Luke Superior to Lake Nepigon in return for an exclusive fishing concession on the lake. The provisional directors of the Fish Co. included J. G. Strong, B. E. Bull, W. R. Williams, H. G. Osterhunt and W. G. Francis, and the secretary is J. T. Emerson, of Port Arthur. The N.Ry. Co. has arranged with the Fish Co. to construct the 40 miles of railway called for by its charter, and made an arrangement with the Thunder Bay, Nepigon and St. Joe Ry. Co., by which the subsidy of \$2,000 cash and 5,000 acres of land a mile voted it in 1901 and 1902, covering 40 miles of railway between Port Arthur and Lake Nepigon, was transferred to the N.Ry. Co. This agreement was subsequently ratified by the Ontario Legislature. To these subsidies has now been added a Dominion one of \$3,200 a mile with the possibility of an increase to \$6,400 a mile for 80 miles.

Location surveys have been recently completed by R. A. Hazlewood for the first 40 miles of the line. A number of trial lines were run, with a view of obtaining easy grad-

ients. The route proposed to be followed starts from the shore of Lake Superior, at the mouth of the Nepigon river, and passes under the C.P.R. trestle, running to a level with the C.P.R. some distance back, from which point a spur line will be constructed to connect with the C.P.R. at Nepigon station. In order to secure an easy gradient the valley of the Helen river is followed at first, then the Nepigon river valley to the 14-mile point, thence turning south, owing to what is called the Divide, through which a pass has been surveyed; thence to the south shore of the lake. The gradients are to be kept down to 1%, and the curvature is easy. Construction will be moderately heavy, there being a good deal of rock-cutting in the first 20 miles. There will be a deal of bridge construction on this section, but it is not proposed to put in any steel or concrete structures at first. A spur will also be built to the Pulp Co.'s mill. It is intended to begin construction in the spring, and the preliminary work of getting out bridge timbers and ties is in progress.

The second section of the line will also be 40 miles in length, and will run from 10 miles up a navigable river at the head of the lake, to Albany river, near where the Grand Trunk Pacific Ry. surveyors are running a line. The two sections of the line will be connected by steamers, of which the Fish Co. has already one on the lake, and is constructing another. Nothing in the way of definite surveys have been made on the second section of the line.

No contract has been let for the construction of the railway, but we were informed Dec. 11 that a general contract for the 80 miles would probably be agreed on a few days thereafter, and that it would be given to Comtee & Bowman, of Port Arthur. (Dec., 1903, pg. 425.)

New Brunswick Coal and Ry. Co.—A Dominion Government inspecting engineer recently made an examination of the line, in company with E. G. Evans, General Manager, and the line from Chipman to just beyond Newcastle, N.B., 15 miles, has been authorized to be placed in operation. (Oct., 1903, pg. 343.)

The Nicola, Kamloops and Similkameen Coal and Ry. Co. was incorporated by the B.C. Legislature April 20, 1891, the provisional directors named being: J. F. Allison, Princeton, B.C.; A. E. Howse, Nicola, B.C.; R. H. Lee, Kamloops, B.C.; W. Mara, W. H. Merritt, F. A. Fleming, C. H. Keefer, C. N. Shanly, Toronto, and Sir Sandford Fleming, Ottawa. The company was authorized to construct a railway from near the western extremity of Nicola lake, where the terminus of the Nicola Valley Ry. shall be located, to Princeton, and thence by way of Similkameen river as far as may be deemed advisable southerly to Osoyoos lake; also from Nicola northerly past Nicola and Stump lakes to the south Thompson river eastward of Kamloops, thence to Kamloops. At the same session of the B.C. Legislature an act was passed incorporating a company with the title of the Nicola Valley Ry. Co., with power to construct a railway from near Spence's Bridge on the C.P.R. transcontinental line, along the Nicola river valley to the western shores of Nicola lake, and a branch along the Coldwater river valley to its junction with the Voght river. The incorporators were J. M. Lefevre, S. Tingley and C. Whetnam. In 1892 the Dominion Parliament voted a subsidy of \$3,200 a mile for 25 miles from Spence's Bridge towards Nicola lake, and in 1894 a subsidy at the same rate for a further distance of 28 miles was voted. Nothing in the way of construction was done under this act, and the subsidies lapsed. The N.K. and S. Coal and Ry. Co. did not do any construction either, but in 1903 the B.C. Legislature revived and confirmed its powers, and gave it power to construct an extension of its railway

from the western extremity of Nicola lake along the Nicola river to Spence's Bridge; and from near Nicola southwesterly to Hope, and thence to Chilliwack. Power was also given to construct branches, to make traffic arrangements with other companies, to issue bonds to the extent of \$25,000 a mile. An act of incorporation was also obtained in 1903 from the Dominion Parliament which also voted a subsidy of \$3,200 a mile towards the construction of the line from Spence's Bridge to Nicola lake, not exceeding 45 miles.

The company was organized in Victoria, B.C., Nov. 13, 1903, when provisional directors were appointed, the final organization being completed at Toronto, Dec. 10, when the following were elected: President, E. A. Jukes, Toronto; Vice-President, G. A. Begy, St. Catharines, Ont.; Chief Engineer, C. H. Keefer, Ottawa; other directors: W. D. Birchall, Montreal; W. R. Sherlock, Canton, Ohio; W. D. Woodruff and G. Dawson, St. Catharines, Ont.; Secretary-Treasurer, W. S. McNamara, St. Catharines, Ont.; solicitors, H. H. Collier, St. Catharines, Ont., and G. H. Cowan, Vancouver, B.C. Under the B.C. act of incorporation the company's offices are to be fixed at any point in Canada to be named at a general meeting of shareholders.

A route for a railway through the country covered by the charter of the N.K. and S. Coal and Ry. Co. was surveyed by W. F. Tye for the C.P.R. in 1901, being sections five and six of the Columbia and Western Ry., which the C.P.R. proposed to construct from Spence's Bridge to Penticton. That route, the Vancouver World recently stated in an article on the N.K. and S. Coal and Ry. Co., started from Spence's Bridge, and went south, with a slight trend easterly for 36 miles up the Nicolet valley, following the windings of the river, and keeping in the gorge all the way, in order to secure the easiest possible grade. At this point the Guichon river joins

the Nicola and the valley widens out, and a mining country is run through to the confluence of the Coldwater and the Nicola rivers. A townsite named Chater's ranch has been laid out here, and from this point to Nicola, the route surveyed passed through very fine land, most of which is laid out as fruit ranches. The route from Chater's ranch to Nicola, at the outlet of the lake, 50 miles from Spence's Bridge, is westerly, with a trend northerly. From Nicola the route proceeds along the southern shore of the lake for a few miles and then strikes south again, and passes out of the prairie country at Quilchena falls, 13 miles from the lake. From this point the route passes through a well-timbered country to Aspen Grove, six miles, in the vicinity of which are several gold claims. From Aspen Grove the surveyed route follows the Graveyard creek to its confluence with the Similkameen river at Princeton. In this vicinity there are considerable deposits of lignite. The Similkameen valley was followed for 20 miles to Hedley, thence 20 miles to Keremeos, and to Osoyoos lake. The total distance between Spence's Bridge and Osoyoos lake being about 190 miles.

The N.K. and S. Coal and Ry. Co. has made a deposit of \$5,000 with the B.C. Government, in accordance with the terms of its act, that work will be started by Oct., 1904. A preliminary survey over the route between Spence's Bridge and Nicola, about 45 miles, has been made by C. H. Keefer, and application has been made to the B.C. Government for aid either in the form of a cash subsidy, a land grant or a guarantee of bonds. If this is granted, it is said, a contract will be entered into at once for the construction of the first section of the line.

The company has secured some coal areas, contiguous to the line of the proposed railway. These areas are estimated to contain 20,000,000 tons of bituminous coal. The promoters

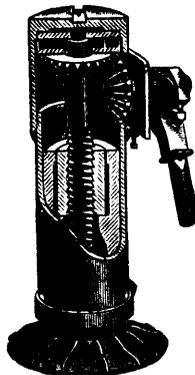
state they have an assurance of a market for 250,000 tons of coal a year. The company proposes to construct a smelter at some point on its line, so that there should be assurance of very considerable traffic for the line. (Sept., 1903, pg. 307.)

North Lanark Ry.—A general meeting of shareholders was held at Arnprior, Ont., Nov. 30, for the purpose of organization. Jas. Bell is Secretary of the company under the original act. D. F. Smith, Valleyfield, Que., is the President of the company, and the offices has been removed to Valleyfield from Arnprior, Ont. (July, 1903, pg. 239.)

North Midlands Ry.—Notice is given that application will be made at the next session of the Ontario Legislature for an act incorporating a company with this title for the purpose of constructing a system of railways to be operated by electricity or compressed air in the cities of London and Stratford, the towns of Mitchell, Seaforth, Clinton and Wingham, and through the townships of London, Bidulph, Blanchard, Downie, McGillivray, Stephen, Osborne, Hay, Tuckersmith, McKillop, Hullett, Hibbert, Logan, Fullerton, Grey, Morris, Howick and Turnberry, with power to construct branches. T. H. Luscombe, solicitor, London, Ont., is acting for the applicants.

Nova Scotia Eastern Ry.—Surveys are in progress on different sections of this projected railway. The Dominion Parliament at its recent session voted the following subsidies at \$3,200 a mile, with the usual conditions as to increasing it to \$6,400 a mile towards the construction of a line from New Glasgow to Cross Roads, Country Harbor, thence to Guysboro, and thence to the Strait of Canso, at or near Mulgrave; from Cross Roads, Country Harbor, to the deep waters of Country Harbor river, not exceeding 116 miles, in lieu of subsidies voted in 1901; and from Dartmouth

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to a point at or near Melrose, to connect there with the line from New Glasgow, not exceeding 120 miles. Hon. J. R. Stratton, Provincial Secretary of Ontario, is President of the Company. During the discussion on the speech of the Lieut.-Governor at the opening of the current session of the Nova Scotia Legislature it was stated that the Company had made arrangements to secure the capital necessary to construct the line, and that construction was expected to be commenced in the spring. Application will be made during the session for an act extending the time for the construction of the line. We have been informed that E. P. Goodman, of New Glasgow, N.S., had charge of the surveys during the summer, but that it had been found impossible to complete plans of the route owing to local demands. (July, 1903, pg. 239.)

Ontario Electric Ry.—A. E. Pond, of Boston, Mass., has issued a circular, in the course of which he says that the investigations made show that an electric railway, such as is contemplated would pay handsomely; that it was intended to commence the construction of the line in the spring, completing it between Trenton and Belleville, and adding section after section until eventually the line will be completed from Toronto to Brockville. The Company proposes to generate electricity by water power, and to dispose of its surplus power at the different towns on its line. The circular is addressed to the different municipalities along the line, with a view to ascertaining the amount of bonus they will offer towards the carrying out of the Company's plans at once, instead of by sections as proposed. (July 1903, pg. 239.)

Ontario Traction Co. (Ltd.)—C. M. Walker, E. F. Ladore, and J. H. Coburn, of Walkerville, Ont.; F. M. Ohi and W. F. Brown, of Toledo, Ohio, have been incorporated with this title to construct a street railway in Walkerville, and to extend the same for 1½ miles in the city of Windsor, and a similar distance in the township of Sandwich east.

Orford Mountain Ry.—Subsidies at the rate of \$3,200 a mile were voted at the recent session of the Dominion Parliament towards the construction of the following lines: from the existing line between Lawrenceville and Eastman, Que., to Lake Bonella, 5 miles; from Kingsbury to Windsor Mills, 10 miles; from Eastman to the boundary of the townships of Bolton and Petton, 12 miles, in all 27 miles. We were advised Dec. 4 that only half a mile of the proposed extension of 10 miles from Kingsbury to Windsor Mills had been graded and laid with track. The whole distance has been finally located and a portion of the right of way arranged for. It is intended to secure the right of way for the whole distance before midwinter, so as to be able to make an early start in the spring. (Oct., 1903, pg. 345.)

Ottawa, Brockville and St. Lawrence Ry. Co.—A special meeting of the shareholders was called for Dec. 21, at Ottawa, for the purpose of electing directors for the balance of the current financial year. (Feb., 1903, pg. 45.)

Ottawa River Ry. (Electric)—A meeting at which the following directors were elected was recently held in Montreal: W. T. Raphael, T. Gauthier, M.P.; N. J. Monk, M.P.; J. A. Ethier, M.P.; J. E. Leonard, M.P.; and — Dec. 10, represented by Col. McMullen, approached the Montreal city council with a view of securing a connection with the lines in that city. The company proposes to construct a line from Ottawa to Montreal through Argenteuil, Two Mountains, Terrebonne, Laval and Jacques Cartier counties, with branches to Ste. Rose, Ste. Ann and Ste. Genevieve. The act authorizing the construction of this line was passed at the last session of the Dominion Parliament, the promoters being the Ottawa

Valley Ry. Co., which has a line of railway from Lachute to St. Andrew's, Que. (Aug., 1903, pg. 269.)

Owen Sound to Durham.—Owen Sound, Ont., papers are advocating the construction of 29 miles of railway from that town to Durham, the terminus of the G.T.R. branch from Mount Forest, the object being to gain a short connection with Hamilton and the U.S. lines. At present Owen Sound is the terminus of the C.P.R. branch line, the old Toronto, Grey and Bruce Ry., and of a short branch from the Wiarton line of the G.T.R.

Pacific, Northern and Omineca Ry.—There has been deposited in the Land Registry office, Victoria, B.C., copies of the plan and book of reference of the location of the line proposed to be constructed by the company from Kitimaat arm, on the Pacific ocean, to the Skeena river. B. G. Goward is the secretary of the company. (June, 1902, pg. 195.)

Pere Marquette Rd.—The proposition to construct a new line from St. Thomas to the Niagara river, Ont., by the P.M. Rd., either through its Canadian subsidiary, the Lake Erie and Detroit River Ry., or a separate company, has evidently been abandoned, as a contract for trackage rights over the Michigan Central Rd.'s Canadian line from Court-right Jct., Ont., to Buffalo, N.Y., has been arranged, the agreement to run for 99 years. At the Chicago end arrangements have been completed with the Lake Shore Rd. for trackage rights for a similar period between Porter, Ind., and Clark Junction, Ill., and for an entrance into Chicago over the lines of the Chicago Terminal Transfer Rd. (July, 1903, pg. 239.)

Point Ann Ry.—This line is 3½ miles in length from the G.T.R. at Belleville, Ont., to Point Ann, where the Belleville Portland Cement Co.'s works will be situated. The line is being laid with 56 lb. rails. It was expected to be completed by Dec. 31, 1903. J. W. Griswold is engineer in charge of the work. We were advised Dec. 17 that the only work remaining to be done to complete the line was the bridge over Bell's Creek. This consists of five spans of 15 ft. 6 in. long, composed of timber stringers, and ties to be laid on the same. The piers were all erected and the work was waiting for the arrival of the necessary timber. The line is laid with 56 lb. rails, and will be used solely for the business of the Belleville Portland Cement Co., the outgoing freight consisting of cement and the incoming of supplies for the mill. The line is 3½ miles in length, and connects with the G.T.R. main line at Belleville.

Preston and Berlin Ry. (Electric)—We were advised Dec. 3 that operations on this line had been delayed somewhat by the weather, and that it would be the beginning of Jan. before freight would be carried over it to and from Berlin. (Nov., 1903, pg. 390.)

Prince Edward Island Ry.—During the season the construction of the north abutment for the bridge over the Hillsboro river for the Murray Harbor branch has been completed. This finishes the substructure, and leaves to be completed the earth approaches at each end of the bridge. The work on these approaches could not be gone on with until the substructure was finished, owing to the fact that the channel has been contracted fully 50%, which has greatly increased the strength of the current. The Dominion Bridge Co. has the contract for the erection of the swing portion of the superstructure. H. MacDonald has the contract for the erection of the balance of the superstructure, which will consist of the spans moved from the Miramichi bridges on the Intercolonial Ry., recently reconstructed.

Track was laid on 21 miles of the Murray Harbor branch in 1902 between Montague

Cross and Murray Harbor, and track has been laid for the remaining distance, about 23 miles, between Montague Cross to Southport, at the south approach of the bridge over the Hillsboro river. (Oct., 1903, pg. 345.)

Quebec and Lake St. John Ry.—Surveys are being made under the direction of A. E. Doucet, Chief Engineer for the construction of a branch to La Tuque, Que. The proposed line branches from the main line, about 85 miles from Quebec, near Beaudet, and will run north-west 35 miles to La Tuque. The final reports of the surveys were expected to be received during Dec., 1903, but preliminary reports state that the work of construction will not be heavy and that gradients and curvature will be moderate. The maximum gradient opposed to traffic will be 0.6 compensated, and 1% compensated against; the curvature, with one or two exceptions, will be 4°. The branch will tap the La Tuque water power, estimated at 100,000 h.p., and the timber limits of the Upper St. Maurice river and its various branches. At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of this branch; subsidies of a similar amount per mile were also voted for the following branch lines for the Q. and L. St. J. Ry.: from Jonquieres, the present terminal of the Chicoutimi branch, to La Baie des Ha-Ha, not exceeding 20 miles, in lieu of a subsidy for 12 miles voted in 1899; for a line from Roberval, the present terminal of the main line, to the government wharf on Lake St. John, one mile; from La Bouchette to St. Audre, not exceeding 13 miles. (Sept., 1903, pg. 307.)

Quebec Bridge.—At the recent session of the Dominion Parliament an act was passed confirming an agreement entered into between the Government and the Company for the granting of further aid towards the construction of the bridge. Up to the present time \$914,862 has been paid out on account of work done, and there is an outstanding indebtedness of \$779,550, of which \$472,000 is represented by bonds sold for \$283,279 cash. The amount necessary to complete the bridge, provide the connecting railways and terminals is \$6,866,882. Under the agreement recently ratified the Company will provide \$200,000, which will be utilized in the payment of the discount under which the bonds were sold, and will issue \$6,678,200 of bonds to be secured on the bridge and its railways, upon which the Government will guarantee interest at the rate of 3%. Tolls are to be fixed subject to the approval of the Government, and the Company is to provide a sinking fund of 1% towards retiring the bonds. The Government may take over the bridge at any time on payment to the shareholders of \$265,585 for the common stock with 5% interest, and in the event of so doing will repay to the city and Province of Quebec the amount of the subsidies paid. A contract for the approaches has been let to M. P. Davis & Co., who also built the superstructure. (Oct., 1903, pg. 245.)

Quebec Central Ry.—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of an extension from St. Francois to St. George, Quebec, about nine miles, and at the same rate a mile for a line from Scott Junction to the bridge under construction at Quebec, not exceeding 22 miles. (May, 1903, pg. 151.)

Quebec, Saguenay and Gulf of St. Lawrence Ry.—The Dominion Parliament at its last session voted a subsidy of \$3,200 a mile with the usual provision for an increase to \$6,400 a mile, towards the construction of a railway from Quebec towards Seven Islands Bay, not exceeding 200 miles. The company was incorporated at the last session of the Dominion Parliament, the provisional direct-

ors including J. and G. Clarke, of New York; J. and W. Clarke, of Toronto; and Thomas Meaney, of Quebec, who also control the North Shore Power Ry. and Navigation Co., which has constructed nine miles of railway at Seven Islands Bay, and is building a pulp mill at the falls of the Ste. Marguerite river. (July, 1903, pg. 240.)

Quebec Southern Railway.—At the last session of the Dominion Parliament a subsidy of \$50,000 was voted towards the construction of a railway bridge on the St. Francis river, in lieu of the grant voted in 1900, and a further sum of \$35,000 towards strengthening the foundations of the bridge. These subsidies are to be granted at the discretion of the Government. The bridge referred to is on the old South Shore Ry., now the South Shore division of the Q.S. Ry. (Nov., 1902, pg. 385.)

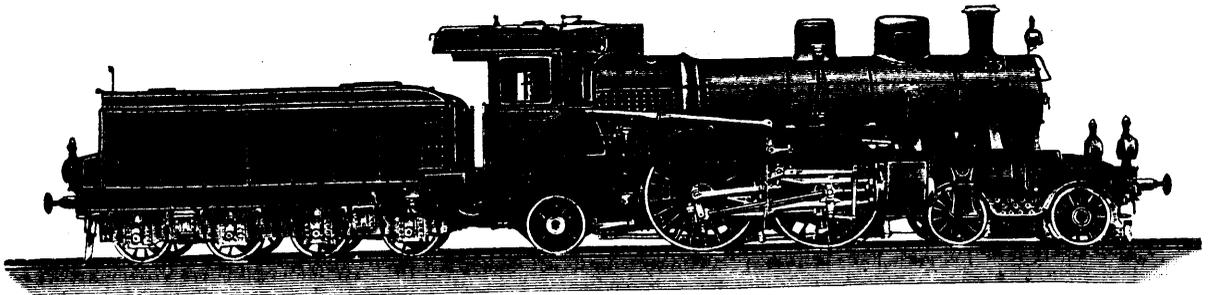
The Reid Newfoundland Co. had during the season a large number of men employed on the railway ballasting, repairing bridges and doing other work on the roadbed. Among the new buildings added has been a station at the Quarry. (Oct., 1903, pg. 345.)

St. Eustache to St. Placide, Etc.—Subsidies were voted at the recent session of the Dominion Parliament at the rate of \$3,200 a mile, towards the construction of the following lines: St. Eustache, the present terminal of the C.P.R. branch, 28 miles from Montreal, to St. Placide, 18 miles; from Eustache to Sault au Recollet, not exceeding 10 miles; and from St. Placide to St. Andrews, not exceeding eight miles.

St. Guillaume to Yamaska.—The Dominion Parliament at the recent session voted \$3,200 a mile as a subsidy towards the construction of 12 miles of line from St. Guil-

laume on the Montreal and Atlantic Ry. to Yamaska, to join the South Shore division of the Quebec Southern Ry.

The St. John, N.B., Ry., during 1903, built a second track from Main st., North-End, along Douglas ave., to the east end of the suspension bridge, about 1 1/4 miles; it has also built from the west end of the suspension bridge, in Lancaster parish, along the suspension bridge road, to Lancaster Heights road, then along that road to Tilton's corner, and down Prince st. to the city line at St. John West, about one mile. The Company wishes to extend the line to Rodney wharf, a distance of a mile, and along the wharf 900 ft. to the ferry landing, but no agreement has been reached with the city. It is also building from the extension from suspension bridge, at Lancaster road, to Fairville, half a mile. At its power house the following additional

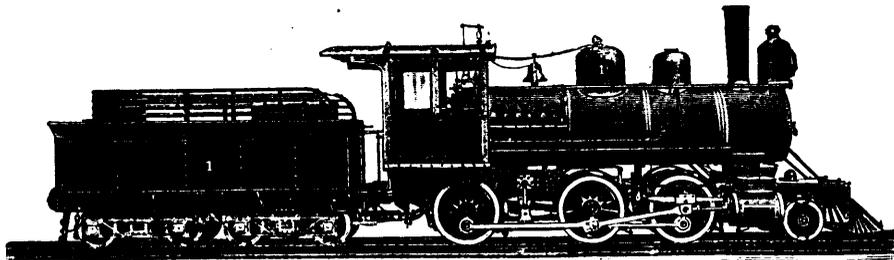


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plant has been installed: one 650 k.w. generator, one engine, 650 relay generator; one engine, 600 k.w. elevator; one engine, 300 k.w., alternator and two boilers. It is also putting up a 30 ft. by 30 ft. addition to its power house, and erecting an office at the corner of Dock and Ann streets. (Oct., 1903, pg. 345.)

St. John Valley Ry.—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was revoked for the construction of a line from Welford or Westfield, N.B., on the C.P.R. to Gagetown, not exceeding 30 miles; also for a line from Fredericton to Woodstock, N.B., not exceeding 59 miles, in lieu of former subsidies. Jas. Manchester, W. H. Thorne and H. G. Troop, St. John, N.B., are interested in the company. (June, 1903, pg. 218.)

St. Mary's River Ry.—The Dominion Parliament at its recent session voted a subsidy at the rate of \$3,200 a mile towards the construction of a line from Spring Coulee to Cardston, Alta., 15 miles; and from a point on the line to the intake of the irrigation canal, not exceeding 10 miles. (July, 1903, pg. 241.)

St. Thomas Street Ry.—The committee of the St. Thomas, Ont., city council has secured a 50 year franchise from the Yarmouth township council for an extension of the city's street railway from St. Thomas to Aylmer (Oct., 1903, pg. 345.)

Salisbury and Harvey Ry.—A project is under consideration for the extension of this line from some convenient point into Moncton, N.B. The line is practically owned by Dr. Swan, who is favorable to the extension of the line, and who says he will proceed with the work if provincial and Dominion subsidies are assured. The proposition is to construct a line from Baltimore siding to Middle Coverdale on the south side of the Petitcodiac bridge, opposite Moncton, about 8 miles. Surveys for a line over this route were made in 1900 by P. S. Archibald, C.E., for another company. The construction would be comparatively light; very little bridging and few culverts would be required. Baltimore siding is 14 miles from Salisbury, where the line joins the I.C.R., and 27 miles from Moncton via the railway, but would be only about nine miles by the proposed route. A committee has the matter in hand, and meetings are being held to obtain public support prior to application being made for subsidies. (Feb., 1902, pg. 61.)

Sarita to Cowichan Bay.—Application will be made at the current session of the B.C. Legislature for an act incorporating a company to construct a railway from Sarita townsite, or some port on the Alberni canal, Vancouver island, by way of Cowichan lake and the valley of the Cowichan river, to some point on the east side of Vancouver island. Wilson, Senkler and Bloomfield, Vancouver, are solicitors for the applicants.

Shediac and Coast Ry.—A subsidy of \$3,200 a mile was revoked at the recent session of the Dominion Parliament for the construction of a railway from Shediac to Shemogue, and towards Cape Tormentine in Westmoreland county, N.B., 38 miles. A. I. Trueman, St. John, N.B., is President of the company. (April, 1902, pg. 145.)

Spence's Bridge to the International Boundary.—An unsigned notice has been published, dated at Vancouver, stating that application will be made at the next session of the B.C. Legislature for an act incorporating a company to construct a railway from a point near Spence's Bridge on the C.P.R., southeasterly to Nicola and Aspen Grove, then southerly to Otter Flat, thence southeasterly via Granite creek and Princeton, and following generally the course of the Similkameen river to the International boundary, either at Osoyoos lake or Midway.

Standard Coal and Ry. Co.—This company has recently acquired additional coal lands in the Cumberland coal basin of Nova Scotia, giving it in all control of 110 square miles. The company has a charter to construct a railway from Maccan to Parrsboro, thence along the shore of Minas basin to Truro, touching at Folly village and the Five Islands. Some surveys have been made, and it is considered likely that Athol will be chosen as the starting point of the line instead of Maccan. E. Gillespie, Parrsboro, is President of the company, but a reorganization is in progress consequent on the new purchase. (June, 1903, pg. 218.)

Stratford.—Several propositions have been made to the Stratford, Ont., city council with a view of obtaining a franchise to construct an electric railway there, and the council has appointed a committee to visit other places with a view of finding out how things are done, and what conditions should be included in a franchise agreement. The latest proposition made to the council is that of N. M. Cantin, of St. Josephs, and F. M. Hamel, of Ottawa, who propose to construct a line from Stratford to St. Joseph on Lake Huron, through the townships of Downie, Fullerton, Hibbert and Hensall. (Sept., 1903, pg. 307.)

Temagami Ry.—Towards the construction of a railway from near Sturgeon Falls, Ont., to the western shore of Lake Temagami, not exceeding 50 miles, a subsidy of \$3,200 a mile was voted at the last session of the Dominion Parliament. R. J. McLaughlin and F. A. McDiarmid, Lindsay, Ont., are interested as well as a number of local people. (June, 1902, pg. 197.)

Temiskaming and Northern Ontario Ry.—It was expected to have track laid and ballasting completed on 65 miles of track from North Bay, Ont., by the end of Dec., 1903. This would carry the line to Lake Temagami in the Ontario forest reserve. On Dec. 14 over 57 miles of track had been laid from the site of the freight yard north of the C.P.R., and at the east end of that company's yard. Ballasting had been completed on about 38 miles of track, but a good deal of surfacing up is required. The rest of the grading will be completed during the winter. The following are the sub-contractors on the different sections: Mileage, 61 to 72, which is partially graded, Ryan and Carlson; mileage 72 to 80, Donovan and Doheny; mileage 80 to 86, Murdoch Bros.; mileage 86 to 91, Grant and Doheny; mileage 91 to 94, partially graded, W. C. Chambers; mileage 94 to 100, partly graded, Kirk and Westerdall; mileage 100 to 112, partly graded, W. C. Chambers. The contractors have a telephone line connecting their various camps, and a telegraph wire has been strung for 50 miles. The work has been done in a thorough manner, and considering the broken nature of the country, the gradients are exceptionally light and the curvature easy. The country opened up is dotted with small lakes; there are plenty of rocks, and a lot of small timber, with but little hardwood. The small creeks and watercourses are crossed by heavily constructed trestles, and the larger rivers by temporary trestles, which will be replaced by steel superstructures on concrete abutments. None of these are of any size, except one a short distance beyond Trout lake. The only important bridge on the line to New Liskeard will be over the Montreal river near Haileybury, which will be erected on masonry abutments, and have a span of 350 ft. The plans for this bridge are not yet finally decided. The location surveys are completed into New Liskeard, and grading operations have been in progress for some time from about a mile outside of the town southerly towards Haileybury. About 12 miles of grading has been completed at this point in places. The engineering parties engaged in surveying a

route for an extension of the line from New Liskeard northerly will remain in the field during the winter. From New Liskeard the route proposed is up the valley of the White river, until the height of land is reached, thence it will proceed along the valley of the White Clay and Black rivers to the Abitibi river is reached. On Dec. 14, the survey parties had reached the 70th mile out from New Liskeard.

The Commissioners have acquired about 50 acres of land north of the C.P.R. tracks, and at the end of that company's yard at North Bay, for a freight yard. Two tracks have been laid on it, and other tracks will be laid as the traffic demands. An option has been secured on a large area of adjoining land to add to the yard. (Oct., 1903, pg. 346.)

Thunder Bay, Neplgon and St. Joe Ry.—A subsidy of \$3,200, with the usual provision for an increase to \$6,400 a mile, was voted at the last session of the Dominion Parliament for the construction of 50 miles of line from Port Arthur, Ont., northeasterly. (Oct., pg. 346.)

Tillsonburg, Lake Erie and Pacific Ry.—At the recent session of the Dominion Parliament a subsidy of \$3,200 a mile was renewed to this company for an extension of its line from Ingersoll to Woodstock, Ont., nine miles; and a new subsidy voted for an extension from Woodstock to Berlin, or from Ingersoll to Stratford, or to any point on the G.T.R. between these places, not exceeding 35 miles, making in all 44 miles. Negotiations are in progress with the Stratford council with a view to securing a bonus towards the construction of the line through that city. A preliminary survey has been made of a route into Collingwood, from Ingersoll, via Stratford and Flesherton, about 125 miles. Five miles of line north of Flesherton on this route would involve much heavy construction, but on the other parts of the route the work would be light. (Sept., 1903, pg. 307.)

Toronto, Hamilton and Buffalo Ry.—We were officially advised, on Oct. 8, that there was nothing in the press reports respecting a proposed extension of this line from Brantford to Drumbo, Ont. Since that date, however, E. Fisher, General Superintendent, has had interviews with the Brantford city council at Hamilton, and meetings have been held at Brantford and other points in the vicinity, at which resolutions favoring an extension were passed. Some of the localities favor an extension to Goderich.

The company is also negotiating with the Hamilton city council for permission to construct some spur lines in the city. (Oct., 1903, pg. 347.)

Toronto, Lindsay and Pembroke Ry.—The Dominion Parliament at its last session revoked a subsidy of \$3,200 a mile for 51 miles of line from Golden Lake to Pembroke, Ont. (Feb., 1903, pg. 49.)

Toronto Radial Ry.—The Mayor of Toronto has drawn up a plan for the entrance of the suburban railways into Toronto, which has been favorably received by the companies interested and is still under discussion by the city council. The proposal is for a line to enter the city at Christie st., to Front st., largely by a private right of way, which could be easily acquired; thence to the market along Front st.; the line from the west to run along side the G.T.R. from Sunnyside to Bathurst st., then crossing the tracks by a bridge, reach the Front st. radial line; this line would also be used by the Toronto and Hamilton Ry.; the route from the east would be along Eastern avenue to the market; the Metropolitan Ry. would connect with the line from the north, by a short line along a private right of way. The tracks on the radial railway to be 4 ft. 8½ in. gauge, and 150 miles of additional radial lines to be built. The pro-

posed agreement contains the terms of the franchise, which is limited to 21 years.

Toronto and Scarboro' Ry.—The present line which extends from the Woodbine race-track, Toronto, to the Halfway House, is to be extended for a distance of five miles to Highland Creek. The present line will be thoroughly repaired and improved. Work will probably be started next spring. Some questions connected with the franchise are in course of settlement with the Scarboro' township council.

Trans-Canada Ry.—Subsidies at the rate of \$3,200 a mile were voted at the recent session of the Dominion Parliament for the following lines: from Roberval, westward to James bay, 60 miles, in lieu of that voted in 1901; and a new subsidy for a further distance of 40 miles towards James bay. (Sept., 1903, pg. 307.)

Trois Pistoles to Renouf Falls.—At the last session of the Dominion Parliament a subsidy of \$3,200 a mile was voted towards the construction of 2½ miles of line from near the bridge at River Trois Pistoles, on the I.C.R., southeasterly to Mackenzie and Renouf Falls.

Vancouver, Westminster, Northern and Yukon Ry.—We were recently advised that it was expected to complete tracklaying on the line from New Westminster to Vancouver, B.C., so as to be able to connect with the Government bridge over the Fraser river, about Jan. 1. When this connection is made trains will be run from Port Guichon to Vancouver. At Port Guichon the ferry service to and from Victoria will connect with the train service. Surveys are in progress for the proposed branch from Bayside to New Westminster. The completion of that line will shorten the trip between New Westminster and Vancouver by about 20 miles. The Company has also filed plans for a branch of its line to the Hastings mill on Coal harbor, and another to north Vancouver, crossing Burrard inlet at the second narrows, but work has not yet been commenced on either of them. (Oct., 1903, pg. 347.)

Vancouver and Coast Kootenay Ry.—Replying to a question in the B.C. Legislature Dec. 10, the Commissioner of Lands and Works stated that the company had not made the deposit required by its act of incorporation, and that it had not commenced work. (Aug., 1903, pg. 269.)

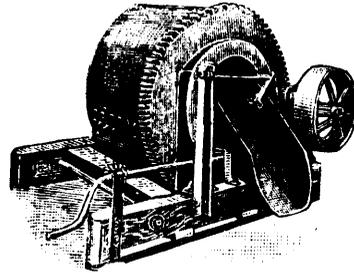
Wabash Rd.—Negotiations are in progress between officers of the Wabash Rd. and the city councils of St. Thomas, Chatham and other points in Ontario, with a view to the location of the shops which it is proposed to start for the repair, etc., of the rolling stock used by the Company in Canada.

Windsor, Essex and Lake Shore Rapid Ry. Co. (Electric).—A 50-year franchise has been granted by the Windsor city council to this company. (Nov., 1902, pg. 387.)

Winnipeg and Stony Mountain Ry.—The Winnipeg board of works recently ordered extensive repairs to be made to the spur line to the quarries owned by the city. An engineer from the city engineering department reported that the roadbed required ballasting, 20 per cent. of the ties needed renewing, and that heavier rails were necessary to carry the increasing traffic. (April, 1903, pg. 123.)

Winnipeg Electric Street Ry.—During the past year the Company has extended its Portage avenue line to the city limits, and for a distance of 3½ miles beyond to Sturgeon Creek, and a service was placed in operation over it Dec. 2. The C.P.R. has consented to the construction of a subway under its tracks where they cross Portage avenue, and the Railway Committee of the Privy Council has approved of the same, subject to an agreement with the city. There has also

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been constructed in St. Boniface about 1½ miles of line, which is now in operation. Pending the approval of the Railway Committee of the Privy Council of the crossing of the tracks of the Canadian Northern Ry. at the north approach to the Norwood Improvement Co.'s bridge, a connection has not been made with the lines in Winnipeg, and passengers have to transfer cars at the bridge. (Oct., 1903, pg. 347.)

The Winnipeg, Selkirk and Lake Winnipeg Ry. Co. was incorporated by the Manitoba Legislature in 1900, and was given power to construct a line from Winnipeg to the Red river at or near Selkirk, or on the western shore of Lake Winnipeg. The officers of the Company are: President, J. Arbutnot, Winnipeg; Vice-President, C. D. Warren, Toronto; Secretary and Treasurer, F. B. Warren, Winnipeg; other directors: R. Sutherland, J. H. Anderson, Winnipeg; N. A. Warren, W. M. Alexander, Toronto. The line now under construction starts from the boundary between the city of Winnipeg and the municipality of Kildonan, near the terminus of the line of the Winnipeg Electric Street Ry., and proceeds along the main highway to the southern boundary of Selkirk; thence over right-of-way, which has been acquired, to Evelyn st., and along that street to the northern boundary of Selkirk. It is intended ultimately to carry the line to Lake Winnipeg, but the objective point and the route has not been announced. The right-of-way over the highways was given free under agreement by the different municipalities, which have also granted freedom from taxation for the line and plant for a limited period. The grading and bridging is all up to the Government standard, and 56-lb. steel rails of standard section are being used. Tracklaying was commenced at the Selkirk end, and has been completed to within about two miles of Winnipeg, when it was stopped owing to shortage of rails caused by the loss of a steamer on which they were being carried. Owing to the lateness of the season the ballasting will be carried over until next season. When this is completed, we are advised that the line will be capable of carrying the heaviest rolling stock, and permit of a fast service, as the gradients are particularly easy, and there is no heavy curvature. Connection may be effected at Winnipeg with the tracks of the Winnipeg Electric Street Ry., though possibly the Company will extend its tracks into the city and have its own terminals at West Selkirk. Connection will be made with Lake Winnipeg steamers. When the line is completed a regular train service will, we are informed, be put in operation. At first, it is said, the line will be operated by steam, but ultimately it will be equipped as an electric railway. The engineer in charge of construction is J. Woodman, and the contractors are the Standard Construction Co. of Winnipeg. This Company was incorporated under the Manitoba Joint Stock Companies' act, June 12, 1903, to carry on a general construction business with a capital of \$100,000, which is reported to be paid up. The President and General Manager is F. B. Warren, Winnipeg; Secretary, J. H. Anderson, Toronto. (Nov., 1902, pg. 387.)

Wolfville to Minas Basin.—The Dominion Parliament at its last session voted a subsidy of \$3,200 for the construction of one mile of railway from Wolfville, N.S., on the Dominion Atlantic Ry., to the government pier at Minas Basin.

Woodstock and Centreville Ry.—The Dominion Parliament at its last session voted a subsidy of \$3,200 a mile towards the construction of a railway from Woodstock, N.B., to the International boundary, not exceeding 26 miles, in lieu of a subsidy voted in 1894. (Aug., 1902, pg. 269.)

Yamaska to Lotbiniere.—At the last session of the Dominion Parliament a subsidy was voted at the rate of \$3,200 a mile for a line from Yamaska to Lotbiniere, Que., not exceeding 70 miles, in lieu of a subsidy for a line from Sorel Junction to Lotbiniere, 82 miles, voted in 1899. The subsidy in 1899 was voted to the South Shore Ry., but nothing has been done towards earning it, and it is now open to any line that may enter into the required contract.

York and Carleton Ry.—Towards the construction of an extension of 5 miles from Stanley, N.B., its present westerly terminus, the Dominion Parliament at its last session voted a subsidy of \$3,200 a mile.

RAILWAY FINANCE, MEETINGS, ETC.

Algoma Central and Hudson Bay Ry.—An effort is being made on behalf of certain interests to induce the Ontario Government to purchase the A. C. and H. B. Ry. (Dec. 1903, pg. 409.)

Atlantic and Lake Superior Ry.—In connection with the enquiry ordered by the Dominion Government to ascertain the amount of subsidy due in respect of the completion of the line to Paspebiac, Que., a commission was directed to examine the books of the company at the Banque Nationale, Quebec. The company claims to be entitled to a subsidy of \$150,000, and it is alleged on the other hand that the work did not cost that amount. The line is in the possession of the English bondholders, who claim that \$70,000 has been expended upon the completion of the 30 miles of line between Caplin and Paspebiac since they took possession and obtained a renewal of the subsidy. The second commission, which is investigating claims for labor and supplies in connection with the original construction of the line, has before it accounts amounting to over \$25,000. (Dec. 1903, pg. 409.)

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

	1902.	1903.	Increase or Decrease.
GROSS EARNINGS.			
Railway—Vancouver division	\$12,429	\$15,325	\$2,896+
Victoria	10,410	10,872	462+
Westminster	13,829	14,712	883+
Lighting—Vancouver division	17,125	20,707	3,582+
Victoria	8,734	9,676	942+
	62,527	71,292	8,765+
Less working expenses	36,121	39,592	3,471+
	26,406	31,700	5,294+
Renewal funds	4,222	4,988	766+
Net income	22,184	26,712	4,528+
Aggregate gross earnings, July 1, to Oct. 31	217,684	259,666	41,982+
Aggregate net earnings, July 1, to Oct. 31	\$71,606	\$93,825	\$22,219+

Brockville, Westport and Northwestern Ry.—The capital of the company which is the new owner of the Brockville, Westport and Sault Ste. Marie Ry., consists of \$1,000,000 of common and \$1,000,000 of preferred stock, of which \$500,000 of each have been issued. It is proposed to provide for the extension of the line by the issue of bonds, under a separate mortgage, at the rate of \$25,000 a mile.

Calgary and Edmonton Ry.—Application was made to the Dominion Government, Dec. 16, for the final ratification of the lease of the C. and E. Ry. to the C. P. R.

Canada Atlantic Ry.—From Jan. 1 to Nov. 14, 1903, the passenger earnings were \$290,994 against \$263,829 for the same period

of 1902. The following figures, referring to the operations of the line for the eight months from Mar. 14 to Nov. 14, have been published: gross earnings \$1,124,702, against \$1,109,487 for the same period 1902; freight carried 2,127,648,940 lbs., against 2,116,891,180 lbs. for same period 1902.

Canada Coals and Ry. Co.—The following officers and directors were elected at the annual meeting held in Montreal recently: President, E. Hanson, Montreal; Vice-President, S. H. Ewing, Montreal; other directors: R. W. Smith, W. Hanson, J. Rodger, W. C. Finley, Montreal; E. W. Wilson, New York; Secretary-Treasurer, A. G. Watson, Montreal. The company does not issue an annual report.

Canadian Northern Ry.—Earnings:—

	1903.	1902.	Increase or Decrease.
July	\$254,800	\$132,000	\$122,800+
Aug.	250,800	131,200	119,600+
Sept.	270,800	182,300	88,500+
Oct.	334,100	236,500	97,600+
Nov.	338,300	240,500	97,800+
	\$1,448,800	\$922,500	\$526,300+

Working expenses for Oct. \$117,500, net earnings \$116,600, against net earnings of \$83,800 for Oct., 1902. Net earnings for four months to Oct. 31, \$378,600, against \$254,800 for same period 1902.

Mileage in operation 1,350, against 1,244 in 1902.

Application will be made at the next session of the Dominion Parliament for an act confirming an issue of mortgage bonds or other securities consolidating, and with the consent of the holders, to be exchangeable for certain bonds of the company and its predecessors; and also confirming an issue of certain mortgage terminal bonds or other securities.

The Columbia and Western Ry. Co., which is owned by the C. P. R., has withdrawn the actions it had entered against certain license holders in B. C., to secure injunctions preventing their operating on certain lands which formed part of the land grant of the railway. These lands formed the subject of an enquiry in 1903, and the passing of an act of the Legislature confirming an order-in-council rescinding the land grant to the C. and W. Ry. Co. (July, 1903, pg. 223.)

Dominion Atlantic Ry.—Gross earnings for Oct. \$109,500, against \$96,153 for Oct., 1902, making for 10 months ended Oct. 31 \$875,478, against \$851,215 for corresponding period 1902.

Great Northern Ry. of Canada.—The adjourned annual meeting was held Dec. 2. Following are the directors for the current year: President, D. B. Hanna, Toronto; First Vice-President, Col. J. McNaught, New York; 2nd Vice-President, H. H. Melville, Boston, Mass.; 3rd Vice-President, E. E. Ling, Quebec; other directors: Hon. J. Tessier, V. Chateaubert, Thos. McDougall, J. Joyce, Quebec; Z. A. Lash, K. C., W. H. Moore, F. C. Annesley, Toronto; and Hon. S. N. Parent, Quebec, ex-officio. Hon. P. Garneau, heretofore president, together with J. T. Ross and J. G. Scott, of Quebec, were not candidates for re-election. (Dec., 1903, pg. 400.)

Guelph Junction Ry. A press report states that the proportion of the receipts of the G. J. Ry. to be paid to the Guelph city council for the last year's operation of the line will amount to between \$10,000 and \$12,000.

Halifax and Southwestern Ry.—The Nova Scotia Government has placed a loan on the London, Eng., market on favorable terms to provide for the advances to the H. and S. Ry. provided for by contract entered into with Mackenzie, Mann & Co. The contract provided for advances at the rate of \$13,000 a mile for about 200 miles of railway.

Halifax Electric Tramway Co.—Gross receipts from railway:

	1903.	1902.	Increase or Decrease.
Jan.....	\$10,867.33	\$10,764.58	\$102.75+
Feb.....	9,321.75	8,498.39	823.36+
Mar.....	10,195.12	9,761.57	433.55+
April.....	10,532.55	10,025.66	506.89+
May.....	10,768.11	11,126.66	358.55—
June.....	11,843.82	11,528.19	315.63+
July.....	15,942.37	14,834.69	1,107.68+
Aug.....	16,786.03	17,177.12	391.09—
Sept.....	18,494.60	17,494.21	1,000.39+
Oct.....	12,054.78	11,382.25	672.53+
Nov.....	11,219.95	9,945.68	1,274.27+
	\$138,026.41	\$132,539.00	\$5,487.41+

Kootenay and Arrowhead Ry.—S. L. Shannon has been appointed by the Department of Railways to inquire into and report upon claims for labor, etc., in connection with the construction of the line between Duncan lake and Arrow lake, B.C.

Lake Erie and Detroit River Ry.—At the meeting of shareholders, held Nov. 28, the contract giving the Pere Marquette Rd. running rights over the lines of the L.E. and D.R.Ry., with the exception of the leased line, the London and Port Stanley Ry., was approved.

Application will be made to the Governor-in-Council at Ottawa Jan. 4, for the final approval of the contract. (Dec., 1903, PG. 411.)

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

	1902-3.	1901-2.	Increase or Decrease.
Dec.....	\$15,041.80	\$12,947.48	\$2,094.32+
Jan.....	12,132.54	10,117.60	2,014.94+
Feb.....	10,716.42	8,894.78	1,821.64+
Mar.....	11,533.68	10,233.21	1,300.47+
Apr.....	11,818.06	9,941.04	1,876.12+
May.....	13,144.76	12,233.68	911.08+
June.....	16,223.80	13,642.77	2,581.03+
July.....	18,317.23	16,327.43	1,979.80+
Aug.....	19,094.16	16,102.08	2,992.08+
Sept.....	19,528.11	18,157.57	1,370.54+
Oct.....	13,772.11	11,645.46	2,126.65+
Nov.....	11,653.68	12,355.65	701.97—
	\$172,976.35	\$152,609.65	\$20,366.70+

Montreal Street Ry.—Negotiations have been proceeding for some time between the company and the city council for a new franchise, and two propositions were submitted by the company, both of which have been rejected.

Earnings and expenses for Nov., 1903:

	1903.	1902.	Increase or Decrease.
Passenger earnings.....	\$187,929.58	\$170,853.63	\$17,095.95+
Miscellaneous earnings.....	1,631.60	2,038.71	407.11—
Total earnings.....	189,561.18	172,892.34	16,668.84+
Operating expenses.....	116,609.18	103,628.45	12,980.73+
Net earnings.....	72,952.00	69,263.89	3,798.11+
Fixed charges.....	17,902.96	16,076.59	1,826.37+
Surplus.....	55,049.04	53,187.30	1,861.74+
Expenses % of car earnings.....	62.05	60.66	-

	1903.	1902.	Increase or Decrease.
Passenger earnings.....	\$392,382.03	\$350,266.49	\$42,115.54+
Miscellaneous earnings.....	3,779.83	4,011.48	231.65—
Total earnings.....	396,161.86	354,277.97	41,883.89+
Operating expenses.....	227,318.10	200,047.37	27,270.73+
Net earnings.....	168,843.76	154,230.60	14,613.16+
Fixed charges.....	36,824.56	32,068.21	4,756.35+
Surplus.....	132,019.20	122,162.39	9,856.81+
Expenses % of car earnings.....	57.93	57.11	-

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

Nakusp and Slocan Ry.—The financial statement of the B.C. Government to June 30,

Pintsch System Car and Buoy Lighting.

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

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1903, shows that under the contract with the C.P.R., by which the Government was to receive 40% of the gross revenue, there was received for 1902-03 \$6,976.37, and the Government paid during the same period \$26,050.18 on account of interest on the \$647,072 of 4% 25-year bonds, the interest on which was guaranteed.

New York and Ottawa Ry.—The sale of this line, the U.S. connection of the Ottawa and New York Ry., was further postponed to Dec. 29, with the consent of the court. (Nov., 1903, pg. 391.)

Ottawa and New York Ry.—The operating expenses for the year ended June 30, 1903, were \$93,398.33, and the taxes \$700, making altogether \$94,098.33. The gross revenue was \$101,239, and the net revenue \$7,141.67.

Pere Marquette Rd.—Press reports state that the rental of the trackage rights over the Michigan Central Rd. is \$165,000 and 5% of the cost of any betterments put on the St. Clair branch of the Canadian section of the line. The lease will run for 99 years, and covers the line of the Canada Southern Ry., from St. Clair Junction to Buffalo, and the St. Clair branch from St. Clair Junction to Court-right, in addition to some mileage in the United States.

Qu'Appelle, Long Lake and Saskatchewan Ry.—Net loss for Oct., \$10,178.88 against \$330.06 for Oct., 1902, making for 11 months to Oct. 30, a net loss of \$658.26, against net earnings of \$64,099.11 for same period, 1901-02.

Quebec Central Ry.—Gross earnings for Oct., \$56,712.30; working expenses, \$42,217.57; net earnings, \$14,494.73, against \$7,996.16 gross, and \$16,307.63 net for Oct., 1902. Gross earnings for ten months ended Oct. 31, \$586,716.18; net earnings, \$172,616.46, against \$568,615.61 gross, and \$183,856.09 net for same period 1902.

Rutland Rd.—The general balance sheet to Sept. 30, 1903, gave the following particulars: Assets.—Cost of road and equipment, \$20,641,492; stocks and bonds, \$1,058,660; accrued interest, \$7,445; supplies on hand, \$286,562; due by agents, \$62,284; due by others, \$55,439; open accounts, \$656,453; cash on hand, \$209,484; prepaid taxes, \$2,710; prepaid insurance, \$4,587; total, \$22,985,119. Liabilities.—Capital stock, common, \$199,400; capital stock, preferred, \$9,057,600; funded debt, \$12,129,000; loans and bills payable, \$207,651; interest due and accrued, \$100,595; rentals due and accrued, \$20,573; dividends unpaid, \$4,015; coupons due, not presented, \$6,551; due for wages, \$84,511; due for supplies, \$85,608; open accounts, \$365,381; profit and loss (surplus), \$724,233; total, \$22,985,118. (Dec., 1903, pg. 411.)

St. Thomas Street Ry.—The street railway committee of the St. Thomas, Ont., city council has prepared a report of the operations of the railway by the city for the first year ended Nov. 24. The report shows: receipts, \$14,603.35; expenditure, \$14,739.78; deficit, \$136.43. Passengers carried, 359,190; receipts from fares, \$13,934.52.

Shuswap and Okanagan Ry.—The financial statement of the B.C. Government for the year ended June 30, 1903, shows that there was received from the C.P.R., being 40% of the gross revenue, \$19,571.66, and the Government paid \$50,816.94 on account of interest on \$1,249,760 of 4% 25-year guaranteed bonds.

Stanstead, Shefford and Chambly Ry.—The following directors and officers were elected at the annual meeting recently held: President, Hon. S. W. Foster; Vice-President, E. H. Fitzhugh; other directors: C. M. Hays, E. C. Smith, W. H. Chaffee, A. H.

Moore, G. Stevens, G. E. Robinson, J. P. Noyes; Secretary-Treasurer, C. H. Farmalee.

Temiscouata Ry.—At the annual meeting recently held at Quebec, the statement of accounts for the year ended June 30, 1903, showed: Passenger earnings, \$40,812.12; freight and live stock, \$94,101.01; gross receipts, \$134,913.13, against \$126,027.51 for same period 1901-02. The expenditure was: Maintenance of way, \$47,701.42; working and repairs of engines and tenders, \$32,899.07; working and repair of cars, \$9,409.75; general operating expenses, \$25,911; total, \$115,921.24; making \$18,991.89 of net earnings, from which there was remitted to London, Eng., for expenses of London office, etc., \$17,091.66; leaving a surplus of \$1,900.23. The following are the figures of expenditure for 1901-2: maintenance of way, \$37,072.55; working and repair of engines and tenders, \$33,504.29; working and repair of cars, \$7,721.24; general operating expenses, \$20,678.95; total operating expenses, \$98,978.02; remitted to London office, \$9,749.99; total, \$108,727.02; which deducted from the gross earnings of \$126,027.51, left a surplus of \$17,300.49. These figures show an increase of \$8,885.62 in the gross earnings, and of \$16,944.21 in the working expenses in Canada, making a decrease in the net earnings of \$8,058.59. The following officers and directors were elected: President, F. Grundy, Sherbrooke, Que.; Vice-President, J. H. Walsh, Sherbrooke; other directors: A. Steele, Sherbrooke; W. Cooke, K.C.; A. H. Cook, K.C.; A. Laurie, L.L.B.; W. N. Campbell, Quebec; Secretary and General Manager, D. B. Lindsay, Riviere du Loup, Que.

Gross earnings for Nov., \$9,121.63; working expenses, \$9,318.21; net loss, \$196.58, against \$9,566.03 gross, \$9,368.87 working expenses, and net earnings of \$197.16 for Nov., 1902.

Toronto, Hamilton and Buffalo Ry.—Gross earnings for Nov.: \$45,859.07, against \$40,414.34 for Nov., 1902. Gross earnings for six months to Nov. 30, \$288,039.53, against \$223,995.59 from same period 1902.

Toronto Railway Co.—Car earnings:

	1903.	1902.	Increase or Decrease
Jan.	\$161,938.22	\$137,135.21	\$24,803.01+
Feb.	146,539.17	127,981.01	18,558.16+
Mar.	159,913.85	141,681.22	18,232.63+
April.	162,276.36	132,546.56	29,729.80+
May.	174,519.58	145,195.54	29,324.04+
June.	177,593.21	131,865.85	45,727.36+
July.	192,629.06	162,072.02	30,556.94+
Aug.	185,822.45	164,764.57	21,057.88+
Sept.	237,009.91	195,610.37	41,399.54+
Oct.	183,810.09	154,750.17	29,059.92+
Nov.	174,038.78	154,632.84	19,405.94+
	\$1,956,090.68	\$1,644,235.46	\$311,855.22+

Victoria and Sidney Ry.—The annual financial statement of the B.C. Government for the year ended June 30, 1900, shows that the Government paid \$6,030 on account of its guarantee of interest on \$300,000 of the Company's 25-year bonds. The Government did not receive anything from the Company during the year in respect of the operation of its line.

White Pass and Yukon Ry.—Gross earnings for Oct., \$183,415; making for 10 months, to Oct. 30, \$1,134,154. From Nov. 1 to Nov. 7, \$4,353.

The Transportation Commissioners, J. Bertram, of Toronto; R. Reford, of Montreal, and H. Fry, of Quebec, met at Ottawa recently, and discussed with members of the Government the scope of the enquiry which they have been appointed to make.

The railway constructed in Cuba by the Cuba Co., in which Sir Wm. Van Horne is largely interested, is now running trains from Havana to Santiago, 540 miles. The trip is made in 25 hours instead of three days, with stop-overs at night, as formerly.

Railway Equipment Notes.

The Cape Breton Electric Co. has imported two snow ploughs.

The Canadian Northern Ry. is contemplating ordering 400 flat cars.

Rhodes, Curry & Co., Amherst, N.S., have added an axle plant to their works with a capacity of 100 axles a day.

The Brockville, Westport and Northwestern Ry. has received lumber for the repair of 10 flat cars and 3 stock cars.

The Minneapolis, St. Paul and Sault Ste. Marie Ry. is reported to be contemplating placing further orders for freight equipment.

The Londonderry Iron Co., of Londonderry, N.S., has placed a new narrow gauge locomotive in service for hauling ore from its West Mines.

The Canadian Northern Ry. added to its equipment between Nov. 16 and Dec. 16, five freight locomotives received from the Canadian Locomotive Co.

A locomotive and 13 flat-cars have been received at Liverpool, B.C., for use on the lines between the International Boundary and Vancouver, operated by the Great-Northern Ry., U.S.

The Temiskaming and Northern Ontario Ry. is having built 100 flat cars by Rhodes, Curry & Co., Amherst, N.S., for delivery in May. An order has also been placed for 50 box cars.

The Canadian Westinghouse Co. (Ltd.) has received orders from the Prince Edward Island Ry. to equip 13 locomotives, 33 passenger cars and 117 freight cars with air-brakes.

The C.P.R. placed orders for the following equipment between Nov. 14 and Dec. 14: two snow ploughs and one flanger at its Hochelaga shops and two vans at its Farnham shops.

The Baldwin Locomotive Works, Philadelphia, Pa., is building one passenger locomotive for the Dominion Atlantic Ry., and two locomotives for the Canadian Copper Co., Sudbury, Ont.

The Record of Recent Construction, no. 44, of the Baldwin Locomotive Works, Philadelphia, Pa., gives illustrations of some types of inspection locomotive-cars, for use by directors and officials.

The locomotive recently purchased by R. McNair from the McLean Bros., Vancouver, for use on his logging railway, was many years ago engaged hauling trains into Salt Lake City, and was the first locomotive used by the Columbia and Western Ry.

The Intercolonial Ry. has received 10 out of the order for 20 consolidation freight locomotives given to the Canadian Locomotive Co. Five 10-wheel passenger locomotives are also on order with the same company.

The Canadian Northern Ry. will, it is reported, fit up three cars, hitherto used as first-class day coaches, as tourist sleeping cars. Supplies for this conversion have been delivered at the Company's Winnipeg shops.

The G.T.R. added to its equipment between Nov. 15 and Dec. 17 two refrigerator cars and 5 switching locomotives, built at its Montreal shops; and one switching locomotive built at its Port Huron, Mich., shops.

The eight refrigerator cars, which have been delivered to the Intercolonial Ry. by Rhodes, Curry & Co., Amherst, N.S., are of 60,000 lbs. capacity, and are fitted with Simplex bolsters and Westinghouse automatic brakes.

The Intercolonial Ry. had received from Rhodes, Curry & Co., Amherst, N.S., up to Dec. 2, 231 box cars of 80,000 lbs. capacity, built to the standard dimensions of the

American Railway Association. They are fitted with Simplex trucks and bolsters, and Westinghouse automatic brakes.

The two baggage cars which Rhodes, Curry & Co., Amherst N.S., are building for the Intercolonial Ry. are 65 ft. long, with special platforms for the blind end, I.C.R. standard trucks, Westinghouse automatic brake, and steel-tired wheels. These cars will be finished outside in natural wood.

The Grand Valley Ry. (Electric) has received two new cars. They are larger than those now in use, and are arranged in three compartments, one for the motorman, one for general passengers, and one for smokers. They are fitted similarly to a railway car. They have been named Hiawatha and Red Cloud.

A U.S. paper recently stated that bids were about to be asked for new machinery for the running repair shops now under construction by the G.T.R. at Allandale, Ont. We were advised, Dec. 11, that no specifications for any new machinery had been prepared, and that if any more machinery was required at Allandale it would probably be transferred from some of the Company's other shops.

The C.P.R. received the following equipment between Nov. 14 and Dec. 14: Three freight locomotives from the Saxon Engine Works, Chemnitz, Germany; 14 freight locomotives from Scotland; one Shay locomotive from the U.S.; two first-class cars from Rhodes, Curry & Co., Amherst, N.S.; five first-class cars and three snow ploughs from its Hochelaga shops; and 167 30-ton box cars from its Perth shops.

The equipment used on the Canadian Northern Ry.'s fast train service from Winnipeg to St. Paul, Minn., is that used during the summer on the fast service operated between Winnipeg and Port Arthur, Ont. The floor plan shows that the feature of the cars is the separation of the smoking room from the men's lavatory, etc. A floor plan and a view showing the arrangement of the smoking room are given on pg. 15.

The Winnipeg, Selkirk and Lake Winnipeg Ry., now under construction, will, it is stated, be operated at first by steam. C. D. Warren, President, Toronto, says ample rolling stock has been secured, but declines to give any particulars. We have been informed from another source that two locomotives and some cars have been secured from the New York Elevated Ry., but C. D. Warren stated, when asked respecting this, that it was incorrect.

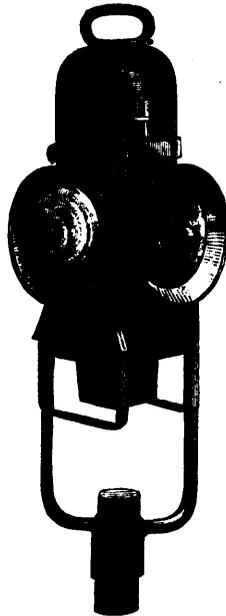
At the C.P.R. shops in Montreal the following plan is adopted for finding flaws in iron or steel: Whenever a pair of wheels is sent to the lathe for tire turning, the axle is first carefully cleaned with naphtha; this removes all the grease; then a thin coat of white paint, in which only turpentine is used, is applied, and the mixture allowed to dry. As soon as the wheels are put into the lathe, the stress in the axle, due to the process of turning, develops any flaw or crack if there is one, and it shows at once, as the grease in the crack comes to the surface. Piston rods and side rods undergo similar treatment, and the result has been that many dangerous defects have been found that would have escaped even a careful examination by the eye alone. —Railway and Locomotive Engineering.

Following are general dimensions of the additional rolling stock ordered by the C.P.R. in Sept., at its Hochelaga shops, and recently completed: The 15 sleeping cars are 72 ft. long, by 9 ft. 10½ in. wide over frame, and are similar in type to the Radnor sleepers. The five dining cars are 72 ft. long by 9 ft. 10½ in. wide over frame; they have six double and six single tables in the dining room, instead of five of each kind, as in previous cars; the kitchen, pantry and other accessories are similar to the Chambord and Warwick class-

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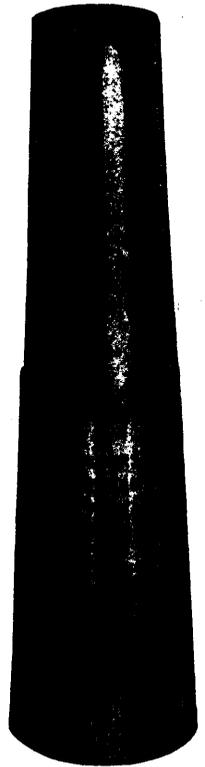
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es. The 25 first-class cars are standard, 60 ft. long by 9 ft. 10 1/2 in. wide over frame, and are fitted with a smoking room to accommodate eight persons. The 26 tourist cars are 72 ft. long by 9 ft. 10 1/2 in. wide over frame, and have, in addition to the usual toilet room and kitchen conveniences, an enclosed smoking room similar to the first-class sleeping cars; the seats and berths are also made similar to the first-class sleepers; and the cars are finished inside with birch and marquetry paneling.

The Temiskaming and Northern Ry. is having four locomotives built by the Canadian Locomotive Co., Kingston, Ont. Following are the general dimensions:

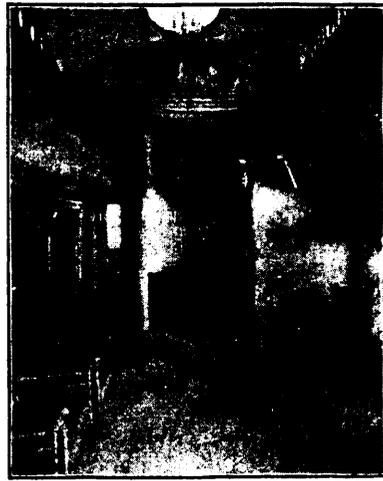
Gauge	4 ft. 8 1/2 in.
Type of engine	10 wheel
Fuel used	Bituminous coal
Weight in working order, drivers	109,000 lbs.
total	135,000 lbs.
Wheel base of engine, rigid	12 ft. 6 in.
total	22 ft. 6 in.
" " and tender	50 ft. 7 in.
Length over all, engine and tender	59 ft. 2 in.
Width " " " "	10 ft. 0 1/2 in.
Height " " " "	14 ft. 4 in.
Heating surface, fire box tubes	155 sq. ft.
total	1,536 " "
Grate area	30 sq. ft.
Diameter of driving wheels	36 in.
Material	centres. Cast iron, 50 in. centres
Diameter and length of driving journals	8 in. x 9 in.
of cylinders	19 in.
Stroke of	24 in.
Type of boiler	Belprire—extended wagon top
Working pressure of boiler	180 lbs.
Number of tubes	239
Diameter " "	2 in.
Length " "	12 ft. 4 in.
Injectors	8 by 9
Safety valves	a locomotive type
Brakes	Westinghouse—American
Coupler	M.C.B. Vertical Plane
Engine truck wheels	Cast iron—38 in. dir.
Weight of tender, loaded	98,000 lbs.
Capacity of tank in imperial gallons	4,000
Style of tank	Square top
Coal capacity	About 8 tons
Style of truck	4-wheel—flanged steel bolster
Diameter of wheel	33 in.
Kind of wheel	Cast iron
Diameter and length of journal	5 in. x 9 in. M.C.B.

German Locomotives for the C.P.R.

In our issue of Oct., 1903, we published an illustration of one of the 20 Pittsburg system two cylinder compound 10-wheel (4-6-0) freight locomotives, built for the C.P.R. by the Saxon Engine Works, Chemnitz, Germany. Following are the general dimensions:

Total weight, lbs.	169,000
Weight on drivers, lbs.	128,000
Heating surface, sq. ft.	2421
Cylinders, in.	22 and 33 x 26
Diameter of drivers, in.	63
Working pressure, lbs.	210

The estimated maximum tractive effort of the locomotive is 24,900 lbs. All the drivers are flanged. The low-pressure cylinder has a balanced slide valve and the high-pressure cylinder has a piston valve. The valve motion bar is an I section and the valve rod receives its motion through a block-and-slot arrangement on the rocker arm, which arrangement avoids the springing motion of the valve rod such as occurs when no rear bearing is used for supporting the rod. The diaphragm in the front end of the locomotive terminates in a vertical plate in front of the blast pipe extending down to within 6 or 8 in. of the shell. Double petticoat pipes and a circular netting are used. The fire-box crown-sheet is sling



VIEW OF THE SMOKING-ROOM, CANADIAN NORTHERN RY. FIRST-CLASS CAR.

stayed, and the holes for the sling stay-bolts in the crown-sheet are reamed out so that the bolt will go up to within about 1/8 in. from the head, after which it is driven up to the plate with a hammer. The six centre rows of stays are fitted with steel nuts 1/2 in. thick and copper washers 1-3/2 in. thick under the crown-sheet. The boiler is the extended wagon-top type, and is 75 1/2 ins. outside diameter at the dome course. The boiler contains 328 2 in. tubes 13 ft. 2 1/2 ins. long. The fire-box is steel, 9 ft. 6 ins. long and 3 ft. 5 1/2 ins. wide, and the grate area is 33.2 sq. ft. The fire-box contains 159 sq. ft. of heating surface. The tender has a capacity of 5,000 imperial gallons of water and 10 tons of coal. Following are some of the typical ratios given by the Railroad Gazette:

Weight on drivers divided by maximum tractive effort	5.14
Weight on drivers divided by heating surface	52.9
Heating surface divided by grate area	72.9
Heating surface divided by h. p. cylinder volume	423.3
Grate area divided by h.p. cylinder volume	5.9
Fire-box heating surface divided by total heating surface	6.57
Steaming capacity	2.20

The special equipment includes Simplex truck bolsters and brake-beams, and Westinghouse automatic brakes on engine and tender. Some additional illustrations are given on page 17.

A recent order-in-council cancels the order of Sept. 7, authorizing the remission of duty on certain materials of Canadian manufacture used without change of form in the construction abroad of locomotives for railways in Canada. The remission of duty will cover parts exported for locomotives ordered prior to Oct. 26, and not yet delivered.

The Chateaugay and Northern Ry. from Montreal to Joliette, Que., was opened for traffic Dec. 15, by the Great Northern Ry. of Canada, which has leased the line. A special train, on which the directors, the Premier of Canada, and others were passengers, went over the line. The bridge over the two branches of the Ottawa river at Bout de L'Isle, was named the Laurier bridge by Lady Laurier, wife of the Premier.

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

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

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July	\$3,997,343.75	\$2,678,816.63	\$1,318,527.12	\$142,815.86+
Aug.	4,076,153.74	2,642,051.24	1,434,102.50	71,204.05+
Sept.	3,937,001.72	2,734,735.91	1,202,265.81	208,486.69+
Oct.	4,488,263.88	2,834,236.87	1,654,027.01	37,892.38+

\$16,498,736.09 \$10,889,840.65 \$5,608,922.44 \$43,420.60+
Approximate earnings for Nov., \$4,058,000, against \$3,898,000 for Nov., 1902.

DULUTH, SOUTH SHORE AND ATLANTIC RY.
—Gross earnings for Oct., \$233,636.04; net earnings, \$73,285.15, against \$259,205.85 gross and \$98,800.19 net for Oct., 1902. Net earnings for four months ended Oct. 31, \$364,325.25 against \$426,615.95 for same period, 1902. Approximate earnings for Nov., \$185,270, against \$197,175 for Nov., 1902.

MINERAL RANGE RY.—Approximate earnings for Nov., \$46,454, against \$48,916 for Nov., 1902.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for Oct., \$802,550.14; net earnings, \$454,613.75, against \$844,467.88 gross and \$519,151.85 net for Oct., 1902. Net earnings for four months ended Oct. 31, \$1,455,014.88, against \$1,460,497.40, for same period, 1902. Approximate earnings for Nov., \$759,625, against \$750,608 for Nov., 1902.

Canadian Pacific Railway Land Sales.

	Acres.		Amount.	
	1903	1902	1903	1902
July	267,647.32	155,344.93	\$1,020,404.70	\$674,876.50
Aug.	263,339.45	130,723.83	1,271,529.81	473,064.85
Sept.	60,441.12	145,535.83	268,757.99	524,811.11
Oct.	15,950.07	270,616.23	236,611.99	952,645.35
Nov.	22,563.95	146,687.83	107,365.21	598,788.99
	569,500.79	848,908.65	\$2,635,911.38	\$3,130,185.80

Grand Trunk Ry. Earnings, Expenses, &c

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

	1903.		1902.		Increase.	Decrease.
July	\$3,192,608	\$2,589,422	\$603,186			
Aug.	3,201,511	2,719,303	482,208			
Sept.	3,274,245	2,885,405	388,840			
Oct.	3,222,750	2,956,358	266,392			
Nov.	2,925,000	2,726,459	198,541			
	\$15,816,114	\$13,876,947	\$1,939,167			

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

GRAND TRUNK RY. CO.

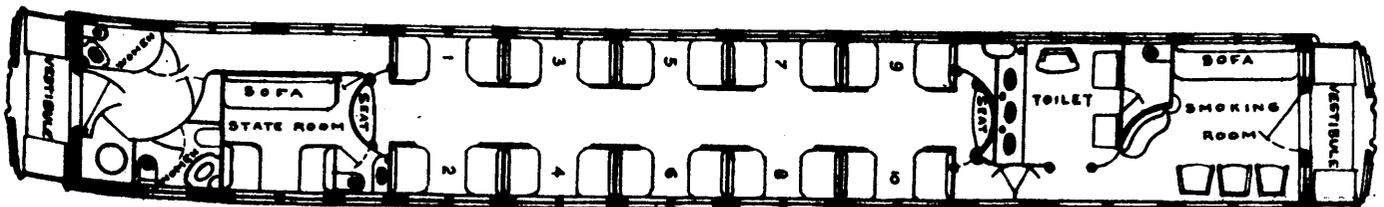
Revenue statement for Oct. 31, 1903:

	1903.	1902.	Increase.	Decrease.
Gross receipts	£2,610,600	£492,100	£24,500	
Working expenses	347,200	323,800	23,400	
Net profit	£219,400	£168,300	£51,100	

Aggregate from July 1 to Oct. 31, 1903:

	1903.	1902.	Increase.	Decrease.
Gross receipts	£2,148,400	£1,876,300	£272,100	
Working expenses	1,446,300	1,216,600	229,700	
Net profit	£702,100	£659,700	£42,400	

GRAND TRUNK WESTERN RY. CO.
Revenue statement for Oct. 31, 1903:



FLOOR PLAN, CANADIAN NORTHERN RY. FIRST-CLASS CAR,

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£119,500	£91,800	£27,700	....
Working expenses	104,900	78,500	26,400	....
Net profit...	£14,600	£13,300	£1,300	....

Aggregate from July 1 to Oct. 31, 1903:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£400,400	£325,000	£75,400	....
Working expenses	360,100	290,400	69,700	....
Net profit...	£40,300	£34,600	£5,700	....

DETROIT, GRAND HAVEN & MILWAUKEE RY. CO.

Revenue statement for Oct. 31, 1903:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£25,900	£23,400	£2,500	....
Working expenses	19,800	17,600	2,200	....
Net profit.....	£6,100	£5,800	£300	....

Aggregate from July 1 to Oct. 31, 1903:

	1903.	1902.	Increase.	Decrease.
Gross receipts...	£99,400	£88,600	£10,800	....
Working expenses	70,400	61,400	9,000	....
Net profit.....	£29,000	£27,200	£1,800	....

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from July 1 to Nov. 30, 1903:

	1903.	1902.	Increase.	Decrease.
Grand Trunk...	£2,629,058	£2,334,448	£294,610	....
G. T. Western	501,014	406,344	94,670	....
D. G. H. & M.	119,814	110,634	9,180	....
Total.....	£3,249,886	£2,851,426	£398,460	....

TRANSPORTATION APPOINTMENTS.

Canadian Manufacturers' Association.—The title of W. H. D. Miller, who has recently been appointed, is Manager Transportation Department.

Canadian Northern Ry.—J. P. Patterson is reported to have been appointed yardmaster at Winnipeg, succeeding T. B. Miles, dismissed. T. P. Gray, night yardmaster, is also reported to have been dismissed for insubordination.

Canadian Pacific Ry.—D. McNicoll, heretofore Second Vice-President and General Manager, has been elected Vice-President. Office at Montreal.

W. Whyte has been elected Second Vice-President, with office at Winnipeg, in general charge of the maintenance and operation of the Company's western lines, and, under the President's direction, of the administration of the Company's affairs in the territory between Lake Superior and the Pacific coast. Officers of departments will report to their respective chiefs as heretofore, but they will consult with the Second Vice-President, and keep him fully informed about all matters affecting the territory in his charge.

J. W. Leonard, Assistant General Manager of all the Companies' lines west of Lake Superior, with office at Winnipeg, has resigned.

E. A. Williams has resigned his position as Superintendent of Rolling Stock, and has been appointed Assistant General Manager of the Erie Rd.

C. H. Hines has been appointed Electrical Engineer. Office, Montreal. He will report to the Superintendent of Rolling Stock. He will have general supervision over all electrical matters, including power and lighting circuits, generators, motors, arc and incandescent lamps, and other electric machinery and apparatus as directed. He will prepare standard and special plans and estimates as required, and it shall be his duty to supervise the construction, operation and maintenance of electric installations and circuits in order to insure compliance with plans, rules and specifications pertaining to same. In the execution of new work, general and special repairs and maintenance of electric plants, divisional employes will act under his instructions as directed and limited by the General Superintendents of their respective divisions.

J. R. Marlow, chief clerk to the General Freight Agent, Ontario division, has been

Drummond, McCall & Co.

IRON, STEEL AND METAL MERCHANTS

Branch Office: TORONTO

Montreal

STEEL RAILS

Prompt Shipment from stock of 60 lb. and 80 lb. A. S. C. E. Standard Sections, the product of **The Algoma Steel Co.**, of Sault Ste Marie, Ont.

For Import:—English Rails, "Barrow" brand, all standard sections; also rails of best German manufacture.

IMPORTERS OF **Beams, Channels, Angles, Steel Plates, Mild Steel Bars, Cold Rolled Steel, Shafting, Wire Rope, Tool Steel, Etc.** COMPLETE STOCK KEPT IN MONTREAL.

MONTREAL STEEL WORKS

MANUFACTURERS OF **STEEL CASTINGS**

LIMITED

(UP TO 15 TONS)

(OPEN HEARTH SYSTEM)

SWITCHES AND TRACK WORK

FOR STEAM AND ELECTRIC ROADS

SPRINGS

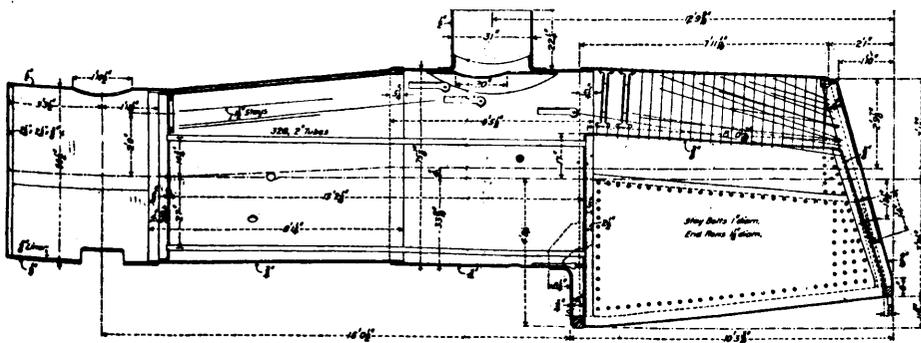
OF ALL KINDS

MANGANESE STEEL CASTINGS

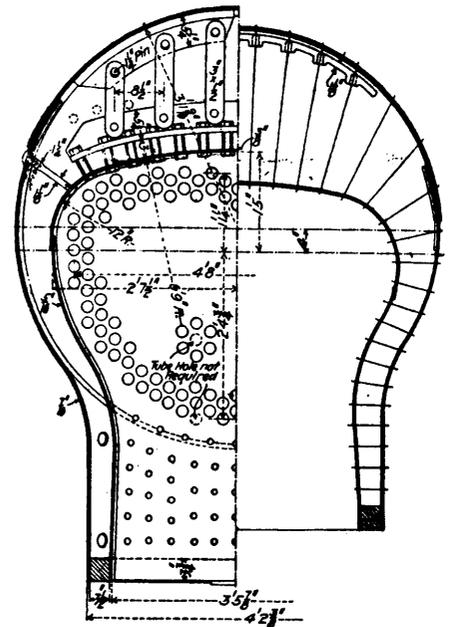
For wearing Parts, insuring Great Hardness and Durability

INTERLOCKING PLANTS

WORKS AND OFFICE: CANAL BANK, PT. ST. CHARLES, MONTREAL



BOILER OF C. P. R. TWO-CYLINDER COMPOUND.



SECTION THROUGH FIRE-BOX C. P. R. TWO-CYLINDER COMPOUND.

appointed chief clerk to the Assistant Freight Traffic Manager, Toronto, succeeding W. H. D. Miller, appointed Manager of Transportation Department, Canadian Manufacturers' Association.

L. A. W. Dougherty has been appointed chief clerk to the General Freight Agent, Ontario division, Toronto, succeeding J. R. Marlow, promoted.

J. Coughlin has been appointed Roadmaster of the Schreiber section, Lake Superior division, vice P. Jackson, resigned. Office, White River, Ont.

W. Guthrie has been appointed Roadmaster of the Chapleau section, Lake Superior division, vice J. Coughlin, transferred. Office, Chapleau, Ont.

G. S. MacKinnon, Master Mechanic, Central division, Winnipeg, has resigned, and until further notice all communications heretofore addressed to the Master Mechanic are to be sent to the Second Assistant of Rolling Stock, J. H. Manning, Winnipeg.

J. L. Audrain has been appointed station master at Winnipeg, succeeding H. O'Connor, transferred.

R. E. MacArthur has been appointed Resident Engineer, Western Division. Office, Calgary, Alta.

S. J. Hungerford resumed his duties as Master Mechanic, Western Division, at Calgary, Alta., Dec. 1. During his absence, on account of illness, R. A. Payne, locomotive foreman at Brandon, Man., was acting Master Mechanic. He has returned to Brandon and resumed his former duties.

T. Downie, heretofore Chief Train Dispatcher, district 1, Pacific division, has been appointed Trainmaster, same district, succeeding G. F. Risteen, resigned. Office, Revelstoke, B.C. G. F. Risteen has been

given a position as passenger conductor between Kamloops and Vancouver.

R. C. Baker, heretofore train dispatcher, Revelstoke, B.C., has been appointed Chief Train Dispatcher, district 1, Pacific Division, succeeding T. Downie, appointed Trainmaster. Office, Revelstoke.

R. A. Burford has been appointed City Passenger and Freight Agent at Buffalo, N.Y., succeeding A. J. Shulman, resigned.

F. P. McKee, who was appointed to act as freight and passenger agent at Washington, D.C., temporarily, has been appointed ticket agent at 1 Broadway, New York.

D. H. Morse has been appointed Freight and Passenger Agent at Washington, D.C.

Central Vermont Ry.—A. Buchanan, Jr., has been appointed Superintendent of Motive Power, succeeding T. A. Summerskill, resigned. Office, St. Albans, Vt.

E. Buck will, it is reported, be appointed Chief Dispatcher, Northern division, succeeding T. S. Beeler, resigned to accept service with another company. On Dec. 12 we were informed that no appointment had been made.

Chicago and Northwestern Rd.—D. Parker, successively with the C.P.R., Northern Pacific Ry. and Canadian Northern Ry., at Winnipeg, has been appointed resident agent for the C. and N.W. Rd. Office, 339 Main st., Winnipeg.

Delaware, Lackawanna and Western Rd.—A circular, dated Dec. 4, says, "After 18 years of faithful and efficient service with this Co., Geo. Bazzard announces his retirement Dec. 31, 1903."

A. Leadlay, heretofore Soliciting Agent at Toronto, has been appointed Canadian Agent, succeeding G. Bazzard, retired. Office, Toronto.

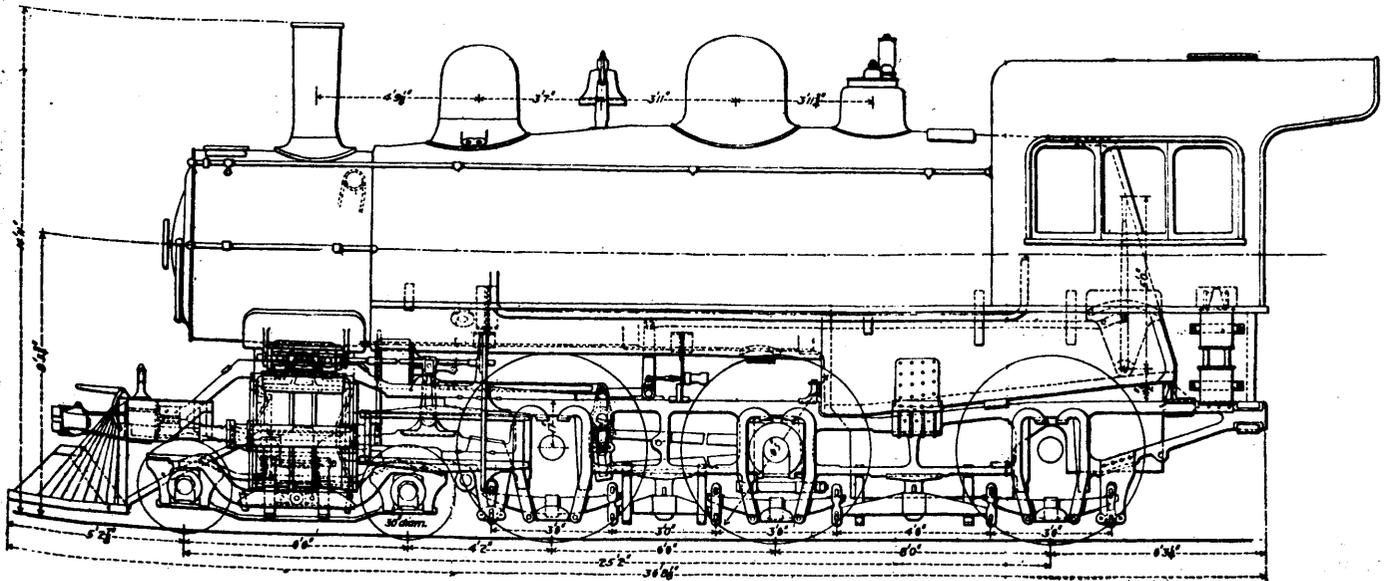
W. A. Grey, heretofore chief clerk, Yonge st. freight sheds, G.T.R., Toronto, has been appointed Contracting Freight Agent, succeeding A. Leadlay, appointed Canadian Agt.

Department of Marine.—J. F. Fraser, heretofore technical adviser to the Department, has been appointed Commissioner of Lights, with W. H. Noble as assistant. Lieut.-Col. W. P. Anderson remains as Chief Engineer of the Department. An enquiry of the Deputy Minister as to the respective duties of the officers named elicited the reply that "they are matters of departmental detail."

Erle Rd.—J. C. Stuart has been appointed General Manager of this company and its allied and controlled lines, vice D. Willard, resigned to accept service elsewhere.

E. A. Williams has been appointed Assistant General Manager of this company and its allied and controlled lines. Office, New York.

Grand Trunk Pacific Ry.—J. W. Kneeshaw, heretofore Assistant Stationery Agent G.T.R., at Detroit, has been temporarily delegated to go to Winnipeg for the purpose of looking after the purchase of supplies, etc., for the engineering parties on surveys. This work has hitherto been done by the division



ELEVATION OF C. P. R. TWO-CYLINDER COMPOUND LOCOMOTIVE.

engineers, but now demands more time than they can give to it.

Grand Trunk Ry.—L. Macdonald, heretofore acting Division Freight Agent at Hamilton, Ont., has been appointed Division Freight Agent there, succeeding J. H. Hanna, resigned on account of ill-health.

H. W. Matthews has been appointed acting Trainmaster, districts 25, 27, 28 and 29, Western division, succeeding J. R. Williams. Office, Durand, Mich.

S. G. Wagstaff, heretofore Michigan State Agent Reading Dispatch Fast Freight Line, at Detroit, Mich., has been appointed Commercial Agent, G. T. R., at Toledo, Ohio. He will report to the Division Freight Agent, Toledo.

Great Northern Ry. of Canada.—This company's line having been extended to Montreal by the leasing of the Chateaugay and Northern Ry., A. J. Gorrie, General Superintendent, will have an office in Montreal as well as in Quebec.

Hampton and St. Martin's Ry.—Capt. R. Carson is reported to have been appointed President and Manager. Office, St. Martin's, N.B.

Montreal Street Ry. and Montreal Park and Island Ry.—K. W. Blackwell has been appointed Vice-President, succeeding F. L. Wanklyn, Vice-President and General Manager, resigned to become Manager of the Dominion Coal Co., and of the Mexican Light and Power Co.

W. G. Ross, heretofore Secretary-Treasurer M.S.Ry., has been appointed Managing Director M.S.Ry., and M.P. and I.Ry.

D. McDonald, heretofore Assistant General Manager, has been appointed Manager.

P. Dubee, heretofore Assistant Secretary, has been appointed Secretary.

Quebec Southern Ry.—C. S. Papps has been appointed Car Accountant. Office, Board of Trade Building, Montreal.

Sherbrooke Street Ry.—The following officers have been appointed: President, P. W. Clement, Rutland, Vt.; Vice-President and General Manager, R. Denio, Bristol, Vt.; Secretary, H. R. Barney, Rutland, Vt.

Spokane Falls and Northern Ry.—H. A. Kennedy, Assistant General Superintendent Great Northern Ry., U.S., at Spokane, Wash., has also been appointed Vice-President S.F. and N.Ry.

E. Sawyer, Treasurer Great Northern Ry., U.S., has also been appointed Treasurer S.F. and N.Ry.

Sydney and Lonsburg Ry.—Following the passing by the Nova Scotia Legislature of the act separating the Dominion Iron and Steel Co. and the Dominion Coal Co., the control of the operations of the S. and L. Ry. and of the Black Diamond Steamship Line, has passed from the D.I. and S. Co., and the lines are operated, as before the amalgamation, by the D.C. Co. The following changes in the operating staff have been made:

C. E. Slayton, heretofore Superintendent of Motive Power, has resigned, and the position has been abolished. All mechanical work is now under the supervision of J. S. Whyte as Mechanical Engineer.

W. Moffatt has been appointed Chief Train Dispatcher; succeeding R. L. Boomer, resigned.

L. McLean, heretofore passenger conductor, has been appointed Trainmaster.

St. Lawrence River Steamboat Co. and Thousand Islands Steamboat Co.—H. B. Mills, heretofore private secretary to President H.S. Folger, has been appointed General Passenger Agent. Office, Kingston, Ont.

Toronto, Hamilton and Buffalo Ry.—B. H. Winans has been appointed Trainmaster, succeeding N. J. McIlhargey, who will continue to perform the duties of Chief Train Dispatcher.

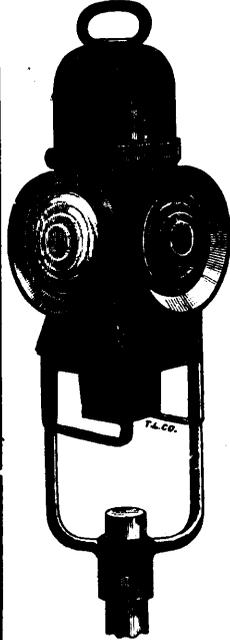
The N. L. Piper Railway Supply Co.

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PIPER'S PATENT SWITCH LAMP



Burns without
a chimney.

Will not catch
on fire.

Requires half
the oil.

Light regu-
lated from the
outside.

Made of Iron,
annealed and
galvanized.

Copper or
Brass oil tank,
never leaks.

PIPER'S SIDE CAR LAMP

Made of
Copper,
nickel
plated.

Fitted with
portable
font with
feeder-cap.

Large
Burner.

Flint
Chimney.

Gives a
clear,
bright
light.



Write for No. 5 Catalogue of Railway Signals and Supplies.

This Year's Purchasing

YOUR AIM IS

To Get the Best Value for the Least Money and
To Show a Saving over Last Year's Supply Account,
To Make a Dollar Go Farther than Ever,
To Get Prompt, Efficient Service.

OUR AIM IS

To Give You the Best Value for the Least Money,
To Make Your Dollar Go Farther With Us than Else-
where,
To Give Prompt, Efficient Service.

A FEW OF OUR LINES

Track Tools, Track Jacks, Car Movers,
Buckeye Wrecking Lights,
Wheel and Drag Scrapers, Railroad Plows,
Etc., Etc.,

W. H. C. MUSSEN & CO.

MONTREAL

MAINLY ABOUT PEOPLE.

N. W. Bethune, district manager, G.N.W. Telegraph Co. at Ottawa, celebrated his 75th birthday recently.

Mrs. Cassils, widow of the late John Cassils, President Dominion Express Co., died at Montreal Dec. 9.

Capt. A. Clinton, senior captain of the Detroit, B.I. and Windsor Ferry Co.'s fleet, died at Windsor, Ont., Dec. 11.

Sir Wm. Van Horne recently returned to Montreal from a trip to Winnipeg, West Selkirk and other points in Manitoba.

R. G. Reid, of the Reid Newfoundland Co., and Mrs. Reid, have returned to Montreal after an extended visit to Scotland.

Jas. Prince, who had been station agent at the Jubilee, N.B., station of the I.C.R. from its opening, died there recently.

I. McMichael, recently appointed General Manager, G.N.W. Telegraph Co., Toronto, took over the duties of the office Dec. 14.

J. D. McLean, train dispatcher, Intercolonial Ry., New Glasgow, N.S., was recently married at Sydney, N.S., to Miss C. A. Forbes.

Miss C. Whyte, daughter of Wm. Whyte, Second Vice-President C.P.R., Winnipeg, was married there recently to Jas. A. Hunter.

Oscar Chevrier, of the Intercolonial Ry., died at the Royal Victoria Hospital, Montreal, Nov. 28., a few days after undergoing an operation.

C. E. Slayton, who recently resigned his position as Superintendent of Motive Power, Sydney and Louisburg Ry., is now at Oelwein, Iowa.

R. Atkinson, formerly Superintendent of Rolling Stock, C.P.R., is now Division Master Mechanic, Philadelphia and Reading Rd., at Reading, Pa.

A. McDonald, roadmaster, C.P.R., Vancouver, B.C., and Mrs. McDonald recently returned to Vancouver after a three-months' trip to Great Britain.

J. W. Moyes, Manager Metropolitan Ry. Co., is one of the provisional directors of the recently incorporated Toronto Coral and Mycenian Marble Co. (Ltd.)

H. B. Sherwood, Superintendent Bay of Quinte Ry., Napanee, Ont., has declined nomination as Liberal candidate for Lennox in the Dominion Parliament.

D. W. Campbell, Superintendent, C.P.R. Atlantic Steamships, is recovering from his recent illness and is able to get down to his office for a short time daily.

H. E. Graves, shipbuilder, Harvey, N. B., is financially involved. His indebtedness is about \$12,000, and his stock was recently seized to satisfy a judgment.

O. Simmons, M. P., Petrolea, Ont., who died recently in Kansas City, Mo., was at one time associated with Sir Wm. Van Horne in some railway work at Chicago, Ill.

L. R. Johnston, Assistant Superintendent of rolling stock, C.P.R., Montreal, recently gave an illustrated lecture in St. George's school, Montreal, on "A trip to China and Japan."

E. A. Jukes, President Nicola, Kamloops and Similkameen Ry., slipped in the King Edward hotel, Toronto, Dec. 9, and fell, fracturing his jawbone and receiving other injuries.

Jas. Currie, accountant and cashier, London Street Ry. Co., has been appointed Secretary-Treasurer and Assistant to the President of the Eastern Ohio Traction Co., Akron, Ohio.

C. R. Dubs, locomotive builder, Glasgow, Scotland, who died recently at Monaive, Dumfriesshire, Scotland, was one of the pro-

moters of the first locomotive works started at Kingston, Ont.

C. W. Anderson, formerly with the Intercolonial Ry. at Halifax, N.S., and later with the G.T.R. at the same point, has been appointed city passenger agent of the Burlington R. Denver, Colo.

H. Sutherland, Executive Agent Canadian Northern Ry., Winnipeg, and Mrs. Sutherland, are among the incorporators of the Roche Percee Coal Mining Co. (Ltd.) recently incorporated in Manitoba.

Mrs. Leonard, wife of J. W. Leonard, Assistant General Manager, C. P. R. lines west of Fort William, Ont., has returned to Winnipeg after spending some time with her sister, Mrs. Barltrop, Toronto.

T. C. Frenyear, General Sales Agent, Canadian Westinghouse Co., with office at Toronto, died in the Fort William, Ont., General Hospital, Dec. 11, from typhoid fever, and was buried at Buffalo, N.Y.

G. G. Ruel, Assistant Solicitor, Canadian Northern Ry., Toronto, a member of the New Brunswick bar, is an applicant for admission to the Ontario bar. Z. A. Lash, K. C., Solicitor to the C. N. Ry., is his sponsor.

A. J. Shulman, who recently resigned his position as C.P.R. City Freight and Passenger Agent at Buffalo, N. Y., has since been with the Niagara Frontier Publishing Co., of Buffalo, and is now travelling for a lumber firm.

C. Currie, General Manager of the Northern Ohio Traction Co., and formerly connected with the London Street Ry., was in a trolley accident at Akron, Ohio, recently. Mrs. Currie was also somewhat seriously injured.

F. Frappier, a C.P.R. section foreman at Montreal, has been arrested on a charge of stealing \$40 from the C.P.R. by means of dummy pay rolls. The company has been defrauded of several thousand dollars by this means.

M. Neilson, formerly General Manager, St. John Ry., was presented with a framed picture of the officials and staff of the operating department of the line on the occasion of a recent trip to St. John, N.B., from Mexico.

G. F. Asselin, formerly night operator, C.P.R., at White River, Ont., was recently sentenced to three years' imprisonment for stealing pay cheques and forging endorsements thereto, from the agent's office at White River.

J. R. Marlow was recently presented with a scarf pin by the staff of the C.P.R. Ontario division general freight office at Toronto on being promoted from chief clerk in that office to chief clerk to the Assistant Freight Traffic Manager, C.P.R., Toronto.

F. A. Huntress was presented with a gold watch by the employes of the Halifax Electric Tramway Co., on his leaving Halifax, N.S., to take up the duties of his new position as manager of the Worcester Consolidated Street Ry. Co., Worcester, Mass.

Capt. Blandford, Marine Superintendent, Reid Newfoundland Co., St. John's, Nfld., who was recently married in Halifax, N.S., to Mrs. Wilkie, widow of the late R. M. Wilkie, has been presented with a service of silver plate by the officials of the company.

N. S. Braden, who has been Manager of the Westinghouse Electric and Manufacturing Co.'s Cleveland office for several years, has been appointed Sales Manager for the Canadian Westinghouse Co., with headquarters at Hamilton, Ont., succeeding T. C. Frenyear, deceased.

G. S. Hodgins, Associate Editor of Railway and Locomotive Engineering, New York, who was formerly connected with the

motive power department of the C.P.R., spent Christmas in Toronto. He is a son of J. G. Hodgins, LL.D., Librarian of the Department of Education, Toronto.

The Erie Rd., to which E. A. Williams, who has resigned his position as Superintendent of Rolling Stock C.P.R., is going as Assistant General Manager, has as its President F. D. Underwood, who was General Superintendent Minneapolis, St. Paul and Sault Ste. Marie Ry. when Mr. Williams was Master Mechanic.

Sir. P. Girouard, who is in charge of the Government railways of the Transvaal and Orange River colonies, and who is visiting his parents in Quebec province, was presented with the freedom of the Ironmonger's Company when passing through London, Eng., on his way to Canada from South Africa. Lady Girouard accompanied her husband.

J. W. Kneeshaw, who is in charge of the purchase of stores, etc., at Winnipeg for the Grand Trunk Pacific Ry. survey parties, has been Assistant Stationery Agent for the G.T.R. at Detroit for about 18 years, and during the past seven years has also been assigned to represent the General Purchasing Agent in the purchase of general stores from time to time.

E. W. Meddaugh, General Counsel, G.T.R. western lines, and a director of a number of its subsidiary companies, who died suddenly near Detroit, Mich., Dec. 21, was born at Morseville, N.Y., July 16, 1833. He entered railway service as local attorney for the G.T.R. at Detroit, and was appointed general solicitor and general counsel for the same system in 1880.

C. H. Hines, who was recently appointed Electrical Engineer, C.P.R., was born at Buffalo, N.Y., Mar. 6, 1865, and from 1884 to joining the C.P.R. staff, was engaged with manufacturing firms in the U.S. having to do with the electrical equipment of street cars, electric lighting, electric power plants, telephone construction, etc. He holds a number of patents in connection with electric lighting, and has contributed a number of articles to the scientific papers, etc.

A. Buchanan, jr., who has been appointed Superintendent of Motive Power, Central Vermont Ry., was born in 1869, and entered railway service 1881, as a machinist with the New York Central and Hudson River Ry. at New York. He was subsequently draftsman, foreman of the erecting shop, and foreman of the machine shop at the same railway's West Albany, N.Y., shops, and from Jan., 1900, to the date of his present appointment, Master Mechanic, Saratoga and Champlain divisions, Delaware and Hudson Ry.

J. H. Dumble, Master in Chancery and Police Magistrate, of Cobourg, Ont., who died recently, was a civil engineer before becoming a lawyer. He was engaged on the survey of Major Robinson's route for the Imperial Ry., subsequently adopted for the Intercolonial Ry.; as engineer of construction for the section of the G. T. R. between Shannonville and Cobourg; was engaged on the preliminary work for the Victoria bridge at Montreal; and was chief engineer for the Cobourg and Peterborough Ry.

J. A. Armstrong, who was recently appointed Chief Dispatcher, C.P.R. at Ottawa, was born at South Durham, Que., April 6, 1863, and entered railway service 1881, since which his record has been: April, 1881, to Sept., 1881, freight checker, G.T.R., at Bonaventure yards, Montreal; Sept., 1881, to Oct., 1886, operator at various stations, G.T.R.; Oct., 1886, to Oct., 1887, operator at various stations, C.P.R.; Oct., 1887, to Mar., 1898, dispatcher, C.P.R. at Farnham, Que.; Mar., 1898, to Nov., 1903, Chief Dispatcher, C.P.R. at Farnham, Que.

A. Leadley, who has been appointed Canadian Agent, Delaware, Lackawanna and Western Rd., at Toronto, was born Feb. 19, 1864, and entered railway service 1882, since which he has been successively: April, 1882, to May, 1886, various positions G.T.R. freight department, Toronto; May, 1886, to Mar., 1898, accounts department, and latterly city collector, G.T.R. freight department, Toronto; Mar., 1898, to Sept., 1900, G.T.R. freight agent Yonge st. station, Toronto; Sept., 1900, to Dec. 31, 1903, Soliciting Agent at Toronto, Delaware, Lackawanna and Western Ry.

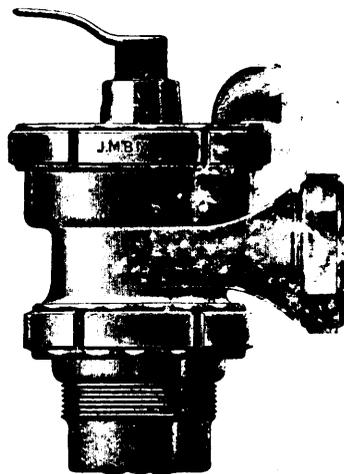
W. H. D. Miller, who has been appointed Manager Transportation Department, Canadian Manufacturers' Association, entered railway service 1887, since which his record has been: June, 1887, to Feb., 1889, messenger under J. N. Sutherland at Queen's wharf; Feb., 1889, to Jan., 1898, in various capacities in general freight offices, C.P.R., Toronto, mainly as export clerk; Jan., 1898, to June, 1902, chief clerk, General Freight offices, Ontario Division, C.P.R., Toronto; June, 1902, to Nov., 1903, chief clerk to Assistant Freight Traffic Manager, C.P.R. at Montreal, and subsequently at Toronto, when the office was moved there.

S. G. Wagstaff, who has been appointed Commercial Agent, G.T.R., at Toledo, Ohio, was born at Hamilton, Ont., Jan. 9, 1866, and entered railway service in 1881; his record being: Oct., 1881, to Feb., 1887, in local freight office, Great Western Ry., afterwards G.T.R., Niagara Falls, Ont., being chief clerk on leaving; Feb., 1887, to Feb., 1893, General Freight Agent Through Traffic, G.T.R., Detroit, Mich.; Feb., 1893, to July, 1899, chief clerk, Commercial office, G.T.R., at Detroit, Mich.; July, 1899, to May, 1903, chief clerk, Division Freight Agent's office, G.T.R., at Detroit, Mich.; May, 1903, to Nov., 1903, Michigan State Agent, Reading Despatch Fast Freight Line, at Detroit, Mich.

Thos. Henry, Traffic Manager, Richelieu and Ontario Navigation Co., Montreal, whose portrait appears on the first page of this issue, was born in Montreal, May 29, 1865, and entered transportation service in 1879, since which his record has been: 1879 to 1881, ticket agent Ottawa River Navigation Co., at Montreal; season of 1881, local freight agent, same company at Montreal; 1881 to 1882, clerk in audit office, G. T. R., Montreal; 1882 to 1884, ticket clerk, G. T. R. city ticket office, Montreal; 1884 to 1887, clerk in office of Northern Pacific Ry.; 1887 to 1900, District Passenger and Freight Agent, Northern Pacific Ry., at Montreal; 1900 to date, Traffic Manager, Richelieu and Ontario Navigation Co.

J. M. Carroll, an Australian railway contractor, who is on a visit to Montreal, in the course of an interview referring to the work in which Thos. Tait, late Manager of Transportation of the C.P.R., has in hand as chairman of the board of commissioners managing the Victorian State railways, said: "Mr. Tait is up against a pretty tough proposition. All the lines in Australia are State owned, and all his predecessors were subjected to all manner of interference from log-rolling politicians. In the State of Victoria Mr. Tait has commenced by cutting off a number of branches which could never be made remunerative, and which had merely been constructed to aid some politician in his quest for votes. Of course that is not the way to run a railway, and Mr. Tait, while he will undoubtedly make the system pay, will, at the same time, incur a great deal of opposition."

D. McNicoll, who has been elected Vice-President, C.P.R., was born at Arbroath, Scotland, April, 1852, and entered railway service Aug. 20, 1866, since which he has been consecutively to 1873, clerk Goods Manager's office, North British Ry., in Scot-



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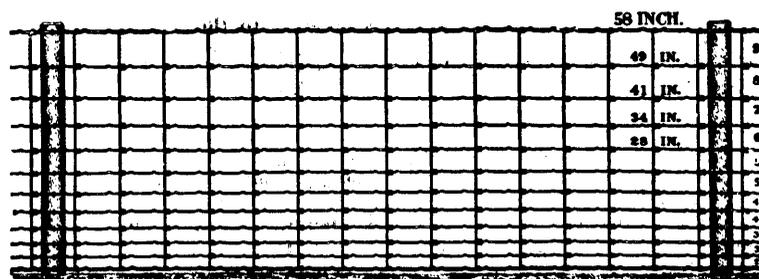
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land; 1873 to 1874, similar position with the Midland Ry. in England; 1874, billing clerk Northern Ry. of Canada, at Collingwood, Ont.; 1874 to 1881, chief clerk in office of General Manager, Toronto, Grey and Bruce Ry.; 1882 to 1883, General Freight 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.

R. M. Hannaford, who was recently appointed Engineer in charge of Permanent Way, Buildings and Bridges, Montreal Street Ry., was born in Montreal, Mar. 22, 1865, and entered railway service as rodman on the Montreal and Champlain Jct. Ry., in 1884, and was rodman and leveller on the construction of the same line, under A. L. Hertzberg, between Ormstown and Huntingdon. After a year spent in the draughting office of a bridge building company in the U. S., he joined the G.T.R. service in 1887 since which his record has been: 1887 to 1889, on bridgework and general engineering; 1889 to 1893, engineer in charge of double track construction G.T.R., Coteau to River Beaudette, Cornwall to Iroquois, and Gananoque to Ernestown; 1893 to 1896, engineer in charge of maintenance of bridges, etc., G.T.R.; 1897 to 1899, designer, etc., with a U.S. bridge building firm; 1899 to 1902, assistant engineer and chief draughtsman with the late James Cooper, Montreal; 1902 to Nov., 1903, assistant engineer for location of new lines and maintenance of bridges and buildings, etc., Montreal Street Ry., and Montreal Park and Island Ry.

Wm. Whyte, who has been elected 2nd Vice-President C.P.R., is a native of Charlestown, Fifeshire, Scotland, and was born Sept. 15, 1843. He commenced his railway career with the North British Ry. in 1861, and after two years' service came to Canada, but it was not until 1865 that he secured his first railway position in this country. For a few months he was freight clerk on the G.T.R. at Cobourg, being transferred to Toronto in the same year. Since then his different appointments have been:—1865 to 1867, freight clerk, G.T.R., Toronto; 1867 to 1870, yardmaster, Toronto, same road; 1870 to 1871, night station agent, Toronto, same road; 1871 to 1874, freight and station agent, Stratford, same road; 1874 to 1881, in charge G.T.R. business at London; 1881, in charge of the freight offices and sheds at Toronto, same road; Nov., 1881, to Sept., 1883, assistant superintendent, central division, same road; Sept., 1883, to Aug., 1884, General Superintendent of the Toronto, Grey and Bruce Ry., Aug., 1884, on the amalgamation of the T.G. and B. with the C.P.R., to May, 1885, General Superintendent Ontario Division C.P.R.; May, 1885, to 1886, General Superintendent of the Eastern and Ontario divisions, same road; 1886, to May, 1887, General Superintendent of the Western division, same road, at Winnipeg; May, 1887, to April, 1901, Manager of C.P.R. lines from Fort William to the Pacific coast; April, 1901, to Dec., 1903, Assistant to the President.

Geo. Bazzard, who has retired from railway service after having been continuously engaged in the freight and passenger departments of railways in Great Britain and Canada since 1856, was born at Westhild Court, Herefordshire, Eng., Jan. 3, 1838. He entered railway service with the South Wales Ry., now part of the Midland Ry. system, at Swansea, Glamorganshire, as General Agent, Sept., 1856, leaving there the following year to act as General Agent of the Newport, Abergavenny and Hereford Ry., remaining there

for six years, during which time he had charge of the traffic over the Crumlin viaduct. Thence he went to the service of the Monmouthshire Ry. and Canal Co., for two years, subsequently becoming joint agent at Brecon, Wales, for the Brecon and Merthyr Ry., Hereford, Hay and Brecon Ry., and Mid-Wales Ry., of the latter of which F. Grundy, now General Manager Quebec Central Ry., was then Manager. He was next with the North Staffordshire Ry. at Burslem and Tunstall, Staffordshire, and left to come to Canada in 1876. He was Agent for the old Great Western Ry. at Yonge st., Toronto, and remained with the G.T.R. on the amalgamation in 1882; subsequently spending four years in Toronto as Freight and Passenger Agent, Chicago, Rock Island and Pacific Rd., and from 1886 was Freight and Passenger Agent, Delaware, Lackawanna and Western Rd., at Toronto, from which position he retired Dec., 1903.

Northern Navigation Co. of Ontario.

The affairs of this company have been so much discussed of late that we have deemed it advisable to obtain the fullest information possible, which will no doubt be of considerable interest at the present juncture. The company was formed in 1899 by the consolidation of the Great Northern Transit Co. and the North Shore Navigation Co., the capital authorized being \$1,000,000, of which \$321,700 was issued and paid up. At that time the company was practically merely a local concern, and it was not until June, 1901, that it came prominently before the public, when \$283,300 new stock was offered at 105 to repay balance of money advanced for building the str. Germanic and for purchasing and refitting the str. Britannic, also to pay for a controlling interest in the Northwest Transportation Co. The directors at that time were: J. Scott, Toronto, President; J. J. Long, Collingwood, Vice-President; T. Long, Toronto, Secretary; C. E. Stephens, Collingwood, Treasurer; M. Burton and F. A. Lett, Barrie; C. Cameron, Collingwood; E. B. Osler, Toronto; W. J. Sheppard, Waubaushe; and H. B. Smith, Owen Sound. Among other things the prospectus said:

"In the two years since the formation of the Northern Navigation Co., that company has paid dividends of 10% per annum out of net earnings, and has carried forward a surplus of \$25,000; and the directors have every confidence that the future earnings of the company will admit of their continuing the payment of this dividend."

It is said the new stock was very satisfactorily subscribed for, and a good deal of it was taken for purely investment purposes.

At the annual meeting in Jan., 1902, the statements showed that after paying two semi-annual dividends of 5% each, and carrying \$25,000 to rest account, which increased it to \$50,000, there remained \$11,882.90 at credit of profit and loss account. The old directors were re-elected except M. Burton, who had disposed of his stock, his place being taken by W. Hendrie, of Hamilton.

In April, 1902, additional new stock for \$280,000 was issued at 110 to the then shareholders in the proportion of one share of new stock for each two shares of old stock held by them. The circular stated that the money raised by this new issue was to be used to purchase the balance of the stock of the Northwest Transportation Co. This brought the subscribed and paid-up capital of the company to \$840,000. Jas. Scott having died in 1902, J. J. Long succeeded him as President, and W. D. Matthews, of Toronto, took his place on the board. H. E. Smith also died, and was succeeded on the board by H. B. Smith, of Owen Sound. The annual report for 1902 presented at the meeting in January, 1903, showed that two half-yearly dividends had been paid during the year, and that \$40,000 had been transferred to rest account, bringing it up to \$90,

000, and that \$15,725.69 had been carried forward at credit of profit and loss. The directors were all re-elected, and later in the year C. Cameron was elected Vice-President.

A considerable amount of stock having been placed with the public in 1901, an allotment of new stock having been made in 1902, and the price having worked up to a pretty high figure, it appears that the Long Bros. and their adherents on the board started in to reduce their own holdings. On June 30, 1900, J. J. Long had 409 shares; in May, 1902, he added one more, and in July, 1902, received 205 of the new allotment, a total of 615. Then the clearing out started. On Aug. 5 he transferred 315 shares, and on Dec. 10, 50. On Feb. 17, 1903, a further 200 were disposed of, reducing his holding to 50 shares. On Sept. 30, 1903, 95 shares were transferred to him, but he got rid of them the same day, so that since Feb., 1903, up to Dec. 23, when our information was obtained, he has held only 50 shares.

Thos. Long acted in unison, only a little more so. On Jan. 30, 1900, he held 410 shares. The new allotment in July, 1902, gave him 205 more, or 615 in all. On July 31 he transferred 265 shares; on Aug. 5, 50; on Nov. 24, 100, and on Nov. 25, 200; leaving none at his credit on the company's books, and he remained in this position, without vacating his seat on the board, until Dec. 10, 1902, when 50 shares were transferred to him by J. J. Long. He still held these on Dec. 23, 1903.

C. Cameron, the Vice-President, held 230 shares on May 22, 1902. Of the new stock in July, 1902, he got 115, making a total of 345. Then he commenced to reduce his holdings; but his transfers were more on a retail basis than those of the Long Bros. However, by Feb. 12, 1903, he had reduced his holdings to 55 shares. In June he added 20, and in Sept. one, so that on Dec. 23, 1903, he had 76 shares.

C. E. Stephens, the Treasurer, held 10 shares, which were increased to 15 by the allotment of new stock in July, 1902. He added another 25 in June, 1903, but disposed of them in Sept., leaving his holding 15 shares on Dec. 23, 1903. The firm of C. E. Stephens & Co. had 74 shares, which were increased to 111 by the new allotment in July, 1902. They then started to dispose of them, and on May 5, 1903, the last of their shares were got rid of.

H. B. Smith had 132 shares on May 14, 1902. The new allotment in July, 1902, increased this to 198, and he got 7 more in Nov., 1902, making 205. In Feb., 1903, he commenced to dispose of them, and by Oct. had reduced his shares to 10. On Dec. 23, 1903, he added 40 more, when, of course, the price was at about the lowest.

W. J. Sheppard held 90 shares on Jan. 25, 1902, which were increased to 135 by the allotment in July, 1902. In Dec., 1902, he transferred 125 of these, retaining only 10. In June, 1903, he increased this to 135, and in Nov., 1903, got 50 more, making 185 in all. Osler & Hammond on Jan. 23, 1902, had 60 shares, which were increased by the allotment in July, 1902, to 90. These were transferred the same month to E. B. Osler, who has held them continuously since, and they stood in his name on Dec. 23, 1903, when Osler & Hammond also held 10 shares, and Osler & Hammond, in trust, 500.

W. Hendrie had 100 shares on Jan. 30, 1902; which were increased to 150 by the allotment in July, 1902. He got 50 more in Dec., 1902, making 200, and they still stood in his name on Dec. 23, 1903.

F. A. Lett had 10 shares, which were increased by the new allotment in July, 1902, to 15. He bought 10 more in June, 1903, making 25, which he still held on Dec. 23, 1903.

W. D. Matthews had 10 shares at his credit on April 8, 1902; by the allotment in July,

1902, this was increased to 15, and on Dec. 4, 1903, he secured 25 more, making 40 in all.

The foregoing record shows that the only directors who have not materially decreased their holdings are Messrs. Osler, Hendrie, Sheppard, Lett and Matthews, and they probably feel that they have been left in the lurch by the other members of the board, who, possibly, have congratulated themselves

on having done a clever thing, though the general body of the shareholders, when they understand the situation, will most certainly look on the proceedings in a very different light.

As previously stated, the first lot of new stock was issued to the public at 105 in July, 1901. After it was listed on the Toronto Stock Exchange in Oct., 1901, there were

sales of 283 shares up to the end of the year, the highest price reached being 109 in Dec. In January, 1902, it advanced to 146, and by April reached its maximum at 172½. In June, 1902, ex allotment, it sold down to 153½ and in July rallied to 160. The next highest point reached during 1902 was 159 in Oct., and the lowest 132 in Oct. In 1903 the highest sales were at 148 in Feb. and March.

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In June it commenced to go down, the following low points being reached: July, 130½; Aug., 128; Sept., 118; Oct., 92½; Nov., 75; Dec., 73; the last named figure being 99½ points below the top figure of 1902.

The control of the company's affairs and the general direction of its business have been practically vested in J. J. Long from the first, as the late Jas. Scott did not take an active part during the time he was President. After the organization of the company in 1899 C. Cameron became Manager, as he had been before of one of the constituent companies. Then for about a year A. Miscampbell acted as manager. The necessity of getting an up-to-date steamboat man became so evident that early in 1901, W. Askin, one of the best and most reliable lake traffic men in Ontario, was appointed Manager, with headquarters at Collingwood, but the impression prevails that he was only allowed to be Manager in name, and that some of the local directors unnecessarily interfered in details and rendered his position almost untenable. After the balance of the stock of the Northwest Transportation Co. had been secured, Mr. Askin was appointed Assistant Manager at Sarnia, and A. B. Pratt was given a similar position at Collingwood, both being subject to the direction of the President. Since C. Cameron's election to the Vice-Presidency he has again taken a somewhat active part, especially in regard to the running of the Collingwood division. Early in 1903 C. T. Long, a son of T. Long, and a nephew of J. J. Long, was appointed General Manager and has had his headquarters at Sarnia. Inquiry fails to show that he possesses the necessary qualifications for the position, his previous experience as a reporter, commercial traveller, etc., etc., certainly not being such as would usually be considered necessary in the general manager of a navigation company with a capital of \$840,000 at stake.

The annual report for 1902, written, of course, after the yield of the Northwest wheat crop was known, stated that the prospect for a large freight business for 1903 was excellent, and that if weather conditions were favorable there should also be a large passenger business, but early in the navigation season of 1903 rumors became current to the effect that the company's traffic was unsatisfactory. We have reason to believe that the west-bound traffic was good, but that there was a falling off in east-bound freight, especially in grain, and that it had to be carried at low rates. It is said that working expenses have been considerably increased, and there is reason to believe that there has been extravagance in regard to advertising and other matters. At all events the net earnings for the year do not appear to justify the payment of the usual second half-yearly dividend, and it is understood that it will be passed.

In Nov. last a shareholder who had been looking into matters on his own account obtained information that he believed should be in the possession of at least some of the directors, and he accordingly communicated it to a member of the firm of Osler & Hammond, who acted as brokers for the Company when the first issue of new stock was made in 1901. This was communicated to certain directors who were not looked on as adherents of the Long brothers. Action was taken at a board meeting; it was determined to have an investigation made, and the work was entrusted to Clarkson & Cross, chartered accountants, Toronto, who have since been engaged on it. It is alleged that there has been incompetency; that the staff has been unnecessarily increased; that too much money has been spent for advertising, printing, etc.; that supplies have been carelessly purchased; that large quantities of them have been bought from certain directors; that there has been no proper check on prices charged; that

the steamer Huronic was built by a company in which certain of the directors are largely interested; that other steamers have been repaired by the same company without there being any proper check on the prices charged; that certain directors have for several years enjoyed a special tariff for the carriage of their goods; that another company in which the same directors are interested has also enjoyed special rates of freight, and that the issue of free transportation has been abused. There may be nothing in these charges; that the investigation, if thoroughly made with the assistance of experts, whose services should be secured, will determine, but there is no doubt that the company has been badly managed, and that a change is absolutely necessary.

We believe that in the best interests of the company the directors who feel that a change is necessary should, if they are a majority of the board, dispense with the services of the General Manager; that the shareholders should withdraw any proxies they may have issued in favor of J. J. or T. Long; that they should refuse to re-elect any of the directors who may have materially decreased their holdings of stock; and that they should elect as directors men who know something of navigation business and who will devote the necessary time to keep themselves thoroughly acquainted with the company's affairs, and not merely sit at board meetings and draw fees, and who will not allow the company to be run for personal interests. The new board to be elected at the annual meeting on Jan. 26, should remove any officials who may be found to be incompetent or unsuitable for their positions, or who are under the personal control of any directors; they should appoint as general manager a steamboat man of unquestioned character and experience, and a general passenger and freight agent who understands lake business and who is acceptable to the railways from which the company's freight and passenger business is largely derived. An up-to-date system of bookkeeping should be inaugurated and a proper method devised for checking the purser's accounts. Supplies should be purchased on the most favorable terms, and after competition, and not from directors or officials of the company, unless their prices are lower than others. The head office should be removed from Collingwood to Toronto, which would be a most convenient point from which to control the two divisions, the local headquarters of which should remain at Collingwood and Sarnia.

Dominion Marine Association.—A meeting of the executive committee was held in Toronto Dec. 22; present, C. F. Gildersleeve, President, in the chair; J. A. Cuttle, Captain T. Donnelly, T. Harling, A. A. Wright, Captain Crangle and F. King, Secretary-Treasurer. The subjects referred to in the circular issued by the President and Secretary to the members, and which was printed in full in our last issue, were thoroughly considered, and it was decided to continue to urge on the Dominion Government some of the requests already made by the Association, and which have not been granted, and also to press some other matters. The annual meeting will probably be held at Ottawa during the next session of Parliament.

Passenger Rate Committees.—The Niagara Frontier Summer Rate Committee will meet at the King Edward Hotel, Toronto, Jan. 14; the rate clerks will meet there on the previous day to arrange details. The Great Lakes and St. Lawrence River Rate Committee will meet at the same place Jan. 15.

The Niagara Navigation Co.'s str. Chicora is now at Kingston and will be placed in the Government dry dock for the winter. The hull and machinery are to be overhauled and repaired by the Canadian Shipbuilding Co.

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

Megantic Yards, Etc.—We have been advised that there has been some consideration given to the question of rearranging the divisional terminals between Bingham Jct., Que., and Mattawamkeag, Me., but nothing definite has been decided. In this connection it has been proposed to make a divisional point at Lennoxville or Cookshire, and if that is done, Holeb, on the Atlantic division, will probably be made the divisional point instead of Megantic. (Dec., 1903, pg. 421.)

Northern Colonization Ry.—Grading, tracklaying and ballasting have been completed on the extension from Labelle to Nominique, Que., 25 miles. We were advised Dec. 1 that nothing further would be done during 1903. (Dec., 1903, pg. 421.)

Ottawa, Northern and Western Ry.—A press report states that it is intended to extend the old Ottawa and Gatineau Valley Ry. from Maniwaki, to which point it was extended during 1903, for a further distance of 100 miles, to effect a junction with the line which the Dominion Government proposes to construct between Winnipeg, Man., and Moncton, N. B., in connection with the G. T. Pacific Ry. (Dec., 1903, pg. 421.)

Ontario Lines.—On Dec. 1 a deputation representing Bowmanville, Cobourg, and other towns in Ontario, waited on Sir Thos. Shaughnessy at Montreal, and asked that the C.P.R. construct a line from Springbrook, on the Montreal-Toronto main line near Central Ontario junction, through Campbellford and Warkworth to Cobourg, and then westerly along the lake front through Port Hope, Bowmanville, Oshawa, Whitby and Pickering, joining the main line again at a point near Agincourt. Sir Thomas promised to take the matter into consideration. (Dec., 1903, pg. 422.)

Winnipeg Station, Hotel, Etc.—The final details in connection with the plans for the new station, hotel, subway, etc., are being worked out. The total cost of the work is estimated at \$2,500,000. (Oct., 1903, pg. 355.)

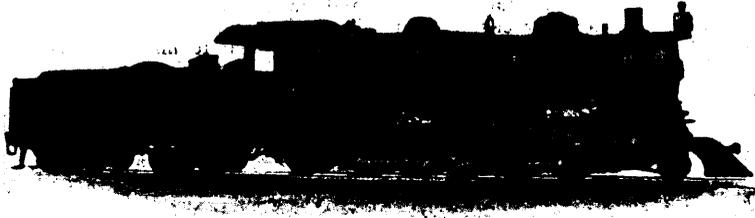
Pipestone Branch.—We were recently advised that grading on the extension of this branch from Arcola to Regina, Assa., 113 miles, had been completed, and that on Dec. 1 track had been laid for 40.7 miles from Regina easterly towards Arcola. A recent press report stated that it was intended to make an effort to complete the tracklaying on this branch, and that it was expected to get the work completed early in Jan. (Nov., 1903, pg. 385.)

Pheasant Hills Branch.—Track has been laid for 120 miles from Kirkella, Man., on this extension, and grading has been completed for a total distance of 147.3 miles. We were advised Dec. 1 that no more grading or tracklaying would be done in 1903, but that work in connection with the erection of the bridge across Pheasant Creek would be gone on with during the winter. (Dec., 1903, pg. 422.)

Branch from Wetaskiwin.—A press report recently stated that steel rails from British Columbia, which had been replaced by heavier rails, had been delivered at Wetaskiwin, Alta., and that it was proposed to lay 30 miles of track on an extension easterly from that point on the Calgary and Edmonton Ry. early in the year. Another report stated that J. G. Sullivan, Divisional Engineer of Construction, Winnipeg, had been at Wetaskiwin completing arrangements for the construction of 100 miles of line. We were advised Dec. 21 that surveys for a branch line from Wetaskiwin, or in that neighborhood, had been made, but nothing definite had been decided as to the length, starting point, route, etc.

Clanwilliam Deviation.—The deviation under construction at this point includes the driving of three tunnels. (Nov., 1903, pg. 385.)

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Grand Trunk Elevators, No. 2 and No. 3, Portland, Me.	2,500,000	"
Export Elevator, Buffalo, N. Y.	1,000,000	"
J. R. Booth Elevator, Depot Harbor, Ontario	1,000,000	"
Southern Pacific Terminal Co.'s Elevator, Galveston, Texas	1,000,000	"
Erie R. R. Transfer & Clipping House, Chicago, Ill.	100 cars in 10 hrs.	"
Manchester Ship Canal Co.'s Elevator, Manchester, Eng.	1,500,000	"
Burlington Elevator Co., Peoria, Ill.	500,000	"
Canada Atlantic Railway Elevator, Coteau Landing, Que.	500,000	"
Northern Grain Co., Manitowoc, Wis.	1,350,000	"
Union Elevator, East St. Louis, Ill.	1,100,000	"
Montreal Warehousing Co.'s Belt Conveyor System		

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An actual settler may purchase 640 acres, or less, on the 10 payment plan, by which the aggregate amount of principal and interest is divided into a cash instalment to be paid at the time of purchase and nine equal deferred instalments annually thereafter, as follows:

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- 160 acres at \$4.50 per acre, 1st instalment \$107.85, and 9 equal instalments of \$90.
- 160 acres at \$5.00 per acre, 1st instalment \$119.85, and 9 equal instalments of \$100.
- 160 acres at \$5.50 per acre, 1st instalment \$131.80, and 9 equal instalments of \$110.
- 160 acres at \$6.00 per acre, 1st instalment \$143.80, and 9 equal instalments of \$120.00.

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

DISCOUNT FOR CASH.

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

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Minneapolis, St. Paul and Sault Ste. Marie Ry.—Grading is reported completed for 86 miles from Glenwood, Minn., northerly to the White Earth Indian reserve; and track had been laid to Parker's Prairie, 35 miles. A train service had been in operation to this point. Tracklaying has been delayed owing to the wet weather. (Oct., 1903, pg. 355.)

Grand Trunk Pacific Railway.

There are a good many rumors at Vancouver, B.C., respecting the selection of a Pacific terminus for the line. There are several parties advocating the claims of Port Simpson and Kitimaat respectively, and each is doing its best to disparage the other. Several survey parties have been looking over all the harbors on the coast which would be likely to afford a suitable terminus. A surveyor of the Dominion Geological department returning from the Peace River district states that no surveyors have been working there during the summer. At Edmonton, Alta., there are, or have been, three parties at work running lines east and west; and others are at work at different points, new parties having recently been sent out from Winnipeg and North Bay, Ont. C. Van Arsdol, Divisional Engineer, Victoria, B.C., went to Edmonton, Alta., recently, where it is stated he will remain for some time for the purpose of directing surveys from that point. Press reports give the names of the following engineers who are in the field in addition to those already published:—Jones, working on a line towards Peace river; Mann, working on a line north-west from Albert, Alta.; Stewart, working south-east of Battleford, Sask.; and J. A. Heaman, working from Winnipeg. In connection with the surveys C. M. Hays, 2nd Vice-President and General Manager G.T.R., recently stated that none of the sectional surveys had been completed in their entirety; it would take more than four or five months to complete even a preliminary survey, and that is all that the country was interested in at the present time.

The following statement respecting the deposit of \$5,000,000 which the G.T.R. was required to make as security for the G.T. Pacific Ry. Co., has been issued by the Dominion Government: "The G.T. Ry. Co. has deposited £1,000,000 of its guaranteed stock as security for the carrying out of the agreement entered into last session between the Government and the G.T. Pacific Ry., subject to ratification of its shareholders at a general meeting. Inasmuch as the contract requires cash or Government securities for the deposit, legislation will be required to confirm the acceptance of the securities which have been deposited, though such securities are worth to-day more than par, and their value is unquestionable." C. M. Hays, 2nd Vice-President and General Manager G.T.R., who returned to Montreal Dec. 24 from London, Eng., where he had been in connection with G.T. Pacific Ry. matters, said in the course of an interview with press representatives: "The G.T. Pacific will certainly be built. The G.T.R. never had any difficulty in raising money, and will not have any in carrying out the transcontinental project. The securities deposited with the Government are better than the cash equivalent. They were deposited because of convenience, not because of any failure to raise the money. There was a delay of a few days, but the time allowed by the Government was rather limited. Neither have we violated any moral obligations to the shareholders of the G.T.R., or broken faith with the Government. The G.T.R. possessed these securities for the purpose of the company, and they were utilized. As to the building of the road, the construction will be begun in the spring. Our first object will be to get the east connected with the great lakes

for summer traffic, and then to give Winnipeg connection with the east. The people of the West want more railway facilities, and we intend to give it to them as quickly as possible." (Dec., 1903, pg. 421.)

Canadian Northern Ry. Construction.

General.—During the completion of the negotiations by which the C.N.Ry. interests secured the control of the Great Northern Ry. of Canada and its leased line, the Chateauguay and Northern Ry., the daily papers gave currency to the report that all this was being done preparatory to the absorption of the C.N.Ry. by the Grand Trunk Pacific Ry.; and further that negotiations had been going on with that end in view. W. Mackenzie, President, C.N.R.; C. M. Hays, 2nd Vice-President and General Manager G.T.R., as well as other executive officers of both companies, gave an emphatic denial of all the statements published. D. D. Mann, Vice-President C.N.R., said: "It is our idea to eventually construct a third great railway system in Canada in spite of reports to the contrary, or stories that any of our property is for sale. None of our roads are for sale, nor are we negotiating with any persons for the sale of any of them."

Another press report stated that an arrangement was about to be concluded by which the C.N.R. would secure running rights over the C.P.R. from Port Arthur to Sudbury, Ont., where a connection would be effected with the James Bay Ry., of which Mackenzie, Mann & Co. have the charter. The James Bay Ry. is projected from Toronto to Sudbury, about 205 miles, and a subsidy for that mileage was voted at the last session of the Dominion Parliament. "There is nothing at all in the rumor," D. D. Mann said in reference to the report about running rights.

Port Arthur Coal Docks.—A location has been decided on for the construction of coal docks at Port Arthur, Ont. The docks will be of steel and concrete, resting on a pile foundation cut off below the water level. The cost will be about \$35,000, and a contract will probably be let in the spring.

Port Arthur Station.—E. A. James, General Superintendent, recently stated that it was intended to erect a new station at Port Arthur, just south of the freight sheds, about 100 ft. from the steamer landing, and that work on the structure would be commenced in the spring.

Winnipeg Roundhouse.—Track has been laid into the 15-stall extension to the Winnipeg roundhouse. The building is of concrete with timber roof. (Nov., 1903, pg. 389.)

Branch to Oak Point.—Track has been laid on the branch from Winnipeg to Oak Point, on Lake Manitoba, 53 miles. This is the old Winnipeg and Hudson's Bay line, which has been re-constructed and in places re-located so as to make its terminus at Oak Point instead of St. Laurent, as originally located. The company has not secured an entrance to the yards at Winnipeg, and it is stated that nothing will be done about this until the spring. (Aug., 1903, pg. 270.)

Greenway Southwesterly.—Track has been laid on this extension from Greenway, on the Morris-Brandon branch, to Wakopa, 40 miles. The route followed is due south to Glenora, thence to the west of Rock lake, and then south to Holmfield, where the C.P.R. Pembina branch is crossed, and thence westerly to Wakopa, at the base of Turtle mountain. The total length of the branch as projected is 58 miles, and some grading has been done between the end of steel and the projected terminal. (Aug., 1903, pg. 270.)

Hartney to Virden and Westerly.—A press report recently stated that a contract

had been let for the construction of a line from Hartney, Man., to Regina, Assa., but we are informed that this is not the case. Surveys have been made for a line from Hartney, at the terminus of the Hartney extension of the Morris-Brandon branch, to Virden, and thence to the Manitoba boundary, about 60 miles, and the Manitoba Government has a contract with the company for the construction of 40 miles of such a line, on guarantee of bonds. Under a Dominion act passed in 1903 the company has power to construct a line from Hartney to Regina. (Aug., 1903, pg. 270.)

Rosendale Extension.—Track has been laid from Portage la Prairie to Arizona, Man., 35 miles, on this extension. Some grading has been completed beyond Arizona, the line being intended to be carried on to Brandon. (Oct., 1903, pg. 347.)

Carberry to Neepawa.—Track has been laid on this line from Carberry to Humerston, Man., on the line completed in 1902, from Katrine, on the main line, to Neepawa, 18 miles. It is contemplated to extend this line southerly five miles to a junction with the branch line under construction from Portage la Prairie to Brandon, and completed to Arizona. (Aug., 1903, pg. 270.)

Rosburn Branch.—Work has ceased on this branch for the season, grading having been completed to Shellmouth. The residents of Russell, which is at the terminus of the C.P.R. branch, from Binscarth, on the old Manitoba and Northwestern Ry., are agitating for the construction of a branch line to connect that town with the C.N.R. system. No track has been laid on the branch this year. (Aug., 1903, pg. 271.)

Grand View-Edmonton Extension.—Track has been laid for 93 miles from Grand View, Man., the terminus of what was formerly known as the Gilbert Plains branch, but which will be the main line of the C.N.R. system. This carries the line well on to the White Sand river. A good deal of grading has been done between the end of track and the C.P.R. line to Prince Albert. From near Saskatoon about 50 miles has been graded westerly; and another stretch of about 20 miles has been graded between the end of steel and Little Quill lake. There has been considerable progress made with the construction of the substructure for the bridge crossing the south Saskatchewan river about four miles from Osler, Sask., and also with the substructure for the bridge over the north Saskatchewan near the Elbow. (Sept., 1903, pg. 309.)

Prince Albert Extension.—Track has been laid from Erwood to Melfort, Sask., 106 miles, and some grading has been done between that point and Prince Albert, which will be for the present the terminal point of the line. A settler at Cote, Sask., writing to a friend at Edmonton, Alta., recently, stated that a yard was being laid out at Cote's reserve, in which six tracks have been laid, and that a roundhouse and machine repair shop were being built there. (Oct., 1903, pg. 347.)

Edmonton.—Grading has been completed on the line from the present station to within a short distance of the Hudson's Bay reserve, where a site has been acquired for a station and yard. (Sept., 1903, pg. 309.)

Great Northern Ry. of Canada.—It is intended to start work first thing in the spring on a branch from near L'Epiphanie, on the Chateauguay and Northern Ry., to near St. Jacques l'Achigan, about 10 miles. A Dominion subsidy was voted last session for a line between these points not exceeding 16 miles. It is also expected to start work early in the spring on the construction of a line from St. Jerome, on the G.N.Ry., to connect with the Montford and Gatineau Ry., recent-

ly acquired by the G.N.Ry., at Morin Flats, about 16 miles. The Dominion subsidy, voted last session, for a line between these two points, is for a line not exceeding 22 miles. The next line which will be gone on with will be a line from Garneau Jct. to Quebec, for

which the Dominion Parliament has voted a subsidy covering 70 miles. This line will give the G.N.Ry. an entrance into Quebec independent of the Quebec and Lake St. John Ry. (Dec., 1903, pg. 423, and Montford and Gatineau Colonization Ry., Dec., 1903, pg. 425.)

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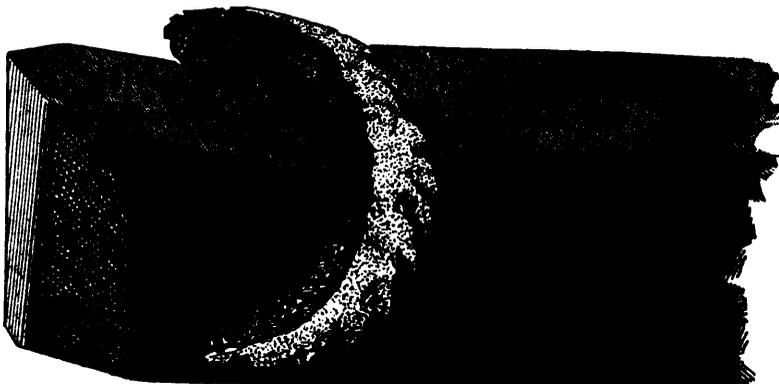
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DIVIDEND NOTICE.

Niagara Navigation Co., Limited.

NOTICE is hereby given that a dividend of four per cent. (being at the rate of eight per cent. for the year) has been declared upon the Capital Stock of this Company, and the same will be payable on the 2nd day of January, 1904. The Transfer Books will be closed from the 17th December, 1903, to 31st December, 1903, both days inclusive.

JOHN FOY, President.

NOTICE.—The Canadian Northern Railway Company will apply, at the next session of the Parliament of Canada, for an Act confirming an issue of mortgage bonds or other securities consolidating, and with the consent of the holders to be exchangeable for, certain bonds of the company and its predecessors; and also confirming an issue of certain mortgage terminal bonds or other securities.

Z. A. LASH, Chief Solicitor,
Canadian Northern Railway Company.
Dated Toronto, 9th December, 1903.

January Birthdays.

Many happy returns of the day to—
 G. Bazzard, late Freight and Passenger Agent, Delaware, Lackawanna and Western Rd., at Toronto, born at Westside Court, Herefordshire, Eng., Jan. 3, 1838.
 R. H. Bell, Travelling Freight and Passenger Agent, Canadian Northern Ry. at Montreal, born at Toronto, Jan. 13, 1865.
 G. M. Bosworth, 4th Vice-President C.P.R. at Montreal, born at Ogdensburg, N.Y., Jan. 27, 1858.
 G. McL. Brown, Superintendent of C.P.R. Dining, Sleeping and Parlor Cars and Hotels at Montreal, born at Hamilton, Ont., Jan. 29, 1856.
 P. W. Brown, Purchasing Agent, Duluth, South Shore and Atlantic Ry., and Mineral Range Ry. at Marquette, Mich., born at Uxbridge, Worcester Co., Mass., Jan. 18, 1845.
 E. L. Chudleigh, Chief Train Dispatcher C.P.R. at Moose Jaw, Assa., born at Clinton, Ont., Jan. 3, 1873.
 N. S. Dunlop, Tax Commissioner C.P.R. at Montreal, born near Almonte, Ont., Jan. 17, 1861.
 Sir Sandford Fleming, K.C.M.G., Director C.P.R., born at Kirkcaldy, Scot., Jan. 7, 1827.
 T. A. Foque, Mechanical Superintendent Minneapolis, St. Paul and Sault Ste. Marie Ry. at Minneapolis, Minn., born at Boston, Mass., Jan. 14, 1866.
 H. V. Harris, General Manager Midland Ry. of Nova Scotia at Windsor, N.S., born at Devonport, Devonshire, Eng., Jan. 16, 1857.
 W. Phillips, General Eastern Agent Canadian Northern Ry. at Toronto, born at Toronto, Jan. 31, 1870.
 J. Pullen, General Freight Agent G.T.R. at Montreal, born at Shepton Mallet, Somersetshire, Eng., Jan. 23, 1863.
 C. Shields, President and General Manager Consolidated Lake Superior Co., born at Albany, N.Y., Jan. 1, 1856.
 J. R. Steele, Freight Claims Auditor C.P.R. at Montreal, born at St. John's, Newfoundland, Jan. 14, 1856.
 W. A. Trueman, Director, Secretary and Treasurer Albert Southern Ry. at Albert, N.B., born at Wallace, N.S., Jan. 29, 1849.
 S. G. Wagstaff, Commercial Agent, G.T.R., at Toledo, Ohio, born at Hamilton, Ont., Jan. 6, 1866.
 F. J. Watson, Division Freight Agent G.T.R. at Montreal, born at Toronto, Jan. 12, 1866.
 G. H. Webster, Right of Way Agent C.P.R. at Montreal, born at Creemore, Ont., Jan. 31, 1857.
 T. H. White, Chief Engineer Halifax and South-Western Ry. at Bridgewater, N.S., born at St. Thomas, Ont., Jan. 27, 1848.

The Manitoba Grain Act.

An act to amend the Manitoba Grain Act of 1900 was passed at the recent session of the Dominion Parliament, the first section of which repeals the act of amendment passed in 1902; the second and subsequent nineteen sections contain amendments to the act of 1900; the 21st section adds 5 additional sections and the 22nd and 23rd amend two of the schedules of the original act. The second section of the amending act is an interpreting one, and defines, "operator, lessee, applicant, agent, railway agent, track buyer and commission merchant," while section 3 provides for the appointment of two or more deputy warehouse commissioners, who shall be under the direction of the Chief Warehouse Commissioner. By other sections all track buyers, etc., are required to take out licenses; elevators are required to "receive" the first six grades of wheat provided there is room; and persons having grain at an elevator in carload lots may order cars for the same, which must be landed within 24

hours after the cars have been furnished. Provision is made for the erection of flat warehouses on the application of any person residing within 40 miles of his nearest shipping point, on a site to be provided on the railway company's premises, at a fair rental, the erection to be commenced within 60 days after the site has been staked out; and for the erection of loading platforms on the application of ten farmers resident within 20 miles of their nearest shipping point. The loading platforms are to be erected by the railway company in its yard within 30 days after application has been made to the Commissioner, under a penalty of \$25 a day for each day's delay. A new penalty section has been substituted providing for a fine of not less than \$10, or more than \$1,000 for breaches of the law. The new sections deal with the distribution of cars. These provide for the keeping of an order book for cars at each station where there is a railway agent, in which all applications for cars shall be entered in rotation, each order to be for a single car only, and cars are to be provided in accordance with the order book, no favor to be shown either to elevator, flat warehouse, loading platform, or otherwise. If the applicant cannot load the car ordered for him within 24 hours, or has not commenced loading within 24 hours after a car has been allotted the order shall be cancelled. The applicant for a car cannot transfer or sell his right to any car under a penalty of not less than \$25, or more than \$100. A written notice is to be posted up daily in the station giving particulars of all cars ordered and allotted; and such cars may be ordered to be placed for loading at any elevator, flat warehouse, loading platform, or at any siding. It is provided that the railway company shall not be relieved of any liability imposed by the Railway Act, or to deprive any person of any right of action against any railway company by that act, by any of the provisions of the Manitoba Grain Act, and further, that the provisions of the act as to the distribution of cars shall not apply to the shipments of grain consigned to points west of the B.C. boundary.

C.P.R. Power House at Fort William.

The C.P.R. has under construction at Fort William, Ont., a power house for the supply of electricity for the operation of its elevators, machine shop and coal-handling apparatus, and also for the supply of electric light in its yards and buildings there. At present the five grain elevators are operated by three independent power houses, two of which provide power for two elevators each. The capacity of these elevators are: two of 1,250,000 bush. each, one of 1,500,000 bush., one of 2,000,000 bush., and one of 3,200,000 bush., making altogether a total storage capacity of 9,200,000 bush. The new central power house will supply power to three of these elevators, the machine shop, the coal-handling plant, and light for the entire yard and buildings. The power house will be 115 ft. long by 100 ft. in breadth, and will be divided by a central wall into an engine and a boiler room. The walls are on concrete foundations, resting on piles, 3 ft. centres, driven 35 ft., and there is a similar pile and concrete foundation under the engine foundation. The building will have a height of 38 ft. 2 in. at the centre wall and 34 ft. at the outer walls, and the roof, in which are skylights over the engine and boiler rooms, will be carried on steel trusses. In the engine room there is a pump pit 8 ft. deep, extending the entire length of the building. The list of boilers and machinery to be installed at present includes the following:

Boiler room.—Four boilers, 416 h.p. tested to 150 lbs. to the square inch, and fitted with economizers, induced draft and shaking grates. The boilers will be hand stoked. Steam header will be carried right along cen-

tral wall for distributing steam to the various units.

Engine room.—One 10-ton travelling crane overhead; two 500 k.w. generators, alternating current, 500 volts; two exciters for same; cross-compound condensing, horizontal direct connected engines, to work at 150 revolutions a minute, and engines for exciters; compressor for supplying compressed air throughout the yard. The pump pit runs the whole length of the yard in which are placed: two condensing plants, 16-24" x 24"; two boiler duplex feed pumps, 12-7" x 12"; one 1000 gal. per min. duplex pump, 18-12" x 12"; one 1000 gal. per min. pump, 18-10" x 12". The injection water for the condensers will be taken from a well outside the power house which is supplied with water from the river, a distance of nearly 300 ft., through a rectangular wooden intake box. The discharge from the condensers is sent back to the river through a similar box; both boxes being built together, one on the top of the other. The 1,000-gal. a minute duplex pump also draws water from the well and supplies water throughout the yard and elevators at a pressure of 100 lbs. per square inch. The second 1,000-gal. a minute pump is connected to the same piping for use in the event of fire. There is also fitted in the pump pit a feed water heater of 500 h.p. capacity, through which feed water passes from pumps to economizer. The exhaust steam from the main and auxiliary engines is also used for heating the machine shop and roundhouse by a blower apparatus.

The coal-handling plant, yard, elevators and sheds are lighted by arc and incandescent lights. Induction motors are used for driving the elevators.

It is the intention of the company to gradually increase this power station until all the elevators at Fort William are driven by electricity from a central source. At the central power house foundations have been prepared for the installation of an additional 416-h.p. boiler, one 500-k.w. and one 250-k.w. generator.

Canadian Northern Railway Elevators.

The Canadian Northern Railway Co. has under construction a large addition to its grain elevators at Port Arthur, Ont., consisting of a receiving and shipping, or what is commonly called a working house of 700,000 bush. capacity, and a storage building or annex with a capacity of 2,100,000 bush. The working house will be an up-to-date regular wood frame work and cribbed bin house covered with corrugated iron, while the annex will be a fire-proof tile tank building, a duplicate of the plant erected in 1902. The working house is 72x224 ft. with first story 24 ft. in clear under bin girders. The bins are 60 ft. deep, and the cupola is 41 ft. wide and five stories high, and extends the full length of building. There is one track through the house and one at the side in a one story carway. There are five receiving elevators with 10 receiving pits, so arranged on the two tracks that the receiving of grain can be carried on continuously and rapidly, each elevator having a capacity of 10,000 bush. an hour or 10,000 lbs. a minute. Five cleaning and shipping legs on the other side of the house take care of the five no. 9 separators and give large shipping capacity, being located to handle grain to or from annex and also from any part of the working house. Each of these elevators will handle 12,000 bush. an hour. Each of the 10 receiving pits is supplied with a pair of automatic power shovels. There are five spouts for loading cars on either track and 10 boat-loading spouts discharging from bins of large capacity, so that loading a boat with several hundred thousand bushels of grain will be but a short job.

All the grain taken in or shipped out is weighed in the cupola, 10 sets of 1,400 bush.

hopper scales having been provided for this purpose. Ten hoppers or garners of even larger capacity are placed above the scales to receive the grain from the elevators. Large cut-off slides with roller bearings enable the weighman to draw the grain from the garners into the scale hoppers, and after it is weighed it goes to the reversible transfer conveyor running the full length of the house and carrying grain in either direction desired, or it is spouted direct to one of the conveyors to the annex, or is discharged into the distributing system of the working house, consisting of 12 patent spouts, and from thence into a bin, a car or into a lake steamer. Grain may be unloaded from a car set on either track into either of the 10 receiving pits, and from there may be put in any bin in the working

house or annex without re-elevating. This shows that a complete and well arranged equipment has been provided.

All the conveyor belts are 36 in. wide, and those in the upper part of the house are provided with trippers for discharging the grain as desired. The dust from the cleaners and about the elevator floors is collected by a system of piping or sweepers, fans and dust collectors, and fed to the furnace under the boilers, where it is burned. There is a screenings conveyor and an elevator with which to handle the screenings coming from

the grain cleaning machines. A tower at the end of the elevator provides space for the power transmission to the cupola, for passenger elevator and stairway; all power transmission is made by Manila rope, except for the cleaner and receiving conveyor drives, and each and every machine, elevator or conveyor is driven by a clutch sheave or pulley, that it can be started or stopped at the will of the operator without stopping the engines.

The power house is of brick with a fire-proof tile roof supported on steel trusses, channels and tee irons. The brick stack has

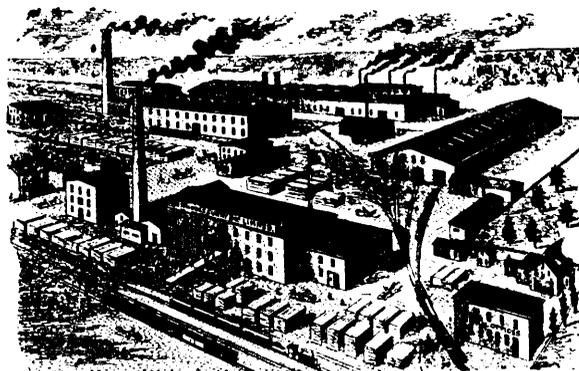
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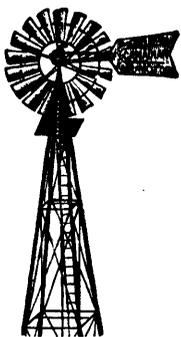
Canada	-	Saturday, Jan. 2nd,	2 p.m.
Dominion	-	"	Jan. 23rd,
Canada	-	"	Feb. 6th,
Dominion	-	"	Feb. 27th,
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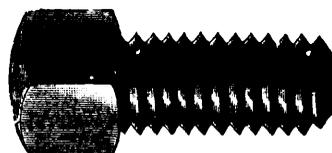
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Ingersoll - - - Ontario

a 50 in. flue, and is 165 ft. high. Four horizontal tubular boilers, 73x18 in. supply the steam at 125 lbs. pressure per square inch to a pair of 22x50 in. Wheelock engines coupled to one shaft, and the power is taken direct from a grooved fly wheel to a grooved sheave on the jack shaft, which extends from the engine room into the elevator. A jet condenser, tubular feed water heater, boiler feed pump and 1,000 gallon fire pump, electric light engine and belted dynamo, with all their fittings, connections and accessories, go to make up the complete outfit. Connected with the fire pump is a standpipe system covering all parts of the working house, and provided with the regular equipment of fire hose on each and every floor.

Fifty feet away from the structure above described stands the fireproof tile grain storage house, forming, with one built in 1902, two of the largest strictly fireproof grain warehouses in the world. These storage houses are connected to each other and to the working house by steel truss bridges, covered with corrugated iron and provided with tile and concrete floors. As this tile elevator is a duplicate of the house built in 1902, it is only necessary to say that it consists of 80 circular bins, each 21 ft. in diameter, and arranged in cluster so as to form 63 other smaller bins, all to carry grain 85 ft. deep. A one story steel frame work above these tanks and bins, covered with tile, caps the structure and forms the room for the conveyors and spouting used in filling this mammoth storage building. Five conveyors in as many tunnels in the concrete foundation below the bins take the grain to the working house for cleaning or shipment.

All of these buildings rest on piling where only a few months ago there was 12 ft. of water. The entire plant will have a capacity of nearly 6,000,000 bush., and will furnish the C.N. Ry. Co. terminal facilities among the largest and equal to the best for handling the large grain business of the Northwest. The builders, or engineers and contractors of the above described, except the first constructed working house, are The Barnett & Record Co., of Minneapolis, Minn.

Grain Elevator Notes.

The elevator under construction at Montreal for the Harbor Commissioners is expected to be completed in March.

The Prince Albert, Sask., Elevator Co. has been wound up, and the shareholders have received \$11.56 for each \$10 share.

The Winnipeg Elevator Co.'s elevator at Ninette, Man., was recently burned down, and 3,000 bush. of wheat destroyed.

The Canadian Elevator Co. is reported to be erecting a 30,000 bush. elevator at Warroad, Minn., on the Canadian Northern Ry.

The Farmers' Union Elevator Co. (Ltd.) has been granted a supplemental charter under the Manitoba Companies' Act, authorizing it to lease, purchase or construct additional elevators.

J. J. Daley of Chicago, Ill., is negotiating with the Collingwood, Ont., board of trade with a view of obtaining aid towards the erection of an elevator, having a capacity of 1,150,000 bush. at that port.

The Winnipeg Commercial gives the following figures showing the storage capacity for grain at Port Arthur and Fort William Ont., Manitoba and in Northwest Territories Dec. 1:—

	Elevators.	Warehouses.	Capacity.
C. P. R. in Manitoba	479	33	14,411,500
C. N. R. in Manitoba	176	13	4,653,400
C. P. R. in N.W.T.	255	15	7,720,000
C. P. R., lake ports	5	..	10,622,000
C. N. R., lake ports	1	..	3,350,000
Total	916	60	40,756,900

In connection with the winding up of the affairs of the Prescott Elevator Co., it is expected that the bondholders will receive about 75% of the amount due. The amount of bonds covered by the trust mortgage was \$140,000; the amount of the claims of the outside creditors was small. The elevator and plant brought \$28,000; and the barges \$90,000, a total of \$118,000. Two dividends, amounting altogether to 35c. on the dollar have been paid, and a final dividend will be declared at an early date. Recent information stated that the claims of the outside creditors had not been passed upon by the master.

The elevator which the Crown Grain Co. (Ltd.), of Winnipeg, is erecting at the intersection of the C. P. R. and the Canadian Northern Ry. at St. Boniface, Man., will be 56x72 ft. in dimension, 150 ft. high, with a 10 ft. basement. It will be covered with corrugated, galvanized steel, and fitted with five cleaners, two clippers, smutters and a flax machine. There will be four working legs. The power house will be 85 ft. away from the elevator and will contain a 400 h.p. engine. It will furnish storage capacity for 250,000 bush. and in addition to this there will afterwards be erected a tank elevator with space for 2,000,000 bush. of grain. The handling capacity of the present elevator will be about 160 cars per day. W. S. Cleveland, of Minneapolis, Minn., is the contractor. M. H. Bennett is the manager of the elevator company.—Winnipeg Commercial.

SHIPPING MATTERS.

Niagara Navigation Company.

The report for the year ended Nov. 30, 1903, presented at the annual meeting in Toronto, Dec. 15, referred to the large increase in net earnings, \$23,527.91, as very satisfactory. Two half-yearly dividends, amounting together to 8%, were declared for the year. Arrangements have been made for repairing the hull and machinery of the steamer Chicora during the winter and putting her in first-class condition. Following are the financial statements:

ASSETS.

Steamers Chippewa, Corona, Chicora and Ongiara	\$707,500 00
Real estate, wharves, etc.	50,000 00
Stores on hand	1,406 33
Accounts receivable	5,664 94
Cash on hand and in bank	74,584 71
	<u>\$839,155 98</u>

LIABILITIES.

Capital stock, authorized	\$1,000,000
" subscribed and paid up	\$605,000 00
Debentures outstanding, 4 1/2%	111,000 00
Interest accrued on same	2,081 25
Accounts payable	1,601 68
Dividend 4%, payable Jan. 2, 1904	24,200 00
Balance carried forward	95,273 05
	<u>\$839,155 98</u>

PROFIT AND LOSS ACCOUNT.

Balance brought forward	\$72,981 51
Net earnings from all sources	75,668 54
	<u>\$148,668 05</u>
Interest on debentures, 12 months to Nov. 30, 1903	\$4,995 00
Dividend 4%, paid July 2, 1903	\$24,200 00
" 4% payable Jan. 2, 1904	24,200 00
	<u>48,400 00</u>
Balance carried forward	95,273 05
	<u>\$148,668 05</u>

The following were re-elected: President, John Foy; Vice-President, F. B. Cumberland; other directors: J. J. Foy, W. Hendrie, J. B. Macdonald, R. H. McBride, E. B. Osler. The officials are the same as last year: Manager, B. W. Folger; Passenger Agent and Treasurer, R. H. McBride; Secretary, J. M. Sullivan.

The estate of the late Sir Frank Smith, who, at the time of his death, was the principal shareholder, has disappeared from the list. At the commencement of 1902 the estate held 3,293 shares of \$100 each; at the end of 1902 this was reduced to 755, and in March, 1903, the last share held by the estate was disposed of. At the closing of the books last month the following held 25 shares or over, the addresses of the shareholders being Toronto unless otherwise stated: E. R. C. Clarkson, 200 shares; E. B. Osler, 200; W. Hendrie, Hamilton, 200; A. Clubb, 100; A. E. Dyment, Thessalon, 100; H. C. Hammond, 100; T. P. Phelan, 100; Mrs. Seraphina Cumberland, 75; J. S. Hendrie, Hamilton, 72; W. Hendrie, Jr., Hamilton, 67; E. S. Murray, Hamilton, 66; F. B. Cumberland, London, Eng., 50; S. G. Curry, 50; E. G. Fitzgerald, in trust, 50; A. J. Small, 50; D. R. Wilkie, 50; E. W. Langley, 45; Rev. G. M. Milligan, 45; S. A. Rowbotham, 45; Mrs. D. M. Peterson, 42; E. W. Atkins, Eglington, 35; A. W. Austin, 30; A. Darling, L. Cooke and F. M. Fraser, trustees, 30; Mrs. L. M. Hendrie, Hamilton, 30; W. H. Knowlton, 30; Geo. Reedy, 30; H. C. Boulton, 25; A. E. Coulthard, Oshawa, 25; J. S. Kormann, 25; H. Lamport, 25; P. Leadley, 25; Mrs. Margaret McArthur, 25; Miss E. A. McMicking, 25; Mrs. Helen Wardrop, 25. At the same date the following financial institutions held in trust the respective numbers of shares mentioned: Toronto General Trusts Corporation, 1,060; Bank of British North America, 455; Canada Permanent Mortgage Corporation, 408; Bank of Hamilton, 295; Imperial Bank, 185; Merchants Bank, 160; Home Savings and Loan Co., 149; Metropolitan Bank, 85; Quebec Bank, 25.

Ship Building in Toronto.

The Dominion Government has decided to add to its fleet a steel twin screw steamer for its fisheries protection service upon the upper lakes, and has given the contract to the Polson Iron Works, of Toronto, which will build a flush deck vessel having a ram bow and elliptic stern of a somewhat similar type to the smaller cruisers in the British naval service. There is to be a commodious deck house near the foremast, containing reception room, chart room, galley, etc., with a bridge over extending from side to side of the vessel. She will be schooner-rigged, with jib-headed foresail and mainsail. The hull will be of open hearth milled steel capable of withstanding all the tensile, cold and temper tests prescribed for the material used in vessels classed A100 in Lloyd's Register of British and Foreign Vessels, and of the sizes and scantlings provided by Lloyd's rules for vessels of the dimensions described below: The dimensions are: length on load water line, 176 ft.; beam moulded, 22 ft.; depth from top of keel to top of main deck, 14 ft. 3 ins.; draft, loaded with 50 tons of coal and steam up, 8 ft.; bunker capacity, 75 tons. She will be fitted with two sets of triple expansion, surface condensing engines, having cylinders of 13 1/2, 22 and 36 ins. diameter by 21 ins. stroke, and two Scotch boilers, 11 1/2 ft. diameter, 13 ft. long, built for a working pressure of 200 lbs. per square inch, fitted with forced draught. This machinery will drive the vessel over 16 knots per hour when the full power is executed. The vessel will have eight water-tight bulkheads. The accommodations for officers and crew are all arranged below the main deck and are well provided with light and air. In the matter of auxiliary machinery, she will have a steam steerer of ample capacity, a complete electric light outfit for 60 incandescent lights; also a powerful searchlight with the necessary lamps, apparatus, switchboard, etc.; also a steam windlass of ample capacity for working the chain cables and anchors. The vessel will have a very

handsome appearance according to her plans, which, together with those for her machinery, are entirely the product of the Polson Iron Works' staff, and have been accepted by the Government without modification. She will be ready for commission early next summer.

The Polson Iron Works is also building a composite, double-ended steam ferry-boat, intended for carriage of horses, waggons and passengers across Burrard Inlet, B.C., for the North Vancouver Ferry and Power Co. The steelwork for this craft will be fitted up complete in Toronto; then taken down and re-erected at Vancouver, where it will be riveted up and the woodwork and equipment completed. The firm has had much experience in this kind of work and is well equipped for handling it. The dimensions of this boat are: length over all, 148 ft.; beam over hull, 28 ft., beam, extreme, 45 ft.; draft, 6 ft. 2 in., with a capacity for 12 double teams and 600 passengers. The design of this boat is similar to that of the New York ferries. She will be fitted with one set of fore and aft compound engines, having cylinders 14 and 28 ins. diam. by 20 ins. stroke, and 2 Scotch boilers 7½ ft. diam. by 10 ft. long, built to a working pressure of 150 lbs. per sq. inch. The machinery will be capable of giving the boat a speed of 10 knots an hour. There is also under construction at the Polson Iron Works a fast river barge, with capacity for 50 tons of freight on light draught, for the Roman Catholic Missions in the Peace River district. She is 80 ft. long, 15 ft. beam, and 5 ft. draught, having fore and aft compound engines 7x14 diam. by 10 ins. stroke. Fitzgibbon boiler 51x84x84 ins., built for a working pressure of 160 lbs. This boat is also of composite construction and the steelwork fitted complete will all be packed up carefully and sent to the Peace River, where it is to be re-erected, planked and completed.

In the Polson Iron Works' drawing office the plans are being prepared for two very handsome steam yachts, with triple expansion engines and Yarrow boilers, but as they are not yet quite ready we will publish a description of them later.

Explosion on Government Dredge.

J. J. Main, Superintendent of the Polson Boiler Works, Toronto, who inspected the Dominion Government dredge, J. Israel Tarte, after the recent explosion of its no. 3 boiler, has reported as follows:—"The boiler was blown out of its place, fore end first, through the steel deck and beams, over the bridge house, and must have made at least one complete somersault, and landed about 60 ft. from its original place. I found the whole of the crown stays had pulled through the crown sheet of the boiler, which has every evidence of being red hot the whole length of the furnace 9 ft. x 5 ft. 3 in. wide, the after end of the crown sheet—or after part of the flue sheet—hanging down 9 ft. 10 in. from its screw stays. The threads of both the plates and on the ends of the stays appear to be fairly good. The holes in the plates are now oblong ¾ in. Some of the holes are 1-16 by 1-5-16. The other end of the furnace plate has parted in the line of the rivet holes of the top flange of the fire door plates, and clearly shows that the plate was red hot when the fracture occurred. There are 14 tubes drawn out of the tube plate at the furnace end, and they are now bent, showing that they were also hot. The crown of no. 4 boiler shows in several places that it was also hot, but this may have happened from the fire in the boiler after steam drum had been blown off by the force of explosion from no. 3 boiler, as the water would go out with the steam as soon as it was liberated, and the fire still remaining in the firebox would heat up the crown plate. The deck of the dredge is split from the bulkhead in front of the boilers to as far back as

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General Contractors and Designers of Grain Elevators, Mill Buildings, Docks and Warehouses

We are prepared to use all of the various kinds of elevator construction, but recommend our special construction known as the Record-Johnson System Patent Fireproof Semi-Porous and Glazed Cellular Tile Grain Storage Construction, covered by the following patents and of which we have exclusive control, patents Nos. 664323, 664324, 664325, 692544, 713104.

The following is a partial list of owners and capacity of plants which we have built in the last four years under these patents

Gt. Eastern Elevator, Minneapolis,	1,000,000	Northwestern Yeast Co., Chicago,	300,000
St. Anthony Elevator Co., "	2,200,000	Canadian Northern Ry., Pt. Arthur,	2,250,000
North Star Malting Co., "	500,000	David Stott Milling Co., Detroit,	200,000
Victoria Elevator Co., "	250,000	Pabst Brewing Co., Milwaukee,	250,000
Frisco Ry. Elevator, Kansas City	700,000		

We have under construction at the present time the following plants

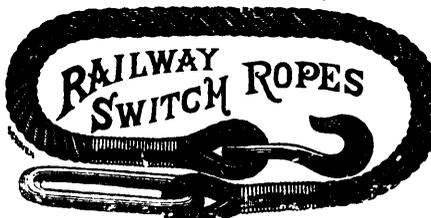
Schlitz Brewing Co., Milwaukee,	550,000	Texas City Imp. Co., Texas City, Tex.	300,000
Washburn-Crosby Milling Co., Buffalo,	300,000	Millbourne Mills Co., Philadelphia	200,000

The following are a few of our largest wood constructed elevators

Calumet Elevator, Chicago,	1,000,000	Maple Leaf Elevator, Kansas City,	1,000,000
Minnesota Annex, "	1,000,000	Burlington Elevator, St. Louis	1,000,000
C., M. & St. P. Ry., Itasca	1,125,000	Gd. Trunk Elevator, Portland, Me.,	1,000,000
Belt Line Elevator, Superior	2,500,000	F. H. Peavey & Co., No. 1	1,750,000
Superior Terminal "	2,500,000	Interstate Elevator, Minneapolis,	1,000,000
Pittsburg & West'n Ry., Fairport, O.	1,000,000	Texas Pacific Ry. Co., Westwego, La.	1,000,000
United States Milling Co., Duluth,	1,000,000	Hoosac Tunnel, Charlestown,	1,000,000
Empire Elevator Co., Minneapolis,	2,500,000	And hundreds of smaller houses.	

A full description of the elevator in course of erection at Port Arthur, Ont. for the Canadian Northern Railway, appears on page 27 of this issue.

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The B. GREENING WIRE CO., Limited
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MANUFACTURERS OF CHICAGO AND MELROSE
ALL-STEEL AUTOMATIC COUPLERS

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the smoke box end at the induced draft fan, and stands up about 6 ft. high with the bulwarks sprung out about 30 in., and where the boiler fell breaking in the deck, causing the bulwark to spring in. Some of the stanchions under that part of the deck are bent, and others are punched right through, and they have been struck by the boiler where it landed. The engine of the circulation pump, which is underneath where the boiler fell, is broken from the crushing down of the deck. The ashpan that was under the boiler is bent down between the beams as if it had been sheet lead. The exterior of the shell of the boiler is intact, with all the stays in place, and looking none the worse for the accident, excepting the sides of the casing outside of the firebox, which are bulged out from the force of the explosion. In speaking of the firebox, one might say that it is turned inside out just the same as one might turn a glove inside out. The boilers are fed by the feed pumps, and each one piped separately with a stop and check valve to each boiler. It was the duty of one man to do nothing else but see that the boilers were kept full to their working level. There were water gauges at both ends of the boilers. And it was also the duty of the fireman to watch the water at the firehold end. All the facts in connection with the case go to show that the explosion was caused by low water, and there is absolutely no doubt that the crown sheet was red hot."

Notices to Mariners.

- The following notices to mariners have been issued by the Department of Marine:
- No. 105. Nov. 5.—Quebec—264. River St. Lawrence, ship channel between Quebec and Montreal, Contrecoeur, completion of 30-ft. channel; 265. St. Ours traverse, range lights established; 266. Petite Traverse, range lights established; 267. Contrecoeur course, range lights established; 268. Longue Pointe Traverse, range lights established; 270. Contrecoeur channel, changes in buoyage; 271. Sorel to Montreal, gas buoys placed; 272. Pointe aux Trembles channel, changes in buoyage.
 - No. 106. Nov. 14.—Quebec—273. River St. Lawrence, ship channel between Quebec and Montreal, Montreal harbor, Bellerive park, range lights established; 274. Hochelaga, range lights established.
 - No. 107. Nov. 14.—Nova Scotia—275. South coast, off New Harbor head, bell buoy established. Newfoundland—276. Belle Isle, south point, arc of visibility of high light.
 - No. 108. Nov. 17.—British Columbia—283. Strait of Georgia, south entrance to Welcome pass, Merry island, lighthouse established.
 - No. 109. Nov. 19.—British Columbia—290. Queen Charlotte Sound, Blunden harbor, rocks, hydrographic notes, sailing directions.
 - 291. Queen Charlotte Sound, dangers.
 - No. 110. Nov. 21.—Nova Scotia—292. Canso harbor, north entrance, False passage ledge, light re-established for the season.
 - No. 111. Nov. 25.—British Columbia—297. Seaforth channel, main passage, Dryad point, red sector inserted in light. 298. Greenville channel, western entrance, Watson rock, beacon established.
 - No. 112. Nov. 27.—Nova Scotia—299. Halifax harbor, gas buoys, warning.
 - No. 113. Nov. 30.—Nova Scotia—303. Cape Breton, east coast, Sydney harbor, Low point, fog alarm established. 304. Cape Breton, Sydney harbor, Cranberry head, fog alarm discontinued.
 - No. 114. Dec. 1.—British Columbia—305. Vancouver island, east coast, Sydney, further particulars of uncharted rock. 306. Vancouver island, east coast, Nanoose harbor, uncharted shoal.
 - No. 115. Dec. 1.—River St. Mary, between Ontario and Michigan—307. Dark Hole and Coyle Point gas buoys, change in position.

Maritime Provinces and Newfoundland.

Hon. Jas. Muirhead, of Summerside, P.E.I., an old shipbuilder, died there recently.

The str. Pontiac, built in Scotland for J.W. Carmichael & Co. (Ltd.), New Glasgow, N.S., made 11 1/2 knots an hour on her trial trip.

The Dominion Atlantic Ry. has arranged to run its str. Prince Arthur on a series of trips from Boston, Mass., to the West Indian islands, the first sailing to be Jan. 16.

Plans have been approved by the Dominion Government for the dry dock to be constructed at St. John, N.B., by the Imperial Dry Dock Co., and tenders have been asked for the work. G. Robertson, M.L.A., St. John, N.B., is the principal promoter.

A company has been formed in Newfoundland, R. Moreton, Burgeo, Nfld., being the principal stockholder, to purchase a freight and passenger steamer to ply between St. John's, Nfld., and west coast ports and Halifax.

The Dominion str. Stanley has been considerably strengthened by the addition of a number of steel ribs, so as to be able the better to work through the ice on her winter route between Cape Tormentine, N.B., and Summerside, P.E.I. During the winter of 1902-03 the Stanley was caught in the ice, and was held for several weeks before she could be freed.

A committee of the St. John city council has had an interview with Sir Thos. Shaughnessy, at Montreal, in connection with the proposals to make extensive improvements and additions to the terminal facilities for steamships at the port. The committee, after returning to St. John, had a conference with Hon. A. G. Blair, M.P., with a view of having the requirements of the harbor brought before the Government.

The St. John, N.B., city council has decided to construct a new ferry steamer of the following dimensions: length over all, 140 ft.; breadth, moulded 34 ft., over guards, 49 ft.; depth from baseline to top deck beam amidships, 12 ft. 11 ins. The engines are to be of the compound type, with three cylinders; electric lighting will be supplied, and steam steering gear provided. The hull will be of steel, and will be a double ender, having a screw at each end. Tenders are being called for.

The Hampstead Steamship Co. was organized at Oak Point, N.B., recently, the officers and directors being: President, L. A. Curry, St. John; Vice-President, R. K. Jones, St. John; Managing Director and Secretary-Treasurer, F. S. Mabee, St. John; other directors: J. N. Inch, Oak Point, N.B.; Jas. E. Waddell, Kingston, N.B. The company has purchased the steamers Elaine and Hampstead, which will be placed on the St. John river at the opening of navigation. It is intended to refit and refurnish the Hampstead during the winter.

The Steamship Senlac Co., (Ltd), has been incorporated under the Dominion Companies' Act, with a capital of \$100,000, and offices at Rothesay, N.B., to acquire and operate the str. Senlac and other steamers between ports in New Brunswick and Nova Scotia, or elsewhere in Canada. The provisional directors are: R., J. H., P. W. and J. R. Thomson; A. Porter, J. R. Armstrong, R. S. Ewing and R. T. Leavitt, of St. John. The str. Senlac was launched in Dec., 1903, and is being completed at St. John. Her dimensions are: length, 190 ft. over all; breadth, 33 ft.; draught, 9 ft. 9 in. Accommodation is provided for berthing 95 passengers, but she will be licensed to carry 500 passengers. Space is provided for considerable cargo. The Senlac will run between St. John and Halifax, calling at south shore ports in Nova Scotia.

Province of Quebec Shipping.

P. D. Brunelle, steamboat inspector, died at Levis recently.

The str. Douro, owned by A. Fraser, was sold by order of the Quebec Admiralty court recently to H. Fry & Co., of Quebec, for \$3,000. The steamer, which was built in 1879 in Great Britain, is valued at \$25,000.

The Montreal Grain Elevating Co. has entered an action against the Montreal Harbor Commissioners to recover \$25,000 for loss caused by the sinking of the floating elevator St. Lawrence in the harbor on May 6, 1903, owing, it is alleged, to the negligence of the harbor commissioners.

J. F. Fraser, heretofore technical officer in the Marine Department, has been appointed Superintendent of the Dominion light service between the head of lake navigation and the Gulf of St. Lawrence. The position is a new one, the work having previously been performed by the Chief Engineer of the Department of Marine.

In rebuilding the str. Montreal at the Sorel docks, the Richelieu and Ontario Navigation Co. will use the plans prepared by the Bertram Engine Works, Toronto, when the vessel was built. The new Montreal is expected to be ready early in the season.

Alderman D. Gallery, of Montreal, has been urging the Department of Railways and Canals to consider the deepening of the canals to 30 ft., so as to permit the largest ocean-going vessels coming to Montreal to reach the Upper Lakes.

The Montreal Transportation Co. during the season of 1903 had in operation 3 steamers, 11 schooners and 30 barges, engaged in carrying grain from the Upper Lakes to Montreal. L. L. Henderson stated that the company's business during the year had increased 60%, largely owing to the removal of the canal tolls.

The Sincennes-McNaughton Co., of Montreal, has just had launched at Sorel for its fleet a new tug named the Alaska. She is 80 ft. long by 20 ft. in breadth, and is fitted with fore and aft compound engines, cylinders 18 in. and 36 in. by 24 in. stroke, to which steam is supplied from marine boilers at 150 lbs. pressure.

The number of vessels arriving in Montreal during the season of navigation 1903 was: ocean-going—797 vessels of 1,541,272 tons register, against 758 vessels of 1,091,272 tons during the season of 1902; river and lake—14,408 vessels carrying 2,410,907 tons, against 9,358 vessels carrying 1,875,668 tons in 1902. The increase in the number of inland vessels is accounted for by the number of new lines between Montreal and the head of Lake Superior. The grain shipments increased from 20,177,624 bush. in 1902 to 24,000,000 bush. in 1903.

The Quebec Steamship Co. has placed an order with a Sunderland, Eng., firm for a twin-screw 5,000 ton freight and passenger steamer, to be ready by Nov. 1. She will have the following dimensions: length, 425 ft.; breadth, 50 ft.; depth, 36 ft. 6 in. She will be fitted with triple expansion engines, 26 in., 42 in. and 71 in. cylinders by 48 in. stroke, to which steam will be supplied by three double ended and three single ended boilers at a pressure of 200 lbs. to the square inch. Accommodation will be provided for 240 saloon, 32 second-class, and 48 third-class passengers.

Capt. W. H. Taylor, of the C.P.R. Atlantic steamer Lake Manitoba, has been awarded the medal and certificate of the Royal Humane Society of Great Britain for rescuing the crew of the Nova Scotian schooner Grenada on Dec. 15, 1902.

Ontario and the Great Lakes.

Capt. Malone, of the str. Simla, recently fell into the hold of the vessel at Kingston, and broke his left leg.

The Manitou Fish Co. is having built at Goderich a new tug of larger dimensions than the Manitou, built in 1903.

Capt. J. McIntyre, recently in command of the str. Advance, was given charge of the Neepawa for the balance of the season.

The str. Lakeside made her last trip from St. Catharines to Toronto for the season Dec. 10. During the winter new boilers are to be put in.

The Dominion Government has awarded the contract for dredging the upper entrance to the Canadian canal at Sault Ste. Marie, Ont., to Hickler Bros.

The str. Advance, recently burned at Sault Ste. Marie, Ont., and scuttled, has been raised. The hull will be towed to Collingwood, and new upper works built.

The number of lockages at the Lindsay locks for the season of 1903 was 578, there passing through 200 steamers, 165 yachts, 145 scows, and 65 rafts of logs.

The Calvin Co. is building at Garden Island, for its raft towing and St. Lawrence rapids work a wooden, paddle wheel tug 130 ft. long, 25 ft. beam, and 9 ft. depth of hold.

The gas buoy plant hitherto maintained by the Department of Marine at Morrisburg, Ont., is to be removed to Prescott, Ont., where new premises have been acquired.

The old str. Cambria, after many vicissitudes, has been dismantled; her boilers, etc., have been removed to be scrapped, and the hull, it is reported, will be turned into a barge for the ice trade.

Wreckage has been found near Cobourg which has been identified as belonging to the Toronto schooner Emerald. Capt. McMaster, who was owner as well as master, and the crew of eight were drowned.

A marine railway sufficiently large to take on three or four vessels is about to be constructed at Port Arthur. Jas. Whalen is interested in the railway which is intended principally for the use of the dredges.

The Algoma Navigation Co. is negotiating with the Owen Sound board of trade with a view of putting on two steamers at the opening of navigation to trade between Owen Sound, Manitoulin island and North Shore points.

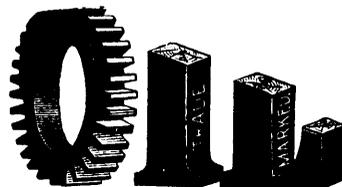
The Hamilton Steamboat Co. held its annual meeting recently. The report is said to have shown the year's operations to have been a most successful one, but it has not been made public. The customary dividend of 10% was declared.

The Western Lakes Transportation Co., which put the str. Wexford on the Upper Lakes early in 1903, is contemplating buying

or having built an additional steel steamer. Capt. W. J. Bassett, of Collingwood, is largely interested in the company.

The total amount of the insurance on the Huron Navigation Co.'s str. Pittsburg, which was burned at Sandwich in the summer, was \$50,000, and of this \$15,000 has been paid by the British America Assurance Co. The balance, \$35,000, is distributed among five companies.

The reports presented at the annual meeting of the Toronto Ferry Co. show a successful year's operations. The company met with a considerable loss during the year owing to the burning of its docks, etc., at the island.



For Steamboats AND RAILWAYS

Vacuum Oils Reduce Friction, thus saving Coal and preserving Machinery.

VACUUM 600 W. CYLINDER
VACUUM No. 1 MARINE ENGINE (better than Lard)
ELDORADO ENGINE
RENOWN ENGINE
ARCTIC CUP GREASE
MINERAL SEAL OIL

300 Fire Test, for Illuminating Purposes

THE QUEEN CITY OIL CO. LIMITED
TORONTO

5 King Street East

FURS and HATS

SPRING HATS ALL IN.
EVERYTHING UP-TO-DATE.

In Ladies' Ready-to-Wear we are showing a select stock. Prices reasonable.

Ladies, now is the time to have your Furs repaired and remodelled. Fur Show Rooms open at all seasons.

Catalogue and Price List sent on application.

Holt, Renfrew & Co.
TORONTO and QUEBEC.

MANITOBA

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

CROPS.		
ACRES.	AVERAGE YIELD.	TOTAL.
Wheat.....2,039,940	26. bus.	53,977,267 bus.
Oats.....725,060	47.5 "	34,478,160 "
Barley....329,790	35.9 "	11,848,422 "
Potatoes..22,005	157. "	3,459,325 "

STOCK.
Number of stock in the Province, July 1, 1902:
Horses.....146,591 Sheep.....20,518
Cattle.....282,343 Pigs.....95,598
Value of Dairy Products.....\$26,314

15,000 FARM LABORERS
Came from Eastern Canada to assist in the harvest fields of Manitoba in 1902—and the demand was not fully satisfied.

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

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

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

For full information, maps, etc., FREE, address
JAMES HARTNEY, Manitoba Emigration Agt.,
77 York Street, Toronto, Ont.
Or J. J. GOLDEN, Manitoba Emigration Agt.,
617 Main St., Winnipeg, Man.



LOW COLONIST RATES TO NORTH-WEST AND CALIFORNIA

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

To all points in Louisiana and Mississippi, \$18.00 from Chicago.

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

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

G. B. WYLLIE,

Canadian Passenger Agent,

210 ELLICOTT SQUARE, BUFFALO, N.Y.

NEW YORK CENTRAL

& HUDSON RIVER R. R.

THE FOUR-TRACK TRUNK LINE.

In connection with the C.P.R., T.H. & B. and M.C. Railroads operate the quickest and best trains between Toronto, Hamilton and New York.

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

Night Train with sleeping car and dining car leaves Toronto 5.20 p.m., Hamilton 6.20 p.m., arrives New York 7.50 next morning.

ONLY ONE station in the City of New York, the Grand Central Station of the New York Central.

Connections at Suspension Bridge with the Grand Trunk Railway.

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

These are being rebuilt and will be ready for occupancy in the spring. The old officers and board of directors were re-elected.

The steam barge Clinton, for which a certificate was refused at the beginning of the season, and which was put on the marine railway at Trenton for repair, was put up for sale by order of the Admiralty Court to satisfy claims amounting in all to \$3,000. A bid of \$500 was made, but the judge twice refused to sanction the sale, the marshall's valuation being \$4,000.

The dimensions of the turbine steamer, which it is expected to have on the Hamilton-Toronto run early in the season, will be 260 ft. over all; her engines will be capable of developing 3,500 h.p., and she will have accommodation for 1,700 passengers. The intention is to make the trip between the two points in an hour and three-quarters, and to make three round trips daily.

The total freight passing through the Canadian and the U.S. canals at Sault Ste. Marie, in Nov., was 2,807,454 tons, against 4,133,035 tons in Nov., 1902. The figures for the Canadian canal are:

	1903.	1902.	Increase or Decrease.
April	159,763 tons	197,926 tons	38,163 tons -
May	636,747 "	334,262 "	302,485 " +
June	917,105 "	1,118,564 "	201,459 " -
July	890,338 "	523,936 "	366,402 " +
Aug.	879,420 "	639,858 "	239,562 " +
Sept.	639,320 "	560,031 "	79,289 " +
Oct.	683,405 "	604,713 "	78,692 " +
Nov.	603,511 "	635,314 "	31,803 " -
	5,409,609 tons	4,614,604 tons	795,005 tons +
	+ increase.	- decrease.	

A number of residents of Wolfe island have taken action seeking to restrain the township council from building a steamer for the ferry between Wolfe island and Kingston. The steamer under construction is a single-ended, composite, side-wheel steamer, having a length of 120 ft. over all, a breadth of 33 ft. over guards, and a moulded depth of 7 ft. 3 in. There will be an open deck 45 ft. long forward for waggon and freight, the remainder of the length being closed in and arranged to accommodate some 250 passengers. The hull is being built of open hearth steel throughout, the bottom only being planked with 3 in. elm. On the main deck are accommodations for purser, engineers, and cooks on each side amidships at the wheelhouse. Aft of the engine space is located the entrance hall immediately in front of the ladies' cabin; from the entrance hall a stairway leads to the promenade deck above, and to the dining room, kitchen and pantries below. The promenade deck is to be covered its entire length with a wooden shade deck, and forward on this deck is the pilot house and annex containing rooms for the captain and mate. Store rooms and crew's quarters are located immediately in front of the engine space below the main deck. The machinery is to consist of an inclined compound engine with cylinders 13 in. and 26 in. by 36 in. stroke, turning 30 revolutions a minute with a steam pressure of 150 lbs. Air pump, bilge, feed and cooler pumps are run from the main engine crosshead, and besides a duplex steam pony pump is installed. The feathering paddlewheels are 14 ft. in diameter. The boiler is of the Scotch type, and is located forward of the wheels. The ferry is intended to run at a speed of 10 miles an hour, and will have the bow specially strengthened for running in ice.

The Department of Marine gave instructions to all lighthouse keepers in Government lighthouses, with the exception of those on the north shore of Lake Superior, to keep their lights in operation as long as any navigation is possible within sight. The Lake Superior lighthouse men were removed Dec. 1., but the Department is arranging to keep them at the different stations there until the close of navigation in future years.

Manitoba and Northwest Territories.

The Dominion Government has instructed P. Paradis to make a full report on the Bow river, in the vicinity of Calgary, Alta., with a view to the prevention of floods, etc.

The Edmonton Investments (Ltd.), recently incorporated with headquarters in Toronto, proposes to own and operate steamship lines in connection with its real estate investments at Edmonton, Alta.

The East Grand Forks Transportation Co. of Grand Forks, N.D., operating two steamers on the Red River, in North Dakota, proposes increasing its fleet, and extending the trips of the steamers to Winnipeg.

Cornwall and Woods are having constructed at Athabaska Landing a steamer 100 ft. long and 21 ft. broad, for launching in the spring. The hull will be ready for launching as soon as the ice breaks up. The steamer will trade between Grand Rapids and Athabaska Landing, and the headquarters of Lesser Slave Lake.

The steamer which Capt. Coates, of Fort Frances, Ont., proposes to build during the winter at Prince Albert, Sask., for trading on the Saskatchewan river, will be a stern-wheel steamer, 130 ft. bottom measure, 150 ft. over all, with a breadth of 28 ft. The engines have been ordered in Chicago, and will have two 15 in. cylinders with a 52 in. stroke. The steamer is to carry freight only, and will not be provided with passenger accommodation.

The stern-wheel steamer which the Hudson's Bay Co. will build on the Peace river for its river trade has been designed by the Company's officers, and is the result of their experience in the trade. Her dimensions will be: length of hull, 110 ft.; length over all, paddle wheel included, 127 1/2 ft.; beam, outside of planking amidships, 22 ft.; extreme width on deck over guards, 25 ft.; estimated draught, loaded, 21 inches. The machinery will consist of a pair of long stroke, direct acting, stern paddle wheel marine engines, cylinders, 10 ins. diameter by 48 inch stroke, to which steam will be supplied at a pressure of 200 lbs. to the square inch by two horizontal firebox type of marine boilers, each 48 in. diameter by 18 ft. long. Each boiler will contain 51 2 1/2 in. lap-welded boiler tubes 13 ft. 4 in. in length; a steam drum 18 in. by 8 ft. will connect the boilers. The total heating surface will be 850 sq. ft., with 30 sq. ft. of fire surface. Accommodation will be provided for passengers in staterooms having two and three berths each, with smoking and ladies' cabins. She will be fitted with electric light throughout and all modern conveniences. Her freight capacity will be about 60 tons.

B.C. and Pacific Coast Shipping.

The North Vancouver Ferry and Power Co. is having a new steamer built at the Polson Iron Works, Toronto, for the ferry, to be launched by May 1.

Robt. Dunsmuir & Sons have chartered, with a view to purchase, the tug Sampson, of Portland, Me. The tug will be used for towing coal hulks from Nanaimo to other ports.

C. McCain, Vancouver, is collecting funds in British Columbia, with a view of raising the old steamer Beaver, and placing the hull as a memorial on the beach of Stanley Park.

The bark Oregon, 1,431 tons net, has been purchased by Robt. Dunsmuir & Sons, from the W. E. Mighall Co., of San Francisco, Cal. The Oregon will carry coal from Nanaimo to the Treadwell mines, Alaska, and concentrates south to the smelters at Tacoma, Wash.

The Sidney and Nanaimo Transportation Co. has sold its business to Capt. A. A. Sears and A. D. Munro. The purchase includes the str. Iroquois, now being run on the route between Sidney and Nanaimo. This service will be continued, Capt. Sears looking after

the navigation of the steamer, and Mr. Munro acting as purser.

The Puget Sound Navigation Co. has let a contract for the construction of a new steamer to be put on the Victoria-Seattle run. Her dimensions will be: length, 200 ft.; breadth, 36 ft.; depth, 15 ft. 6 in. She will be fitted with triple expansion engines, which are estimated to give a speed of 14 knots an hour, and will have berth accommodation for 175 passengers.

The Vancouver Dry Dock and Shipping Co. proposes to construct a floating, self-docking, steel pontoon dock at that port, 500 ft. long, with a lifting weight of 11,000 tons. The Imperial Government's dry dock at Esquimalt is only 380 ft. long. The maximum subsidy of \$30,000 a year for 20 years will be obtained from the Dominion Government. Work will be started at once, and the dock will be completed within 18 months.

The C.P.R. str. Princess Beatrice has been placed on the Victoria and New Westminster run. She was built at Esquimalt, her hull being of wood, with steel bulkheads, and is fitted with engines constructed in Scotland, and taken to British Columbia. Her dimensions are: length, over all, 202 ft.; breadth, 37 ft.; depth from upper deck, 25 ft. 6 in. The steamer is propelled by a single screw, 12 ft. in diameter, driven by one set of triple expansion engines, having cylinders 18 1/2 in., 30 in., and 50 in., with 36 in. stroke of piston, to which steam is supplied by two boilers 11 ft. 9 in. in diameter by 12 ft. in length. Three furnaces are provided for each boiler. The working pressure is 180 lbs. to the square inch, and when going full speed the screw makes 110 revolutions a minute, capable of making 13 or 14 knots an hour. The Princess Beatrice has a displacement, approximately of 1,000 tons, and can carry 700 tons of cargo. She is fitted with steam winches and steam capstans, and has two pole masts to which are fitted four steam derricks for handling cargo. The passenger accommodation is well arranged and includes a ladies' room, smoking room, and general social hall. This is the largest and most powerful vessel built in British Columbia.

Application is being made at the current session of the B.C. Legislature for an act incorporating the Canada Fire and Marine Insurance Co. Livingston, Garrett & King are solicitors for the applicants.

Press reports stating that the C.P.R. has entered into an arrangement with the Hamburg-American Steamship line by which the latter will handle the passenger trade from Germany to Canadian ports, are denied by the management.

The str. Mira, originally owned by the Dominion Coal Co., which was wrecked off Yarmouth, N.S., in the winter of 1901-2, and which was floated after some interesting operations, was sold to F. A. Gilchrist, of Alpena, Mich. Mr. Gilchrist rebuilt the hull as an oil carrier, and is applying for a U.S. register.

There were 15 casualties reported to ocean-going vessels on the St. Lawrence route during 1903. Eight steamers were slightly damaged, three badly damaged, one very badly damaged, and three total losses. In 1902 there were 11 casualties, but no total loss; in 1901, five casualties, but no total loss; in 1900, five casualties, of which four were total losses.

The str. Toronto, of the Canadian Lakes and Ocean Navigation Co., was the last vessel to leave Montreal for the season of 1903. She had to complete her loading at Quebec. A new steamer for the line, the Lady Strathcona, was recently launched at Newcastle-on-Tyne, Eng. She is a 7,000 ton steamer, and will trade between Antwerp, British ports and Canadian ports.

The C.P.R. Atlantic steamers, in addition to operating the regular service to ports in Great Britain, will operate a line between New Orleans, La., and Galveston, Tex., to England, carrying cotton. The former owners of the steamers purchased by the C.P.R., the Elder, Dempster Co., ran four of their steamers on this route yearly after the close of navigation on the St. Lawrence.

The Dominion Government has placed an order for the construction at Barrow-in-Furness, Eng., of a steel twin-screw steamer for the fishery protection service on the Atlantic coast. She will be 200 ft. long by 25 ft. beam, and will have a total capacity of 700 tons. She will have accommodation for 60 men, and will be armed with Maxim-Nordenfeldt quick-firing guns, and fitted with a 4,000 candle power searchlight.

The Toronto Globe reproduces the following item from its issue of Dec. 3, 1853: "Mr. Land, the builder of the steamers intended for

McKean, McLarty & Co.'s Canadian line, is confident that they will make average trips of between eight and nine days to Quebec. The Ottawa, recently launched, is much faster than the Lady Eglinton, which made the voyage in less than 11 days. Canadians will then be able to make the Atlantic voyage quicker from their own port than by the States."

Among the Express Companies.

The Dominion Ex. Co. has leased the premises in Vancouver now occupied by the Royal Bank, and will move its offices there as soon as the alterations are complete.

The estate left by the late H. Sanford, first Vice-President of the Adams Ex. Co., who died at Bridgeport, Conn., Sept. 6, was valued for probate at over \$6,000,000.

The Canadian Ex. Co. has opened a route on the Hampton and St. Martin's Ry., from

Hampton, on the I.C.R., to St. Martin's, N.B., and has opened an office at St. Martin's.

The Canadian Ex. Co., during the shooting season of 1903, handled in the district south of North Bay, Ont., 2,950 deer carcasses, an increase of 692 over that of the season of 1902.

The Dominion Ex. Co. has made some change in its waggon route between Galt and Doon, Ont., consequent on the opening of the new route on the electric railways between Galt and Berlin.

The Dominion Ex. Co. has extended its route on the Galt, Preston and Hespeler Street Ry., and the Preston and Berlin Ry., so that it now has a service in operation between Galt and Berlin, Ont.

The River Ouelle branch of the I.C.R., from River Ouelle to St. Denis wharf, having been closed for the winter, the office which the Canadian Ex. Co. opened at St.

MADE IN CANADA

Mica Fire-Proof Coverings

- FOR -

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

COLD STORAGE INSULATION
The Highest Non-Conductor in the World.

AWARDED THE GOLD MEDAL AT PAN-AMERICAN EXPOSITION, AND GRAND-PRIZE AT PARIS

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

Send for particulars to the
Mica Boiler Covering Co., Limited
86-92 Ann Street, Montreal, Can.

The Direct Line

To New York, Philadelphia, Atlantic City, Baltimore, Washington and the South.
The Grand Trunk Railway in connection with the

LEHIGH VALLEY RAILROAD

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

ROUTE OF THE
"Black Diamond Express"
(Handsomest train in the world.)

The Great double-track scenic highway, stone ballasted, protected by automatic electric block signals, Through Pullman Parlor and Sleeping Car Service, Dining Car Service à la carte. Everything first class. Call on Grand Trunk Ticket Agents for tickets and further information, or address

ROBT. S. LEWIS,
Canadian Passenger Agent, 33 Yonge Street, Toronto.
A. A. HEARD, CHAS. S. LEE,
Asst. Gen. Pass. Ag't, New York. Gen. Pass. Ag't, New York.
G. R. CHESBROUGH,
West'n Pass. Ag't, Buffalo, N.Y.

When You Stop to Think

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

=====
METALLIC CIRCUIT SERVICE
EFFICIENT, RAPID, CONSTANT.
=====
THE BELL TELEPHONE COMPANY
OF CANADA.

STEEL, PEECH & TOZER, LIMITED,

SHEFFIELD, ENGLAND.

STEEL AXLES, TYRES, AND SPRING STEEL.

"PHENIX" Loco. Spring Steel is the
accepted Standard in Canada.

SOLE AGENTS:
James Hutton & Co., Montreal.

JOHN J. GARTSHORE,

83 Front St. West, TORONTO.

Railway and Tramway Equipment.

New and Second-hand Rails
(All Sections.)

*Locomotives, Cars, Derricks,
Hoisting Machinery, etc.*

Old Material Bought and Sold.

THE PLACE VIGER MONTREAL

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

RATES: \$3 UPWARDS.

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

IMPERIAL BANK OF CANADA.

Capital authorized	-	-	\$4,000,000
Capital paid up	-	-	2,983,896
Rest	-	-	2,636,312

DIRECTORS:

T. R. MERRITT, President; D. R. WILKIE, Vice-President; WM. RAMSAY, ROBERT JAFFRAY, T. SUTHERLAND STAYNER, ELIAS ROGERS, WM. HENDRIE.

HEAD OFFICE, TORONTO.

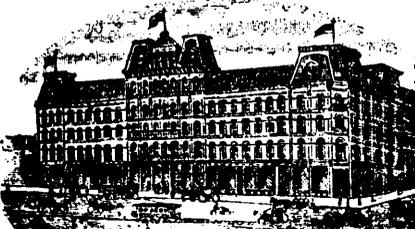
D. R. WILKIE - - - General Manager.
E. HAY - - - - - Asst. General Manager.
W. MOFFAT - - - Chief Inspector.

Branches in Quebec, Ontario, Manitoba, North-West Territories and British Columbia

AGENTS.—London, Eng., Lloyds Bank Limited; New York, Bank of Montreal, Bank of the Manhattan Co., Bank of America. Sterling exchange bought and sold. Letters of credit issued available in any part of the world.
A general Banking business transacted.

THE RUSSELL

OTTAWA, ONTARIO.



The Leading Hotel of the
Capital of Canada

F. X. ST. JACQUES - - - - Proprietor

OUR SPECIALTIES

RAILROAD and STEAMSHIP PRINTING

LARGEST IN CANADA

The Mail Job Printing Company, Limited

75 York Street, Toronto

Phones, Main 5 - 130 - 135 Richard Southam
Manager

Denis has been discontinued until the re-opening of the line.

The stage line operated by the White Pass and Yukon Ry. from Whitehorse to Dawson, 327 miles, carries passengers, who may carry 45 lbs. of hand baggage free, and mails. The service is operated by sleighs in the earlier part of the season, the fare being \$125, but it was announced that this would be reduced to \$100 when larger sleighs could be used. The rates at the road houses are \$1.50 for meals and \$1 a night for beds.

Telegraph and Cable Matters.

The G.N.W. Telegraph Co. has closed its offices at the following points: Beaumaris, Edgar Station, Keenansville and Tyrone, Ont.

The Government cable between Pelee Island, Lake Erie and the mainland broke during Nov., and it was expected to have the repairs completed before the ice formed.

The United States military authorities propose to extend their cable to the two islands off Port Simpson, B.C., which have been awarded to the U.S. by the Alaska Boundary Commission.

The loss on the operation of the all-British and Trans-Pacific cable for the current year is estimated at £92,000, towards which the Canadian Government will have, under the agreement, to contribute £28,000.

The 51st anniversary of the laying of the cable between Prince Edward Island and the mainland was observed in Charlottetown, P.E.I., Nov. 21. The residents of the island-province are agitating for better communication with the rest of Canada.

The recent commission which reported on the condition of the War Office in London, Eng., called attention to the unprotected condition of the Atlantic cables in case of hostilities. In this connection Major Bland, of the Royal Engineers, has been delegated to report on the best methods of protecting the cables.

The Government telegraph line round Cape Breton island was expected to be completed by the end of 1903. The line has been completed along the southern coast, and the work in progress during Dec. was the stringing of the wire on Scatarie island to the eastern light, where an office will be opened. The lines, which are completed, extend some 200 miles, and connect St. Peters, Gaberous, Main a' Dieu and Scatarie island.

The Canadian Government telegraph service proposes to string a telegraph line to Lloydminster, Sask. We are advised that Lloydminster, which is on the projected route of the Canadian Northern Ry., to Edmonton, Alta., will be reached by a loop from the main telegraph line at a point between Pitt and Onion Lake. The loop will be about 15 miles in length. Poles are being cut and fixed by the Government linemen with local assistance, and the wire will be strung as soon as practicable. The work is being done under the charge of J. S. Macdonald, District Superintendent.

The Canadian Northern Telegraph Co. completed the construction on its lines for the season Nov. 30, when the construction gangs returned to Winnipeg. During the year about 60 miles of wire was strung between Stanley Jet. and Gunflint Narrows, Ont., on the Duluth extension of the Canadian Northern Ry.; two wires have been strung along the main line of that railway under construction from Grand View, Man., to Edmonton, Alta., one of the wires being for commercial purposes, and the other for use in connection with railway construction work; and for 50 miles beyond Erwood, Sask., on the extension of the C.N.R., from there to Prince Albert.

General Telephone Matters.

The telephone line and instruments used between Cartier and Geneva Lake, Ont., are reported to have been purchased by J. Peverely, C.P.R. scaler at Cartier.

The completion of the Kamouraska Telephone Co.'s line to Riviere du Loup, Que., was celebrated Dec. 15, when a long-distance connection was made with Toronto.

The Bell Telephone Co.'s franchise in London, Ont., expired Dec. 4. No new proposition was received from the company, and nothing is likely to be done until early in the year.

Edmonton Investments (Ltd.) has been incorporated with offices in Toronto for the purpose of dealing in real estate at Edmonton, Alta., and in connection therewith to construct and operate telephone and telegraph lines.

THE GREAT CHARITY.

THE HOSPITAL FOR SICK CHILDREN, TORONTO.

It Takes Care of Every Sick Child in Ontario Who Cannot Afford to Pay For Treatment.

The Hospital for Sick Children, Toronto, is not a local institution—it is Provincial.



MESSAGE FOR RHEUMATISM.

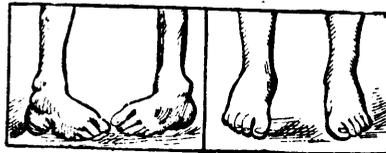
The same claim and the same privileges as the Toronto child born within sight of its walls.

This is the reason that the Trustees appeal to the fathers and mothers of Ontario—for as their money goes out to help the Hospital so the Hospital's mercy can go out to help the children.

This is the 28th year of the Hospital's life. The story of the years is a wonderful one—for in that period 10,000 children have been treated, and over 5,000 cured and 3,000 improved.

Last year there were 868 boys and girls in its beds and cots, and of these 493 were cured and 247 improved.

Look at these pictures of club feet—before and after.



BEFORE AFTER

Of the 868 patients 293 came from 216 places outside of Toronto.

In three years the patients from different parts of Ontario, not Toronto, average 250—nearly a third of the entire number.

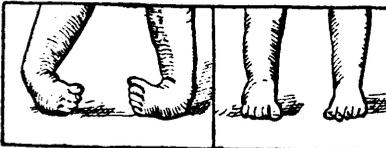
In six years 1,400 outside patients have been treated—and for 20 years past they will average 100 a year.

The average stay of every patient was 54 days, the cost per patient per day 94c.

A dollar or two means a small lot of money out of your pocket, but it takes a big load of misery out of some little life.

The X Ray department gives wonderful results. A girl came in with a double thumb on one hand. She left with one thumb—a perfect hand.

See what the hand of the Surgeon does for the crippled children of Ontario.



BEFORE AFTER

Money kept from the Hospital is mercy kept from the children.

Your money means mercy to somebody's child.

Your money can cheer some mother's heart by saving some mother's child.

Health and wealth. You give wealth to the Hospital, and the Hospital gives health to the children.

The Corporation of the City of Toronto gives \$7,500 a year to the Hospital for the maintenance of every child, whether from city or country.

The citizens of Toronto contribute about \$7,000 a year towards the maintenance of every patient in the Hospital, whether from city or country.



HE ENJOYS READING.

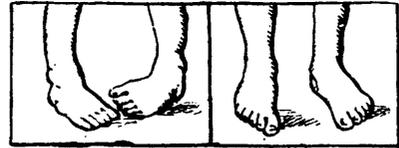
Toronto does its share in the good work, and the Trustees ask you to do yours.

The Newspaper Proprietors of Ontario have kindly helped the Hospital by inserting our appeals.

There are two newspaper cots, and boys and girls from the country are placed in the cots founded by the newspaper men.

Look at the pictures of "before and after." They tell their own story—surely you will help us in this good work.

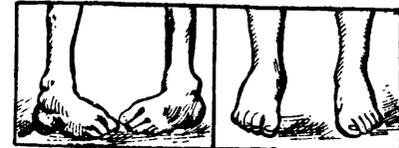
If your dollar could straighten the feet of a little boy or girl with club-feet you would gladly give it, and your dollar will help to do that.



BEFORE AFTER

Take off the handicap of deformity—give all children a fair start in the race of life.

Twenty-three children who came in with club-feet were sent home perfect cures last year. There are as many more in the Hospital to-day awaiting treatment.



BEFORE AFTER

If you know of a sick child—the club foot boy or girl—send his parent's name to the Hospital.

Please send your contributions to J. Ross Robertson, Chairman, or to Douglas Davidson, Sec.-Treas. of the Hospital for Sick Children, College Street, Toronto.

The New Westminster and Burrard Inlet Telephone Co. is looking into the matter of connecting Vancouver island with the B.C.

mainland by means of a submarine cable, and expects to be able to go on with the work in the spring.

The Ottawa city council telephone committee has recommended that a telephone franchise be granted to the Canadian Telegraph and Telephone Co., which was incorporated at the last session of the Dominion Parliament. The proposed agreement gives a 21-year franchise at \$2,500 a year, the charges to be \$36 for office telephones and \$22 for telephones in private houses.

The G.T.R. has in operation between Montreal and Brockville, a distance of 125 miles, a composite telephone and telegraph service. The instruments are installed on a no. 8 galvanized iron wire and used as a single line grounded system. There are instruments at Montreal, Vaudreuil, Cornwall and Brockville, and excellent results are being obtained. Although the system is yet in the experimental stage, it is expected that it will be installed quite generally over the G.T.R. lines. The installation was made under the directions of W. W. Ashald, Superintendent of Telegraphs.

The British Columbia Telephones (Ltd.) has not yet decided upon the plan for reorganizing and consolidating the several companies operated, and consequently there has not been a transfer of the head offices from Huddersfield, Eng., to Vancouver, B.C. The subsidiary companies owned by the Company are: the New Westminster and Burrard Inlet Telephone Co., with offices in Vancouver, operating the Victoria and Esquimalt Telephone Co., the Vernon and Nelson Telephone Co., the Kootenay Lake Telephone Co., Nanaimo Telephone Co., the Canada Western Telephone and Telegraph Co., and the Columbia Telephone and Telegraph Co., acquired in 1903.

PURCHASING AGENTS' GUIDE.

(Continued from third page of Cover.)

Signals	The Hiram L. Piper Co. Montreal.
	N. L. Piper Railway Supply Co. Toronto.
Signs	Acton Burrows Co. Toronto.
Snow Ploughs	Rhodes, Curry & Co. Amherst, N.S.
Spikes	Rice Lewis & Son. Toronto.
Springs	B. J. Coghlin & Co. Montreal.
	Montreal Steel Co. Montreal.
Station Name Signs	Acton Burrows Co. Toronto.
Steamboats	Polson Iron Works. Toronto.
Steamboat Signs	Acton Burrows Co. Toronto.
Steam Couplers	Safety Car Heating and Lighting Co. New York.
Steam Shovels	James Cooper. Montreal.
	W. H. C. Mussen & Co. Montreal.
Steam Traps	The James Morrison Brass Mfg. Co. Toronto.
Steel	James Cooper. Montreal.
	B. J. Coghlin & Co. Montreal.
	Wm. Jessop & Sons. Sheffield, Eng.
	Rice Lewis & Son. Toronto.
Steel Buildings	Dominion Bridge Co. Montreal.
Steel for Springs	James Hutton & Co. Montreal.
Steel Plate	Jas. W. Pyke & Co. Montreal.
Steel Tyres	B. J. Coghlin & Co. Montreal.
	James Hutton & Co. Montreal.
	Latrobe Steel Co. Philadelphia, Pa.
	Jas. W. Pyke & Co. Montreal.
Stop Cocks, Iron and Brass	The James Morrison Brass Mfg. Co. Toronto.
Structural Metal Work	Dominion Bridge Co. Montreal.
	Locomotive and Machine Co. of Montreal.
	Jas. W. Pyke & Co. Montreal.
Studs, Engine and Binder	John Morrow Machine Screw Co. (Ltd.) Ingersoll

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

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Montreal, Que.	Ottawa, Ont.	Quebec, Que.
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To the Manufacturers of & Dealers in Steam & Electric Railway, Steamship, Express, Telegraph & Telephone supplies, &c.

Accident Insurance Canadian Ry. Accident Ins. Co. Ottawa, Ont. Travelers' Insurance Co. Montreal.	Derricks James Cooper Montreal.	Locomotives (Steam) American Locomotive Co. New York, N.Y. Baldwin Locomotive Works Philadelphia, Pa. Canadian Locomotive Co. Kingston, Ont. James Cooper Montreal. Locomotive and Machine Co. of Montreal The Saxon Engine Works, Chemnitz, Germany.
Boiler Waters L. Drewry Winnipeg.	Door Signs Acton Burrows Co. Toronto.	Machine Tools The Saxon Engine Works, Chemnitz, Germany
Brakes & Fittings Tinghouse Mfg. Co. Hamilton, Ont.	Dry Goods The Hudson's Bay Company	Manganese Steel Castings Montreal Steel Co. Montreal.
Drawings Drewry Winnipeg.	Electric Car Route Signs Acton Burrows Co. Toronto.	Matches The Hudson's Bay Company
Electric Lamps & Scones Lewis & Son Toronto.	Electric Cranes Dominion Bridge Co. Montreal W. H. C. Mussen & Co. Montreal.	Milepost Numbers Acton Burrows Co. Toronto.
Awning, Tent & Tarpaulin Co. Montreal.	Enameled Iron Signs Acton Burrows Co. Toronto.	Mohair The Hudson's Bay Company
Buttons & Co. Montreal.	Engineers' Supplies The James Morrison Brass Mfg. Co. Toronto.	Nails, Wire Dominion Wire Manufacturing Co. Montreal.
Buttons & Co. Montreal.	Engines, Stationary & Marine Polson Iron Works Toronto.	Numbers Acton Burrows Co. Toronto.
Buttons & Co. Amherst, N.S.	Engraving Acton Burrows Co. Toronto. Toronto Engraving Co. Toronto.	Nuts, Cold Pressed John Morrow Machine Screw Co. (Ltd.), Ingersoll
Buttons & Co. Toronto.	Express Office Signs Acton Burrows Co. Toronto.	Oakum Rice Lewis & Son Toronto. The Hudson's Bay Company
Buttons & Co. Toronto.	Fencing Canadian Steel and Wire Co. Hamilton, Ont. Dominion Wire Manufacturing Co. Montreal.	Oils Galena-Signal Oil Co., Franklin, Pa., & Toronto. The Queen City Oil Company Toronto.
Buttons & Co. Toronto.	Flags Rice Lewis & Son Toronto. The Hudson's Bay Company	Office Signs Acton Burrows Co. Toronto.
Buttons & Co. Toronto.	Flour The Hudson's Bay Company	Packing The N. L. Piper Railway Supply Co. Toronto.
Buttons & Co. Toronto.	Foghorns Rice Lewis & Son Toronto.	Pinch Bars The Hiram L. Piper Co. Montreal. The N. L. Piper Railway Supply Co. Toronto.
Buttons & Co. Toronto.	Gas and Electric Fixtures The James Morrison Brass Mfg. Co. Toronto.	Pipe Covering The James Morrison Brass Mfg. Co. Toronto. Mica Boiler Covering Co. Montreal.
Buttons & Co. Toronto.	Gauges, Steam and Vacuum, etc. The James Morrison Brass Mfg. Co. Toronto.	Plushes The Hudson's Bay Company
Buttons & Co. Toronto.	General Supplies The Hudson's Bay Company	Porter E. L. Drewry Winnipeg.
Buttons & Co. Toronto.	Grain Elevators John S. Metcalfe Co. Chicago, Ill.	Portland Cement Rice Lewis & Son Toronto.
Buttons & Co. Toronto.	Groceries The Hudson's Bay Company	Printing The Hunter, Rose Co. Toronto. The Mail Job Printing Company Toronto.
Buttons & Co. Toronto.	Hardware Rice Lewis & Son Toronto. The Hudson's Bay Company	Pumps Rice Lewis & Son Toronto.
Buttons & Co. Toronto.	Headlights The Hiram L. Piper Co. Montreal. N. L. Piper Railway Supply Co. Toronto.	Rail Benders, Roller Montreal Steel Works Montreal.
Buttons & Co. Toronto.	Hose Rice Lewis & Son Toronto.	Railway Supplies The Hiram L. Piper Co. Montreal. The N. L. Piper Railway Supply Co. Toronto.
Buttons & Co. Toronto.	Illustrations Acton Burrows Co. Toronto.	Rails (New) James Cooper Montreal. Drummond, McCall & Co. Montreal. J. J. Gartshore Toronto. W. H. C. Mussen & Co. Montreal.
Buttons & Co. Toronto.	Injectors The James Morrison Brass Mfg. Co. Toronto.	Rails (for relaying) James Cooper Montreal. J. J. Gartshore Toronto. T. A. Morrison & Co. Montreal. W. H. C. Mussen & Co. Montreal. Rice Lewis & Son Toronto. Jas. W. Pyke & Co. Montreal.
Buttons & Co. Toronto.	Interlocking Signals Montreal Steel Co. Montreal.	Roof Trusses Dominion Bridge Co. Montreal.
Buttons & Co. Toronto.	Iron Rice Lewis & Son Toronto.	Rope Rice Lewis & Son Toronto. The Hudson's Bay Company
Buttons & Co. Toronto.	Iron Signs Acton Burrows Co. Toronto.	Safety Valves The James Morrison Brass Mfg. Co. Toronto.
Buttons & Co. Toronto.	Japans McCaskill, Dougall & Co. Montreal.	Screws, Milled Machine John Morrow Machine Screw Co. (Ltd.), Ingersoll
Buttons & Co. Toronto.	Journal Bearings Jas. W. Pyke & Co. Montreal. St. Thomas Brass Co. St. Thomas, Ont.	Semaphore Arms Acton Burrows Co. Toronto.
Buttons & Co. Toronto.	Lager Beer, &c. E. L. Drewry Winnipeg.	Semaphores The Hiram L. Piper Co. Montreal. The N. L. Piper Railway Supply Co. Toronto.
Buttons & Co. Toronto.	Lamps & Lanterns The Hudson's Bay Company Rice Lewis & Son Toronto. The Hiram L. Piper Co. Montreal. N. L. Piper Railway Supply Co. Toronto.	Shafting Rice Lewis & Son Toronto.
Buttons & Co. Toronto.	Launches Polson Iron Works Toronto.	Shipbuilders' Tools & Supplies Rice Lewis & Son Toronto.
Buttons & Co. Toronto.	Life Insurance Travelers' Insurance Co. Montreal.	Ship Lamps The Hiram L. Piper Co. Montreal. The N. L. Piper Railway Supply Co. Toronto.
Buttons & Co. Toronto.	Lights, Contractors and Wrecking James Cooper Montreal. W. H. C. Mussen & Co. Montreal.	Ships Polson Iron Works Toronto.
Buttons & Co. Toronto.	Linoleum and Floor Coverings The Hudson's Bay Company	Shovels James Cooper Montreal. The Hudson's Bay Company Rice Lewis & Son Toronto.
Buttons & Co. Toronto.	Locomotive Brass Work The James Morrison Brass Mfg. Co. Toronto.	Side Bearings Simplex Railway Appliance Co. Montreal.
Buttons & Co. Toronto.	Locomotives (Compressed Air) American Locomotive Co. New York, N.Y. Baldwin Locomotive Works Philadelphia, Pa. Locomotive and Machine Co. of Montreal	Signal House Numbers Acton Burrows Co. Toronto.
Buttons & Co. Toronto.	Locomotives (Electric) American Locomotive Co. New York, N.Y. Baldwin Locomotive Works Philadelphia, Pa. Locomotive and Machine Co. of Montreal	
Buttons & Co. Toronto.	Locomotives (Raek) American Locomotive Co. New York, N.Y. Baldwin Locomotive Works Philadelphia, Pa. Locomotive and Machine Co. of Montreal	

(Continued on preceding page.)

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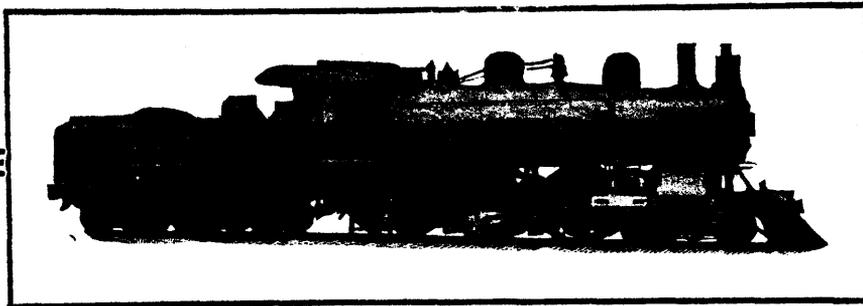
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