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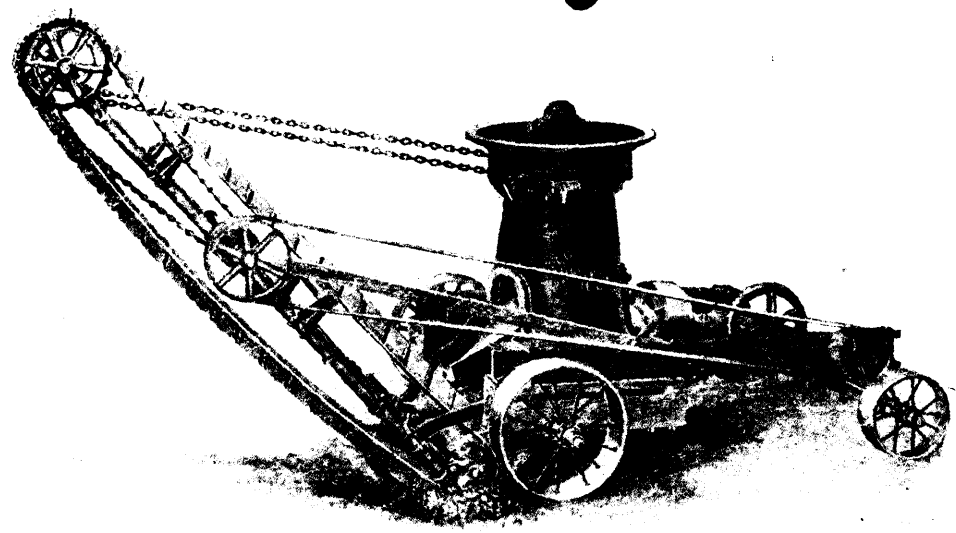
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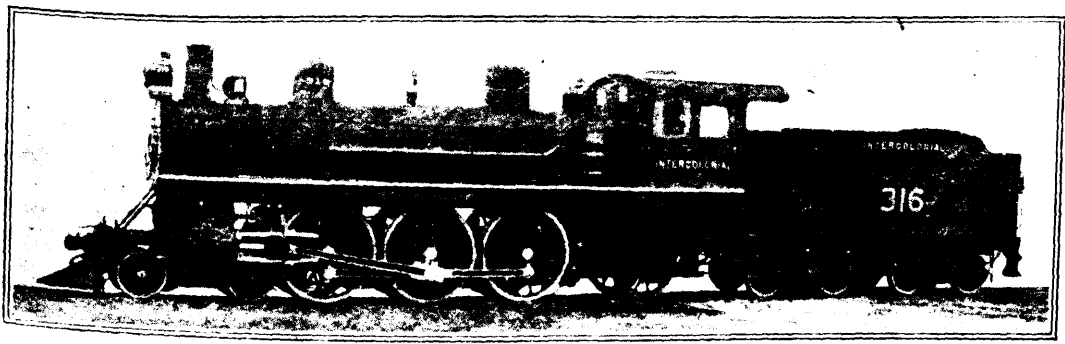
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## RAILWAY DEVELOPMENT.

### Projected Lines, Surveys, Construction, Betterments, Etc.

**Algoma Central and Hudson Bay Ry.**—An act was passed at the last session of the Ontario Legislature, authorizing the Lieut.-Governor-in-Council to adjust a question in connection with the land grant to the company. By an old act certain lands had been exempted from being granted for railway aid, but some portions had been taken by the company and improved. The present act will enable the Government to arrange this difficulty. (June, pg. 241.)

**Bessemer and Barry's Bay Ry.**—The Ontario Government decided not to ask the Legislature to vote any subsidies for railway construction at the recent session. We were informed May 25 that the management had been informed that it would be aided by way of loan, to put the line through. To what extent, or just in what way this help will be given, has not been announced. The mortgage and bonds approved of at the meeting of shareholders May 23, are in process of execution. (June, pg. 241.)

**Brandon, Saskatchewan and Hudson's Bay Ry.**—Application is being made at the current session of the Dominion Parliament for an act extending the time for the construction of this projected railway from the International boundary between ranges 23 and 25 west of the principal meridian to Brandon, Man., thence to Pas Mission. (Sept., 1903, pg. 305.)

**Canada Atlantic Ry.**—The question of the construction of a subway at Bank St., Ottawa, at the joint cost of the C.A.R. and the Ottawa Electric Ry., is before the Railway Commissioners. The application is being made by the Ottawa City Council. The Commissioners have heard the evidence and the arguments, and it is expected that a special engineering report will be obtained before judgment is given.

**Detroit River Tunnel.**—The Michigan Central Rd., and its Canadian subsidiary—the Canada Southern Ry.—are organizing companies, one in Michigan and the other in Canada, for the construction and operation of a tunnel under the Detroit River, between Detroit, Mich., and Sandwich, Ont. The tunnel will have its Detroit outlet between 17th and 18th streets, and the Canadian outlet near L'Assomption Roman Catholic Church, Sandwich, and new tracks will be built on either side of the river to connect it with the present tracks. There will be a full wide curve at each end of the tunnel as it leaves the river extending along the shore to accommodate the new tracks. Including the curves the tunnel will be two miles long. Really there will be two tun-

nels, each having a single track, constructed parallel, but separated by a distance of about 35 ft. The tunnels will run almost straight across the river; topographically it will be 10° south of east. The work will be done from the Sandwich end, and it is expected will occupy about two years to complete. Nothing will be done at the Detroit end until the tunnel is completed. The boring of the tunnels will be done by the hydraulic pressure system, and electricity will be used as much as possible. Each tunnel will contain a single

track, and there will be a sidewalk running through them. The trains will be hauled by electric locomotives, the third rail system being used. The power plant will be located on the Detroit side of the river. The estimated cost is \$10,000,000, and the work is expected to be commenced about Oct. 1. (See Detroit River Bridge, June, pg. 241.)

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that as soon as that line reached Edmonton work would be gone on with on this line to the coast.

**Great Northern Ry. of Canada.**—The Quebec Board of Trade has been endeavoring to ascertain when the company proposes rebuilding its shops in that city. The shops were located in the city as a principal consideration for a bonus of \$200,000; and they were burned down about two years ago. An official stated that the shops would be rebuilt, but it was impossible to give the exact date when the work would be taken in hand. (June, pg. 243.)

**Great Northern Ry. (U.S.).**—The contract for the construction of the line from Oroville, Wash., to Princeton, B.C., has been let to Sims and Shields, of St. Paul, Minn., who have let a number of sub-contracts. The total distance is 86 miles. A line is also contemplated to Oroville, either from Midway or Republic, Wash. From Midway the line would be 45 miles long, with 2½% gradients, while from Republic it would be 65 miles with a maximum gradient of 1%. (See also Vancouver, Victoria and Eastern Ry.)

**Guelph and Goderich Ry.**—P. A. Petersen, Chief Engineer in charge of construction, made a trip of inspection recently, and states that the work will be completed according to contract in Oct. The plans of the location of the line in Goderich, and of certain deviations from the previous locations at Blyth, and some other points in Huron county, have been filed.

**Haliburton, Whitney and Mattawa Ry.**—The Ontario Legislature at its last session passed an act extending the time for the construction of this projected line from Haliburton to Mattawa, Ont.

**Halifax and South-Western Ry.**—We were advised June 14, that about 80% of the grading had been completed between Sable River and Shelburne, N.S. Grading had been commenced at Liverpool, and west of Shelburne, between which place and Barrington there were over 600 men at work. The route between Liverpool and Sable River has been finally agreed upon, and the location survey is being pushed ahead. The route follows the coast, passing through Port Matoun, and then runs inland to the boundary of Queen and Shelburne counties. From Shelburne the coast is practically followed to Port Clyde, thence the line will follow a straight route to Barrington, where a junction will be made with the Halifax and Yarmouth Ry., recently taken over by the H. and S.W.R. On the section between Liverpool and Bridgewater, about one-third of the ballasting had been completed, and was being gone on with. On the Middleton and Victoria Beach section,



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Edmonton, Yukon and Pacific Ry.—When the company's application for an extension of time for the construction of the line was before the Senate Committee of the Dominion Parliament June 9, W. H. Moore, Secretary of the Canadian Northern Ry., stated

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## RAILWAY DEVELOPMENT.

*(Continued from page 281.)*

track had, on June 14, been laid from Middleton to about 8 miles from the terminus which it is proposed to make inside Annapolis Basin. Tracklaying was expected to be completed by the end of June. The telegraph line, fencing, station buildings and water tanks are being built as fast as possible. It is expected to have the line completed this year. (June, pg. 243.)

**Intercolonial Ry.**—The following additional amounts have been voted by the Dominion Parliament for betterments—Improved accommodation and facilities along the line, \$29,600; additional sidings, \$26,100; eliminating two road crossings at rail level near Dorchester, N.B., \$2,000.

A contract has been let for 25,000 tons of Canadian steel rails to be delivered during the current year.

Tenders are under consideration for a freight shed at Windsor, N.S., for the substructure of a double-track bridge at Bedford, N.S., and for substructures for bridges at Mitchell and St. Leonards Jct., Que.

The new tracks at the lower yard at St. John, N.B., have been laid and ballasting is being proceeded with.

The freight shed at pier 9, Halifax, N.S., has been completed and was used for receiving cargoes from steamers at the end of May.

In connection with the new station at Pictou, N.S., which is now nearly completed, a wharf is to be erected to run parallel with the present wharf, and will be about 725 ft. long at the longest point, and 80 ft. wide at the outer end. The materials to be used are creosoted pine piles, hard pine timbers and 4. inch spruce plank floor. There will be four tracks on the wharf, which will be used for discharging full cargoes either to or from vessels. There will be about 10,000 cubic yards of dredging to do before the water alongside the new wharf will be of sufficient depth to accommodate the size of vessels usually berthed at the port. (June, pg. 243.)

**Iroquois, Bancroft and Ottawa Ry.**—An extension of time was granted at the last session of the Ontario Legislature for the construction of the authorized extension from the present terminus at Bird's Creek easterly. Authority was also given to construct an extension from the present terminus at the junction with the G.T.R. near Kilmount, Ont., westerly to Georgian Bay.

**James Bay Ry.**—Nothing has been announced as to the route of the line through Orillia, Ont., but it is not expected that any difficulties will be met with now that the taxpayers have carried the by-law voting \$30,000 as a bonus. Toronto City Council has given notice of opposition to the company's application to the Railway Commissioners for a right of way along the Don River, and extending north of the G.T.R. tracks, and along Esplanade St. The contractors have construction trains running from Parry Sound to south of Falding, some 10 miles south of the Canada Atlantic Ry. (June, pg. 243.)

**The Kingston, Smith's Falls and Ottawa Ry. Co.** was incorporated by the Dominion Parliament in 1887, and the time for the construction of the line authorized was extended in 1889, 1891, 1896, and again at the current session of the Dominion Parliament. By the present extension the line is to be commenced by July 1, 1907, and completed in three years thereafter. C. F. Gilder, one of the promoters, stated recently that it was anticipated the charter would be taken over by the G.T.R., with a view of providing a Toronto-Ottawa route.

**Lake Superior, Long Lake and Albany River Ry.**—Plans of the location survey of the first 12 miles of this projected railway from Peninsula Harbor, on Lake Superior, towards Albany River, have been filed with the Ontario Department of Public Works. (June, pg. 243.)

**Manitoulin and Iron Range Ry.**—W. H. Hearst, J. McKay, J. Miller, J. L. Darling, of Sault Ste. Marie, Ont.; J. Stobie, of Johnston township, Algoma, Ont., were incorporated last session of the Ontario Legislature under this title, for the purpose of constructing a railway from Hutton township, Nipissing district, southerly and westerly to Lake Huron, near the boundary of Humbolt township. The capital is fixed at \$500,000, with power to increase, and bonds to the extent of \$20,000 a mile may be issued. The offices of the company are to be at Sault Ste. Marie, Ont.

**New Brunswick Coal and Ry. Co.**—Hon. G. G. King and G. McAvity, the commissioners appointed by the New Brunswick Government, have made an inspection of the line, and presented a report to the Government. The report points out the necessity of certain expenditure on the line and its equipment, and it is stated that the acceptance of the office of commissioners by the persons named depends upon the action of Government on their report. A press report is to the effect that the Eastern Division of the Grand Trunk Pacific Ry. will pass through Chipman, where a junction will be effected with this line. (Dec., 1904, pg. 429.)

**New Brunswick Southern Ry.**—A Press report states that the surveys for the proposed line to New River Beach have been completed at the beach end, and are now going on at St. Stephen. A satisfactory route with easy gradients has been found, the heaviest grade being near Pocologan. (Mar., pg. 94.)

**New Ontario Ry.**—The Ontario Legislature granted, at its last session, an extension of time for the construction of this projected line from Dryden to Lac Seul, Ont., for seven years from May 1, 1905. (April, pg. 145.)

**Nicola, Kamloops and Similkameen Ry.**—A contract has been let to C. E. Loss, of New York, for the construction of a line from Spence's Bridge, on the C.P.R. transcontinental line, to Nicola Lake, B.C., 45 miles. Jas. Macdonnell, of Montreal, is associated with C. E. Loss, and is in charge of the construction work. A start was made June 15, and we are advised that it is expected to have the line completed about the end of June, 1906. The work to be done is quite heavy, consisting of rock and earth excavation, tunnelling and concrete construction. It is intended to construct the road in a first-class manner in all respects with a grade not exceeding 1% at any point. C. S. Gzowski, jr., Toronto, is engineer in charge for the company, and H. J. Cambie will represent the C.P.R., which will operate the line under a lease. B.C. press reports state that L. M. Rice is acting as contractors' engineer, and that J. G. McLean & Co., of Vancouver, have a contract on the line. (June, pg. 243.)

**Penetanguishene and Orillia Ry.**—J. McArthur, J. Goldthorpe, C. L. Wilson, H. C. Moore, L. W. Mitchell, of Toronto, were incorporated by an act passed last session of the Ontario Legislature under this title, with power to construct a railway from Penetanguishene, through the townships of Tiny, Medonte, North Orillia, South Orillia, and the town of Orillia, to Brechin or Udney, Ont. The capital is \$500,000, and bonds to the extent of \$30,000 a mile may be issued. The offices of the company are to be in Toronto, and the line is to be completed in six years. The company is authorized to enter into agreements with the G.T.R., the C.P.R.,

the James Bay Ry., or any other railway crossing its tracks. (April, pg. 145.)

**Prince Edward Island Ry.**—The House of Commons has granted supplies for the following additional improvements on the line: house for agent at Bloomfield, \$715; house for agent at Misouche, \$560; station at St. Theresa, \$100; extension of railway track along the water front at Charlottetown, \$7,150.

A recent visit of W. B. Mackenzie, Chief Engineer of the Government railways, Moncton, N.B., was reported to be in connection with the starting of surveys for a line from O'Leary to West Cape, 12 miles, and a line from Kensington to Stanley Bridge. (June, pg. 243.)

**Quebec Bridge and Ry. Co.**—The grading is being gone on with on the 6½ miles from the north end of the bridge into the city of Quebec. The terminals will be at the Champlain market, right below the Chateau Frontenac. The gradient on this line from tide-water to the north end of the bridge will be a little in excess of 1%. It is expected that a branch line to connect the bridge with the C.P.R. will be gone on with at an early date. The construction of this line is of importance, as it will enable material to be got in for construction from the north end. The Eastern Division of the G.T. Pacific Ry. will also have a connection with the north end of the bridge. M. P. Davis is the contractor, and he also has the contract for the construction of a line about 2½ miles in length to connect the south end of the bridge with the Intercolonial and the G.T.R. near Chaudiere Curve. At this point connection will also be made with the Eastern Division of the G.T. Pacific Ry. A large shunting yard will be laid out here between the I.C.R. and the G.T.R. An important piece of work in connection with this line is the construction of a bridge over the Chaudiere River, about half a mile south of the St. Lawrence. It is a double track steel bridge, the spans from the north side being: span of 182 ft., steel tower span, 40 ft.; span 200 ft.; steel tower on central pier in river; span 200 ft., steel tower span, 40 ft.; span 100 ft. The bridge will be 140 ft. above the river bed. It is expected to have the bridge completed early in July. As soon as the bridge is completed and the track laid the steel for the permanent structure of the bridge over the St. Lawrence can be brought right up to the work. About 20,000 tons of steel for the permanent work of the bridge has been made at the shops, and about 8,000 tons delivered at the site. There have been erected one flanking span at each end of the bridge, and a considerable quantity of the steel falsework for erecting the permanent bridge, working from the south end.

**Quebec and Lake St. John Ry.**—We were advised June 12, that grading on the La Tuque branch had been completed for six miles and was under way for eight miles more, making 14 miles from La Tuque Junction. The bridges and culverts on the first 10 miles had been completed. Track has been laid for four miles and it was expected to have the first ten miles laid and ballasted by the end of July. The engineers have not yet given up hope of having the track laid to a very short distance from La Tuque falls this season. Work was delayed considerably in the spring, and even early in June the steam shovels had to be stopped in one or two of the cuts on account of frost. The company has issued a booklet descriptive of the country which will be opened up for development by this 40 mile branch. The line passes through large areas of forest land, and touches numerous water powers, the largest of which is La Tuque falls, estimated to furnish 90,000 h.p. As soon as the line is completed it is intended to place a steamer on the St. Maurice River. The route of the



Eastern Division of the G.T. Pacific Ry., it is understood, has been surveyed through the St. Maurice Valley, and this branch will enable supplies to be taken in and so aid in the pushing of construction.

The first three miles of the Gosford branch have been completed except for the ballasting. It is hoped to locate a further 12 miles on this branch during the current season. (June, pg. 243.)

**St. Maurice Valley Ry.**—Application is being made at the current session of the Dominion Parliament for an act authorizing the construction of the line from Three Rivers to Shawenegan Falls, Grand Mere, and St. Jean des Piles, and thence to a junction with the Eastern Division of the Grand Trunk Pacific Ry. Power is also asked to enter into agreements with other companies.

**Strathroy and Western Counties Ry.**—Application was made last session of the Ontario Legislature for an act changing the name of this company to the Hamilton, London and Western Counties Ry., and authorizing the construction of lines to Hamilton. The application was opposed by the promoters of electric lines projected from Hamilton to Guelph, and it was defeated.

**Temiskaming and Northern Ontario Ry.**—The commissioners have purchased additional property at North Bay, Ont., and are negotiating for the purchase of other lands adjoining, for station and yard purposes. It is not likely that anything will be done in the way of coming to a decision as to the operation of the line or a portion of it by electricity until after the coming winter. (June, pg. 243.)

**Toronto, Ottawa and French River Ry.**—E. N. Armour, G. W. Beardmore, G. A. Case, H. V. H. Cawthra, J. I. Davidson, of Toronto; F. M. Field, Cobourg, were incorporated last session of the Ontario Legislature under this title, for the purpose of constructing a railway from Toronto to Ottawa, through the counties of York, Ontario, Durham, Northumberland, Hastings, Frontenac, Lanark and Carleton, and from the mouth of the French River to Hawkesbury. The capital of the company is fixed at \$1,000,000, and bonds to the extent of \$50,000 a mile may be issued. The head offices are to be in Toronto, and the line is to be completed within seven years.

**Trans-Canada Ry.**—The Quebec Legislature at its recent session did not vote any subsidies in aid of railway construction, but it is expected that something will be done in this direction next year. In all probability there will not be any construction done this season.

**Upper Arrow Lake to Tete Jaune Cache.**—Application will be made next session of the British Columbia Legislature for an act incorporating a company to construct a railway from near Arrowhead, on the Upper Arrow Lake, following the Columbia and Canoe Rivers to the Fraser River at Tete Jaune Cache, with power to construct branch lines not exceeding 20 miles in length, and for other purposes. Harvey, McCarter and Pinkham, Revelstoke, B.C., are solicitors for the promoters.

**Vancouver, Victoria and Eastern Ry.**—The application of this company for an extension of time for the construction of the line, and for several amendments to its charter, is being made the subject of a fight before the Railway Committee of the Dominion Parliament. The clause in the bill which is causing the discussion, is for the purpose of authorizing the company at such points on the International boundary line between the west bank of the Similkameen River and the Columbia River as is deemed expedient for the purpose of avoiding difficulties in construction, to make connection with any railway in the State of Washington. The company was originally incorporated by the Brit-

ish Columbia Legislature to construct a line easterly from Vancouver through the Similkameen and Kootenay districts, and to provide a ferry connection with Victoria. A Dominion charter was subsequently obtained and the applications of the company for extensions of time have been the subject of considerable discussion in Parliament. The charter is owned by Great Northern Ry. (U.S.) interests, which also own the Washington and Great Northern Ry. Under the charter of these two local companies there has been constructed 73.4 miles of line, extending from Marcus, Wash., to Grand Forks Jct., B.C., 40.3 miles; and from Grand Forks Jct. to Phoenix, 31.1 miles. There is also a line extending from Republic, Wash., to Grand Forks, B.C., 34.6 miles. These lines are operated by the Spokane Falls and Northern Ry., a subsidiary of the G.N.R. (U.S.) The objection urged against the passing of the act is that it is proposed to use a charter, originally intended for a line in Canada, for the purpose of providing a route in and out of Canada, at desirable points, for the purpose of diverting the mineral traffic to U.S. lines; and a statement made in this connection was to the effect that it was never intended to carry the line to Vancouver, but to make the terminal at Everett, Wash. The promoters of the line deny this, and state that the only object in view is to have power to follow the river valleys at one or two points and so avoid having to construct "toboggan slides" over the mountains. The company's map showing the general plan of the proposed route shows a line entirely in Canada from Midway, B.C., touching Osoyoos, Kere-meos, Hedley, Princeton, Tulameen, Huntingdon, terminating at Cloverdale, with the lines of the Vancouver, Westminster and Northern Ry. Grading has been completed from Curlew to Midway, 15½ miles, and a contract has been let for the construction of a further section of 22 miles between Oroville, Wash., and the International boundary near Midway. (June, pg. 243.)

See also Great Northern Ry., U.S.

**Woodstock and Lake Huron Ry.**—The application at the current session of the Dominion Parliament for the incorporation of a railway from Woodstock to a point on Lake Huron between Kettle Point and Kincardine, Ont., has been withdrawn.

### July Birthdays.

Many happy returns of the day to—

J. H. Black, General Superintendent Temiskaming and Northern Ontario Ry., North Bay, Ont., born near Smith's Falls, Ont., July 8, 1874.

D. E. Blair, Assistant Superintendent Montreal St. Ry., Montreal, born at St. Thomas, Montmagny, Que., July 25, 1877.

D. W. Campbell, ex-General Superintendent of C.P.R. Atlantic Steamships, born at Montreal, July 15, 1860.

D. A. C. Coleman, chief clerk to General Superintendent Central Division C.P.R., Winnipeg, born at Carleton Place, Ont., July 9, 1879.

Geo. Collins, Receiver and Manager Central Ontario Ry., Trenton, Ont., born at Kingston, Ont., July 20, 1860.

D. D'E. Cooper, Canadian Freight Agent, Lehigh Valley Rd., Toronto, born at Buffalo, N.Y., July 8, 1862.

John Corbett, General Foreign Freight Agent C.P.R., Montreal, born in Lanarkshire, Scotland, July 19, 1863.

E. J. Coyle, Assistant General Passenger Agent C.P.R., Vancouver, B.C., born at Stayner, Ont., July 23, 1870.

S. E. Dewey, Travelling Freight Agent, G.T.R., Hamilton, Ont., born at Beckenham, Kent, Eng., July 4, 1879.

J. F. Dolan, City Passenger and Ticket

Agent Richelieu and Ontario Navigation Co., Montreal, born at Kingston, Ont., July 1, 1868.

C. W. Graves, District Freight and Passenger Agent Great Northern Ry. (U.S.), Montreal, born at Waddington, N.Y., July 6, 1864.

W. R. Haldane, District Freight Agent, C.P.R., Detroit, Mich., born at Galashiels, Scotland, July 6, 1867.

J. H. Hanna, ex-Division Freight Agent, G.T.R., at Hamilton, Ont., now at Calgary, Alta., born at London, Ont., July 27, 1867.

R. K. Harris, Chief Engineer, Orford Mountain Ry., Kingsbury, Que., born at Maitland, Ont., July 20, 1866.

A. D. Huff, Commercial Agent, G.T.R., Pittsburg, Pa., born at Chatham, Ont., July 17, 1866

D. T. Lawrence, Manager National Dispatch-Great Eastern Line, Buffalo, N.Y., born at Marysville, Ohio, July 20, 1871.

J. M. Lyons, General Passenger and Ticket Agent, I. C. R., Moncton, N.B., born at Halifax, N.S., July 1, 1850.

T. J. Maguire, Accountant, Quebec Central Ry., Sherbrooke, Que., born at Quebec, July 31, 1860.

C. N. Monsarrat, Engineer of Bridges, C. P. R., Montreal, born there, July 2, 1871.

J. B. Morford, Assistant to General Manager Michigan Central Rd., St. Thomas, Ont., born at Warwick, Orange Co., N.Y., July 16, 1836.

J. E. Quick, General Baggage Agent, G.T.R., Toronto, Ont., born at Richmond, Ontario Co., N.Y., July 10, 1851.

W. C. Ross, Mechanical Foreman, I.C.R., Richmond, N.S., born at Quebec, July 26, 1863.

G. G. Ruel, Assistant Solicitor Canadian Northern Ry., Toronto, born at St. John, N.B., July 5, 1866.

E. G. Russell, ex-Manager Intercolonial Ry. born at St. George, N.B., July 23, 1858.

P. E. Ryan, Secretary Transcontinental Railway Commission, Ottawa, born there, July 26, 1876.

F. W. Snider, Superintendent Atlantic division C.P.R. telegraphs, St. John, N.B., born in Halton Co., Ont., July 14, 1854.

T. Tait, Chairman Board of Railway Commissioners for Victoria, Melbourne, Australia, born at Melbourne, Que., July 24, 1864.

**American Railway and Engineering and Maintenance of Way Association.**—The Board of Direction for the current year includes W. McNab, engineering department G.T.R., Montreal; and the following representatives associated with railways in Canada are members of committees: J. G. Sullivan, Division Engineer of Construction C.P.R., Winnipeg; L. H. Wheaton, Division Engineer Halifax and South-Western Ry., Shelburne, N.S.; Committee on Roadway; M. P. Cotton, Assistant Engineer C.P.R., Winnipeg, Man., Committee on Ballasting; T. H. Hickey, Roadmaster Michigan Central Rd., St. Thomas, Ont.; D. MacPherson, Division Engineer C.P.R., Montreal, Committee on Track; F. P. Gutelius, Engineer of Maintenance of Way C.P.R., Montreal, Committee on Signs, Fences, Crossings and Cattleguards; W. S. Kinnear, Assistant General Manager Michigan Central Rd., Detroit (Vice-Chairman); H. A. Woods, Assistant Chief Engineer G.T. Pacific Ry., Montreal, Committee on Records, Reports and Accounts; A. McGill, assistant analyst Inland Revenue, Ottawa (Vice-Chairman), Committee on Water Service; W. McNab, Assistant Engineer G.T.R., Montreal (Chairman); W. F. Tye, Chief Engineer C.P.R., Committee on Economies of Railway Location.

The Alberta Ry. and Irrigation Co. has ordered a 175 horse-power Robb-Mumford boiler from the Robb Engineering Co., Amherst, N.S. This makes eight boilers of this type that the A. R. and I. Co. has purchased during the past few years.

# The NORTON BALL-BEARING JACK

A CANADIAN INVENTION  
MADE IN CANADA FOR CANADIANS

## THE BALL-BEARINGS

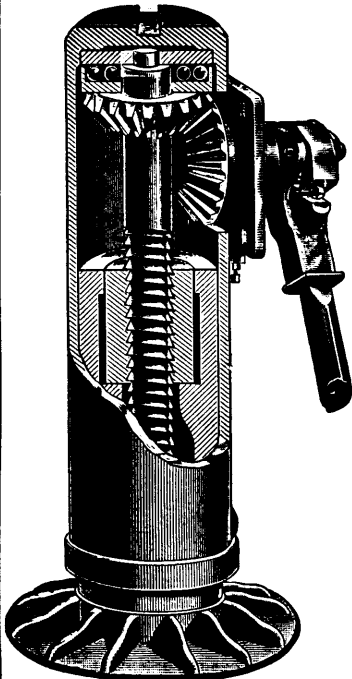
reduce the friction and increase the power of the Jack.

## THE GEARS

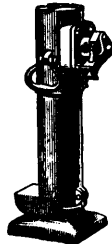
are cut from solid steel forgings, thereby giving highest efficiency and greatest durability.

## THE SCREW

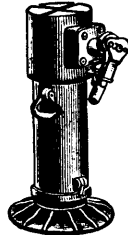
runs in a Phosphor Bronze Nut and is covered by a sliding sleeve which takes all the side strain, prevents the Screw from bending, and protects the working parts from Grit and Rust.



Sectional View of Norton Jack.



Foot-Lift Jack.



35 Ton Jack.



Journal Jack.

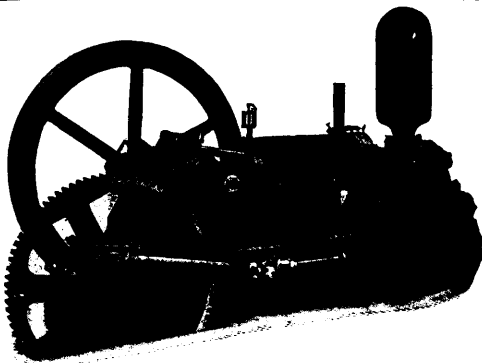
Made in 50 styles—8 to 70 tons capacity.

Manufactured by

**A. O. NORTON,**  
COATICOOK, PROV. QUEBEC.

Stock carried by

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Fairbanks-Morse & Co's Gasoline Combined Pumper

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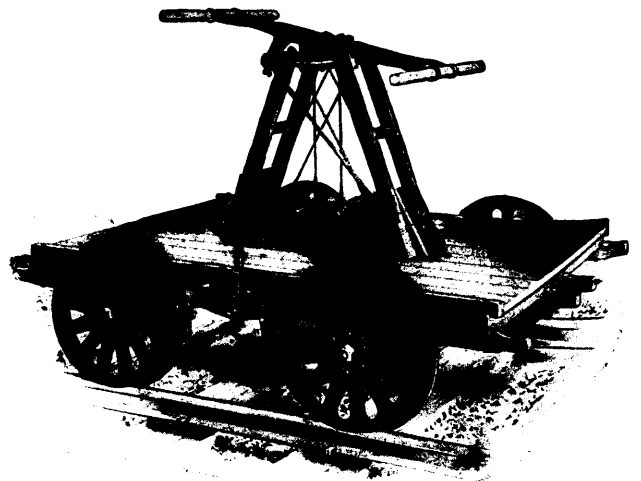
### FAIRBANKS-MORSE & CO'S

Gas and Gasoline Engines  
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**THE CANADIAN FAIRBANKS CO.**  
Limited

Montreal Toronto Vancouver Winnipeg



No. 1 Sheffield Hand Car



**Recent Dominion Legislation.**

The Dominion Parliament at its current session has passed the following acts affecting transportation interests:

- Respecting the Albert Central Ry.
- Respecting the Alberta Ry. and Irrigation Co.
- Incorporating the Algoma Copper Range Ry.
- Incorporating the Anthracite Coal Ry. Co.
- Incorporating the Athabaska Northern Ry. Co.
- Incorporating the Athabaska Ry. Co.
- Respecting the Atlantic, Quebec and Western Ry.
- Respecting the Battleford and Lake Lenore Ry.
- Respecting the Bay of Quinte Ry.
- Incorporating the Brantford and Woodstock Ry.
- Respecting the Brockville, Westport and North-Western Ry.
- Incorporating the Calgary and Battleford Ry. Co.
- Respecting the Calgary and Edmonton Ry.
- Incorporating the Calgary, Red Deer and Battleford Ry. Co.
- Respecting the Canada and Michigan Bridge and Tunnel Co.
- Respecting the Canada Atlantic Ry.
- Respecting the Canada Southern Bridge Co.
- Respecting the Canada Southern Ry. Co.
- Respecting the Canadian Pacific Ry.
- Respecting a patent of Celeste Joly (monorail railway system).
- Respecting the Central Counties Ry. Co.
- Respecting the Columbia and Western Ry.
- Respecting the Esquimalt and Nanaimo Ry.
- Respecting certain patents of the Facer Solid Wheel Co.
- Incorporating the Georgian Bay and Seaboard Ry. Co.
- Respecting contracts for Government Works.
- Respecting the Grand Trunk Ry. of Canada.
- Respecting the Guelph and Georgian Bay Ry.
- Respecting the Hamilton, Galt and Berlin Ry., and changing its name to the Hamilton, Galt and Guelph Ry.
- Respecting the Hudson's Bay and Pacific Ry. Co.
- Respecting the Kingston and Dominion Ry., and changing its name to the Dominion Central Ry. Co.
- Respecting the Kingston, Smith's Falls and Ottawa Ry.
- Respecting the Kootenay, Cariboo and Pacific Ry.
- Respecting the Lake Champlain and St. Lawrence Ship Canal.
- Incorporating the Lebonk and Thunder Bay Ry.
- Incorporating the London and St. Clair Ry. Co.
- Respecting the Macleod, Cardston and Montana Ry.
- Respecting the Medicine Hat and Northern Alberta Ry.
- Respecting the Monterey Electric, Gas Co., and to change its name to the Monterey Electric Light and Power Co.
- Respecting the Montreal and Southern Ry.
- Respecting the Montreal Bridge Co., and changing its name to the Montreal Bridge and Terminal Co.
- Incorporating the Montreal, Quebec and Southern Ry. Co.
- Incorporating the Moose Jaw and Edmonton Ry. Co.
- Respecting the Niagara, St. Catharines and Toronto Ry.
- Respecting the Niagara-Welland Power Co.
- Respecting the Nicola, Kamloops and Similkameen Coal and Ry. Co.
- Respecting the Ottawa River Ry., and

changing its name to the Central Ry. Co. of Canada.

- Respecting the Ottawa, Northern and Western Ry.
- Incorporating the Owen Sound and Meaford Ry. Co.
- Amending the Public Works Act.
- Amending the Quebec Harbor Commissioners' Act, 1899.
- Amending the Railway Act, 1903.
- Amending the act relating to the Railways and Canals Department.
- Respecting the Red Deer Valley Ry. and Coal Co.
- Respecting the Regina and Hudson's Bay Ry.
- Incorporating the Saskatchewan Bridge Co.
- Incorporating the St. Mary's and Western Ry.
- Respecting the Temagami Ry. Co., and to change its name to the Ontario Northern Temagami Ry. Co.
- Respecting the Toronto and Hamilton Ry. Co.
- Respecting the Toronto and Hamilton Ry.
- Respecting the Toronto, Hamilton and Buffalo Ry.
- Respecting the Vancouver, Westminster and Yukon Ry.
- Respecting the Walkerton and Lucknow Ry. Co.
- Respecting the Western Alberta Ry.

**G.T.R. Souvenir.**—In connection with the special trip of delegates attending the recent International Railway Congress at Washington, D.C., over the G.T.R. from Chicago, Ill., to Niagara Falls, Ont., and Montreal, the company's passenger department issued a handsome souvenir in the shape of an illustrated book entitled "Notes by the Way." The delegates travelled by special train, covering 985 miles of the G.T.R., and the book gives in order a description of the main points touched, in the form of an annotated time table. The text is illustrated with a number of tinted engravings, showing a standard G.T.R. train, Sarnia Tunnel, Niagara Falls, and other important points on the line. The introduction gives a number of interesting facts relating to the G.T.R., the recently acquired Canada Atlantic Ry., and the projected G.T. Pacific Ry. At the end is a list of the company's officers, and a map showing the company's lines in red and purple, the latter being the portions of the line travelled over by the special train. The book is a very fine piece of typographical art, and one of the most artistic pieces of advertising material issued by the G.T.R.

The Newfoundland Government has taken power to fund the temporary debentures issued to provide for the payment of the cash portion of the sum awarded to the Reid-Newfoundland Co., in 1903, by the arbitrators, \$562,203; and the purchase money of the right of way Newfoundland Northern and Western Ry., \$61,000.

The Canadian Prairie Lands Co. has been incorporated under the Dominion Companies' Act, with a capital of \$5,000,000, and the Canadian Northern Prairie Lands Co. has been incorporated under the Ontario Companies' Act with a capital of \$2,000,000. The object in the first case is to deal in lands and aid settlers and to advance money for railway construction; and in the second case to carry on the business of a land company with the usual limitations, incidental and subsidiary powers. The provisional directors are: J. S. Lovell, R. Gowans, W. F. Ralph, R. P. Ormsby, F. C. Annesley, A. J. Mitchell, with the addition of G. H. Cassels in the first-named company. All the provisional directors are connected with the legal firm of Blake, Lash & Cassels, or with Mackenzie, Mann & Co. The offices of both companies are in Toronto.

**Victoria Rolling Stock Co.**

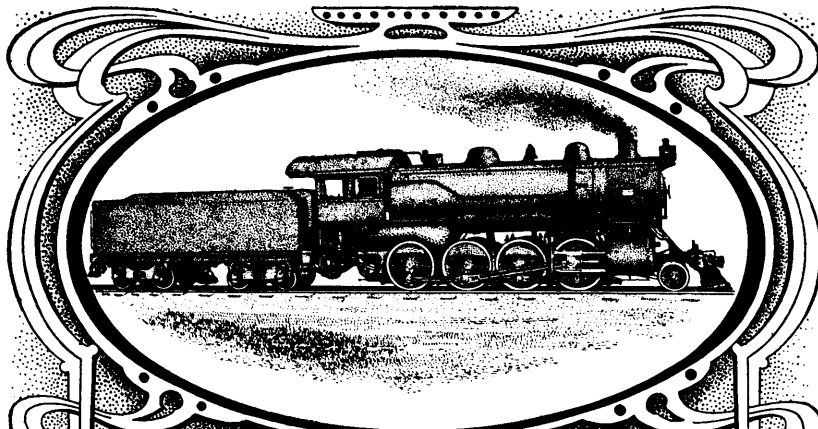
Following are extracts from the report of the Victoria Rolling Stock Co., of Ontario, Ltd., for the year ended Feb. 15, 1905, presented at the recent annual meeting:—"During the year the company sold £155,600 and \$721,000 of series S 4% debentures, making with \$223,000 sold in 1903, total sales of £155,600 and \$944,000, leaving unsold £41,600, and \$496,000. The discount and commission on the debentures sold during the year was \$76,624.78. Of this the directors wrote off \$20,624.78, leaving \$56,000 carried forward to be dealt with in future years. The total amount of discount and commission on series S 4% debentures might properly have been distributed over the term of this lease (15 years); but the directors thought it better to deal with it in this manner; \$16,100.04 having been written off in the 1903 accounts. Rolling stock to the value of \$737,126.00 has yet to be delivered under this lease; deliveries are being made rapidly and the lease will shortly be completed. During the year outstanding debentures against leases shown in last year's report as \$1,447,000 have been reduced by \$318,000. Debentures issued against series S lease have been reduced by \$160,000. All payments on leases which have matured during the year have been promptly met. The profit on the year's business, after charging up directors' fees, expense account, and discount and commission on debentures sold, is \$20,052.56; out of which a dividend of 12% per annum on the paid-up capital stock, amounting to \$14,400, has been paid, leaving \$5,652.56 carried forward to profit and loss account, which now stands at \$104,257.28. The directors regret to have to record the death during the year of A. B. Lee, who had been a director for many years. D. Coulson has been elected a director to succeed Mr. Lee.

ASSETS.	
Obligations on leases.....	\$1,099,082 83
Paid on account of series S lease.....	1,665,859 50
Debentures and accrued interest.....	107,872 49
Discount and commission on series S debentures sold.....	56,000 00
	\$2,928,814 82
LIABILITIES	
Capital stock subscribed.....	\$600,000 00
Capital stock paid up.....	120,000 00
Debentures outstanding.....	1,129,000 00
Interest accrued on same.....	16,505 84
Coupons due and not presented.....	160 00
Debentures sold and outstanding against series S lease.....	1,541,253 27
Advances against debentures.....	17,638 43
Balance at credit of profit and loss.....	104,257 28
	\$2,928,814 82
PROFIT AND LOSS ACCOUNT.	
Interest paid and accrued on debentures and advances.....	\$235,906 06
Discount and commission on debentures sold series S.....	20,624 78
Expense account.....	3,173 44
Directors' fees last year.....	1,400 00
Dividend account.....	14,400 00
Balance carried forward.....	104,257 28
	\$379,761 56
Balance at credit of profit and loss, Feb. 15, 1904.....	\$ 98,604 72
Rents received and accrued on leases and interest on debentures held.....	281,156 84
	\$379,761 56
Original cost of rolling stock held under existing leases.....	\$3,660,682 53
Amount paid in an account by railway companies in addition to interest.....	2,534,071 76
	\$1,126,610 77
Total amount of the company's debentures outstanding.....	\$1,129,000 00

The officers and directors for the current year are:—President, W. Hendrie; Vice-President, E. B. Osler; Managing Director, H. C. Hammond; other directors: T. G. Brough, D. Coulson, W. D. Matthews, H. Pellatt, D. R. Wilkie; Secretary, R. A. Smith.

The Canadian Freight Association's annual meeting will be held at Hotel Champlain, Bluff Point, N. Y., on July 12 and 13.





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WE USE THE WASTE STEAM AND WATER  
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89 PRINCESS STREET, - WINNIPEG, MAN.  
403 CORDOVA STREET, - VANCOUVER, B.C.

**C.P.R. LANDS**

**THE CANADIAN PACIFIC RAILWAY COMPANY** have 12,000,000 acres of choice farming lands for sale in Manitoba, Assiniboia, Saskatchewan and Alberta. Manitoba lands and Assiniboia lands east of third meridian, \$4.00 to \$10.00 per acre according to quality and location. Lands in South-Western Assiniboia and Southern Alberta, \$3.50 to \$8.00 per acre. Ranching lands generally \$3.50 to \$4.00 per acre. Northern Alberta and Saskatchewan lands generally \$6.00 to \$8.00 per acre. Maps showing the lands in detail will be sent free on application.

**TERMS OF PAYMENT.**

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

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

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

**DISCOUNT FOR CASH.**

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

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

F. T. GRIFFIN,  
Land Commissioner C.P.R. Co., Winnipeg.

**CANADA NORTH-WEST LAND CO.**

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

**Quebec Central Railway Meeting.**

The following report for the year ended Dec. 31, 1904, was presented at the annual meeting in London, Eng., recently:—

	1903.	1904.
Gross earnings	\$682,757	\$778,969
Working expenses	492,698	540,373
Net earnings	\$190,059	\$238,596
Interest on balances	157	336
Net revenue	\$190,216	\$238,932

The statement shows increases in the gross earnings of \$96,212, in the working expenses of \$47,675, and in the net earnings of \$48,537. The net revenue for the year amounted to \$238,932. The addition of \$10,989 brought forward from the year 1903 increased the available total to \$249,921. After providing \$88,892 for the year's interest paid and accrued on the outstanding prior lien bonds and 4% debenture stock issued, the sum of \$8,204 was charged against net revenue for alterations, additions, and improvements to bridges, culverts, and stations, etc. There then remained \$152,825, from which was paid interest on the 3% second debenture stock amounting to \$49,348, and a dividend at the rate of 4% for the year on the 7% income bonds, absorbing \$65,797, leaving a balance of \$37,680. The total train miles run have increased by over 10%.

In order to provide for this additional traffic 60 new box cars have been ordered and are now in course of delivery. The directors have appropriated \$27,000 out of the surplus towards special betterments and improvements, and have carried forward the balance of \$10,680. Up to Dec. 31, 1904, £268,684 of the new 4% debenture stock had been issued. Of this amount £198,200 had been used in retiring a like amount of prior lien bonds and £70,484 had been sold to provide funds for a portion of the requisite additional capital expenditure authorised by the act of 1899. There remained £151,800 prior lien bonds unexchanged on Dec. 31, 1904. The directors had to regret the death of Jos. Price, and desired to place on record their appreciation of his ability and the invaluable assistance which he was able to render in the conduct of the company's affairs. Thos. Lindley, who had for more than 16 years occupied the position of secretary, had been elected a director to fill the vacancy, and C. D. Brassey had been appointed secretary.

E. Dent, chairman, in moving the adoption of the report referred to the death of Joseph Price, one of the directors, and reviewed the history of the line during the eighteen years that had elapsed since the present board assumed the direction of affairs. Owing to the failure of the contractors and London agents of the company, a considerable amount of the money originally subscribed was never expended on the railway, and the present board had to take over an unfinished line, inadequately equipped, and with a floating debt of over £80,000. Special acts of parliament had, from time to time, been obtained, giving the company fresh borrowing powers and granting subsidies, and to show how judiciously these powers had been exercised, he had only to tell them that in the year 1888 the gross earnings were only \$229,800, and the net earnings \$49,200, whereas in 1904 the gross earnings were \$778,900, and the net earnings \$238,500, in spite of the fact that the mileage during this period had only increased from 153 to 211 miles. Then, as to their equipment. In 1888 they had nine locomotives, whereas now they had 22, and their cars had increased from 238 to over 600. In addition to this, the line had been almost reconstructed, and was now mostly laid with 70-lb. rails. Some of the proprietors might take exception to the conservative charges they had made against revenue in order to bring the road up to date; but he was sure their policy had been a wise one, and that they would in the future reap the benefit of the course pursued. At the time the bond-

holders' committee was formed the old bonds stood at 19, whereas the securities representing those bonds, at the present time, stood at 82. Having referred to the services of F. Grundy, who had been General Manager since 1889, and to the staff in Canada, to whose work the altered condition of affairs was largely due, the chairman proceeded to refer to the annual report. The gross earnings for 1904 showed an increase of \$96,212 over the preceding year, and the net earnings an increase of \$48,537. The total available net revenue, including the amount brought forward, was \$249,921. After paying the fixed charges and 3% on the second debenture stock, a dividend of 4% on the income bonds was declared and had been paid. A balance then remained of \$37,680, and of this sum they had appropriated \$27,000 towards what he might call special betterments and improvements, which were commenced last year, and they were carrying forward the balance of \$10,680 to the current year, practically the same amount as last year. Some might think the appropriation excessive, but they had found it necessary to replace a wooden bridge at Beauce Junction (which was always a cause of anxiety owing to the risk of damage by fire) by a new steel bridge, and this would absorb nearly the whole amount set aside. The year 1904 had been a prosperous one for the company, and although they had had accidents, as all railways must have, they had not been of a serious nature. The increase in freight traffic was very satisfactory, but parts of this was owing to an accumulation of lumber which was held back in 1903, owing to prolonged drought, which prevented the logs being floated down to their stations. The passenger traffic, although showing an increase, might have been better, as there was a decrease in foreign and through passengers, which was attributable to the St. Louis Exhibition, which diverted travellers from Canada. The local passenger receipts, however, showed an increase generally, the line had been kept in good order, 70,000 new ties had been put in the road-bed, 9,000 ft. of new sidings had been constructed, 12,000 ft. of new wire fencing erected, and 20 miles of the main line had been relaid with new 70-lb. steel rails. Owing to the increase of traffic two new locomotives had been purchased, and 50 new box cars ordered. The year 1904 had been the most prosperous one in the history of the company. With regard to the current year, the earnings up to the fourth week of April were \$218,135, as compared with \$217,178 for the corresponding period of last year. The net earnings up to the end of March showed an increase of \$7,071.

F. Grundy, Vice-President and General Manager, Sherbrooke, Que., seconded the motion, and said business was promising better even than in 1904. The company's property was a very good one. With regard to the proposed extension of the line from Scotts to the Quebec Bridge, until they had a more complete report from the engineer, who was now surveying it, he could not say what the cost would be, but it would not vary very much from the estimate already made. As to the Quebec Bridge, the Government of Canada having guaranteed the interest on the balance of the capital required to complete this important undertaking, it was now assured; they said it would be finished in two years—he thought it would be the third year from now. However, when it was completed it would be a good thing for the Quebec Central Ry. It would then have direct communication from New York, Boston, Portland and the important districts of the Eastern Townships, as well as the prosperous counties of Beauce, Dorchester and Levis right into Quebec City. At present all the passengers and freight had to be transferred across the river between Levis and Quebec by ferry boats at considerable inconvenience and loss of valuable time. When the bridge was opened the Q.C. trains would run through and this would, he felt confident, increase their

traffic considerably. He did not think that any company would benefit more than the Quebec Central by the bridge.

The report was adopted and the directors re-elected as follows:—E. Dent, A. Bremner, T. Lindley, F. H. Norman, S. G. Sheppard, London, Eng.; F. Grundy, Sherbrooke, Que., and Z. A. Carrier, Levis, Que.

**Railway Employees' Claims for Accidents.**

The Dominion Parliament in 1904 passed an Act to amend the Railway Act, 1903, being Chapter 31 of the Statutes of 1904, the bill having been introduced by H. Lennox, M.P., its aim being to cut down the privileges enjoyed by railway companies in connection with the insurance of their employes, by virtue of Dominion legislation. For instance the G.T.R. Co. was empowered by legislation passed in 1874 and 1878, to insure its employes and to make regulations governing the rights of the insured and their representatives. The G.T.R. Insurance and Provident Society is largely supported by contributions from the G.T.R. Co., and it is provided in the by-laws that in consideration of the company's subscription, no member of the Society or his representatives shall have any claim against the company for compensation on account of injury or death from accident. The validity of this provision having been upheld by the Courts, Mr. Lennox introduced the bill referred to, the 1st section of which was passed as follows:—

"Notwithstanding anything in any act heretofore passed by Parliament, no railway company within the jurisdiction or legislative power or control of Parliament shall be relieved from liability for damages for personal injury to any workman, employe or servant of such company, nor shall any action or suit by such workman, employe or servant, or in the event of his death, by his personal representatives, against the company, be barred or defeated by reason of any notice, condition or declaration made or issued by the company, or made or issued by any insurance or provident society or association of railway employes formed, or purporting to be formed, under such act; or by reason of any rules or by-laws of the company, or rules or by-laws of the society or association; or by reason of the privity of interest or relation established between the company and the society or association, or the contribution or payment of moneys of the company to the funds of the society or association; or by reason of any benefit, compensation or indemnity which the workman, employe, or servant, or his personal representatives, may become entitled to or obtain from such society or association or by membership therein; or by reason of any express or implied acknowledgment, acquittance or release obtained by the company or the society or association prior to the happening of the wrong or injury complained of, or the damage accruing, to the purport or effect of relieving or releasing the company from liability for damages for personal injuries as aforesaid."

The second section provided that the question of the competency of Parliament to enact the preceding section should be submitted to the Supreme Court and in the event of the Supreme Court deciding that the provisions of the section were within the powers of Parliament, and the time for appeal having elapsed, or in case of appeal, then in the event of the Judicial Committee of the Privy Council deciding that the provisions were within the powers of Parliament, the act should be brought into force by proclamation of the Governor-General-in-Council.

In accordance with this provision the question of the competency of Parliament to pass Sec. 1 of the act was referred to the Supreme Court. On behalf of the G.T.R. it was contended that Sec. 1 was ultra vires. It was urged that the section not merely prevented the company from entering into contracts with any employe, but it would interfere with any employe entering into any contract sought to be prohibited by the Statutes. It was also contended that the legislation was void, as it was legislation in regard to property and civil rights, and that such legislation could only be enacted by the legislative assemblies of the various provinces. It was further urged that the section would operate to destroy the effect of any

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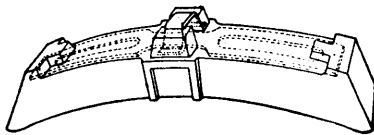
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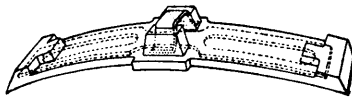
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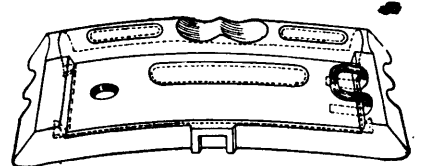
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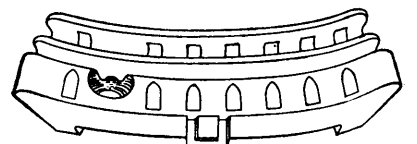
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notice issued by the company, that it would prove injurious to the proper maintenance and operation of the railway, that it would tend to negligence on the part of employes and other results of injurious character to the public service and the safety of the travelling public would result.

On behalf of the Attorney-General of Canada, it was contended that the section related exclusively to lines of railway connecting a province with another province, or extending beyond the limits of a province, or to such railways as, although wholly situate within one province, are declared by Parliament to be for the general advantage of Canada, or for the advantage of two or more of the provinces, and that it was therefore excluded from provincial powers.

On behalf of railway employes affected and the promoter of the Act, it was argued, among other things that all the rights and privileges sought to be modified by Sec. 1, were obtained by the companies from Parliament and that Parliament had the power to withdraw or restrict these privileges.

The case was argued before the Supreme Court at Ottawa, May 2. Judgment, which was reserved, has been delivered, upholding the competency of Parliament to pass Sec. 1, and declaring it to be ultra vires. The Chief Justice and Justices Girouard and Davies, agreed as to the validity of the section, Justice Nesbitt dissenting and holding it to be ultra vires. It is said that the matter will be appealed to the Judicial Committee of the Privy Council.

**Qu' Appelle, Long Lake and Saskatchewan Railways.**

The report for the year ended Nov. 30, 1904, showed gross earnings, after deducting earnings from Government service, amounting to \$470,838.19, against \$436,350.67 for the previous year, an increase of \$34,487.52 or 7.90%. The total expenses for the year amounted to \$487,107.93 against \$435,155.70 for the previous year, an increase of \$51,952.23 or 11.94%. The percentage of expenses to earnings for the past year was 103.46% as compared with 99.73% for the previous year. The net loss for the year amounted to \$16,269.74, against a profit of \$1,194.97 for the previous year, a decrease of \$17,464.71. Earnings from passenger traffic including Government service, amounted to \$147,447.73, as against \$132,137.68 for the previous year, an increase of \$15,310.05, or 11.58%. Freight, express, mail and miscellaneous earnings, including Government service, amounted to \$327,781.08, as compared with \$310,485.31 for the previous year, an increase of \$17,295.77, or 5.57%. The increase in gross earnings amounting to \$34,487.52, notwithstanding the fact that the road was almost closed for traffic for nearly two months on account of the carrying away of the bridge at Saskatoon in April, 1904, is satisfactory, and indicates the large increase of the volume of traffic of the company's railway. The increase in expenses of \$51,952.23 is partially due to increased traffic, but largely caused by the manner in which traffic had to be handled for some time after the spring freshets, increased expenditure for train supplies being \$24,763.77, loss and damage to freight, \$14,648.84, and superintendence \$3,006.28. With the exception of a few hundred dollars, practically the whole amount shown under train supplies represents money paid out for feeding and caring for passengers on the company's line at the time the Saskatoon bridge was carried away. A permanent structure is now being erected to replace the bridge carried away, but there is little doubt that traffic will be again interrupted for a short time when the ice goes out in the spring. The directors are of the opinion that the company may look forward to a very sat-

isfactory traffic during the present year which should result in considerable net surplus.

ASSETS.	
Cost of road.....	\$4,010,140 00
Bonds held by company re McDowell's mill siding.....	11,253 02
Sundry debtors.....	9,386 97
Interest deferred.....	1,274,157 23
Cash in bank.....	31,403 82
	\$5,336,341 04
LIABILITIES.	
Capital stock paid up.....	\$ 201,000 00
First mortgage bonds, £782,700.....	3,809,140 00
Coupons due and not paid.....	2,237 34
Interest unpaid.....	1,274,157 23
Sundry creditors.....	6,363 16
Profit and loss account.....	43,443 31
	\$5,336,341 04
EARNINGS.	
Balance brought forward.....	\$ 58,653 42
Passenger.....	\$147,447 73
Freight.....	317,477 32
Express.....	6,968 25
Mail.....	2,680 51
Miscellaneous.....	655 00
	\$475,228 81
Less amount of Government service included in the above.....	4,390 62
	\$470,838 19
Balance carried down.....	\$529,491 61
Government subsidy for year £16,438.7/2.....	80,000 00
Interest on bonds held by company.....	475 70
Interest allowed on deposit.....	975 85
	\$123,835 23
OPERATING EXPENSES.	
General expenses.....	\$ 1,676 11
Conducting transportation.....	\$42,383 68
Management expenses.....	3,289 95
Maintenance of way and structures.....	229,212 51
Maintenance of equipment.....	43,119 02
	\$487,107 93
Balance carried down.....	42,383 68
	\$529,491 61
INTEREST ACCOUNT.	
£1.1/0 paid in cash on account Feb. 1, 1904, coupon £8,218.7/0.....	
£1.1/0 paid in cash on account Aug. 1, 1904, coupon £8,218.7/0.....	
	£16,436.14/0
	\$79,991 92
Expenses of coupon re service and other expenses (London).....	400 00
Balance carried forward.....	43,443 31
	\$123,835 23

Following are the officers for the current year:—President, H. C. Hammond, Toronto; Vice-President, Hon. W. Pugsley, St. John, N.B.; other directors, G. T. Chisholm, C. T. MacInnes, F. G. Osler, E. B. Osler, M.P., S. B. Sykes, R. A. Smith (secretary), Toronto.

The Y.W.C.A. Railway Department will hold its 12th international conference at Detroit, Mich., Sept. 28—Oct. 1.

The Shippers Cartage Co., has been incorporated under the Dominion Companies' Act, to carry on a general cartage, transfer and transport business in Canada, and in connection therewith to make contracts with railway and steamship companies; to hold stock in other similar companies, and to carry on various allied businesses. The capital is \$1,500,000 and the chief officers are at Montreal. The incorporators and provisional directors are merely formal, those actually interested in the formation not being named. The active promoter is R. P. Inglis, of Montreal, and it is stated that the intention is to take over the cartage businesses of the Shedden Co., Montreal, and the Wm. Hendrie Co., Hamilton, and to do the cartage for the G.T.R. in the larger cities in Canada. Another report stated that the company had obtained a contract with the C.P.R. to do its cartage, but we are advised that this is not the case. The C.P.R. cartage contract with the Dominion Transport Co., which covered a period of ten years, expired recently, by effluxion of time, but the company is continuing to do the work. Shippers Cartage Co. has not been organized, but when it is, it will probably endeavor to secure a contract with the C.P.R.

**Orders by the Railway Commissioners.**

The following orders have been issued by the Board of Railway Commissioners:—

Authorizing the Canadian Northern Ry. to change the location of its lines and tracks crossing Water St., Winnipeg, Man., and to construct an overhead bridge there, near the west end of the company's bridge over the Red River. (May 16).

Sanctioning alterations in the location of the Guelph and Goderich Ry. between mileage 60 and mileage 80. (May 25).

Authorizing the Canadian Northern Ry. to take certain lands in lots 18 to 32, St. Boniface, Winnipeg, Man., according to a plan filed. (May 29).

Authorizing the opening for traffic of the following extensions of the Canadian Northern Ry.:—Rosburn extension, from near Neepawa, Man., for 20.7 miles; Oak Point branch, from the C.P.R. to the shore of Lake Manitoba, 54 miles; Rosendale or Arizona branch, from Portage la Prairie, Man., for 51.55 miles; Prince Albert branch, from Erwood to Melfort, Sask., from mileage 278.6 to mileage 385.6, or 107 miles; main line (Grand View extension) from mileage 278.7 to mileage 425.1, or 146.4 miles; and from mileage 425.1 to mileage 507.2, or 82.1 miles, the latter at a speed not more than 15 miles per hour. (May 30).

Approving of the location of the Nepigon Ry. from mileage 5 near Helen Lake, Ont., to mileage 31. (May 31).

Sanctioning a deviation from the previously located line of the Pheasant Hills branch of the C.P.R., between mileage 189.8 and mileage 212.5. (May 31).

Approving a deviation from the previously located line of the Vancouver, Victoria and Eastern Ry. near Midway, B.C. (May 31).

Sanctioning plans for the erection of a number of bridges for the Canada Atlantic Ry. (May 31).

Authorizing the opening for traffic of the Greenway branch of the Canadian Northern Ry. from Greenway to mileage 52.1. (May 31).

Approving of the crossings of Rink St., and Wolfe St., Peterboro', Ont., by the C.P.R. tracks. (May 31).

Sanctioning deviations from the previously located line of the Canadian Northern Ry. at several points between mileage 531 and mileage 739, main line. (June 2).

Approving a deviation from the present constructed line of the C.P.R. fronting the Humber River, at Lambton, Ont. (June 5).

Authorizing the carrying of the wires of the Okanagan Telephone Co. across the line of the Shuswap and Okanagan Ry. at Vernon, B.C. (June 5).

Approving a deviation from the previously located line of the James Bay Ry. in the townships of Brock and Thorah, Ont., between mileage 57.44 and mileage 63.39.

Approving of detail plan of the substructure of the bridge across the Seguin River at Parry Sound, Ont., for the James Bay Ry. (June 6).

Approving plans for the reconstruction of the substructures of the bridges across the Rideau and Nation Rivers, for the Canada Atlantic Ry. (June 6).

Authorizing the construction of 11 bridges crossing various rivers and creeks for the Guelph and Goderich Ry., and approving plans for the same. (June 6).

Approving the location plans of the Bessemer and Barry's Bay Ry. from near L'Amable, Ont., for 5½ miles. (June 7).

Granting an extension to June 23, 1905, to the G.T.R., for the completion of the branch line in London, Ont., authorized by the order of July 6, 1904. (June 8).

Authorizing the C.P.R. to acquire certain lands at Toronto Junction, Ont., for providing further accommodation there. (June 9).

### Freight Rate Matters.

The Canadian Manufacturers' Association has applied to the Board of Railway Commissioners for reconsideration of some of the classification matters which were brought to the attention of the Board at its sitting in Toronto last summer. The point upon which the Association desires specially to secure a ruling from the Board has reference to the extension of the mixed carload privilege to the territory west of Port Arthur. The compromise arranged, in order to permit a temporary approval of the classification, involved the restoration of the mixed carload privilege in the territory east of Port Arthur only.

The Association complains of the minimum charge for articles requiring platform cars for carriage as given in rule 6 of the classification. The objection has reference to the minimum weight of 6,000 lbs., which the Association contends is excessive. A reduction is asked to 4,000 lbs.

Rule 7, respecting freight carried at "owner's risk" and "released," is claimed to be too ambiguous. The rule does not specify what is meant by these terms, nor does it indicate the extent to which the carriers are permitted to limit their liability. The penalty of 50%, where goods are required by shippers to be transported at carrier's risk, is contended to be excessive.

Rule 30—Smalls. The Association's complaint states that the "smalls" charge on Canadian railways is 35 cents, or, if cartage is performed, 59c.; that formerly this service, including cartage, was performed by Canadian railways for 35 cents, and that the universal "smalls" charge throughout the United States, exclusive of cartage, is 25c. The Association asks the Board to make the latter charge applicable in Canada.

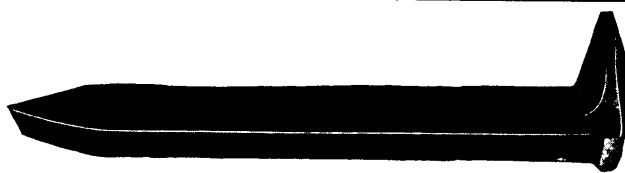
The Halifax and Southwestern Ry. is operating a tri-weekly freight and passenger service on its line from Caledonia to New Germany, and from Liverpool to Halifax, N.S.

The Canadian Westinghouse Co. has issued circulars 1109 and 1110, descriptive of single-phase railway system and Westinghouse catenary line construction; and circular 1104 dealing with Westinghouse portable instruments for testing and measuring.

The Winnipeg Transfer Co., has been incorporated under the Manitoba Companies' Act, with a capital of \$50,000, to carry on a general cartage and transfer business in Winnipeg, and throughout Manitoba. The head offices will be in Winnipeg, and the incorporators are A. M. and H. W. Nanton, J. D. Clark, J. Lemon, and G. W. Allan, all of Winnipeg.

The Eastern Canadian Passenger Association met in Toronto, June 6, at 10.30 a.m., and adjourned until 4 p.m. to allow the members to attend the funeral of the late A. P. Cockburn, Secretary and Manager of the Muskoka Navigation and Hotel Co., in connection with whose death a resolution of condolence was adopted. Considerable business was transacted principally relating to fares for various events.

The Washington correspondents and members of the Gridiron Club left Washington, D.C., Wednesday, June 21, via Baltimore and Ohio Rd., Philadelphia and Reading Rd., and Lehigh Valley Rd., for Suspension Bridge, and then via G.T.R. special to Toronto and Montreal, then travelling by C.P.R. special to Ottawa, and making stops at Fort William and Winnipeg to the coast. The party will return via C.P.R. and Soo line to North Bay, thence by G.T.R. to Suspension Bridge, and home over the U.S. lines.



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We rather pride ourselves on our Railway Spikes. As we turn them out, they embody all the requirements of the most exact specifications.

**POINTS**—Clean-cut and well tapered.

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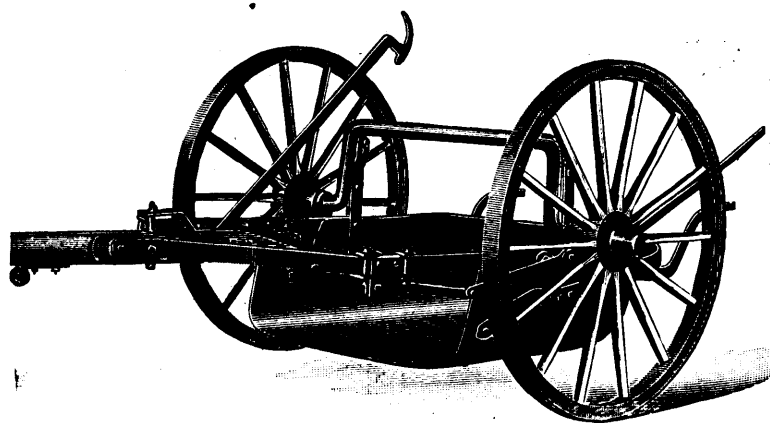
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**DUMP WAGONS**      **DUMP CARTS**  
**WHEELBARROWS**      **TRUCKS**  
**CEMENT MIXERS**      **WAGONS**  
etc., etc.

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**Railway Equipment Notes.**

The G.T.R. added to its rolling stock 378 box cars of 60,000 lbs. capacity recently.

The G.T.R. is reported to be asking prices on three parlor cars and 25 passenger cars.

The Brockville, Westport and Northwest-ern Ry. has sold two old type engines to be scrapped.

It is reported that the Prince Edward Island Ry. freight cars are to be equipped with M.C.B. couplers.

The Quebec and Lake St. John Ry. has purchased a locomotive and a passenger car from F. M. Hicks & Co., Chicago.

The James Bay Ry. has received 125 flat cars, 60,000 lbs. capacity, out of an order of 200 placed with the Crossen Car Manufacturing Co., Cobourg, Ont.

The Halifax and Southwestern Ry. has received 50 flat cars, 60,000 lbs. capacity, and 25 box cars, 60,000 lbs. capacity, from Rhodes, Curry & Co., Amherst, N.S.

The Temiskaming and Northern Ontario Ry. Commission has purchased the private car Wolverine from the Ann Arbor Ry. Co. The car has been renamed Temagami.

The James Bay Ry. has been registered as the owner of the following equipment: three locomotives, two passenger coaches, 200 flat cars of 60,000 lbs. capacity, and four conductor's vans.

The W. H. Kelson Co., Montreal, has delivered to A. R. Macdonell, contractor for the Temiskaming and Northern Ontario Ry., three second-hand locomotives. They were supplied through Fitz-Hugh, Luther Co., Chicago, Ill.

The C.P.R. placed orders for the following rolling stock between May 18 and June 12: 248 flat cars, 7 first-class cars, 5 suburban cars, 3 baggage cars and 3 second-class and smoking cars, to be built at its Angus shops, Montreal.

The Canadian Northern Ry. has received 75 box cars. The 10 locomotives ordered from the Locomotive and Machine Co., of Montreal, have been completed, and, we were advised June 16, were being tested at Montreal prior to delivery.

The Temiskaming and Northern Ontario Ry. has not ordered three second-hand locomotives as recently stated in press reports. It will shortly be in the market for one second-hand locomotive, one 1st class passenger car, and two or three 2nd class passenger cars.

The Westinghouse Air Brake Co. has received orders from the Baltimore & Ohio Rd. for the equipment of 10,000 of its cars with Westinghouse friction draft gear apparatus. This will make a total of 25,000 cars on this system equipped with the friction draft gear device.

The C.P.R., between May 18 and June 12, received the following rolling stock:—5 switching locomotives, 5 sleeping cars, 4 colonist cars, 139 box cars, 101 flat cars, 150 ballast cars, from its Angus, Montreal, shops; 8 vans from its Farnham, Que., shops, and 4 steam shovels from the Locomotive and Machine Co., of Montreal.

The Intercolonial Ry. received between May 20 and June 15 the following additional rolling stock:—3 Pacific type locomotives from the Canadian Locomotive Co., Kingston, Ont., and 76 box cars, 60,000 lbs. capacity, from Rhodes, Curry & Co., Amherst, N.S. The I.C.R. is not in the market at present for any additional rolling stock.

The vote in the House of Commons, May 23, for rolling stock for the Intercolonial Ry., was for \$383,000, and was a revote of the unexpended portion of a total vote of \$1,383,000. On the same date there was also voted \$465 for a portable plant for boring and cutting rails, and \$9,350 for new machinery for locomotive and car shops.

The Canadian Locomotive Co. has recently delivered one of several Pacific type locomotives it is constructing for the Intercolonial Ry. Following are the general dimensions: weight on drivers, 127,000 lbs.; weight in working order, 187,000 lbs.; weight of tender, 122,300 lbs.; total weight of engine and tender, 309,300 lbs.; cylinder, 21 x 28 ins.; working pressure, 200 lbs.; diameter of driving wheels, 72 ins.

In connection with the preparing of plans for the G.T. Pacific Ry. equipment, so far as circumstances permit the locomotives will be standardized. There will be several types to suit the requirements of the traffic, and the conditions of the different portions of the line, but it is intended to have as many of the parts as possible interchangeable. This has been done to a large extent on the G.T.R., and has resulted in the saving of considerable time and expense in the way of repairs.

The Grand Trunk Ry., between April 9 and June 3, received from the Locomotive and Machine Co., of Montreal, 10 Richmond

Compound Mogul locomotives, and during the month ended June 3, five box cars from the U.S. Following are some of the dimensions of the locomotives:—

	Light.	Loaded.
On truck.....	21,560 lbs.	22,960 lbs.
On drivers.....	128,688 "	140,744 "
Total.....	150,248 "	163,704 "
Tender.....	65,200 "	143,300 "
Total Loco. and Tender.....	215,448 "	307,004 "

It is reported that a clearing house for the pooling of freight car repairs will be established by the Vanderbilt lines on July 1. The railways in the pool are the New York Central Rd., Lake Shore and Michigan Southern, Lake Erie and Western, Indiana, Illinois and Iowa, Michigan Central, and Rutland. The idea of the pool is to provide all shops of the Vanderbilt system with uniform supplies so that when a freight car is damaged or disabled it may be repaired in the nearest shop regardless of the particular road to which it belongs, and the charges for same reported to the clearing house in New York.—Railway and Engineering Review.

We have been asked to state who will purchase rolling stock for the portion of the National Transcontinental Ry. between Moncton, N.B. and Winnipeg. Section 22 of the agreement between the G. T. Pacific Ry. Co., and Government, ratified by Parliament in 1903, provides that the Company shall equip both divisions of the railway, i.e. east and west of Winnipeg, with modern and complete rolling stock \* \* \* \* the first equipment for the completed road to be of the value of at least \$20,000,000, of which not less than \$5,000,000 worth to be for the Eastern Division, together with all renewals of and additions thereto, to be marked Eastern Division \* \* \* to be held to form part of the equipment of the Eastern Division for the 50 years of the lease. Section 23 provides for the maintenance, repair and renewal of equipment by the Company.

The Minneapolis, St. Paul and Sault Ste. Marie Ry. is having built at the American Locomotive Co.'s Schenectady Works, several two cylinder compound consolidation (2-8-0) locomotives. Following are the general dimensions:—

WEIGHT.—On drivers, 174,000 lbs.; on truck, 27,500 lbs.; total, 201,500.
WHEEL BASE.—Driving, 17 ft.; engine, 25 ft. 11 in.; engine and tender, 55 ft. 10½ in.
CYLINDER.—Diameter, 23 and 25 in.; stroke, 34 in.; spread, 86 in.
WHEELS.—Driving, diameter, 63 in.; centres, 56 in.; material, cast steel; journals, 9½ and 9 by 12 in. Engine truck wheels, 33 in. dia.; journals, 6 by 10 in.
FRAMES.—Width, 4½ ft.

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Practical service for the past 18 years has demonstrated the reliability, efficiency and adaptability of the Safety Systems of Direct Steam and Hot Water Heating which are being applied in large quantities to railroad equipment. Straightport couplers. Automatic Steam Traps. 140 Railroads are using these devices, applied on 16,000 cars. Standard on Pullman cars.

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Parties intending purchasing will find it to their interest to let us have their specifications at an early date so as to ensure desired deliveries.

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GENERAL SALES AGENTS



**BOILER.**—Type, extended wagon top; diameter, 67½ in. outside first ring; pressure, 210 lbs.  
**FIREBOX.**—Length, 96½ in.; width, 70½ in.  
**TUBES.**—No. 224 of 2 in. diameter, and 40 of 3½ in. diameter; thickness, no. 11 and no. 8; length, 15 ft. 9 in.  
**HEATING SURFACE.**—Tubes, 2,407.53 sq. ft.; firebox, 157.97 sq. ft.; total, 2,565.5 sq. ft. Grate area 46.8 sq. ft.  
**TRACTIVE POWER.**—37,300 lbs. Factor of adhesion 4.51  
**SUPERHEAT.**—Heating surface 261 sq. ft.  
**TENDER.**—Frame, 10 ft. steel channel; wheel diameter, 33 ins.; type of truck, two 4-wheel C.B.; journals, 3½ by 10 ins. Type of tank, U shape; water capacity, 6,000 gals.; fuel capacity, 10 tons

## TRANSPORTATION APPOINTMENTS.

**Canadian Pacific Ry.**—D. W. Campbell, General Superintendent Atlantic Steamships, has resigned and the position has been abolished.

C. W. Fee has been appointed Resident Engineer, second district, Central Division, succeeding W. S. Edge, resigned. Office, Winnipeg, Man.

A. J. McLeod has been appointed Bridge and Building Master, third district, Central Division, succeeding N. Hayden, resigned. Headquarters, Brandon, Man.

H. H. Abbott, heretofore local agent at Vancouver, B.C., has been appointed Assistant General Freight Agent, Western Division, succeeding G. H. Smith, transferred to the Central Division. Office, Calgary, Alta.

A press report states that — Scarlett, city passenger agent at Vancouver, B.C., has been transferred to Skagway, Alaska, and has been succeeded by C. E. Blaney.

**Duluth, South Shore and Atlantic Ry.**—M. Adson, heretofore General Agent at Duluth, Minn., has been appointed General Passenger Agent, succeeding G. W. Hibbard, resigned. Office, Duluth, Minn.

Jas. Maney, rate clerk, has been appointed Assistant General Passenger Agent. Office, Duluth, Minn.

**Grand Trunk Pacific Ry.**—J. R. Stephens, Assistant Engineer, has left the service.

G. H. Pope, heretofore G.T.R. live stock inspector, Montreal, is reported to have been appointed Right-of-Way Agent, G.T.P. Ry. Office Fort William, Ont.

**Grand Trunk Ry.**—F. Crane, heretofore general agent at Sherbrooke, Que., has been appointed Ticket Agent, Bonaventure station, Montreal, succeeding J. C. Wilson.

L. L. Grabill has been appointed baggage agent at Bonaventure station, Montreal.

J. B. Harris, heretofore baggage agent at Hamilton, Ont., has been appointed assistant baggage agent Bonaventure station, Montreal.

W. J. Cockburn has been appointed Baggage Inspector of the System. Office, Toronto.

J. Gray, heretofore freight agent at Buffalo, N.Y., has been appointed acting freight agent at Hamilton, Ont., in place of J. Wallace, and is succeeded at Buffalo by A. S. Fraser, acting agent.

An official informed us, June 24, with respect to the press reports that ex-Alderman Whitham of Brantford, Ont., had been appointed General Inspector of Buildings, an office formerly held jointly with that of Inspector of Bridges, that no such appointment had been made.

The following agents have been appointed: Sherbrooke, Que., T. King; St. Hilaire, Que., E. Peterson; St. Lambert, Que., N. Morrill; Arthabaska, Que., A. Pelletier; Beausfield, Que., H. H. Jones; Brockville (freight), Ont., F. A. Larke; Trenton, Ont., G. A. Hoag; Grafton, Ont., A. E. Milner; Keene, Ont., J. L. Dodds; Kinmount, Ont., J. P. Brownridge; Aurora, Ont., J. Hodgins; Colwell, Ont., S. Blatherwick; Limehouse, Ont., J. Levitt; Tecumseh, Ont., S. F. Ball; Goldstone, Ont., D. Alair; Southampton, Ont., F. Goodier; Ayton, Ont., J. H. Fawcett; Bluevale, Ont., J. G. Clancey; Brucefield, Ont., H. Prime; Londesboro, Ont., C. P. Carlisle.

W. J. Gilkerson, heretofore Travelling Passenger Agent, Chicago, Ill., has been appointed Travelling Passenger Agent at St. Paul, Minn., succeeding D. Brown, Jr., resigned. He reports to the Assistant General Passenger and Ticket Agent, Chicago.

O. C. Bryant, heretofore advertising clerk, Chicago, Ill., has been appointed Travelling Passenger Agent there, succeeding W. J. Gilkerson, transferred to St. Paul. He reports to the Assistant General Passenger and Ticket Agent, Chicago.

**Halifax and South-Western Ry.**—The Halifax and Yarmouth Ry. having been taken over by the H. and S. W. Ry., C. Cooper, Superintendent of the H. and Y. Ry., has resigned.

G. C. Farish, heretofore Chief Clerk in the office of the Superintendent Halifax and Yarmouth Ry., has been appointed Acting Superintendent Yarmouth Division H. and S. W. Ry.

**Lake Superior Corporation.**—W. H. Plummer, Sault Ste. Marie, Ont., has been appointed by the Ontario Government a director to succeed N. W. Rowell, K.C.

W. H. Hearst, Sault Ste. Marie, Ont., has been appointed agent for the Ontario Government in connection with the company's affairs, succeeding N. W. Rowell, K.C.

Mr. Rowell continues to act as Solicitor for the company.

**Muskoka Lakes Navigation and Hotel Co.**—W. F. Wasley, heretofore Assistant Manager and treasurer, has been appointed acting Manager, succeeding the late A. P. Cockburn. He also retains the position of Treasurer.

**Northern Navigation Co.**—S. Bickford has been appointed Travelling Passenger Agent at Toledo, Ohio.

## MAINLY ABOUT PEOPLE.

F. M. Rattenbury, architect of the C.P.R. hotel at Victoria, B.C., is visiting England.

Lord Mount Stephen celebrated his 76th birthday, June 5, at his London, Eng., residence.

Dr. Jas. Thorburn, who died in Toronto recently, was the first surgeon in Toronto of the G.T.R.

A. F. Harrison, I.C.R. baggage master at St. John, N.B., for the past 16 years, died there recently.

W. A. Clement, assistant city engineer, Toronto, has been appointed City Engineer of Vancouver, B.C.

G. F. Shepley, K.C., who has been engaged upon a number of railway arbitration matters recently, has gone to England.

I. Suckling, who died at Toronto, May 30, aged 94, was father of H. Suckling, Assistant Treasurer C.P.R., Montreal.

R. Bain, son of Jas. Bain, Superintendent of the Quebec and Lake St. John Ry., died suddenly on a train when returning to Quebec, June 5.

Mrs. Prindiville, mother of W. A. Prindiville, Superintendent of the Halifax Electric Tramway Co., died recently.

J. D. Warwick, who was largely engaged in wharf construction for the Dominion Government died at Brockville, Ont., June 14.

J. R. Waghorn, who for many years published Waghorn's Railway Guide, at Winnipeg, Man., has moved to Vancouver, B.C.

H. Egg, son of W. F. Egg, formerly C.P.R. city passenger agent, Montreal, was married to Miss Eva Carson, at Montreal, May 29.

L. M. Mitchell, of the Treasurer's office Canadian Northern Ry., Toronto, was married to Miss Stanway, at Toronto, June 21.

R. Reid of the Transcontinental Railway Commission has purchased 286 McLaren St., Ottawa, and taken up his residence there.

J. McLerie, Northwest Agent Montreal and Lake Superior Line at Winnipeg, has recovered from his recent illness and is on duty again.

The new Presbyterian Church erected at Kirkfield, Ont., by W. Mackenzie, President Canadian Northern Ry., was opened June 5.

M. Zimmerman, General Manager Brockville, Westport and Western Ry., has taken up his residence at Brockville, Ont., for the summer.

J. W. Platten, Second Vice-President Lehigh Valley Rd., has resigned to become Vice-President United States Mortgage Corporation.

Hon. P. Garneau, of Quebec, President of the Great Northern Ry., and a director of the Quebec and Lake St. John Ry., died there, June 23, aged 82.

Jas. Murdoon, Toronto, was elected Fourth Vice-President of the Brotherhood of Railway Trainmen at the recent convention held at Buffalo, N.Y.

Miss E. Emmerson, daughter of the Minister of Railways and Canals, was married to R. Deacon, of Milton, Ont., at Dorchester, N.B., June 7.

Mrs. R. R. Benton, widow of C. Benton, first Master Mechanic of the Canada Southern Ry., at St. Thomas, Ont., died at Tillsonburg, Ont., recently.

Mrs. Brignall, wife of J. J. Brignall, chief clerk in the C.P.R. District Passenger Agent's office, Toronto, died at 24 Concord ave., Toronto, May 29.

Miss C. C. Lash, daughter of Z. A. Lash, K.C., Counsel for the Canadian Northern Ry., was married June 6 to K. D. McMillan, of Princeton, N.J.

The estate disposed of by will by Mrs. Bell, wife of J. Bell, K.C., consulting counsel, G.T.R., Belleville, Ont., was valued for probate at \$90,000.

Mrs. Bicknell, wife of Jas. Bicknell, K.C., Solicitor Toronto Ry., died in Toronto, May 31. On June 18 Mr. Bicknell's mother died at Hamilton, Ont.

The funeral of the late F. B. Wade, Chairman Transcontinental Railway Commission, who died at Ottawa, took place at Bridgewater, N.S., May 29.

Miss M. Dwight, daughter of H. P. Dwight, President G.N.W. Telegraph Co., was married to D. A. Ross, Civil Engineer, Winnipeg, Man., at Toronto, June 14.

Lady Van Horne and family have moved from Montreal to their summer residence at St. Andrew's, N.B. Sir Wm. Van Horne left Montreal for Cuba, June 22.

C. G. Hanning, civil engineer, who had been associated with the surveys for, and construction of, a number of Canadian lines, died at Galt, Ont., recently, aged 80.

Sir C. Rivers Wilson, President G.T.R., have returned to England, after making an official trip of inspection over the line. He was accompanied by Lady Wilson.

T. F. Brennan, Canada Atlantic Ry., Ottawa, was present at the semi-annual meeting of the Eastern Association of Car Service Officers, held at New York, June 8.

W. J. Fairbairn, C.P.R. agent at the St. Lawrence and Ottawa station, Ottawa, has been appointed Appraiser of Customs at Ottawa, in succession to the late A. H. Taylor.

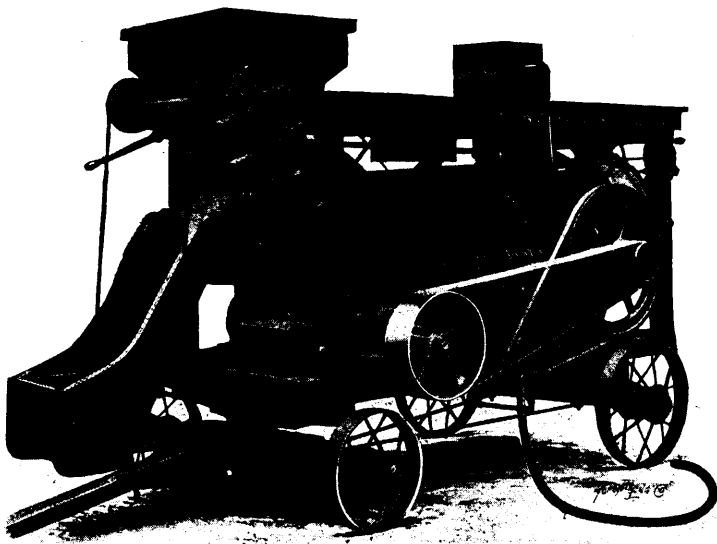
H. C. Williams, heretofore in the office of the chief engineer, Intercolonial Ry., Moncton, has been appointed Resident Engineer, Louisville and Nashville Rd., at Conasanga, Tenn.

A. E. Rosevear, Freight Claim Agent, G.T.R., was appointed one of the committee of three on arbitration at the recent meeting of the Freight Claim Association, at Philadelphia, Pa.

Mrs. Lumsden, wife of H. D. Lumsden, Chief Engineer Transcontinental Railway Commission, and family have moved from



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GOLD HAS NO  
SUBSTITUTE**

Ottawa to their summer residence at Orillia, Ont.

R. Salmon, late of the Marine Department, Ottawa, has been indicted by the New York city Grand Jury for personating Commander Spain, of the Dominion Fisheries Protection service.

G. E. King, who recently resigned his position as Assistant General Passenger Agent of the Michigan Central Rd., at Chicago, is now with his family on his fruit ranch at Fair Oaks, California.

G. A. Somerville, G.T.R. station agent at Kincardine, Ont., was recently presented with an address and some pieces of silver by the residents of the town, on his leaving for the Northwest.

C. T. Riddell, foreman of the car shops of the Michigan Central Rd., at St. Thomas, Ont., has left after nearly 20 years' service, to take a foremanship at the C.P.R. Angus shops, Montreal.

The appointment of J. H. Ashdown, of Winnipeg, as a member of the Transportation Commission, although made by Order-in-Council dated Jan. 7, was not officially published until May 27.

C. T. Lewis, connected with the I.C.R. prior to 1882, and for 20 years in the C.P.R. service at Winnipeg, Man., but latterly with the Canadian Northern Ry., has resigned to go into the contracting business.

D. Brown, Jr., after 23 years' service with C.T.R., has resigned his position as Travelling Passenger Agent G.T.R., at St. Paul, Minn., and has been appointed Eastern Agent Chicago Great Western Rd., at New York.

H. P. Madden, cashier Michigan Central Rd. freight offices, St. Thomas, Ont., was the recipient recently of a set of pipes and other smoker's supplies, from members of the staff, on leaving the company's service.

J. Hendry, President of the Vancouver, Westminster and Yukon Ry., with Mrs. Hendry, accompanied the Canada Manufacturers' Association, of which he is Vice-President, on his trip to Great Britain.

Thos. Jackson, an engineer engaged in one of the survey parties on the Ottawa and Georgian Bay canal, was accidentally shot by the discharge of a rifle, while lifting his coat from a canoe, near Portage du Fort, Que.

E. G. Russell, formerly Manager Intercolonial Ry., Moncton, N.B., and now residing in Buffalo, N.Y., has secured control of five square miles of timber lands near Fort George, in the Nechaco country, B.C.

P. E. Ryan, Secretary of the Transcontinental Railway Commission, Ottawa, was married there June 26, to Miss Chapleau, daughter of the French Clerk of Votes and Proceedings of the House of Commons.

A. R. Macdonell, contractor for the Temiskaming and Northern Ontario Ry., and D. Russell, the Montreal promoter, had a number of deals together, and are now suing each other for \$25,000 in connection therewith.

G. W. Hibbard has resigned his position as General Passenger Agent, Duluth, South Shore and Atlantic Ry., and is reported to have received an appointment on the passenger staff of the National Lines of Mexico.

C. Wurtele, who has been appointed General Eastern Agent for Canada for the Great Northern Ry., U.S., was married to Miss Kellogg, at Seattle, Wash., May 20, prior to his removal from the Pacific coast to Toronto.

P. S. Archibald, C.E., Moncton, N.B., formerly Chief Engineer, Intercolonial Ry., is acting as consulting engineer for A. E. Trites, who has a contract for the construction of a new line in Maine for the Boston and Aroostook Ry.

J. G. Sing, for five years chief assistant to the late Major Gray, Dominion Engineer, Toronto, has been appointed to the vacant

position, and H. J. Lambe succeeds him as Acting Engineer in charge with headquarters at London, Ont.

Jas. A. Ruel, a civil engineer of Gibson, N.B., died there June 2. He was engaged in survey and contracting work on the New Brunswick Ry. from Gibson to Edmundston, the Canada Eastern Ry., and the Prince Edward Island Ry.

G. H. Pope was presented with a gold watch and chain by the live stock exporters of Montreal on retiring from the position of live stock inspector at Montreal, to take the position of Right-of-Way Agent for the G. T. Pacific Ry., at Fort William, Ont.

Thos. Rodger was presented with a purse of gold by his associates June 7, on the occasion of his leaving the Great North-Western Telegraph Co.'s service, after 31 years' continuous service. At the time of his leaving he was chief operator at Montreal.

E. S. Smiley, who recently resigned his position as Division Freight Agent of the I.C.R., at St. John, N.B., has removed to Winnipeg, and is reported to be representing Kilgour Bros., of Toronto, manufacturers of paper bags, paper boxes, etc.

Notice is given that A. G. Blair, Jr., law clerk to the Board of Railway Commissioners, son of Hon. A. G. Blair, ex-Minister of Railways and Canals, and ex-Chairman of the Railway Commission, will be called to the Ontario Bar next term, under the rules in special cases. The notice is signed by F. H. Chrysler, K.C., Ottawa.

C. Morgan, formerly Treasurer of the Rutland Rd., has been appointed Professor in charge of the newly inaugurated department of Railroad Transportation, McGill University, Montreal. H. M. McKay, a graduate of McGill, and subsequently engaged with Waddell and Hedrick, Consulting Engineers, Kansas City, Mo., has been appointed Assistant Professor of Civil Engineering in connection with the department.

C. R. Hosmer, director of the C.P.R., is a provisional director of the Kakabeka Power Co., with a capital of \$2,000,000 and offices at Fort William, Ont., incorporated under the Dominion Companies' Act, to develop power at the falls of the Kaministikwia River. His associates in the enterprise are H. S. Holt, F. W. Thompson, H. W. Norton, of Montreal, and F. H. Phippen, of Winnipeg, Man.

H. Fraser, for over 42 years in the service of the New York Central and Hudson River Rd., his last position being station agent at Lewiston, N.Y., died there June 14, aged 79. He retired from the service a number of years ago. He was father of B. P. Fraser, Passenger Agent, Buffalo District, Pennsylvania Rd. System, Buffalo, N.Y., and uncle of Jas. Bryce, Vice-President and General Manager, Canadian Express Co.

M. J. Haney, C.E., contractor, Toronto, has been elected a director of the newly organized Home Bank, which proposes to take over the property, assets and liabilities of the Home Savings and Loan Co. Mr. Haney has been awarded the contract for the construction of the new tunnel from Toronto to the Island, for the corporation water-works, and will lay out yards, etc., for the assemblage of material, etc., on Ashbridge's Bay.

J. Sparks, who has been appointed Assistant General Baggage Agent C.P.R. western lines, Winnipeg, Man., was born in London, Eng., April 25, 1874, and entered railway service 1899, his record being: 1899, clerk in accountant's department, Winnipeg; 1899 to 1901, clerk in general baggage department, Winnipeg; 1901 to 1902, assistant to Pacific division representative baggage department, Vancouver, B.C.; 1902 to 1903, in charge of general baggage department, Pacific division, Vancouver; 1903 to 1905, representative

Western and Central divisions general baggage department, Winnipeg; entire service with the C.P.R.

E. F. Sixias, whose portrait appears on the first page of this issue, was born in New York City, Oct. 26, 1870, and after taking a student's electrical course at Schenectady, N.Y., from 1888 to 1890, spent a number of years in construction work, and in travel and study in various parts of the United States and Europe. In 1891, he was superintendent of interior wiring at the Chicago World's Fair (electrical department) and in 1895 was connected with the electrical department at the Atlanta, Ga., Exposition. In 1896, he was engaged in the consolidation of the Lighting and Ry. Co. of Amsterdam, N.Y., remaining as manager until 1901, when he resigned to become General Manager of the Niagara, St. Catharines and Toronto Ry., which position he still holds.

F. Hoffmeister, who has been appointed Electric Superintendent of the British Columbia Electric Ry., is a native of Ontario, but moved to British Columbia in early life. In 1892 he was appointed chief electrician of the San Francisco and San Mateo Ry., and three years later became Professor of Electrical Science, as applied to electric railways and steam engineering, in a San Francisco College. In 1898 he was appointed erecting engineer for the Canadian General Electric Co., and has had charge of electric installations on the Soulanges Canal; Montreal Street Ry.; Halifax Electric Tramway Co; St. John Ry.; Winnipeg Street Ry.; the C.P.R. Angus shops, as well as a number of electric light companies and power plants.

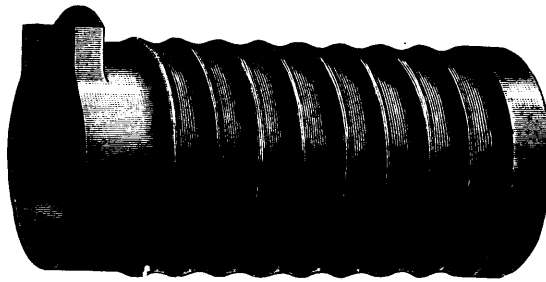
Jas. Cochrane, a representative of Montreal in the Quebec Legislature, and an ex-Mayor of the city, died there May 28, after a somewhat lengthened illness, aged 54. He was born at Kincardine, Scotland, in 1851, and was brought at an early age to Montreal, where he was educated. He began his business career with the Montreal Telegraph Co., becoming ultimately night manager. He was subsequently engaged in connection with telegraph offices in Whitehall and Malone, N.Y.; and Boston, Mass., as well as a number of Canadian points up to 1880, when he was at Winnipeg, Man. He constructed the first telegraph line on the north shore of Lake Superior, between Nepigon and Dog Lake, Ont. He was engaged in railway construction work with the late J. J. Macdonald, on the Intercolonial Ry., and with M. J. Haney, on Section 15 of the C.P.R. In later years he has been engaged mainly in civic contracting work.

H. H. Schaefer, who has been appointed District Freight Agent, Intercolonial Ry., at St. John, N.B., was born at Cologne, Germany, Feb. 10, 1848, and came to Canada with his parents in 1855. After residing for some time in Nova Scotia, he with his family moved to Prince Edward Island, where he subsequently entered the service of the Anglo-American Telegraph Co., then the New York, Newfoundland and London Telegraph Co. After holding various positions with that company he became manager at the repeating point at Sackville, in 1870. He became connected with the I.C.R. in 1871, serving successively as station agent at Sackville (1871-76), Shediac (1876-78), Point du Chene (1878-92); travelling freight agent, 1892 to 1897; in charge of the weighing department, 1897 to 1898; chief clerk to General Freight Agent, 1898 to date of present appointment. He also acted as secretary to the freight rate commission appointed to take evidence in regard to alleged excessive freight charges in the Northwest in 1895. While at Point du Chene he started the marine boat slide, otherwise known as chute-the-chutes, which he patented in Canada and the U.S. in 1885.

A. P. Cockburn, the pioneer of the Muskoka country, died suddenly at his residence, Jarvis

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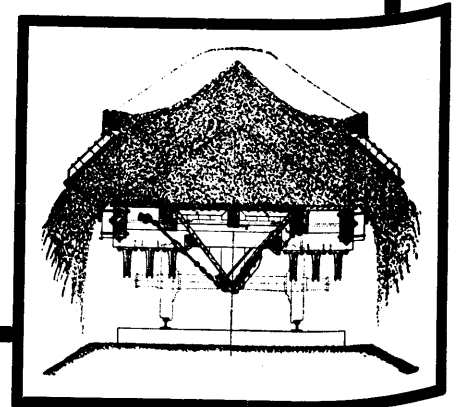
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**F. H. HOPKINS & CO., MONTREAL**  
(Late James Cooper)

St., Toronto, June 2, aged 69. He was born in Stormont, Ont., April 7, 1837. He became interested in the Muskoka District in 1865, taking up his permanent residence there later. He founded the Muskoka Settlers' Association in 1867, and wrote a number of guide books to the country. He built the first steamer on the Muskoka Lakes in 1866, and added others from time to time. In 1881 the Muskoka and Nipissing Navigation Co. took over the business, and in 1886, the Parry Sound Navigation Co. was acquired, the title of the merged companies being the Muskoka and Georgian Bay Navigation Co. In 1902 the Muskoka Navigation Co. was formed, to take over the business and to establish hotels. An hotel was built and the company was reconstructed in 1903, under the title of the Muskoka Lakes, Navigation and Hotel Co. Mr. Cockburn was Manager and Secretary of the Company at the time of his death, and had only returned from Gravenhurst, June 1, where he had been arranging for the season's business. He represented Muskoka in the House of Commons 1872 to 1882, and North Ontario, 1882 to 1887, and was recently spoken of as likely to be appointed to the Senate. At the funeral, June 4, the honorary pall bearers included J. S. Playfair, Toronto, President M.L.N. and H. Co.; G. T. Bell, General Passenger and Ticket Agent, G.T.R., Montreal; and among those present were representatives of the Eastern Canadian Passenger Association, the G.T.R., Huntsville, Lake of Bays and Lake Simcoe Navigation Co. The Eastern Canadian Passenger Association passed a resolution of sympathy with the family. The estate is valued for probate at \$38,300, of which \$28,300 is represented by stocks and shares almost entirely of the M. L.N. & H. Co.

### Canadian Northern Ry. Construction.

The discussion on the erection of a joint station at Winnipeg, Man., for use by the C.N.R. and the G. T. Pacific Ry. continues, but no decision has been reached. The site suggested for such a depot is at Water St., where the C.N. Ry. has large property interests. H. Sutherland, Executive Agent, when asked about recent purchases of land in the vicinity, stated that the company had all the land it required for station purposes. At a meeting of the Winnipeg Board of Works, June 13, application was made to close portions of certain streets in the Fort Rouge district, on both sides of which the C.N.R. owns the land, so as to utilize the whole area for yards and terminal facilities.

The extension from Emerson to Vassar or Sprague, of which some 16 miles has been constructed, will be pushed to completion. The present track end is at Ridgeville, and the construction of another 35 miles is necessary to complete the line. The completion of this line would enable the company to take grain from the whole of southern Manitoba to Port Arthur, without going to Winnipeg, shortening the haul by about 25 miles. The main line has been laid into North Battleford, Sask., and a train service has been placed in operation.

### Grand Trunk Pacific Ry.

In giving a summary of the report of the Transcontinental Railway Commissioners in our last issue, upon the surveys in progress for the Eastern Division of the G. T. Pacific Ry., decimal points were omitted in quoting the figures relating to the gradients. The gradients obtainable, as reported by H. D. Lumsden, Chief Engineer, are 0.4% east bound, and 0.6% west bound. In the stretch between Edmundston and Weymontache, 432 miles, the gradients east bound will not exceed 0.4%, and 0.6% west bound, and not 4 and 6% as stated. In the section of the re-

port dealing with the cost per ton of the respective lines prepared by M. J. Butler, Assistant Chief Engineer, the ten daily trains assumed are for the purpose of comparison only, as is usually the custom in valuing reduction on grades and similar improvements on high-class railway service. The cost per train mile quoted is that given in the report of the Department of Railways and Canals for 1903, and does not refer in any way to the amount earned per train mile, which is entirely another matter. The figures given are based entirely on the cost per train mile and not the cost likely to be charged for the service.

Three survey parties are in the field in central New Brunswick working on improved lines between Fredericton, Chipman, and Plaster Rock. The route favored by New Brunswick is from the Quebec-New Brunswick boundary down the St. John River to Fredericton, thence across the province through Chipman to Moncton. The Commissioners have under consideration tenders for the construction of an office building and residence for the Division Engineer at Nepigon, Ont.

The specifications for the Eastern Division, which were prepared by the commissioners in consultation with H. A. Woods, acting for the G. T. Pacific Ry., have been signed by the Governor-General, and have been printed. It is not expected that tenders will be invited until towards the end of this year or early in 1906. The specifications prepared will be used as far as possible for the Lake Superior branch and for the Western Division, which are to be built by the G.T.P. Ry. Co. The location plans of the line from Fort William to the proposed junction with the Eastern Division, a distance of approximately 200 miles, have been filed.

There are five parties in the field locating the Lake Superior branch from Fort William, Ont. Two parties are in the field making surveys for the branch to connect the Eastern Division of the G.T.P. Ry. with North Bay, Ont.

Speaking recently at Ottawa, Sir C. R. Wilson is reported to have said that from surveys made it was expected to get a gradient of 0.4% as far as the Rocky Mountains, and 1% through the mountains. The specifications had been approved of by the Government and it was expected to begin construction on the Lake Superior branch and the Prairie section during the summer.

The mortgage deed executed in connection with the guarantee of the 3% bonds by the Dominion Government for the construction of the Prairie section, has been signed by the Minister of Finance. The bonds were sold recently at 92½. The Dominion Parliament at its current session passed an act confirming the first and second mortgage bonds on the Western Division, and the first mortgage bonds on the Lake Superior branch.

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

**Freight Yards at Turcot.**—The foundations of the roundhouse at the new yard at Turcot, Que., are being laid. It will be built of reinforced concrete, will have sixty stalls, and is expected to be completed in the fall. The freight yard will be laid out later, and is intended to be used as a classification yard for trains arriving from the west.

**Hotel at Ottawa.**—In connection with the taking over of the Canada Atlantic Ry., it was recently stated by Sir C. R. Wilson, President, that a station building and large hotel would be built at Ottawa. We were advised June 21 that it was, as yet, too early to say what plans will finally be adopted in this respect.

**Toronto Union Station.**—It is stated that plans for the new union station are in preparation at Montreal, and that they are subject to the approval of F. H. McGuigan.

The plans for the laying out of the tracks in the new station and its approaches are being made by F. L. Somerville, Resident Engineer, Toronto.

**Mimico Yards.**—Considerable progress has been made in laying out the new yard at Mimico, Ont. It is expected it will be completed by the end of July.

**Hyde Park to Kingscourt Jet. Double-tracking.**—Good progress is being made on this work by Ross and Macrae, the contractors. It is expected to start tracklaying early in July, which will probably be completed in the fall. The section between Hyde Park and London will be a very heavy undertaking, as it involves the reconstruction of a number of bridges. It is not likely that it will be undertaken this year.

The Toronto Transportation Club held its regular quarterly meeting in the Canadian Freight Association's office, Union Station, June 2, when several applications for membership were accepted. At a special meeting at the same place June 23, a number of further applications were accepted and a committee was appointed to arrange for a day's outing to Niagara Falls, via Niagara, St. Catharines and Toronto Ry. and Navigation Co., in the latter part of July. The Club's membership is now in the neighborhood of 100.

**Field Practice of Railway Location.**—This is the title of a 250 page book by W. Beahan, B.C.E., Division Engineer, Chicago and Northwestern Ry., at Winona, Minn., published by the Engineering News Publishing Co., New York City. The perusal of the preface and a glance over the table of contents showing the principal matters treated in the eight chapters, gives the impression that the book is practical and popular, an impression which deepens into certainty as the book is read. Other and larger books deal at length with the mathematics of surveys, and of such questions of railway economics as have to be taken into consideration by engineers in charge of location. Mr. Beahan, starts out in his first chapter with a consideration of the road and discusses a number of questions that require consideration before survey work can be undertaken, from a common-sense point of view, and gives much information gleaned from personal experience and observation, and references to standard works on location, etc., which cannot fail to be useful to young engineers, as it is of interest to a non-professional reader interested in railroad construction work. Succeeding chapters deal with reconnaissance for route, preliminary survey, geology in its relation to topography, the locomotive, train resistance, the located line, records and cost of survey. The third chapter is a very useful one dealing as it does with the organization, subsistence and equipment of survey parties. The success or non-success of a survey party in the work given it to do depends a great deal upon the personal characteristics of the men composing it, but to a much greater extent upon the camp outfit and the cook.

The John Morrow Machine Screw Co., Ingersoll, Ont., has been authorized to do business in Quebec province, F. Bacon, 377 St. Paul St., being its agent.

The Great Lakes Steamship Co., owning the str. Haddington, is having a new steamer built in England, to carry 75,000 bush. of grain from the Upper Lakes to Montreal. Her dimensions will be: length, 256 ft.; breadth, 43½ ft.; depth, 20 ft.

The Canadian Rubber Co., of Montreal, which was previously carrying on business under an act of the old Province of Canada, has been incorporated under the Dominion Companies' Act, with additional powers. The incorporators are Sir H. M., H. A., and A. A. Allan, J. B. Learmont, C. F. Smith, F. C. Henshaw, H. M. Molson, H. Provost and A. Piddington.

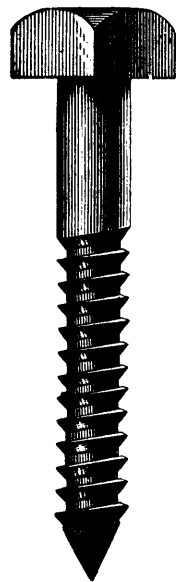
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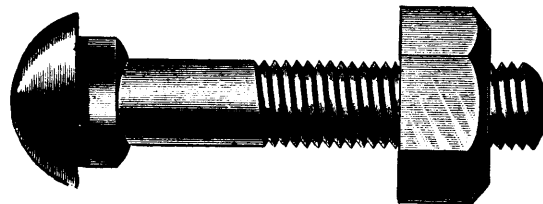
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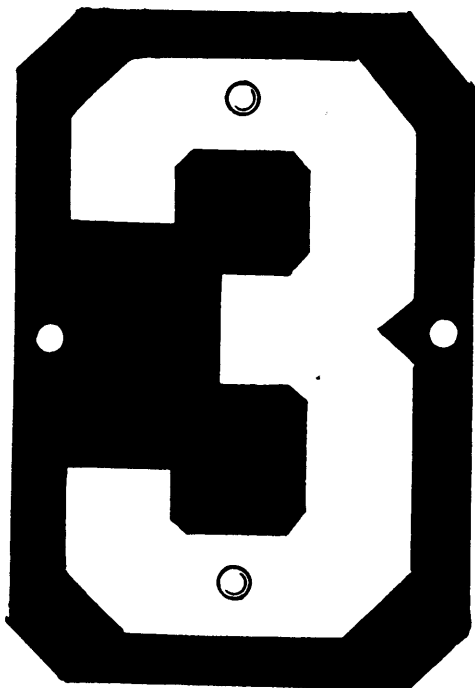


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Sailing from Boston on Wednesdays.

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Calling at Dover for London and Paris.  
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Boston and other New England points, via  
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Lv. Montreal	*9.00 a.m.,	*7.45 p.m.
Arr. Lowell	*7.29 p.m.,	*6.37 a.m.
" Worcester	9.04 "	*9.19 "
" Boston	*8.15 "	*7.30 "

### VIA G.T.RY., AND WHITE RIVER JCT.

Lv. Montreal	*9.01 a.m.,	*8.40 p.m.
Arr. Lowell	*6.11 p.m.,	*7.17 a.m.
" Worcester	9.04 "	*9.19 "
" Boston	*6.55 "	*8.05 "

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Lv. Montreal	9.00 a.m.,	*7.45 p.m.
Arr. Portland	7.45 p.m.,	*8.05 a.m.
" Old Orchard	8.16 "	*8.42 "

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**Railway Finance, Meetings, etc.**

**Canada Atlantic Ry.**—It is understood that the formal transfer of the line to the G.T.R. will be made in Sept. A new mortgage, guaranteed by the G.T.R., securing \$16,000,000 of 4% consolidated first mortgage sterling bonds has been filed.

**Central Ontario Ry.**—Suit has been entered by the company against R. Weddell, T. G. Blackstock, and G. W. Bingham, the executors of the late S. Burke, and S. Johnston, to recover \$55,000 alleged to have been wrongfully paid. It is also alleged that certain bonds now held by the Molsons bank are the property of the company. This is another phase of the long series of law suits respecting the company's bonds and the ownership of the line.

**Canada Southern Ry.**—The annual meeting of the shareholders was held in St. Thomas June 7, and meetings of the subsidiary and other companies under the same control were held on the following day—the Canada and Michigan Bridge and Tunnel Co. at Windsor, Ont.; the Michigan, Midland and Canada Ry.; the Toledo, Canada Southern and Detroit Ry., and the Canada Southern Bridge Co., at Detroit, Mich. The officers and directors are the same in each case, viz.: President, W. H. Newman; Vice-President, H. B. Ledyard; other directors: W. K. and F. W. Vanderbilt, C. M. Depew, S. F. Barger, E. O. Wickes, J. Brown, H. McK. Twombly; Secretary, N. Kingsmill, K.C.; Assistant Secretary, D. W. Pardee; Treasurer, C. F. Cox; Assistant Treasurer, F. Middlebrook.

**Esquimalt and Nanaimo Ry.**—The formal transfer of the E. and N. Ry. to the C.P.R. was made at Victoria, B.C., June 8, when the old directors consisting of Jas. Dunsmuir (President); Jos. Hunter (Vice-President); Hon. C. E. Pooley, J. Little and J. A. Lindsay resigned, and a new board was elected. The new directors are W. Whyte, Second Vice-President, C.P.R.; A. R. Creelman, K.C., Chief Counsel C.P.R.; R. Marpole, General Superintendent Pacific Division C.P.R.; J. W. Troup, Superintendent C.P.R. Pacific Coast steamships; J. S. Dennis, C.P.R. Land Commissioner for British Columbia. W. Whyte is President, and J. S. Dennis Vice-President of the new organization. Under the sale the C.P.R. acquires the whole of the capital stock of the company, secures all its franchises, the land grant and property.

**Fredericton and St. Mary's River Bridge Ry.**—Under the powers of an act passed in 1904, the Dominion Government has taken over the franchise and property of this company. The bridge is one of the Gibson enterprises, and was built at a cost of \$400,000, of which \$300,000 was advanced by the Government which took a mortgage. No interest was paid on the bonds, and the act of foreclosure was passed, the company being given time to redeem. The Government also owns the Canada Eastern Ry, the Gibson railway which obtained an entrance into Fredericton across the bridge.

**Grand Trunk Ry.**—In an interview at Ottawa after returning from an inspection of the line, Sir C. R. Wilson, the President, said June 9, that he did not look upon the payment of dividends to the holders of common stock as an impossibility.

**Intercolonial Ry.**—The Minister of Railways, replying to a question in the House of Commons, stated that there had been expended on the I.C.R. to June 30, 1897, \$55,416,157.15, of which sum \$14,316,561.16 was expended on branches, extensions, connections and other subsidiary parts of the I.C.R., and the following amounts had been expended on capital account since: 1898, \$252,756.80; 1899, \$1,081,929.94; 1900,

\$3,255,348.29; 1901, \$3,633,836.57; 1902, \$4,626,841.05; 1903, \$2,254,266.68; 1904, \$1,880,856.60.

The Minister of Railways, June 14, made a statement regarding the I.C.R. finances in the House of Commons. He stated that it was estimated that the operations of the current financial year would show a deficit of \$1,800,000. This large deficit was partly due to the increase in wages, and partly to the expenditure necessary owing to the abnormally heavy snowfall during the winter. The cost of snow clearing was \$35,175, against \$11,000 in 1903-04. The maintenance of way showed an increase of \$182,000, the mechanical department an increase of \$621,000, and the traffic department of \$145,000, making altogether an increased expenditure of \$949,000 on these accounts

alone. The deficit of 1904 would bring the total loss for the year to over \$1,800,000.

**Ottawa and New York Ry.**—The New York State Railroad Committee has authorized the New York and Ottawa Rd. to issue a first mortgage of \$2,500,000, of which \$1,500,000 is to pay for the purchase of the railway and property of the N.Y. and O. Ry., which includes the stock of the O. and N.Y. Ry. Co. in Canada. The balance of the funds to be raised by the mortgage it is proposed to expend upon betterments.

**Quebec and Lake St. John Ry.**—The annual meeting was held at Quebec, recently, when the directors reported that the number of passengers carried during 1904 was 266,459 against 247,905 in 1903, and 321,391 tons of freight against 318,730 in 1903. The average earnings per passenger were 58½c. against

## CANADIAN WHITE COMPANY LIMITED

### SOVEREIGN BANK BUILDING, MONTREAL

### ANNOUNCEMENT

THE CANADIAN WHITE COMPANY, LIMITED, is incorporated in Canada to carry on a General Contracting and Engineering Business, on similar lines to J. G. White & Company, Incorporated, of New York; J. G. White & Company, Limited, London, England, and the Waring-White Building Company, Limited, London, Eng. The Letters Patent of the Canadian Company were granted the latter part of May, and the organization of the Company is now being completed.

#### OBJECTS OF THE COMPANY.

The Canadian White Company, Limited, will carry on a General Contracting and Engineering Business and will undertake any Civil, Mechanical, Electrical, Hydraulic and Building work. It will be fully equipped to handle large construction contracts for Steam or Electric Railways, and will be prepared to design, build, equip and operate Electric Lighting Plants and Power Installations, Gas Works, Water Supply, Sewage Systems, Piers, Docks, Harbor Works, Office Buildings, Apartment Houses, Hotels, etc.

The Contracting and Engineering Departments of J. G. White & Company, Incorporated, of New York, will at all times be at the service of the Canadian Company, and the Company will further have the benefit of the experience of J. G. White & Company, Limited, London, England, and the Waring-White Building Company, London, England. This insures the Canadian Company, from its inception, the benefits and advantages to be derived from a very long and successful experience in the Contracting and Engineering business.

#### ORGANIZATION.

The Canadian White Company, Limited, will have upon its Board and as stockholders, strong representative business men well-known throughout Canada, and will be organized to carry on its business in the most thorough and expeditious manner.

#### GENERAL MANAGER.

The General Manager of the Company will be a prominent Civil Engineer with large experience in Railway Construction, etc., and who has held executive positions.

#### TREASURER.

Mr. H. P. Douglas, formerly Vice-President and General Manager of the Canadian Otis Elevator Co., Limited, will be Treasurer of the Company.

#### CONTRACTING AND ENGINEERING STAFF.

The Contracting and Engineering Staff will be sufficient at all times to carry out promptly and efficiently all works undertaken by the Company. The men for this Department will be competent engineers who have had long and thorough experience.

#### SUPERINTENDENT OF BUILDING CONSTRUCTION.

For this position, Mr. H. C. Hitch has been engaged. Mr. Hitch has been for several years connected with the Thompson-Starrett Company, of New York, as Superintendent.

The organization as outlined above, with its allied interests, insures prompt and efficient attention to any contracting or engineering matter that may be brought to its attention.

#### BUILDING DEPARTMENT.

The Canadian White Company, Limited, intends making a feature of Building Construction, and is now prepared to contract for the better class of building work; such as Office Buildings, Apartment Houses, Hotels, Industrial Plants, Warehouses, etc.

The Company invites correspondence on all Contracting, Engineering and Building propositions and will be glad at all times to investigate and report upon any business that may be brought to its attention.

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**SWITCHES AND TRACK WORK**

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The Company has General Stores at Winnipeg, Vancouver, Calgary, Edmonton, and other places where purchasers will find the best of goods at moderate prices.

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59c., and 97c. per ton of freight against 86c. in 1903. The directors had issued and disposed of at a satisfactory price \$150,000 of 4% prior lien bonds, out of an authorized issue of \$300,000. The money obtained was being used for the purpose of the construction of the La Tuque branch, upon certain betterments, and for additional equipment. Following are the officers and directors for the current year:—President, G. Lemoine; Vice-Presidents, W. Hanson, Montreal; J. T. Ross; other directors: C. A. Hanson, London, Eng.; P. Garneau, T. A. Piddington, Hon. J. Tessier, E. Beaudet, F. W. Ross, H. J. Beemer and E. Hanson.

**Reid-Newfoundland Co.**—Reports have recently been current that R. G. Reid and his associates, who form the Reid-Newfoundland Co., operating the railway system in the colony, a line of steamers from Port aux Basques to Sydney, N.S., and another line along the coast and to Labrador points; the street railway at St. John's, and the dock there, are negotiating for the sale of their numerous interests. It was stated that the first offer was made to the Newfoundland Government of the railway line, but as nothing was done private capitalists were approached. A number of United States capitalists, including H. M. Whitney, of Boston, recently visited the island and inspected the railway, with a view to acquiring the interests of the company in it. It is understood that the question of the purchase will be decided within the course of a month or so.

**St. John Bridge and Ry. Co.**—Local press reports state that the negotiations are practically completed for the taking over of undertaking of this company at St. John, N.B., by the C.P.R. The line is two miles in length, and gives the C.P.R. a connection with the Intercolonial Ry.

**Temiscouata Ry.**—Gross earnings for May \$13,657.23, against \$11,323.69 for May, 1904.

**Toronto, Hamilton and Buffalo Ry.**—At the annual meeting held in Hamilton, Ont., June 6, a satisfactory annual report was presented. Following are the directors for the current year: Sir T. G. Shaughnessy, D. McNicoll, Montreal; E. B. Osler, M.P., W. P. Torrance, N. Kingsmill, K.C., Toronto; W. K. Vanderbilt, W. H. Newman, C. F. Cox, New York; J. N. Beckley, Rochester, N.Y.; H. B. Ledyard, Detroit, Mich., and D.A. Scott, Ottawa.

The estimated receipts for May were \$57,783.25 against \$63,947.69 for May, 1904.

**Canadian Northern Ry. Earnings, etc.**

Gross earnings for April, \$282,900; working expenses, \$109,500; net earnings, \$173,400 against \$234,300 gross; \$176,200 working expenses, and \$58,100 net earnings for April, 1904. Gross earnings for ten months ended April 30, \$3,133,500; net earnings \$1,025,000 against \$2,551,100 gross, and \$843,300 net for same period 1903-04. Mileage increased to 1,876, against 1,350. Approximate earnings for May, \$349,400 against \$276,100 for May, 1904.

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

Gross earnings, working expenses, net profits, increases or decreases over 1903-04, from July 1, 1904:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
J'ly	\$4,398,833.95	\$2,949,181.81	\$1,449,652.14	\$131,125.02+
Aug.	4,474,237.64	2,946,307.21	1,527,930.43	93,827.93+
Sept.	4,250,876.03	2,952,068.47	1,298,807.56	66,541.75+
Oct.	4,743,961.93	3,177,848.02	1,566,113.91	87,913.10+
Nov.	4,751,970.43	3,082,395.69	1,669,574.74	191,593.56+
Dec.	4,852,142.45	2,899,473.62	1,952,668.83	81,523.57+
Jan.	3,054,501.93	2,829,833.46	422,668.47	65,016.44+
Feb.	3,036,094.05	2,753,922.73	302,171.32	219,630.51+
Mar.	4,134,961.50	2,950,134.46	1,182,827.04	331,972.76+
April	4,229,144.50	2,697,338.29	1,531,806.21	119,273.61+
Total	\$41,822,724.41	\$29,238,503.76	\$12,584,220.65	\$1,212,592.05+

Approximate earnings for May, \$4,203,000 against \$4,088,000, for May, 1904.

**DULUTH, SOUTH SHORE AND ATLANTIC RY.**—Gross earnings for April, \$211,402.93; net earnings, \$62,001.03 against \$186,253.35 gross and \$59,616.81 net for April, 1904. Net earnings for ten months ended April 30,

\$728,210.44, against \$648,331.89 for same period, 1903-04. Approximate earnings for May \$254,551 against \$183,852 for May, 1904.

**MINERAL RANGE RY.**—Approximate earnings for May, \$58,895, against \$53,341 for May, 1904.

**MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.**—Gross earnings for April, \$654,863.07; net earnings, \$249,564.73, against \$474,765.00 gross and \$176,769.23 net for April, 1904. Net earnings for ten months ended April 30, \$3,591,202.11 against \$2,756,967.64 for same period 1903-04. Approximate earnings for May, \$626,450, against \$465,454 for May, 1904.

**Canadian Pacific Railway Land Sales.**

	Acres.		Amount.	
	1904-05	1903-04	1904-05	1903-04
July	36,425.75	267,647.32	\$177,473.94	\$1,020,444.70
Aug.	15,669.90	293,339.45	88,735.88	1,217,529.81
Sept.	16,470.02	60,441.12	73,642.96	268,757.99
Oct.	23,792.84	15,950.07	104,843.47	236,611.59
Nov.	23,392.84	22,593.95	112,261.70	107,365.21
Dec.	32,196.59	30,146.00	142,583.40	125,676.00
Jan.	34,590.41	116,840.78	141,759.50	386,649.88
Feb.	27,593.56	14,729.69	116,278.76	73,428.94
Mar.	15,906.61	12,992.06	87,576.00	59,660.03
April	22,030.37	24,064.44	125,210.08	116,349.19
May	58,095.21	51,477.16	282,796.37	203,768.02
Total	305,984.10	880,199.04	\$1,453,153.06	\$3,870,201.36

**Grand Trunk Ry. Earnings, Expenses, etc.**

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.

	1905.	1904.	Increase.	Decrease.
Jan.	\$2,556,340	\$2,253,378	\$302,962	....
Feb.	2,163,683	1,649,525	514,158	....
Mar.	2,911,267	2,649,779	261,488	....
April	2,850,125	2,638,946	111,179	....
Total	\$10,481,415	\$9,391,628	\$1,089,787	....

**GRAND TRUNK RY. CO.**

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

Revenue for April:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£466,000	£474,200	....	£8,200
Working expenses	295,400	292,100	£3,300	....
Net profit	£170,600	£182,100	....	£11,500

Aggregate from Jan. 1 to April 30:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£1,692,900	£1,522,000	£170,900	....
Working expenses	1,240,900	1,243,400	....	£2,500
Net profit	£452,000	£278,600	£173,400	....

**GRAND TRUNK WESTERN RY. CO.**

Revenue for April:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£99,000	£92,800	£6,200	....
Working expenses	78,000	73,400	4,600	....
Net profit	£21,000	£19,400	£1,600	....

Aggregate from Jan. 1 to April 30:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£367,200	£336,800	£30,400	....
Working expenses	310,800	297,200	13,600	....
Net profit	£56,400	£39,600	£16,800	....

**DETROIT, GRAND HAVEN & MILWAUKEE RY. CO.**

Revenue for April:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£20,600	£16,300	£4,300	....
Working expenses	16,400	15,900	500	....
Net profit	£4,200	£400	£3,800	....

Aggregate from Jan. 1 to April 30:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£93,100	£70,800	£22,300	....
Working expenses	74,600	63,900	10,700	....
Net profit	£18,500	£6,900	£11,600	....

**TRAFFIC RECEIPTS OF THE SYSTEM.**

Aggregate from Jan. 1 to May 31:

	1905.	1904.	Increase.	Decrease.
Grand Trunk	£2,199,243	£2,021,461	£177,782	....
G. T. Western	449,934	429,102	11,932	....
D. G. H. & M.	110,371	99,943	10,428	....
Total	£2,759,548	£2,550,506	£209,042	....

A. R. Macdonell, contractor for the Temiskaming and Northern Ontario Ry., recently purchased three second-hand locomotives from F. M. Hicks & Co., Chicago, Ill. U.S. railway periodicals stated that the locomotives had been purchased by the Commissioners for the Temiskaming and Northern Ontario Ry.

**Master Car Builders' Convention.**

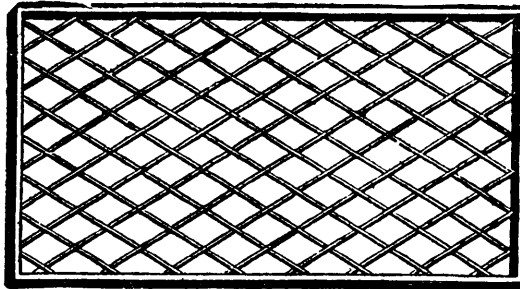
The annual convention of the Master Car Builders' Association was held at Manhattan Beach, N.Y., June 19, 20 and 21. The report showed a membership of 607, and a balance of \$3,469.38 in hand. The membership fee for the current year is \$4 per vote. Several changes in the constitution were proposed, making it permissive for a larger number of desirable car department men to become members. After an address by E. A. Moseley of the Interstate Commerce Commission, the reports of committees were taken up. The committee on triple valve tests reported that two applications for tests of valves had been received since April 15, too late to be dealt with this year. The committee on brake shoe tests reported the testing of four brake shoes. The report of the committee on standard and recommended practices was discussed and dealt with at length. The recommendations on journal boxes and details were referred to letter ballot. Those on wedges were defeated. Those on brake beams were referred to letter ballot. The recommendations on grab irons and hand holds were given an extended discussion, and the following change made: The lower rounds on ladders with wooden sides are to be made straight and not with offset. The recommendations as thus modified, were submitted to letter ballot. The recommendations concerning centre plates were defeated. Recommendations on uncoupling arrangements for couplers were submitted to letter ballot. Those under high-speed foundation brake gear were adopted. The recommendations on permanent stake pockets were submitted to letter ballot. The question of temporary stake pockets was referred to the committee on loading long materials. The report of the committee was accepted as a whole and a committee was appointed to consider the height of brake staffs.

A topical discussion followed on the question, "Is not the method now commonly followed of securing yokes to couplers with rivets from 1-16 to 1/4 in. smaller than the holes unmechanical and ineffective?"—the general opinion being that the present method was unsatisfactory, and it was finally decided to refer it to the standing committee on couplers to prepare designs and specifications. Another topical discussion was on the question of the best method of preventing or minimizing damage to the metal parts of the right of way from salt water drippings, but no action was taken. The report of the committee on air brake hose recommended that angle cock be placed 30 ins. from the centre of the car and be turned inwards at an angle of 30 degrees. It was also recommended that specifications be prepared especially adapted for woven hose. The report was approved and its recommendations will be submitted to letter ballot. Other committees reporting were those on M.C.B. couplers, revision of rules for loading long materials, arbitration, revision of passenger car rules, truck arch bars, safety appliances, steam line connections, tank cars, stenciling cars, safety chains. Other topical discussions took place on the establishment of a standard height from top of rail to centre of drawbar for passenger cars; the advisability of using malleable iron for wearing surfaces; breakages of flange on cast iron wheels; higher breaking power of freight trains.

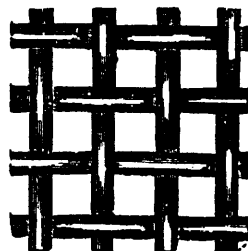
The officers for the current year are:—President, J. Becker, Supervisor Yazoo and Mississippi Valley Rd., Leland, Miss.; First Vice-President, W. E. Fowler, Master Car Builder C.P.R., Montreal; Second Vice-President, G. N. Dow, Master Car Builder Lake Shore and Michigan Southern Rd., Cleveland, Ohio; Third Vice-President, R. F. McKenna, Master Car Builder, Delaware, Lackawanna and Western Rd., Scranton, Pa.; Treasurer, J. Kirby; members of Executive: H. M. Carson, G. W. Wildin, T. H. Curtis.



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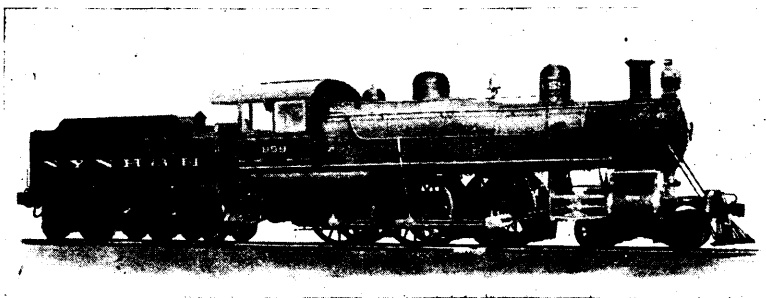
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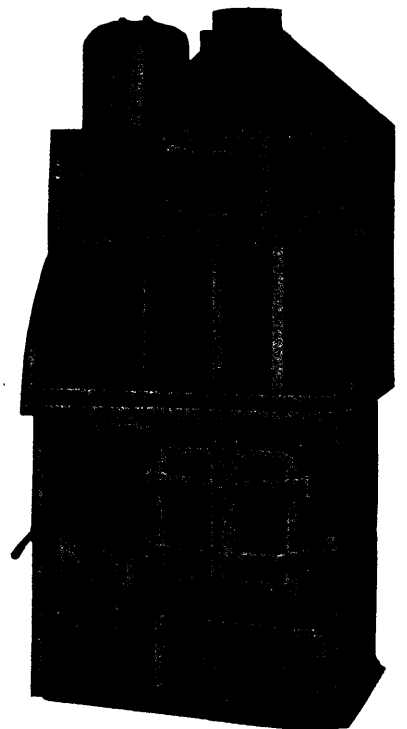
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**Master Mechanics' Convention.**

The annual convention of the American Railway Master Mechanics' Association was held at Manhattan Beach, N.Y., June 14, 15 and 16. There were present about 300 members, some 15% higher than any previous record. P. H. Peck, President, referred to the negotiations that had taken place respecting the proposed consolidation of the Master Mechanics' and the Master Car Builders' Associations, but at a joint meeting of the executive committees of both associations it was the unanimous opinion that nothing could be gained by any closer relations than now exist between the two associations. At the last convention it was proposed to procure a fund not exceeding \$5,000 for the purpose of enabling a special committee to conduct a series of tests and experiments concerning the value of varying proportions and dimensions of heating surface, grate surface, and such other important features of boiler design. There is a fund now exceeding \$3,000 for use this year, and arrangements had been made for a locomotive of modern design. The Purdue University plant will be available in the fall. The necessary steps had been taken for the appointment of representative members in accordance with the action of the Association at its last year's convention, and already the number of such representatives appointed was very gratifying. The secretary reported the membership to be 738 active, 17 associate, and 38 honorary members. The financial statement showed a balance of \$1,500 in hand. The membership fee for the year was fixed at \$5.

The committee on the proper loading of locomotives presented a report consisting largely of extracts from replies received to a circular of inquiry sent to members asking "What are the factors that affect economical loading of locomotives?" These factors vary but slightly in the opinion of a large number of replies, and consist principally of gradients, curvatures, quality of coal, speed, conditions of track, weather conditions, and density of traffic. The condition of the locomotive was also mentioned as a factor in some of the replies, and it seems in general, both from the replies and the discussion, that local conditions were of great importance. In the discussion, H. H. Vaughan, Superintendent of Motive Power, C.P.R., requested information concerning the practice of the members in regard to a reduction of rating for locomotives in poor condition. This request brought out the information that in some cases there was no provision made for a lower rating, but that some roads had a series of ratings amounting to certain percentages of the maximum which were given to locomotives which had finished certain percentages of the required mileage. This, however, did not seem to be general practice.

The report of the committee, of which H. H. Vaughan is a member, on locomotives of the Pennsylvania Rd. at the St. Louis Exposition, stated that tests have been finished on eight locomotives and that the results would be available in a short time. The committee was continued.

The committee on locomotive front end, formed to carry to completion the tests outlined in its report to the convention of 1903, reported through H. H. Vaughan, its chairman. An individual paper by H. H. Vaughan on "The value of superheat steam in locomotive work, called forth, the Railway and Engineering Review says, expressions of appreciation for its completeness and value from several of the members. C. A. Seley called attention to the fact mentioned in the paper that no loss can be expected by the use of superheaters. This paper was but briefly discussed because its completeness offered but little chance for discussion. It was suggested by one member that superheating, because of

its economy in coal, might offer a chance of aiding the work of the fireman. Ed. Sauvage, of the Eastern Railway of France, a visitor to the convention, and a delegate at the recent International Railway Conference at Washington, stated that in France the matter of superheating was just being undertaken and that he thought the results shown in this paper would give it a large impetus in the near future. H. H. Vaughan, in answering a few questions, stated that he thought a superheater engine which gave the same economy as a compound was preferable to the latter because of the large amount of trouble given by the compounds in cold weather.

A report on the shrinkage allowance for tires was presented by the committee, of which J. E. Muhlfeld, of the Baltimore and Ohio Rd., formerly Superintendent of Motive Power Intercolonial Ry., was a member, and was followed by a general discussion. Wheel centres, it was stated, are being made too light, especially in the rim. The committee was continued and instructed to include the subjects of wheel centre design and tire fasteners in their investigations. The paper on motive power terminals brought out many interesting points concerning practices in different sections of country. W. D. Robb, of the G.T.R., said it was their practice to put heating pipes around the pit rails and centre of turntables, to prevent trouble with snow. Designs presented in the paper were criticised by several members. One member objected to the use of mechanical ash-handling devices because of trouble in winter, while others reported them most satisfactory and economical.

The officers for the current year are:—President, H. F. Ball, Lake Shore and Michigan Southern Ry.; First Vice-President, J. F. Deems, New York Central Rd.; Second Vice-President, W. McIntosh, Central Railroad of New Jersey; Third Vice-President, H. H. Vaughan, C.P.R.; Treasurer, A. Sinclair; Executive Committee: C. A. Seley, G. W. Waldin, A. E. Mitchell, two years; A. E. Manchester, J. F. Walsh, and F. H. Clark, one year.

**Babcock & Wilcox, Ltd.,** Montreal, report the following among recent orders for their water-tube boilers. The Dominion Government last fall installed 4 B. & W. marine boilers of 1,125 h.p. in the icebreaking steamer *Montcalm*, which has been employed on the St. Lawrence during the past winter. Among other recent orders are the following: C.P.R. Angus shops, Montreal, 1,400 h.p. additional, equipped with Babcock patent superheaters and automatic chain grate stokers. Winnipeg Electric Ry., 2,000 h.p. additional equipped with Neemes patent shaking grates. South-Western Traction Co., London, Ont., 900 h.p. Singer Manufacturing Co., St. John's, Que., 1,625 h.p. C.P.R. shops, Winnipeg, 1,250 h.p. with superheaters; C.P.R. Winnipeg hotel and station, 800 h.p. Central Electric Co., 200 h.p. additional. J. R. Booth, Ottawa, 2,000 h.p. boilers and superheaters. Winnipeg city water and electric light plant, 500 h.p. additional, equipped with Babcock patent superheaters and automatic chain grate stokers. Dominion Coal Co., Glace Bay, N.S., 2,500 h.p. Belgo-Canadian Pulp and Paper Co., Ltd., 500 h.p. F. W. Bird & Son, Hamilton, Ont., 75 h.p.

The Imperial Limited, the C.P.R. express from Montreal to Vancouver, was put on the run for the season June 4.

The locomotive equipment for the G.T. Pacific Ry. will probably be of four types, suited to the requirements of the different sections of the line. It is stated that they will be uniform with those of the G.T.R., and that probably a number of the G.T.R.'s older locomotives will be transferred to the G.T. Pacific Ry. for construction purposes.

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

**Branch to Stratford.**—The question of a branch line from the line under construction between Guelph and Goderich, into Stratford, Ont., continues to be the subject of discussion. The city council offers to submit a by-law for \$30,000 to pay the cost of entrance into the city, but the C.P.R. asks for free right-of-way and payment of all expenses arising from damages and the raising of streets. A satisfactory route has been surveyed. There is an agitation in the city and the district, which would be traversed by the branch, in favor of an electric line, and local reports state that the C.P.R. is agreeable to the construction of an electric line, but that certain local interests are strongly in favor of a steam railway.

**Second Track Work near Toronto.**—The C.P.R. has laid a second track on its freight line between North Toronto and Toronto Junction, and between the end of the yard at Toronto Junction and Lambton.

**Toronto-Sudbury Line.**—Good progress has been made with the line between the transcontinental line at Romford, Ont., and Bolton, on the Toronto-Owen Sound line. J. W. Leonard, Manager of Construction, is reported to have stated in an interview at Montreal June 26, that there were 4,000 men employed on construction, that seven steam shovels were engaged on the grade, and that 80 miles of grading had been completed, and that it was expected to have the whole line ready for tracklaying in 1907. The contract for the line southerly from Romford to Byng Inlet was let to Foley Bros., and Larson, and G. S. Deeks & Co. have a contract between Bolton and Parry Sound.

The located line of this branch and that of the James Bay Ry. overlap at a number of points, and G. A. Mountain, Chief Engineer of the Board of Railway Commissioners, is engaged in endeavoring to adjust the matter.

**Fort William-Winnipeg Second Track.**—We were advised June 17 that it was not then possible to give any information in regard to this projected work.

**Winnipeg Shops.**—The new shops at Winnipeg are practically completed and it is expected to transfer the whole of the work to them during July.

**Moose Jaw to The Elbow.**—A letter from W. Whyte, Second Vice-President, to the Moose Jaw, Assa., Board of Trade, contained the statement that a survey would be made for a line from Moose Jaw to The Elbow of the Saskatchewan River, a distance of about 200 miles. A late report from Moose Jaw states that the survey has been started.

**Strathcona to Edmonton.**—Plans have been filed for the proposed extension of the Calgary and Edmonton Ry. from the present terminus at Strathcona into Edmonton, Alta. The plans show a line from Strathcona station northwesterly to the river at Legal Ave., thence across the river to the foot of 10th st., thence to the undivided block of the Hudson's Bay Co.'s land north of Jasper Ave. The plans do not mention a bridge, but connection between the points named on the plan could only be made by a bridge 1,150 ft. long, and 220 ft. high.

**Diversion at Palliser.**—The diversion of the transcontinental line at Palliser, B.C.,  $2\frac{1}{2}$  miles, has been completed. The work involved the construction of a tunnel, the erection of a bridge, and the shifting of the track, the object being to avoid a bad crossing of a mountain creek.

**Pitt River Bridge.**—Concrete piers are being erected at a cost of about \$40,000 to replace wooden piers of the bridge over Pitt River. The B.C. General Contract Co.,

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Vancouver, has the contract. The steel superstructure, it is expected, will be placed next year.

**Kootenay Central Ry.**—W. Whyte, Second Vice-President, is reported to have stated in a recent interview at Nelson, B.C., that construction will be commenced on this projected line from Golden to Fort Steele, B.C., during the present year. Construction would be started at Golden.

The Robb Engineering Co., Amherst, N.S., has received an order from the Dominion Coal Co. for two 100-horse power Robb-Mumford boilers.

The International Water Lines Association has issued its second list of passenger fares, via through combination water routes for the season of navigation of 1905.

The Prince Edward Island Ry. rolling stock—passenger, freight and stock cars—are being equipped with M.C.B. couplers, which are being supplied from the Intercolonial Ry. stores at Moncton, N.B. The work is expected to run into the next fiscal year.

"I have here," said the amateur inventor, as he extracted a small model from his grip, "a device that will warn the engineer of a train when anyone is crossing the track."

"No good," rejoined the railway manager. "It's the party crossing the track that requires the warning."

The Board of Railway Commissioners will hold the following sittings in Western Canada during Sept. for the hearing of matters specially affecting the West: Fort William, Ont., Sept. 7, 8 and 9; Winnipeg, Sept. 11, 12 and 13, and New Westminster, B.C., Sept. 19.

The G. B. Meadows Iron, Wire and Brass Manufacturing Co. has purchased a site at the corner of Wellington and Draper streets, Toronto, and is erecting a new factory there. The company has been registered in Quebec, under the provisions of the act relating to extra-provincial corporations.

The Great Lakes and St. Lawrence Rate Committee has been advised by the Lake Michigan and Lake Superior Transportation Co. that, pending the construction of its new equipment it has suspended active operations, and for the present a portion of its territory in the Lake Superior district will be served from Chicago and Milwaukee by the Graham and Morton Transportation Co.

The report of the directors of the Newcastle Harbor Co., for the year ended June 19, presented at the annual meeting of shareholders held at Newcastle, Ont., that day, showed that the company's elevator received less grain for storage than in the previous year, owing largely to the farmers going in more largely for stock raising, and there was a considerable falling off in the receipts of coal. The main cause of the falling off in the coal receipts has been that there is not sufficient depth of water to enable large schooners or barges to get in.

The expenditure also showed an increase, due to repairs to lighthouse and elevator. The repairs to the wharf and breakwater by the Dominion Government had made satisfactory progress. When the harbor had been dredged and a new cut made it was expected that a satisfactory increase of business would be shown. It was stated that 41,035 bush. of grain were stored and 77 vessels made calls. The total receipts were \$997.56 and the expenditure \$889.17. Following are the officers and directors for the current year: President, Dr. R. McIntosh; Vice-President, W. Foster; other directors: W. Grose, H. Murray, K.C., Toronto, and W. W. Tamblyn, Bowmanville, Ont.

**Sink-Holes on the G.T.R.**

By Leslie A. Waterbury.

The G.T.R. has experienced considerable difficulty in many places in Michigan with sink-holes. One of these is located between Haslett Park and Lansing, near mile-post 107. These sink-holes are caused by small lakes which are covered with a layer of peat bog, so as to present an appearance of ordinary marsh land. The formation of such bogs is described by N. S. Shaler, in the Tenth Annual Report of the U.S. Geological Survey. The diagram illustrating this is taken from the same report. The formation of the crust BB is caused by a growth of water-moss, which requires no under soil for its roots to penetrate, the species of sphagnum being the most

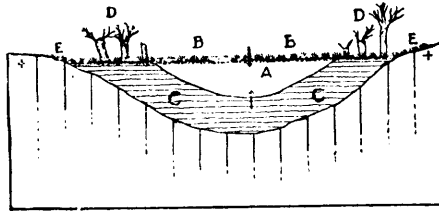


Fig. 1. Showing Formation of Peat Bog.

prominent of this class of plants. The growth begins near the shore and gradually extends over the surface, until the entire pond has become covered with a dense mat, which increases in thickness, collecting soil washed down from the surrounding hills, thus affording opportunity for other vegetable growths, and in this way a considerable crust is formed. In the diagram, A represents the remaining portion of the water sea; CC represents muck, or a peaty mass derived from the disintegration of the surface layer; DD shows the solid part of the swamp, bearing trees near the shore, and further out bushes; EE indicates climbing bog, which may be absent; ++ shows the original water-level, and the arrows indicate the direction of growth of the upper and under layers of peat.

In the case of the sink-hole near Haslett Park, the pond has a crust about 6 ft. thick. The upper portion of the crust is quite firm and solid, but gets softer beneath, so that the bottom, which is in contact with the water, is soft and spongy. Upon this crust there is a considerable growth of trees and bushes. Some of the trees are of very good size, yet their roots do not penetrate much below the surface, but spread out in the upper portion of the peat crust. As would be expected,

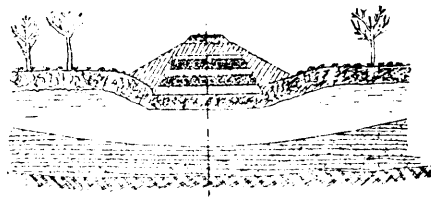


Fig. 2.—Cross Section Showing Original Construction over Peat Bog.

from the character of its formation, the crust covering the lake is light, and is composed largely of organic matter. Three air-dried samples analyzed at the Agricultural College were found to be composed of the following ingredients: Sample 1, taken south of hole and 1 ft. from surface—Organic matter, 79.06%; moisture, 8.92%; mineral matter, 12.007%; total, 99.987%. Sample 2—taken 100 ft. south of hole in crust, from ground exposed by a tree which had been blown over—Moisture, 10%; organic matter, 80%; mineral matter, 10%; total, 100%. Sample 3, taken from water at north side of hole—Moisture, 10.57%; organic matter, 83.74%; mineral matter, 5.691%; total, 100.001%.

The specific gravity of this crust is very nearly 1. However, the material as it is around the sink-hole has a considerable supporting power. Pieces of it which were placed in water in a frozen condition floated but generally sank after thawing. This is perhaps due to the fact that marsh gas is generated by the decomposition, and also to the fact that the crust would withstand tension so that any load coming upon the surface would not depend entirely upon the floating power of the crust beneath for its support.

It was upon this bog that the road was originally built. To add to the supporting power of the crust, a large quantity of timber was first laid upon the surface, forming a corduroy foundation some 20 ft. deep. Upon this foundation the embankment and the

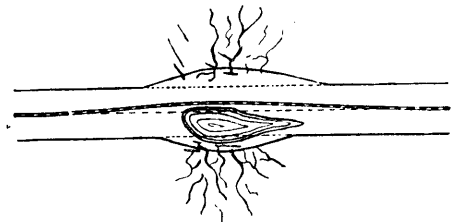


Fig. 3.—Plan of Sink-Hole Showing Distortion in Alignment, and Cracks at Sides.

track were placed. The construction is shown in Fig. 2. But little difficulty was experienced at this point until preparations were begun for laying double track. At this time, the dirt, which was dumped beside the old track for the purpose of widening the embankment, gradually sank out of sight, leaving a pond of water, at the same time forcing the crust apart and pushing the track and right-of-way fences out of line. The plan of the sink-hole, fig. 3, shows the alignment of the track, and approximately that of the fences as it was Nov. 26, 1902. The track had been further out of line than the diagram shows, but had been thrown back before the displacement was measured. The broken lines show the original positions of track and fences, and the full lines show them after being distorted. The portion of the track which had been moved the most was 19½ ft. from its original position when measured. The portion of the fence which had been displaced most was 38 ft. from its original position.

The material used for widening the embankment was till, a mixture of sand and clay, and was much heavier than the peat crust. This filling carried down with it not

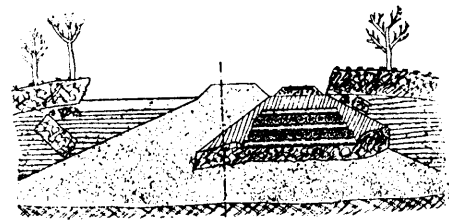
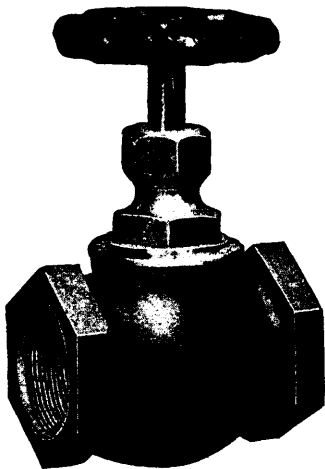


Fig. 4.—Cross Section Showing Displacement of Original Embankment, and Displacement Muck by Filling, Causing Crust at the Sides to be Raised.

only the crust beside the track, but also the embankment upon which the track rested. It also broke the crust so that the track sank under the action of traffic. Whenever a train passed, the track would sink four or five-tenths of a foot, and would then have to be jacked up and filled in beneath before traffic could be resumed. Cinders were used for the filling directly under the track, on account of lightness, while the filling at the side was continued with till.

The sinking of the track caused the peat layer beneath to break away from that adja-



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**A. A. Heard,**  
Gen. Passenger Agent, - - ALBANY, N.Y.

The differences between the G.T.R. and its telegraphers have been adjusted after several conferences between C. M. Hays, second Vice-President and General Manager, and F. H. McGuigan, Fourth Vice-President, and representatives of the Order of Railroad Telegraphers. A new schedule is being prepared on the basis of the terms arranged.



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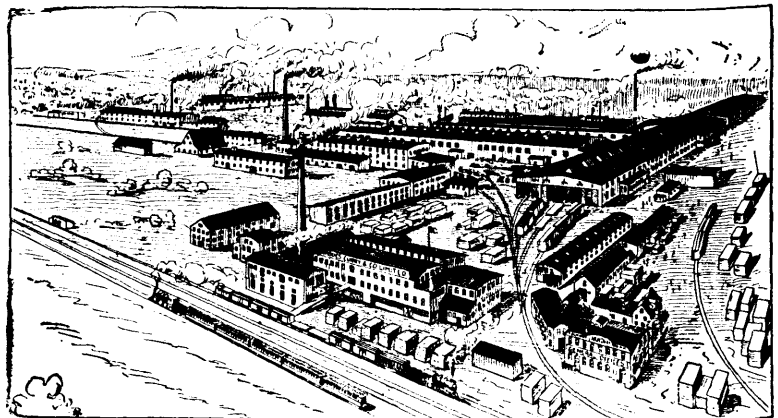
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cent on each side (fig. 4). Then the filling of the heavy material, together with the consequent displacement of the muck beneath, caused the peat crust on each side to be floated upward. The amount of vertical lift near the right-of-way lines was at least 6 ft. Thus a cone was formed with a radius of from 250 to 300 ft. The lifting of the crust developed cracks from 1 to 2 ft. wide near the track, and radiating from the centre to the base of the cone, somewhat as shown in the plan. A section of the hole along the track is shown in fig. 5, which is taken from the company's profile. The bottom was determined by soundings. The profile shows the hole to be about 28 ft. deep.

The portion of the pond over which the crust first broke extends from about station 120 to station 124. Into this opening 30,000

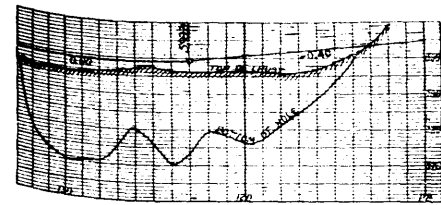


Fig. 5.—Profile Showing Section of Sink-Hole along Line of Track.

cu. yds. of material was placed before the track stopped sinking. Between stations 115 and 120 the embankment was widened upon the top of the crust, as it was thought there would be sufficient support at that point. Since that time this section has also gone down, and has required 10,000 cu. yds. of material to form an embankment of sufficient width for double track. This filling has raised the crust on one side of the track, but not on the other. Over the remaining portion of the pond between stations 124 and 133 the embankment has been widened to its full width upon the peat crust, but it is the intention of the company to fill the hole beneath this next spring.

Filling placed in water assumes a flat side slope, but in this case it does not seem probable that it can be as flat as the slope of the cone, since the cone extends from 250 to 300 ft. on each side. If this cone which has been displaced were filled with till it would require from 14,000 to 15,000 cu. yds.; or, since the total amount which had been placed in the hole at that time was 30,000 cu. yds., about one-half of the total filling. The distance of the base of the cone from the bottom of the pond would be about 20 ft., so that it would be impossible to fill the hole in this manner with 30,000 cu. yds. It is therefore probable that there is quite a quantity of muck or semi-fluid material near the bottom of the lake, caused by the disintegration of the peat crust. This muck has been displaced by the heavier filling, and has been forced out on each side so as to lift the crust. The probable cross-section after this has occurred is shown in fig. 4. The diagram also shows about the amount which the track was displaced.

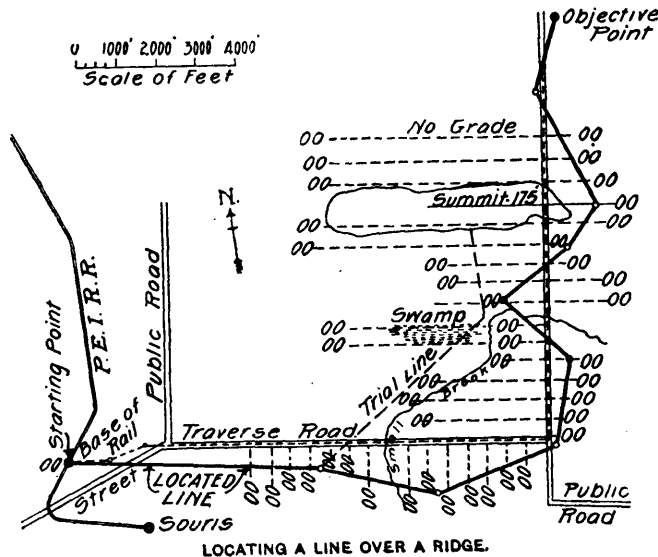
There are many other sink-holes in the vicinity of the one described, there being at least eight such formations within a distance of six miles. The largest of these is 55 ft. deep, and has already received over 60,000 cu. yds. of filling. It is the intention of the company to break the crust above these holes, a little at a time, and to continue the filling until the track shall have a solid foundation.

If coarser material, such as rock or coarse gravel were obtainable for filling, or if the present material should be placed in bags, a much smaller amount would be required, since it would not be floated out like till, which is in a finely divided state. However, under the present conditions the method used is probably the most economical.

**Locating a Line Over a Ridge.**

J. A. Macdonald writes from Hermanville, P.E.I.: "During the past season I was engaged in locating a branch line from Souris, on the Prince Edward Island Ry., to a point some 13 miles east. No great engineering difficulties were encountered after the first 4 or 5 miles were located, but these 5 miles presented some difficulties owing to a high natural ridge, which crossed our path some two miles out. This ridge was 175 ft. higher than base of rail—our starting point—and the maximum gradient was 1 1/4%, so that to get over the ridge without too much round-about, or too deep a cutting, was somewhat of a problem. The accompanying plan will explain the methods used and the trial and final location of the route.

"The first thing we did was to traverse the route as shown by dotted lines on the road. For this work I used a 14-inch vernier compass. The leveller followed, taking levels on each hundred feet. I may say that this was done after making a trial line, shown by dotted lines on the plan. Having taken the levels past the ridge or summit, cross sections were taken at each 500 ft., running in on either side of road till grade was obtained, a profile having been made from the traverse and levels and the maximum gradient put on.



B.

A. A. Burke has been appointed town ticket agent of the C.P.R. at Mount Forest, Ont., succeeding A. McKean, resigned.

D. McNicoll, Vice-President C.P.R., left Montreal June 26, for a trip to the Pacific coast, intending to be absent about a month.

C. A. Pipon, Passenger Agent for Ontario for the International Mercantile Marine Co., has gone to Jersey, Channel Islands, where his father, General Pipon, is seriously ill.

G. H. Smith, heretofore Assistant General Freight Agent Western Division C.P.R., at Calgary, Alta., has been appointed Assistant General Freight Agent, Central Division, at Winnipeg.

The appropriation made by the Dominion Parliament for the financial year 1905-06, for rolling stock for the Intercolonial Ry., is to provide 12 passenger locomotives, 10 freight locomotives, three switching engines, 130 ballast cars, four snow plows, and two flangers. Nothing has been voted for the P.E.I. Ry.

"Having finished the cross-sectioning, as shown by the dotted lines on the plan, a map of the locality was made and grade points marked thereon. Now we had our latitude and complete data, and began running the final line, and in doing so sought the grade points as near as might be, as it appears on the plan herewith. Now we had a line almost at grade throughout, with but little fill or cut, and something like a mile longer than our first trial line.

"By looking at the plan it will be seen that our trial line ran into a swamp situated on the summit of a ridge—a very rare occurrence—which involved a 12 to 15 ft. cut through the swamp. This was not a very good location for a railway line, and no lower ground could be obtained to the left, which was good reason for abandoning it. The work of cross-sectioning these four miles took our party a week, and we believe was a week well and economically spent."—Railway Age.

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### Grain Elevator Notes.

The Barnett and Record Co., elevator builders, Minneapolis, Minn., has been authorized to do business in Quebec, as an extra-provincial company. W. H. Tamm of St. Henri, Montreal, is its principal agent.

The International Elevator Co.'s elevator at St. Boniface, Man., which was completed in May, is situated in the outer angle formed by the crossing of the C.P.R. and the Canadian Northern Railway. The company was formed by the consolidation of the Colonial Elevator Co. and the Andrews-Gage Grain Co.

Work has been commenced on the new flour mills at Keewatin, Ont., for the Keewatin Flour Mill Co. The mill will have a capacity of 3,000 barrels a day. The company proposes to erect a 500,000 bush. elevator at the mill, and will also build a number of small elevators throughout the Northwest for the purpose of wheat buying.

The McHugh-Christensen Co.'s elevators which number 20, and are situated at various points on the C.P.R. line in Manitoba, are reported to have been sold to McLaughlin and Ellis, who already own a number of elevators throughout the same territory. The elevators have a capacity varying from 25,000 to 60,000 bush. It is also reported that McLaughlin and Ellis have resold those of the McHugh-Christensen elevators at the points where they previously had elevators to the Royal Canadian Flour Mills Co.

The G.T.R. has leased a site at Tiffin, about two miles east of Midland, Ont., to E. R. Bacon, of Midland, and Chicago, Ill., for the purpose of erecting an 800,000 bush. elevator thereon. Work is to be started on the building at once, and it is expected to have it completed in time for the handling of the present season's crops. A local press report states that the elevator proper will be constructed of steel, and the engine house, etc., of brick, and that in connection with the work the G.T.R. tracks will have to be straightened out, involving the removal of a bank 180 ft. wide and 13 ft. deep. F. Kontcher was recently in the town making arrangements on behalf of E. R. Bacon for proceeding with construction.

The Western Canada Flour Mills Co. has been organized in Toronto, and is an amalgamation of the A. Kelly Milling Co., Brandon, Man., and the Lake Huron and Manitoba Milling Co., of Goderich, Ont. The new company proposes to erect a 4,000 barrel mill at St. Boniface, Man., and to erect a complete line of elevators throughout Manitoba. The capacity of the Brandon and Goderich mills is 2,500 barrels of flour and 500 barrels of oatmeal a day, and 26 elevators are operated in connection. The officers and directors of the new organization are: President, A. Kelly, Brandon, Man.; Vice-President and General Manager, S. A. McGaw, Goderich, Ont.; Treasurer, E. J. Barclay, Brandon; Secretary, A. Hills, Toronto; other directors: W. J. Lindsay, Brandon; J. J. Wright, L. Lukes and A. J. Mitchell, Toronto.

**Michigan Central Rd.**—W. S. Kinnear, heretofore Assistant General Manager and Chief Engineer, has resigned the position of Chief Engineer. He will have charge of the construction of the tunnel under the Detroit River. He has also been elected Vice-President of the Indiana Harbor Rd., a subsidiary company.

The Canadian Freight Association at its last annual meeting left the appointment of Secretary-Treasurer and Manager of the Car Service Association to the executive committee. John Earls is continuing to act in both capacities, but it is stated that in the near future there will be two appointments. J. E. Duval, at present Chief Inspector of

Accidents, etc., for the Board of Railway Commissioners, will, it is said, be Manager of the Car Service Association. The selection for Secretary-Treasurer of the Canadian Freight Association has not been announced, but it is believed that there will also be a change in the appointee for that position.

### ELECTRIC RAILWAYS.

#### Canadian Street Ry. Association.

The quarterly meeting was held in Toronto, June 2 and 3, the President, W. G. Ross, Managing Director of the Montreal Street Ry., in the chair. The others present were:—Dr. S. Ritter Ickes, Treasurer, Grand Valley Ry.; C. K. Green, Traffic Superintendent; G. H. Levy, Solicitor, Hamilton Cataract Power, Light and Traction Co.; J. E. Rothery, Superintendent International Railway Co., Niagara Falls, Ont.; C. E. A. Carr, General Manager London, Ont., Street Ry.; P. Dube, Secretary, D. McDonald, Manager, Montreal Street Ry.; T. J. McIntosh, Niagara, St. Catharines and Toronto Ry.; Col. H. H. McLean, K.C., Vice-President St. John, N.B., Ry.; J. D. McArthur, Superintendent, C. L. Wilson, Traffic Manager, Toronto and York Radial Ry.; W. H. Moore, Assistant to the President, R. J. Fleming, General Manager, J. M. Smith, Comptroller, J. Gunn, Superintendent, A. D. Grantham, Purchasing Agent, W. H. Nix, Head Roadmaster, Toronto Ry.; A. H. Royce, Vice-President Toronto Suburban Ry., and Acton Burrows, publisher of THE RAILWAY AND SHIPPING WORLD, the official organ of the Association.

The Executive Committee presented a report largely dealing with recent Provincial legislation, which was very fully discussed. The action of the New Brunswick Legislature in passing an act varying the contract between the St. John Ry. Co. and the city of St. John, and taking away certain vested rights of the company, was very strongly condemned, and the opinion was freely expressed that such legislation would effectually prevent the investment of capital in New Brunswick enterprises. A report was also presented from the special committee on freight rates. The committee on fenders asked for further time in which to report. A sample fender, of the cow catcher type, which W. H. Moore had had built on the plan of some he had recently seen on rural lines in the U.S., was displayed in the room and was fully discussed.

The following papers were read:—Parks and Park Amusements, by J. D. McArthur, Superintendent Toronto and York Radial Ry; Commutation Tickets, by C. K. Green, Traffic Superintendent Hamilton Cataract Power, Light and Traction Co.; Freight Development on Interurban Roads, by E. F. Seixas, General Manager Niagara, St. Catharines and Toronto Ry.; Discipline of Street Railway Men, by J. E. Hutcheson, Superintendent Ottawa Electric Ry. The discussion on the last paper was left over until next meeting, but the others were very fully considered and much valuable information was given by the different members.

It was decided to hold the next quarterly meeting at St. John, N.B., in September, the date to be fixed by the Executive Committee.

The officers were all re-elected, it being thought that no change should be made as they had only been in office six months. They are as follows:—President, W. G. Ross, Montreal; Vice-President, W. H. Moore, Toronto; Executive Committee, C. E. A. Carr, London, Ont.; E. G. Evans, Quebec; D. McDonald, Montreal; Secretary-Treasurer, A. H. Royce, Toronto; Counsel, Col. H. H. McLean, K.C., St. John, N.B.

On the afternoons of both days the members witnessed the Ontario Jockey Club's races at the Woodbine, the Toronto Ry. Co.'s

official car being placed at their disposal. On the evening of June 3, the members attending the meeting and a number of other guests were entertained at a magnificent dinner at the King Edward hotel by the Toronto Ry. Co., W. H. Moore presiding. A number of toasts were proposed and responded to, and the evening was enlivened by vocal and instrumental music and other features which were most thoughtfully and hospitably provided.

#### Projects, Construction and Betterments.

**Brantford and Hamilton Electric Ry.**—The negotiations with the Hamilton, Ancaster and Brantford Ry. in connection with the construction of an electric railway between Hamilton and Brantford, Ont., for which both companies hold charters—the B. and H.E. Ry., a Dominion one, and the H.A. and B. Ry., an Ontario one—have not resulted in a definite agreement, and negotiations are off. The Brantford City Council has granted both companies rights of way into the city independent of the tracks of the Brantford Street Ry., which is controlled by the same interests owning the B. and H. E. Ry. See also Hamilton, Ancaster and Brantford Ry.

**British Columbia Electric Ry.**—A tentative agreement has been made between the company and the North Vancouver municipal council, for a railway and street lighting franchise. The franchise will be for 50 years, but the council may expropriate at the end of 10 years. The car line at present contemplated will extend from Lansdowne Avenue to the Capilano and Grouse mountain. A line is also contemplated from Steveston to New Westminster, and press reports state it will be gone on with as soon as possible after the electrification of the Vancouver and Lulu Island Ry., from Vancouver to Steveston, on which good progress has been made. Another improvement in contemplation is the double-tracking of the lines in the vicinity of Point Ellice bridge in connection with the Gorge extension. The Vancouver Power Co.'s tunnel at Lake Beautiful was declared open by the Lieut.-Governor June 10. This company is a subsidiary of the B.C.E. Ry. Co. (June, pg. 259.)

**Chatham, Wallaceburg and Lake Erie Ry.**—The first section will cover about 21 miles from Wallaceburg through the county of Kent to the southerly limits of Chatham, Ont., and will, it is anticipated, be completed during the current year. An extension from Chatham to Rondeau, on Lake Erie, is proposed to be undertaken next year. No contracts for construction will be let, the company proposing to do all the work itself. Work has already commenced on the Wallaceburg-Chatham section, and the line is expected to be opened by Nov. 1. The power house plant has been planned, and will be of the most modern type. The plant will include five water tube boilers, manufactured by the Canada Foundry Co., Toronto. The officers of the company are: President, G. W. Kipp, Towanda, Pa.; Secretary and Solicitor, E. W. Bell; Engineer, A. McDonnell; General Manager, W. N. Warburton, Chatham, Ont. A special meeting of shareholders was called to be held in Chatham June 20, for the purpose of authorizing the issue of bonds to provide for construction. (June, pg. 261.)

**Chilliwack, B.C.**—Considerable capital has been locally subscribed for the construction of an electric line in the Fraser valley, in the neighborhood of Chilliwack, and an effort is being made to interest Vancouver capital. J. Rounsefell, Chilliwack, is the active promoter.

**Edmonton Street Ry.**—We are informed that beyond placing contracts for some of the machinery required very little has been





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Moose, Deer and Partridge abound in the forests of this peerless region.

Magnificent scenery and attractive canoe trips.

The district is situated 1000 ft. above the level of the sea.

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

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

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

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

The price of land varies from \$3 to \$40 per acre. Location with respect to railways, towns, timber and water determines the price of land.

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

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

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

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

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THE SIX-TRACK TRUNK LINE.

In connection with the

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which is not only in the

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done. It is reported, however, that construction will be gone on with at an early date.

**Hamilton, Ancaster and Brantford Ry.**—After a lot of discussion and a number of provisional agreements between the contending parties, the Brantford, Ont., City Council decided to grant the company an entrance into the city independent of the tracks of the Brantford Street Ry. The corporation also gave the Brantford and Hamilton Electric Ry., which is owned by the same interests controlling the Brantford Street Ry., a right of independent entrance, if it is decided to construct that line. The H.A. and B. Ry. has obtained an extension of time for construction from the local councils, and C. D. Haines, who is conducting the negotiations, states that not only will the line be constructed to Guelph, but arrangements will be made with the owners of a charter there for the continuation of the line from Guelph to Owen Sound. (June, pg. 261.)

**Hamilton, Grimsby and Beamsville Ry.**—Notices were issued May 25 that the stations at Campden and Vineland would be closed and that the line between Beamsville and Vineland would cease to be operated. The company claims to have run this section of the line at a loss of \$7 a day, and to have been embarrassed by suits on the part of residents adjoining the line. The Lincoln county council also directed the moving of the tracks at certain points. The track will be taken up. (June, pg. 261.)

**Hamilton Radial Ry.**—The Wentworth county council has passed a by-law granting a franchise to the H.R. Ry. for the construction of a line from the corner of Main St. and Sherman Avenue, Hamilton, to Bartonville, Ont. The terms are \$50 a mile a year for three years; \$100 a mile a year for the next five years, and \$200 a mile a year thereafter; construction to be commenced by June 15, and completed by Nov. 1. (June, pg. 261.)

**Levis County Ry.**—The line is at present being operated by the Sequestrator appointed by the Quebec courts, but it is expected to be taken out of his hands early in July, on the completion of the reorganization. There are 10½ miles of track being operated, viz.: from Levis to St. Joseph de Levis, about 3 miles; from Levis to St. Romuald, about 6 miles, and about 1½ miles in the town of Levis. A. E. Sutherland is Sequestrator, and H. H. Morse, Superintendent.

**London Street Ry.**—An office building is to be built on the site of the old car barns on Dundas St. (June, pg. 261.)

**Montreal and Southern Counties Ry.**—The organization of this company, which has power to construct an electric railway from Montreal on the south shore of the St. Lawrence, was completed recently. The officers and directors for the current year being: President, H. A. Richardson; First Vice-President, S. T. Willett; Second Vice-President, F. D. Monk; Treasurer, J. W. Harris. Other directors: Hon. W. Mitchell, R. C. Smith, H. G. Elliott, W. B. Powell, T. Craig, Secretary, J. Walker; Auditor, G. D. Perry. (May, pg. 111.)

**The Montreal Street Ry. Co.** has purchased the whole of the property north of the C.P.R. track between St. Denis St. and the city boundary, and is applying to the Montreal City Council to have the street lines erased so that it may use the entire block for building purposes. A double track is being laid on Atwater Ave., with a view of completing another belt line. (Feb., pg. 71.)

**Montreal Terminal Ry.**—Application is being made to the Montreal City Council for a revision of this company's contract, on the ground that it was forced to consent to

onerous terms in order to gain an entrance into the city. It asks to be placed on the same footing as the Montreal Street Ry. No action has been taken in the matter. The Maisonneuve council has approved of a contract with the company on similar terms to those granted to the Montreal Street Ry. (June, pg. 261.)

**The Peterboro Radial Ry.** proposes, according to press reports, to commence construction at an early date of an extension to Clear Lake, about 12 or 15 miles, but we were advised, June 21, that no decision has been arrived at about the matter.

**Quebec and Saguenay Ry.**—M. Workman, R. Forget, W. McL. Walbank, W. G. Ross, of Montreal; A. R. McDonald, J. McCarthy, Hon. P. A. Choquette, Hon. E. B. Garneau, Hon. C. Langelier, G. Tanguay, N. Rioux, J. Cameron, L. A. Taschereau, W. Price, of Quebec, and A. Girard, of Marieville, Que., have been incorporated by the Quebec Legislature with this title to construct a railway from St. Joachim, the present terminal of the Quebec Ry., Light and Power Co.'s line, along the shore of the St. Lawrence River to Tadousac, with branch lines for the use of industries established in the interior. The capital of the company was fixed at \$1,000,000, and power was given to issue \$500,000 of preferred shares at not more than 6%. The head offices are at Quebec. At the organization meeting held June 6 the following were elected officers for the current year: President, R. Forget; Vice-President, Hon. P. A. Choquette; Secretary, J. A. McDonald. These, with the other promoters mentioned in the act of incorporation waited on the Quebec Government with a view of obtaining an assurance of a land subsidy. The Premier told the deputation that the province would do its share if the Dominion Government would give a subsidy. This aid is being applied for. This line is projected from St. Joachim, the terminus of the Quebec Ry., Light and Power Co.'s line, along the north shore of the St. Lawrence to the mouth of the Saguenay River, about 140 miles. It will open up a large area of country capable of great development, and will serve a present population of 35,000. A survey was made from St. Joachim to Murray Bay by E. A. Hoare, in 1895, for the Quebec, Montmorency and Charlevoix Ry. The first 11 miles from St. Joachim to Cap Tourmont will involve some heavy construction. It is proposed to obtain power from the Seven Falls of St. Ferreol, about six miles north of St. Joachim, the fall being 375 ft., and 6,000 h.p. will be developed.

**Quebec Ry., Light and Power Co.**—The branch line to Beauport Asylum is expected to be completed early in July. (June, pg. 261.)

**St. John Street Ry.**—An extension of the double track on Pitt St., St. John, N.B., has been completed, and five additional cars have, in consequence, been placed on the lines in the city.

**Southwestern Traction Co.**—It is proposed to make a start on construction on the line from St. Thomas to Port Stanley, Ont., at once. A switch has been laid to the M.C.R. tracks to facilitate the transfer of construction material. The agreement with St. Thomas for a right of way through the city has been passed by the council, and will be submitted to the ratepayers on an early date. (May, pg. 207.)

**Toronto and York Radial Ry.**—The station at Richmond Hill, Ont., was opened May 24; that at Newmarket, May 31, and the station at Aurora was expected to be opened by the end of June. Construction work is being proceeded with from the present terminus towards Lake Simcoe, and it is expected to have the line completed to Jackson's Point in the fall.

A branch is projected from near Thornhill to Markham, and a preliminary survey has been made. (June, pg. 261.)

**Winnipeg Street Ry.**—Members of the city council and several of the directors of the W.S. Ry. Co. drove over the route of the proposed line from Maryland bridge to the new suburban park recently, and a final decision as to the route will be made shortly. Construction will be commenced immediately the final decision has been made. Work has been commenced on the Kildonan extension from Bird's Hill Road. (June, pg. 263.)

### Electric Ry. Finance, Meetings, Etc.

**British Columbia Electric Ry.**—Railway earnings for April—Vancouver, \$20,228; Victoria, \$10,001; Westminster, \$11,471; total, \$41,700, against \$36,105 for April 1904. Gross earnings railway and lighting, \$70,823, against \$61,889 for April, 1904. Working expenses, \$41,090; renewal fund, \$6,695; net income, \$23,038, against \$37,511; working expenses, \$5,988 renewal funds, and \$18,390, net income for April, 1904. Net earnings for ten months ended April 30, \$277,400, against \$242,761 for same period 1903-04.

**Halifax Electric Tramway.**—Railway receipts for May, \$10,710.36, against \$12,074.10 for May, 1904.

**Kingston, Portsmouth and Cataract Ry.**—No offers were received for this line which was advertised for sale by the bondholders. The city council, which has the matter of purchase, under revised conditions, under consideration, has directed the company to remove its generators from the corporation power house.

**Levis County Ry.**—A proposal for the reorganization of the company's affairs has been submitted for consideration by the Bondholders' Reorganization Committee. The committee suggests that it be authorized to purchase the railway, real estate and all other of the company's property, on behalf of the assenting bondholders, and for the purpose of paying for it a new company be formed with power to issue \$500,000 of 20 year 5% first mortgage bonds, \$500,000 of non-cumulative preferred stock (one-half only to be issued in connection with the reorganization), and \$250,000 of common stock. It was further suggested that the stock and bonds be disposed of under one of two plans outlined. The first plan provides for the sale of as much of the bonds at 85% as will provide for the purchase and working capital; holders of outstanding bonds to be entitled to purchase new bonds at 85% in proportion to the amount of bonds deposited by them; preferred stock to be given in exchange at par for face value of outstanding bonds, in addition to 25% of face value of outstanding bonds. The second plan provides for the raising of whatever is necessary by 90% of the bondholders purchasing at 90% additional stock equal to 30% of their present holdings. In return for this for each \$1,000 bond surrendered there will be delivered a bond of the new company for \$400, six shares of \$100 each fully paid preferred stock, and five shares of fully paid common stock. The circular issued in connection with the matter sets forth the proposal in full detail, and states that the committee will be entitled as remuneration for their services to not exceeding \$50,000 of fully paid up common stock of the proposed new company. The committee consists of T. B. Macaulay, R. Audette and J. Forman, of Montreal.

**Montreal Street Ry.**—Passenger earnings for May, \$232,999.06; total earnings, \$236,399.49, against \$217,341.18 and \$222,154.32 for April, 1904. Operating expenses, \$134,693.27; fixed charges, \$28,748.60; surplus,

**DIVIDEND NOTICE**

**Niagara Navigation Company**

Notice is hereby given that an interim 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 3rd July, 1905.

The Transfer Books will be closed from the 17th June to 30th June, 1905, both days inclusive.

By Order of the Board.

E. B. OSLER,

President.

Toronto, June 12th, 1905.



**Ticket Agts.**

**Note**

Where **ILLINOIS CENTRAL RAILROAD COMPANY** has through car service, both Coach and Sleeper and Free Chair Cars,

**Chicago to Hot Springs, Ark., St. Louis, Omaha, St. Paul and Minneapolis, Memphis, Tenn., New Orleans, San Antonio, Texas, and all California**

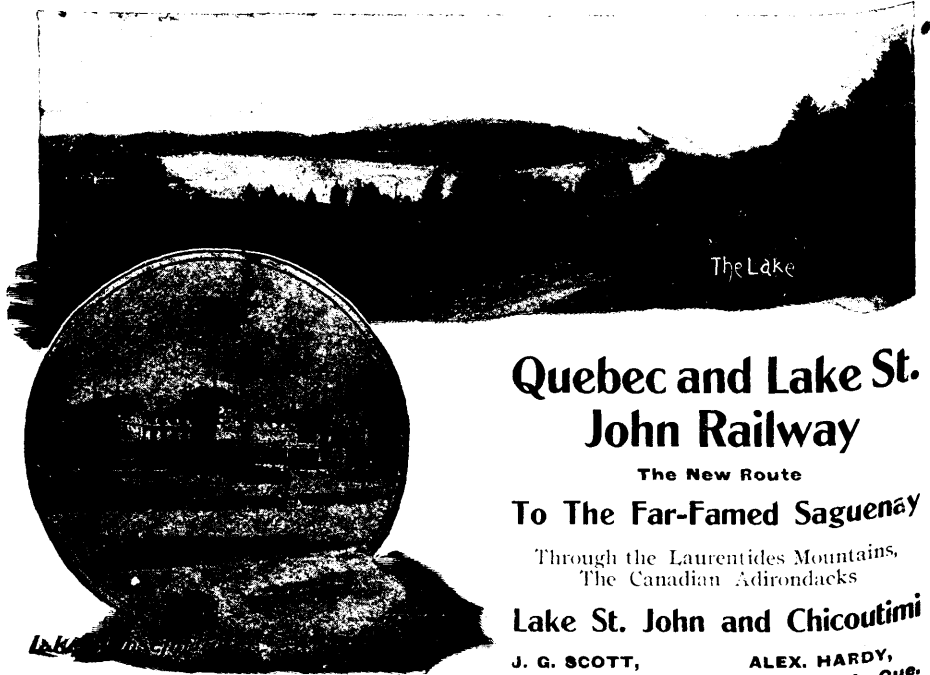
in Special Excursion Pullman Cars. Round Trip Tickets to all South and South-west points daily, same to California. Rate same via New Orleans as other direct routes. First and third Tuesdays each month.

Special First-class Round Trip Tickets at one fare plus \$2.00 from Chicago to Home-seekers in South and South-west.

Look The Illinois Central map over and consult

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**Quebec and Lake St. John Railway**

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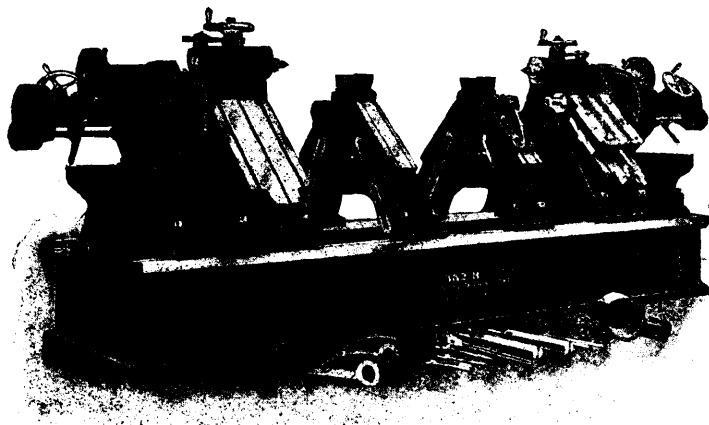
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Only 50 minutes from Quebec.

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**With Outboard Support for Boring Spindles and Removable Rest for Turning Crank Pins.**

This 90° Quartering Machine is designed for quartering and boring crank pin holes in locomotive driving wheels having right hand lead and wheels having left hand lead up to 85" in diameter on the tread. The boring spindles have 15" travel and two changes of power and rapid hand movement. The saddles are graduated and have angular adjustment for any length of stroke from 12" to 36". The axles are held on their centres and supported by adjustable V bearings, the wheels being clamped to the side of the frame. Each head is arranged to be driven by a 5 H.P. electric motor.

**The JOHN BERTRAM & SONS CO., Limited**

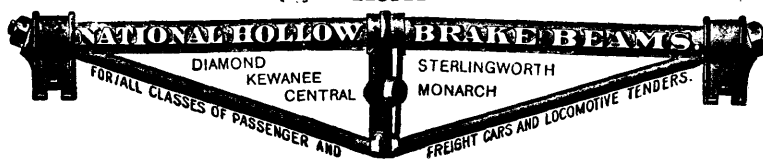
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**I. A. YOUNG,**  
AGENT

\$72,957.62, against \$126,641.73, \$22,641.41 and \$70,871.18 for May, 1904. Net earnings for eight months ended May 31, \$554,864.59; fixed charges, \$169,653.87; surplus, \$385,210.72, against \$510,958.87 net earnings, \$149,075.92 fixed charges, and \$361,882.95 surplus for same period 1903-04. The interest on Montreal Park and Island Ry. Co's bonds owned by the M.S. Ry. Co., not included.

**South-Western Traction Co.**—The annual meeting was held June 5, when it was reported that a satisfactory agreement had been made with St. Thomas, Ont., respecting the entrance of the company's lines into that city, and that the line would be open for traffic at an early date. The auditors' report as to expenditures was presented and approved. The officers and directors for the current year are: President, T. G. Rumball; Vice-President, Lieut.-Col. R. McEwan; Managing Director and Secretary-Treasurer, A. E. Welch; Solicitor, T. H. Luscombe; other directors: Dr. A. McKay, H. M. Rumball, W. Dafoe, J. Howlett, and Capt. T. E. Hobson.

**Toronto Ry.**—Car earnings for May \$225,768.23, against \$198,336.93 for May, 1904.

**Electric Railway Notes.**

The Toronto and York Radial Ry. is constructing a telephone system on its lines.

A test is being made by the Toronto Ry. of a new motor brake. It is operated by simply pressing a lever, the motor operating the brake.

The Chatham, Wallaceburg and Lake Erie Ry. has ordered four double equipments and one quadruple equipment of no. 101 railway motors from the Canadian Westinghouse Co.

The Winnipeg City Council decided May 30 to pass a by-law to permit cars to be run by the street railway on Sundays after June 15. Opposition is threatened if the council passes the by-law.

The Toronto Ry. has issued a notice that all its cars are to stop at churches during hours of worship, and at all streets where there are churches, for the convenience of the congregations.

A number of questions in dispute between the Toronto Ry. and the Toronto City Council have been referred for settlement to Judge Snider. The principal matters of reference are the penalty claims.

F. Hoffmeister, who was expected in Vancouver, B.C., June 6, to take up his duties as Electrical Superintendent of the B.C. Electric Ry., has been delayed in Winnipeg, Man., owing to the serious illness of his wife.

The Montreal Street Ry. is suing the Montreal Terminal Ry. for \$5,000 damages owing to the latter having as alleged placed an improper diamond at the crossing on Davidson and Notre Dame streets, whereby the former's cars have been damaged.

The Hamilton Cataract Power, Light and Traction Co. is making extensive additions to its power plant at DeCew Falls, Ont. Orders have been placed with the Canadian Westinghouse Co. for 2 6,400 k.w. 3 phase 2,400 volt, 8,000 alternating 287 r.p.m., 2 bearing generators with motor-driven exciters and switchboard apparatus, and for 4 3,200 k.w. oil insulated water-cooled raising transformers.

The Windsor and Tecumseh Electric Ry. is to be equipped with 300 k.w. 3,300 volt Westinghouse single-phase engine type generators, direct coupled to Robb-Armstrong engines, and its car equipments are to consist of 2 50 h.p. Westinghouse single-phase motors each. As this is the first single-phase road in Canada, its developments will be

watched with considerable interest. This equipment eliminates feeders, sub-stations and raising transformers. The generator voltage is fed directly to the car through the trolley wire, and step-down transformers are carried by each car.

The second annual report of the Montreal Street Ry. Mutual Benefit Association for the year ended April 30, showed members disabled through sickness or injury, 611; prescriptions issued, 2,864; visits made by physicians to disabled members, 692; consultations given by physicians to disabled members, 4,026; paid for sickness and injury, \$6,239.10; medicine, \$783.73; death and burial insurance, \$5,767.67. The membership has increased to 1,700, and the funds were increased by \$1,316.42, the proceeds of a picnic; and a special donation of \$3,000 from the M.S.R. Co. The fees and dues received from members were \$8,800. The total revenue for 1904-05 was \$22,398.65; expenses, \$18,850.41; surplus \$3,548.24. The surplus for 1903-04 was \$5,800.48, which makes the total invested surplus \$9,348.72. The committee of management for the current year is: President, D. McDonald; Secretary-Treasurer, P. Dubee; other members: W. G. Ross; L. Trudeau, H. R. Lockhart, R. M. Hannaford, D. E. Blair, H. G. Taylor, A. Caron, J. Donald, G. Bellrose, L. Charland, W. Butler, F. X. Lacroix, E. Drinkwater.

**St. John, N.B., Railway Co.**

Following are extracts from the report presented at the annual meeting June 14:—The business for the year ended April 30, shows a net profit, after providing for interest on bonds and all other charges, of \$52,034.44, out of which there were declared two half-yearly dividends of 3% amounting to \$44,626.80, leaving a balance of \$7,407.64, which has been transferred to profit and loss account. Since the last annual meeting Seaside Park has been purchased and the tracks carried to it, besides equipping the buildings for restaurant purposes, and making the grounds attractive. This venture has proved quite successful, notwithstanding that the weather last summer was the worst for very many years and that the park had not opened until July 1. The company has completed a further improvement, which will enable it to perform a quicker service in the city, that is the continuation of the tracks from the corner of Princess and Carmarthen streets to Wentworth, through Wentworth to King, down King to Pitt, along Pitt to Britain, and through Britain connecting with tracks already in use. It was contemplated to double-track the Seaside Park line this summer and the company had authority to do so; but obstacles have been thrown in the way which may compel it to delay this improvement for an indefinite period. The city of St. John, having applied to the Provincial Legislature for certain important modifications in the charter rights of the company, succeeded in imposing upon the company important changes in the matter of maintenance and care of the streets upon which its railway is operated, much to the company's disadvantage. The directors view with alarm, which must be shared by other companies doing business in New Brunswick, the action of the Legislature in so enacting that a charter given by them can be changed in this way, as such must have the effect of seriously damaging the credit of present and future enterprises in the Province; but the directors trust that on serious consideration by the Government these modifications will be annulled. The city, fully realizing its obligations to the company, entered into a contract dated Dec. 1, 1897, running for 10 years, under which, instead of maintaining the streets the company pays a fixed sum. This contract has two years still to run, and

the modifications imposed upon the company do not take effect until it expires, by which time it is hoped the company shall be relieved from these new obligations.

ASSETS.	
Cost of property	\$1,587,419.23
Accounts receivable	31,013.76
Stores	19,513.42
Cash on hand	600.00
Cash in bank	7,862.15
Total	\$1,646,408.56

LIABILITIES.	
Capital stock	\$779,700.00
Bonds	675,000.00
Accounts payable	36,287.58
Outstanding tickets	2,635.35
Dividend payable June 12	23,391.00
Contingent and depreciation	38,264.51
Profit and loss	91,130.12
Total	\$1,646,408.56

INCOME ACCOUNT.	
Dividends	—
Paid Dec. 15, 1904	\$21,235.80
Payable June 15, 1905	23,391.00
Transferred to profit and loss	7,407.64

Profits for the year, after providing for interest on bonds and all other charges, \$52,034.44

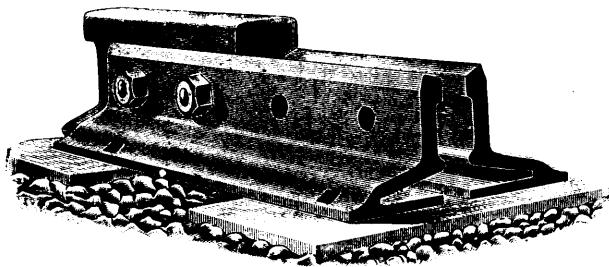
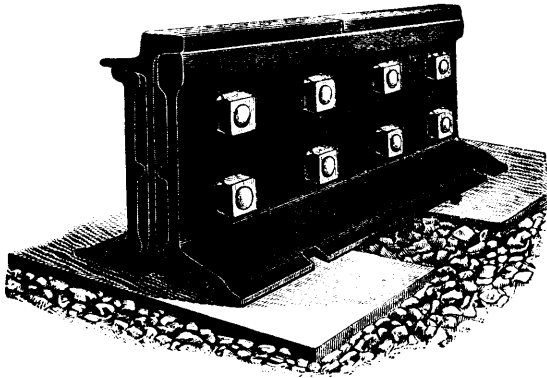
Following are the officers and directors for the current year: President, Jas. Ross, Montreal; Vice-President, H. H. McLean, St. John; other directors: R. B. Emerson, J. Manchester, J. J. Tucker, M. Neilson, W. Downie, H. B. Robinson. J. M. Robinson who was Vice-President, retired on account of ill-health.

**SHIPPING MATTERS.**

**Northern Navigation Co. of Ontario.**

The statement of claim of this company against Thos. Long and J. J. Hopkins, executors of the late J. J. Long, has been filed in the High Court of Justice of Ontario. It sets forth that J. J. Long was a director and president of the company during 1902 and 1903. By the by-laws the directors were required to prepare and submit to the shareholders at their annual meeting a financial report and statement of the affairs of the company, and of the position of its business, and the result of its operations, and it was the duty of J. J. Long as President, to prepare such a report and statement on behalf of the directors, and he undertook the preparation of such a report and statement to be presented at the annual meeting held at the close of the year 1902, and did actually prepare, or superintend the preparation of such report and statement. The said report and statement was brought before the directors of the company by J. J. Long, and upon his representation and assurance that it was correct and accurate it was adopted by the directors as their annual report and statement and was submitted as such to the annual meeting. Previous to the presentation of the report and statement the company had paid three semi-annual dividends of 5% upon its subscribed capital stock, and after the presentation and adoption of the report and statement the company through its directors, in June and Dec., 1902, relying upon the correctness and accuracy of the report and statements, and on the faith of the truth thereof, declared and paid two further dividends of 5% each, and the company was induced to declare and pay these dividends by the said report and statement, and by the statements therein contained, and these dividends would not have been declared and paid but for such statements. J. J. Long, at the time of the preparation of the said report and statement, was the holder of a large amount of the capital stock of the company, which stock had recently been listed on the Toronto Stock Exchange. J. J. Long was desirous of disposing of his holdings of the stock, and it was important to him, in order that the price of the said stock should be maintained or en-

## Railroad Essentials.



The day has passed when men of finance are willing to place their money into bad material in railroad construction only to be compelled to replace it by renewals or reconstruction after very little use. Many of the best and most successful steam and electric railroads use the rail joints of the Continuous patent type for standard track work, insulated joints, step joints, and electric bonding joints for the reason that experience has proven it to be the best appliance of its kind ever put upon the market, as evidenced by the fact that it is used in all parts of the world on over 20,000 miles of track.

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WM. E. CLARK, Manager.

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Medals awarded at Paris and Buffalo Expositions.

**EXPERIMENTS WITH BRAKES** are risky at best, sometimes costly. The **Sterling Safety Brake** is not an experiment. In use 9 years, it is standard on 12,000 cars of all sizes up to 45 tons. Its superior merits are well known. It is sold at a standard price. Gray iron substitutes with one chain cost only half as much. We have one. The Sterling excels in quickness, power and ease of operation. Ask for 50 references. Try it.

**STERLING-MEAKER CO.**

NEWARK, N.J.



## THE NORTHERN NAVIGATION CO.

To all Points on

**Georgian Bay  
Lake Superior  
and North-West**

For Sault Ste. Marie and North Channel way ports Steamers leave Collingwood 1.30 p.m., Meaford 4 p.m., Owen Sound 11 p.m., Tuesdays, Thursdays and Saturdays.

For Parry Sound, Byng Inlet and French River Steamers leave Collingwood Mondays and Fridays at 10.30 p.m.

For Sault Ste. Marie, Port Arthur, Fort William and Duluth Steamers leave Sarnia Mondays, Wednesdays and Fridays at 3.30 p.m.

Through tickets and freight rates at all Railway Agents.

**H. H. GILDERSLEEVE** - Manager  
Collingwood

**C. H. NICHOLSON** - Traffic Mgr.  
Sarnia

Established 1849

**BRADSTREET'S**

Capital and Surplus \$1,500,000

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hanced, that the dividend theretofore paid by the company should be continued, and in order to induce the company to continue the said dividend, J. J. Long falsely and fraudulently inserted in the said report and statement the statement that the net profit from the company's operations during the season of 1902 was \$88,519.92, whereas in fact the net profits were only \$58,000, or thereabout, as J. J. Long well knew. As a result of the payment of the dividends above referred to J. J. Long was enabled to dispose of and did dispose of his holdings of stock or the major

portion thereof, at a considerable profit, while the company has, in consequence of his fraud and deceit, and by reason of the false and fraudulent representations and statements above mentioned, paid out in respect of the said two dividends \$83,773.40, and by reason of such payment has been seriously hampered and injured in its business, and claims \$150,000 damages in respect of J. J. Long's fraud and deceit and false and fraudulent representations. In the alternative the company alleges that in or about June, 1904, the company having discovered

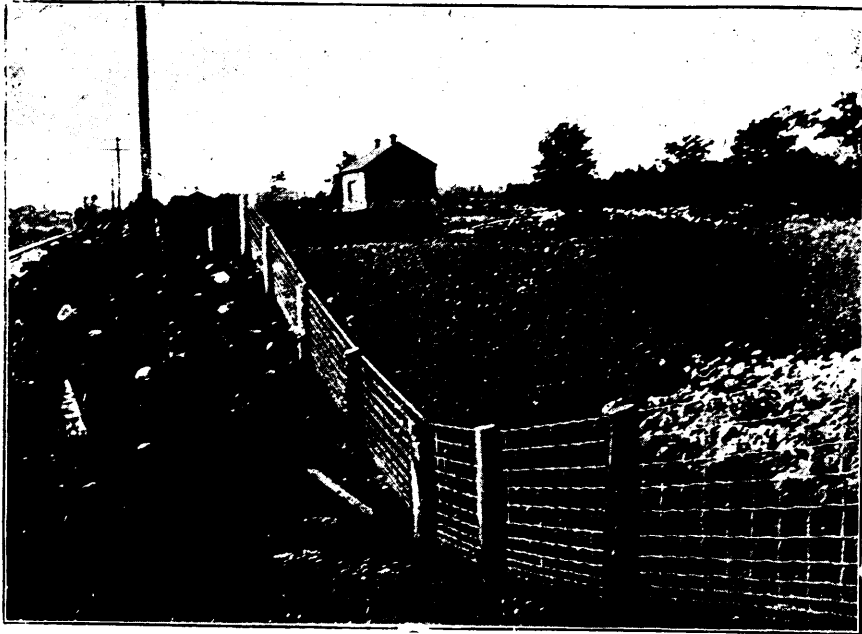
the fraud and deceit which had been practised upon it, and having become aware of the damage it had suffered by reason of J. J. Long's fraud and deceit and false and fraudulent representations, made claim upon him in respect of the premises, and he thereupon agreed to pay, and the company agreed to accept \$83,773.40 in settlement of the company's claim, and the company claims payment from the defendants of \$83,773.40, with interest from June 30, 1904. The plaintiff proposes that this action be tried at Toronto.

LIST OF STEAMSHIPS REGISTERED IN CANADA FROM MAY 1 TO MAY 31.

Name.	No.	When and Where Built.	Engines, etc.	Length	B'dth.	Depth	Gross tons.	Reg. tons.	Home Port.	Owners.
Alberta	116,603	Sorel, Que., 1905	39 N.H.P. Screw	96.4	17.7	6.9	125	62	Montreal	The Sincogne-McNaughton Line, Ltd., Montreal.
Alph. Racine	116,602	Sorel, Que., 1904	43 "	79.2	18.6	10.1	121	69	Montreal	Harbor Commissioners, Montreal.
Amelia	104,069	Ayr, Scotland, 1891	69 "	145.0	22.8	9.9	357	103	Magdalen Islands	Magdalen I.L.N.S.S. Co., Halifax, N.S.
Burrard	117,018	Vancouver, B.C., 1905	10 "	63.6	14.2	6.5	56	38	Vancouver, B.C.	J. D. Foreman, Vancouver, B.C.
Columbia	117,017	Vancouver, B.C., 1905	3 "	60.0	14.0	4.5	40	27	Vancouver, B.C.	Rev. J. Antle.
Com. McRae	117,015	Vancouver, B.C., 1905	3 "	22.7	6.2	3.0	2	2	Vancouver, B.C.	R. Hamilton, Vancouver, B.C.
Constance	117,016	New Westminster, B.C.	10 "	50.0	11.0	5.5	23	16	Vancouver, B.C.	A. McEvoy et al, Vancouver, B.C.
Cygnat	117,019	Vancouver, B.C.	2 "	25.8	10.4	3.4	6	4	Vancouver, B.C.	Maple Ridge Creamery & Fruit Canning Co., Port Hammond, B.C.
Dredge No. 2	117,102	U. S. A.		84.0	29.5	8.3	291	247		R. E. Stewart and E. Fasse, Ottawa.
Eagle	116,986	Rat Portage, Ont., 1905	1 "	32.0	9.6	4.0	12	8	Rat Portage, Ont.	G. H. Draper, Rat Portage, Ont.
Edson Fitch	117,103	Hull, Que., 1904		120.6	24.0	7.9	183	171	Ottawa	Ottawa Transportation Co., Ottawa.
Elsie	117,012	Vancouver, B.C., 1905	2 "	40.0	11.6	4.8	16	11	Vancouver, B.C.	J. W. Hackett, Vancouver, B.C.
Fraserville	116,715	Port Glasgow, G.B., 1904	17 "	60.0	15.3	7.4	51	35	Quebec	D. Fraser et al, Fredericton, N.B.
Hardy	117,075	Simcoe, Ont., 1896	3 " Paddle	37.0	10.0	4.0	28	18	Toronto	W. E. Bigwood, Toronto.
Holland & Graves (3)	117,076	Simcoe, Ont., 1905	3 "	41.0	10.0	4.0	30	19	Toronto	W. E. Bigwood, Toronto.
Holland & Graves (4)	117,077	Simcoe, Ont., 1905	3 "	41.0	10.0	4.0	30	19	Toronto	W. E. Bigwood, Toronto.
Iona	112,338	Meaford, Ont., 1904	9 " Screw	58.2	13.2	5.6	29	20	Collingwood, Ont.	H. McInnes, Meaford, Ont.
John Randall	117,121	Kingston, Ont., 1905	13 "	104.4	22.5	7.7	194	95	Kingston, Ont.	J. Randall, Seely's Bay, Ont.
J. W. Todd	117,104	Hull, Que., 1904		120.0	24.0	7.9	183	171	Ottawa, Ont.	Ottawa Transportation Co., Ottawa.
Kathleen	116,685	Lindsay, Ont., 1905	6 "	66.0	14.0	4.0	37	26	Lindsay, Ont.	E. Elliott, Lindsay, Ont.
Kingfisher	116,931	Rat Portage, Ont., 1905	19 "	65.0	14.1	10.0	77	52	Rat Portage, Ont.	R. P. Lumber Co., Rat Portage, Ont.
Lady Eileen	103,512	Port Glasgow, G.B., 1905	104 "	168.2	31.0	19.6	921	526		Interprovincial Nav. Co. of Canada, Cambridge, N.B.
Marion	117,074	Simcoe, Ont., 1905	1 "	34.7	10.0	3.8	9	6	Toronto	W. F. Ball, Sombra, Ont.
Marshall W	116,973	Chatham, N.B., 1905	4 "	31.4	10.3	3.0	6	4	Chatham, N.B.	J. Miller, Chatham, N.B.
Maud	112,202	Hamilton, Ont., 1905	1 "	32.5	7.0	3.6	4	3	Hamilton, Ont.	D. Reynolds, Dundas, Ont.
Rover	111,884	Peterboro', Ont., 1905	3 " Paddle	40.0	9.5	3.2	19	12	Peterboro', Ont.	The Dickson Co., Limited.
Sonoma	117,111	Vancouver, B.C., 1905	3 " Screw	46.5	11.0	4.6	19	13	Vancouver, B.C.	F. Keeling et al, Vancouver, B.C.
Standard	116,987	Rat Portage, Ont., 1905	1 "	44.0	10.0	4.5	16	11	Rat Portage, Ont.	F. Gustafson, Rat Portage, Ont.
Success	116,976	Burnt Church, N.B., 1904	5 " Paddle	61.0	12.6	2.5	21	13	Chatham, N.B.	W. Anderson, Burnt Church, N.B.
Wanderer	116,988	Rat Portage, Ont., 1905	1 " Screw	45.0	11.0	4.5	20	13	Rat Portage, Ont.	J. Matheson, Rat Portage, Ont.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM MAY 1 TO MAY 31.

Name.	No.	When and Where Built.	Length	B'dth.	Depth	Gross tons.	Reg. tons.	Home Port.	Owners.
Ada and Pearl	116,900	Arcadia, N.S., 1904	34.0	12.0	6.2	13	13	Yarmouth, N.S.	J. T. Duncan, Clark's Harbor, N.S.
Adelaide	116,526	Lunenburg, N.S., 1905	38.5	11.7	5.5	13	13	Lunenburg, N.S.	Jas. Holland, Lunenburg, N.S.
Agnes M.	116,898	Tusket Wedge, N.S., 1905	37.0	11.6	6.0	11	11	Yarmouth, N.S.	L. Duceite, Tusket Wedge, N.S.
Alexander R.	116,748	Liscomb, N.S., 1905	71.2	19.8	9.0	75	75	Halifax, N.S.	A. Rudolph, Liscomb, N.S.
Annie Luc	117,113	Shelburne, N.S., 1904	33.0	11.4	6.0	10	10	Yarmouth, N.S.	J. M. Crowell, Port La Tour, N.S.
Coria May	116,236	Shelburne, N.S., 1905	75.0	21.0	8.0	64	64	Digby, N.S.	C. E. Finnegan et al, Freeport, N.S.
C. W. 2	117,020	Vancouver, B.C., 1904	72.0	24.0	6.0	88	88	Vancouver, B.C.	Champion & White, Vancouver, B.C.
Drusie	116,912	Liverpool, N.S., 1905	100.3	25.5	9.5	128	99	Liverpool, N.S.	J. Millard, Liverpool, N.S.
Edith F. S.	116,528	La Have, N.S., 1905	69.4	21.8	8.5	67	67	Lunenburg, N.S.	J. Schmeisser, La Have, N.S.
Ellie Annie	116,979	Caraquet, N.B., 1905	40.0	13.2	5.8	17	17	Chatham, N.B.	N. S. Lantaigne, Caraquet, N.B.
Etha May	117,141	Dover, N.S., 1905	41.2	11.5	5.2	11	11	Halifax, N.S.	G. Johnson, Dover, N.S.
Ethel G.	116,890	West Head, N.S., 1904	38.0	11.5	5.0	12	12	Halifax, N.S.	G. Johnson, West Head, N.S.
Gatherer	116,525	Lunenburg, N.S., 1905	44.4	13.4	6.2	15	15	Lunenburg, N.S.	I. Berringer, Lunenburg, N.S.
Georgina	116,980	La Have, N.S., 1905	38.6	13.4	5.1	15	15	Chatham, N.B.	G. L. Dugué, Shippegan, N.B.
Guida	116,527	La Have, N.S., 1905	75.2	21.8	8.5	73	73	Lunenburg, N.S.	W. N. Reinhardt, La Have, N.S.
Ida	117,181	Shippegan, N.B., 1905	39.0	13.4	5.0	16	16	Chatham, N.B.	J. Savoy, Shippegan, N.B.
Iona and Ida	117,131	Shelburne, N.S., 1905	35.5	12.5	6.0	13	13	Yarmouth, N.S.	W. N. Madden, Port La Tour, N.S.
Jessie W.	117,133	Shelburne, N.S., 1905	32.0	10.6	6.0	10	10	Yarmouth, N.S.	L. Smith, Port La Tour, N.S.
J. J. Cox	116,747	Indian Harbor, N.S., 1905	39.5	10.6	5.3	12	12	Halifax, N.S.	H. Weinart, Indian Harbor, N.S.
Laura B.	116,853	Shelburne, N.S., 1905	75.0	21.9	8.1	65	65	Shelburne, N.S.	W. T. McCarthy, Shelburne, N.S.
Lydia L.	117,136	Cape Island, N.S., 1905	34.0	12.0	5.6	10	10	Yarmouth, N.S.	H. Surin, Cape Island, N.S.
Mabel	106,899	Plymouth, N.S., 1905	34.0	12.0	6.2	14	14	Yarmouth, N.S.	N. Le Blanc, Plymouth, N.S.
Mahone Packet	116,977	Shippegan, N.B., 1905	38.0	13.4	5.0	16	16	Chatham, N.B.	W. A. Loggie Co., Limited, Chatham, N.B.
Mankabe	116,524	Mahone Bay, N.S., 1905	74.8	23.2	8.8	78	78	Lunenburg, N.S.	C. N. Mader, Mahone Bay, N.S.
Margaret	116,523	Bridgewater, N.S., 1905	73.8	22.6	9.0	76	76	Lunenburg, N.S.	S. Walters, La Have, N.S.
Mariana	116,978	Shippegan, N.B., 1905	40.0	13.1	5.4	16	16	Chatham, N.B.	W. A. Loggie Co., Limited, Chatham, N.B.
Marie Etiole	116,854	Sable River, N.S., 1905	62.4	13.5	6.7	33	33	Shelburne, N.S.	W. J. Harding, Little Harbor, N.S.
Myrtle S.	117,182	Caraquet, N.B., 1905	42.0	13.7	5.8	20	20	Chatham, N.B.	J. A. Dorion, Caraquet, N.B.
Nahada	116,897	Sanford, N.S., 1904	35.0	12.0	6.0	12	12	Yarmouth, N.S.	A. Shaw, Sanford, N.S.
Nema D.	116,530	Lunenburg, N.S., 1905	88.6	24.6	9.5	104	94	Lunenburg, N.S.	H. C. Brannen, Port La Tour, N.S.
O. P.	117,132	Port La Tour, N.S., 1904	33.0	11.0	6.0	10	10	Yarmouth, N.S.	J. C. Brannen, Port La Tour, N.S.
Perseverance	116,802	Sorel, Que., 1905	103.1	23.3	6.4	121	118	Sorel, Que.	O. Paul, Sorel, Que.
Providence	116,745	Mahone Bay, 1905	43.4	12.3	5.8	12	12	Halifax, N.S.	E. E. Stratford, Indian Harbor, N.S.
Reliance	116,974	Caraquet, N.B., 1905	40.4	13.8	5.8	18	18	Chatham, N.B.	M. Lentigne, Caraquet, N.B.
Ruby	116,749	Tancock, N.S., 1905	43.0	11.8	6.0	14	14	Halifax, N.S.	W. Hubble, Indian Harbor, N.S.
Sakata	116,975	Parrsboro, N.S., 1905	59.8	22.0	6.2	56	53	Chatham, N.B.	A. Loggie et al, Dalhousie, N.B.
Scotia	116,901	Port Greenville, N.S., 1905	149.0	35.0	12.2	464	395	Parrsboro, N.S.	W. F. Conlin, Parrsboro, N.S.
S. O. Co., No. 41	116,529	La Have, N.S., 1905	72.2	22.6	8.6	78	78	Lunenburg, N.S.	A. Burns, La Have, N.S.
Spindrift	116,952	Port Richmond, N.S., 1903	156.6	33.0	12.0	492	481	Sarnia, Ont.	Imperial Oil Co., Sarnia, Ont.
Stella R.	116,746	Mahone Bay, N.S., 1905	44.2	12.4	6.0	15	15	Halifax, N.S.	F. Boutilier, Indian Harbor, N.S.
Tunisia	116,750	Ship Harbor, N.S., 1905	45.5	13.8	5.4	13	13	Halifax, N.S.	W. E. Murphy, Ship Harbor, N.S.
Vina	117,135	Cape Island, N.S., 1905	33.0	11.9	6.0	12	12	Yarmouth, N.S.	H. T. Hines, Cape Island, N.S.
	117,183	Shippegan, N.B., 1905	38.4	13.0	5.0	14	14	Chatham, N.B.	J. Noel, Shippegan, N.B.



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**List of Canadian Shipping.**

The total number of vessels remaining on the registry books of the Dominion on Dec. 31, 1904, including old and new vessels, sailing vessels, steamers and barges, was 7,152, measuring 672,838 tons register tonnage, an increase of 132 vessels, and a decrease of 10,309 tons register, as compared with 1903. The number of steamers on the registry books on the same date was 2,543 with a gross tonnage of 353,514 tons. Assuming the average value to be \$30 a ton, the value of the registered tonnage of Canada on Dec. 31, 1904, was \$20,185,140, against \$20,494,410 on same date 1903. Following is a summary showing the number of vessels and their tonnage by provinces:—

	Sailing ships and steamers	Steamers	Gross tonnage of steamers	Net Tonnage of sailing ships and steamers
N. Brunswick	933	138	12,433	54,855
Nova Scotia	2,066	193	22,038	211,972
Quebec	1,287	384	87,533	130,339
Ontario	1,886	1,288	151,338	176,430
P. E. Island	161	16	2,908	12,200
B. Columbia	666	414	66,701	77,105
Manitoba	141	99	7,359	7,765
Yukon Dist.	12	11	3,204	2,172
<b>Total</b>	<b>7,152</b>	<b>2,543</b>	<b>353,514</b>	<b>672,838</b>
<b>Total for 1903</b>	<b>7,020</b>	<b>2,410</b>	<b>338,251</b>	<b>683,147</b>

There are 78 ports of registry in the Dominion, an increase of one in the year, the new port being Sorel, Que. The ports are distributed as follows:—Ontario, 38; Nova Scotia, 21; New Brunswick, 7; Quebec, 6; British Columbia, 3; Prince Edward Island and Yukon, one each.

The ports having more than 300 vessels registered are:—Quebec, 634; Montreal, 599; Halifax, 426; Ottawa, 407; St. John, 361; Chatham, N.B., 355; Toronto, 350; Lunenburg, N.S., 318. Of steamers there are registered 271 at Toronto; 227 at Montreal; 225 at Ottawa; 184 at Vancouver, B.C.; 154 at Quebec; 136 at Victoria, B.C.; 109 at Kingston, Ont.; and 99 at Winnipeg. The port having the largest tonnage is Montreal, with 97,689 tons; Victoria being second with 47,198 tons, and Windsor, N.S., third with 46,432 tons.

The number of new vessels built and registered in the Dominion during the year was 308, measuring 18,554 tons register tonnage. Estimating the value of the new tonnage at \$45 a ton, it gives a total value of \$834,930 for new vessels, against \$1,364,535 for new vessels built in 1903. The new vessels were built and registered as follows:—

	Vessels	Tons.
New Brunswick	25	1,306
Nova Scotia	99	5,993
Quebec	20	3,203
Ontario	105	5,167
Prince Edward Island	2	185
British Columbia	48	2,362
Manitoba	9	338
Yukon District	Nil.	Nil.
<b>Total</b>	<b>308</b>	<b>18,554</b>
<b>Total for 1903</b>	<b>328</b>	<b>30,323</b>

During the year the names of 24 vessels were changed at 13 ports.

In point of ownership of net tonnage Canada stands eighth among the nations, those having over 100,000 tons being as follows:—

British, including Canada and other Colonies	11,225,421
United States	2,636,281
Germany	2,298,902
Norwegian	1,390,062
French	1,143,661
Italian	982,118
Russian	924,772
Canadian	672,838
Swedish	639,422
Japanese	587,908
Spanish	541,037

Dutch	469,826
Danish	439,356
Grecian	385,215
Austrian	365,360
Turkish	238,419
Brazilian	162,731
Belgian	104,018

Capt. Ritchie, for a number of years in command of the Allan Line str. Parisian, died at Rothesay, Isle of Bute, Scotland, May 23.

The Dominion Government cruiser Canada has returned to Halifax, N.S., from a lengthened cruise in West Indian waters for the instruction of the crew. During the summer she will be employed in the fisheries protection service off the Maritime Provinces coastline.

The Australian Government has renewed the contract with the Canada-Australian Line of steamers for the carrying of mail from Sydney, New South Wales, to Vancouver, B.C. A renewal of the contract with the Canadian Government for one year has been made.

The question of the seizure of the Canadian schooner Agnes M. Donohue, off the coast of Uruguay, by the Government of that republic, has been specifically brought to the notice of the Government through the Lieutenant-Governor of British Columbia by the Master Mariners of that Province. The schooner was under full sail, and was three miles beyond the territorial waters when the seizure was made. Diplomatic action will be taken through the regular channels.

Several misunderstandings have arisen in connection with the proposal to establish a steamship service between Canada and Mexico on both the Atlantic and the Pacific oceans. A contract was let to Weir and Co. of Glasgow, Scotland, for the Pacific service, but the Mexican Government being apparently more anxious for the Atlantic service combined the subsidies. The service will be inaugurated July 20, when the steamer Anglia will leave Montreal, taking freight and passengers for Progreso, Cozacacoalcos, Vera Cruz and Tampico, Mexico, calling at Charlottetown, P. E. I., and Halifax, N.S.; Nassau, Bahamas; and Havana, Cuba, en route. On the return trip the steamer will not call at Cuba, but will call at Halifax and Charlottetown. A monthly sailing from each port has been arranged. The Elder-Dempster Co. has the contract, and the company's manager in Montreal will be D. W. Campbell, who managed its operations in the city prior to the purchase of the transatlantic steamers by the C.P.R.

The proceedings of the International Waterways Commission which held its preliminary meetings at Washington, D.C., have been devoted largely to the discussion of the scope of the enquiry. The most important feature has been the question of whether the St. John River is to be considered. Though a boundary river, its free navigation is assured to U.S. citizens under a special treaty, and the contention of the U.S. Commissioners is that this river cannot be considered. The question is of considerable importance to New Brunswick lumbermen particularly. The Canadian Commissioners contend that the intention in appointing the commission was to investigate in general the waters adjacent to the boundary line. Under the present instructions the U.S. Commissioners are authorized to investigate only the condition of the Upper Lakes which empty into the St. Lawrence. On June 6, the Canadian Government, while standing by its original contention, consented to the Commissioners proceeding with the work in connection with the Great Lakes and tributary waters. The U.S. Commissioners have their headquarters at Buffalo, N.Y., and the Canadian Commissioners have theirs at Toronto.

**Notices to Mariners.**

The following have been issued by the Dominion Department of Marine:—

No. 35. May 12.—Nova Scotia—89. West coast, Yarmouth harbor; light established on corner beacon. 90. South coast, Mahone Bay, change in character of buoy, new buoy. 91. South coast, Halifax, harbor, north-west arm, change in character of buoy, new buoy.

No. 36. May 26.—Quebec.—95. River St. Lawrence, between Murray Bay and Kamouraska, Morin shoal, gas buoy established.

No. 37. May 26.—British Columbia—96. Northern waters, Chatham Sound, depth on rock off Holland Island. Alaska.—97. Lynn Canal, Chilkat Inlet, rock reported.

No. 38. May 26.—Ontario—98. An edition of sailing directions for the Canadian shore of Lake Huron has been published for use in connection with the sheet charts containing the results of the surveys of these waters. Copies can be had from the Department of Marine and Fisheries, Ottawa, and from the Collectors of Customs at the principal lake ports. 99. Lake Huron, north channel, Blind River, light on wharf discontinued.

No. 39. May 27.—New Brunswick—102. Restigouche River, Campbellton, front range lighthouse moved. Newfoundland.—103. East coast, Fog Island, Brookes point, light established. 104. South coast, Placentia bay, Burin harbor, approach, Iron Island, fog bell.

No. 40. May 29.—Quebec.—105. Gulf of St. Lawrence, Gaspé coast, range lights established.

No. 41. May 30.—New Brunswick.—106. South coast, Bay of Fundy, Point Lepreau fog alarm, change in length of and intervals between blasts.

No. 42. May 31.—Nova Scotia.—108. Bay of Fundy, Basin of Mines, Parrsboro, fog bell established at lighthouse.

No. 43. June 5.—Quebec—109. River St. Lawrence below Quebec, Beaujeu channel, lighthouse foundation placed, temporary lights exhibited.

**Maritime Provinces and Newfoundland.**

Capt. M. Reddy, a retired shipbuilder and master mariner of Guysboro county, died at Boylston, N.S., June 2, aged 80.

Capt. D. Wall, a well-known lake captain, who died at Marinette, Wis., recently, was born in Richibucto, N.B., in 1858.

The steam yacht Adrienne of Boston, Mass., has been purchased by D. M. Robb, of the Robb Engineering Co., Amherst, N.S.

The Prince Edward Island Legislature at its recent session passed an act amending the act of incorporation of the Island Tug Co.

D. A. Smith and W. A. Richardson have been appointed members of the pilotage authority for North Sydney, N.S., the latter being appointed Secretary-Treasurer.

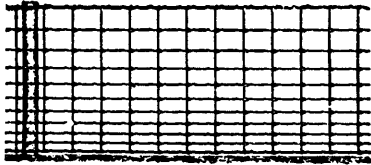
A. N. Whitman, of Canso, N.S., has purchased the str. Olive from Beazley Bros., of Halifax. The Olive was built at Dartmouth, N.S., 1903, and is a screw steamer of 24 tons register. She is fitted with engines of 40 h.p.

The French str. Pro Patria, trading between Halifax, N.S., and St. Pierre, Miquelon, ran on a rock 30 miles west of Louisburg, N.S., May 30, and has been found to be so badly damaged that she has been abandoned as a total loss. The passengers and crew were saved.

The ferry steamer which the St. John, N.B., City Council is having built at the port has been launched, and was named the Ludlow. The hull was constructed by the Bertram Engine Works, Toronto, and sent in sections to St. John, where it was put together, and the engines, which were constructed at St. John, installed.

The Brig Curacoa Co., and the Brig G. B. Lockhart Co., have been incorporated under the Dominion Companies' Act, with offices at

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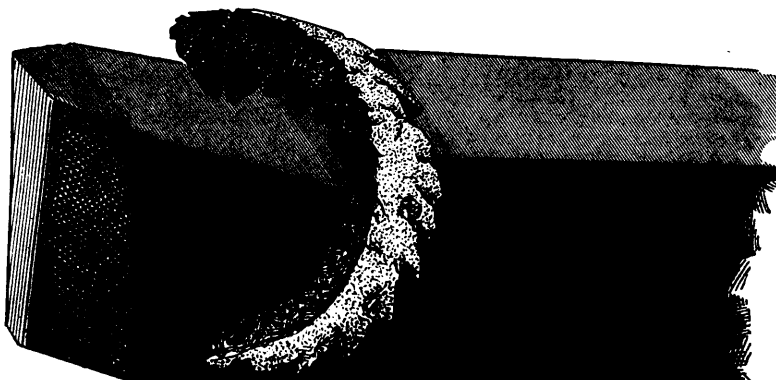
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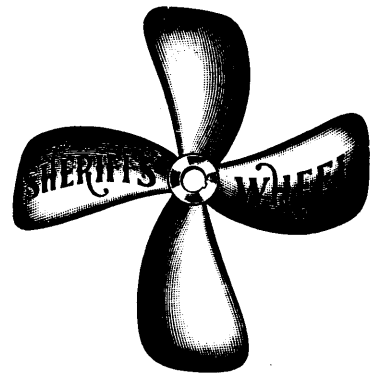
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STEAM ATTACHMENTS

Horton, N.S., and \$10,000 and \$7,500 capital respectively, to purchase the vessels named. The provisional directors are the same in each case, viz.: J. T. and D. E. North, Horton, N.S.; G. B., F. and W. Lockhart, of New York city.

A plan has been submitted to the public by J. S. Armstrong, a civil engineer, for harbor improvements at St. John, N.B. He advocates the rearrangement of wharves at Sand Point, and the commencement of construction on lines which would provide for future extensions as required. The plan is suggested as an alternative to the new wharf, which the city council proposes to erect to provide 1,500 feet of additional wharf space.

The Reid-Newfoundland Co.'s str. Bruce has just come out of dry dock at St. Johns, Nfld., after having had the whole of the sheathing stripped off and the plates underneath examined and riveted. The sheathing will be renewed for the winter trade. The engines have also been overhauled, and some redecoration has been done. The Bruce has resumed her trips between Port aux Basques, Nfld., and Sydney, N.S.

A steamer, Chr. Knudsen, was launched recently at Middlesborough, Eng., for Norwegian owners, but to be engaged in the Canadian coal and ore trade. The vessel is the third of a new type and is so designed that although 51 ft. beam, she has no hold or lower deck beams, pillars or web frames throughout the holds, thus making absolutely free and clear space for cargo. Her construction and design are carried out on a patent system of cantilever transverse frames. Another feature is that when in ballast trim the propeller is almost entirely submerged. She carries 2,000 tons of water ballast, is a self trimmer, with hatches 30 ft. wide; is fitted with masts and 20 derricks, so that she will load 7,000 tons of coal in three hours and can be discharged in seven hours. The engines are placed right aft, and ample provision is made for officers and crew. The steamer has been chartered for a term of years to the Dominion Coal Co.

### Province of Quebec Shipping.

Capt. Barclay, for 40 years Superintendent of the Allan line at Montreal, died there June 1, aged 77.

A. A. Allan has been elected to represent the Shipping Federation on the Montreal Harbor Commission, in place of R. Reford, resigned.

Quebec business men have signed a petition asking the Government to abolish the charge of 5c. per register ton exacted from shipping at that port as harbor dues.

Owing to a break in the banks of the Champlain Canal at Fort Edward, and Moleskill, N.Y., June 7, navigation between the St. Lawrence and Lake Champlain points was suspended. It was expected that the repairs would be completed by July 1.

The Quebec Steam Whaling Co. purchased the str. Falke, at Christiania, Norway, for its operations. The steamer arrived at Quebec early in June and subsequently went to the company's station at Seven Islands, in the St. Lawrence, from which she will operate.

A bill is under the consideration of the Dominion Parliament to amend the Pilotage Act, by placing the pilots below Quebec on a similar footing to those between Quebec and Montreal. This will have the effect of bringing the pilots more directly under the control of the Minister of Marine.

In connection with the vote of \$30,000 for hydrographic work the Minister of Marine recently stated in the House of Commons that the chart of the St. Lawrence between Quebec and Montreal would be completed about the end of July, and that from Montreal to Kingston, Ont., about a month later.

The Dominion Government has promised to give consideration to plans for the extension of the Louise embankment and other harbor improvements at Quebec, which a delegation from the Harbor Commission recently asked should be made. A Government engineer will inspect the harbor and will report upon the plans.

The North American Transportation Co.'s str. Restigouche is being run on a route between Montreal and St. John's, Nfld., calling at Charlottetown, P.E.I., and North Sydney, N.S., going, and at the latter port returning. The freight space was chartered for six months from May 15, to the Nova Scotia Steel Co., the N.A.T. Co. retaining control of the passenger traffic.

The Laird-Paton Co. has been incorporated under the Dominion Companies' Act, with a capital of \$95,000 and offices at Montreal, to carry on a general contracting business, to carry on a general boat building and repair business, and in connection therewith to take over the business of the St. Lawrence Canoe and Boat Co. The provisional directors are: J. and H. L. S. Paton, W. J. Thompson and J. Sutherland, Montreal.

A meeting of the Quebec Board of Trade was held June 5 for the purpose of considering a proposal to establish a direct line of ocean steamers from Great Britain to Quebec as the terminal point. The proposal is to raise sufficient money to charter or purchase outright the necessary number of steamers to maintain a weekly freight service. The Quebec people claim that they are being discriminated against by the steamship managers of Montreal, and they desire to have an independent service. The proposition also includes the leasing of the grain elevator owned by the Great Northern Ry., and the offering of facilities for handling western grain for export through it. The proposition was heartily endorsed and a committee was appointed to enquire into its feasibility and to devise means to carry it into practical effect.

The bill for the abolition of the Montreal Harbor Commission, as at present constituted, and for the creation of a new commission with more limited powers, is being considered by the Dominion Parliament. The new commission is to consist of five, who shall be experts in shipping matters, and representative of the different interests involved in the harbor's work. These commissioners, it is proposed, shall give their whole time to the work, and will be paid suitable salaries. The first commissioners will not be named in the bill, but will be appointed by the Government after the passing of the act. The commission which it is proposed to abolish, was established in 1830, when an act was passed giving the Governor power to appoint three commissioners for improving the harbor of Montreal. Power was given in 1841 to appoint additional commissioners, but no additional appointments were made until 1855, when the number was increased to five. In 1850 the commissioners were authorized to improve Lake St. Peter and the channel at Isle Platte. In 1873 the membership was increased to nine, and in 1893 to ten. The board has the management of the affairs of the port generally, including the making and enforcing of by-laws, the fixing of harbor dues, the apportioning of wharf space, the construction and maintenance of the wharves and other works, the collection of dues, disbursement of expenses, appointment of officers, etc. The by-laws and changes in rates of harbor dues are, however, subject to the approval of the Governor-General-in-Council before coming into effect. Any new wharves or any interference with the river bed is also subject to the same approval. Besides having jurisdiction over the harbor proper, the commissioners, up to 1901, when the Government took over the duty, were also charged with the licensing and supervision of pilots between Montreal and Quebec.

The Richelieu and Ontario Navigation Co. has placed its new steamer Montreal on the run between Montreal and Quebec. On May 22, the directors entertained a large party on a trial trip from Montreal. A set of flags was presented to the steamer, on behalf of Montreal, and in reply the President, R. Forget, gave a brief sketch of the history of the company. The company operates over 1,175 miles of river and lake navigation, owns 26 steamers which are capable of carrying 17,000, and providing berth accommodation for 4,000 passengers. The Montreal was built by the Bertram Engine Works Co., at Toronto, in 1902, and was taken through the rapids to Montreal to be completed. When nearly finished a fire broke out on board and the whole of the interior was burned out. The R. and O. N. Co. purchased the hull from the underwriters, and the steamer has been entirely reconstructed at the company's dockyard at Sorel, Que. Her dimensions are:—length, 332.4 ft.; breadth, hull 43.5 ft., overguards 75½ ft.; depth, 14.8 ft.; tonnage—gross, 4,282 tons, register 2,299 tons. She is fitted with triple expansion engines of 386 nominal horsepower, and capable of developing high speed. Steam is supplied by six Scotch cylindrical boilers 11 by 12 ft. at a working pressure of 185 lbs. The side wheels are fitted with the latest type of feathering buckets. The entire vessel is heated with steam; there are 1,200 sixteen candle-power electric lights on board, and pumps supply running water to each of the 250 state-rooms. Of these, 20 are parlor rooms, with bathroom attached. The dining-room, which will seat 150 persons, is on the main deck, forward of which is the entrance hall, with the purser's office on one side and the bar on the other. The arrangement of the upper saloons and state-rooms, on the first and second upper decks, is much the same as on the company's steamer Kingston. The main stairway to the upper saloon is in the entrance hall, and in front of the landing space at the top of the stairway is the gallery deck, at the head of which is a large painting of Cardinal Richelieu, by Suzor-Cote. In consequence of the great width of the steamer there are three rows of state-rooms on each side of the central portion of the vessel. The entrance hall is panelled in dark mahogany, relieved by panel pictures of the seasons in bronze relief. The stair and gallery railings are of bronze leaf work surmounted by handrails. The furniture generally is of dark mahogany and green plush, and it, as well as the general ornamentation of the upper saloon, is in Louis XV style.

### Ontario and the Great Lakes.

The name of the tug D. L. White, of Midland, Ont., has been changed to the Midland.

The steam yacht Ellen has been sold by F. Huck, of Rockport, Ont., to Capt. Reid, of Cardinal, Ont.

The Rainy River Navigation Co. has sold its str. Keewatin to G. Gerrard, Kenora (Rat Portage), Ont.

A proposition is under consideration for the construction of a dry dock at Midland, Ont. J. Playfair, of the Midland Navigation Co., is interested in the proposition.

During May the total tonnage passing through the canals at Sault Ste. Marie was 5,775,787 tons, of which 4,686,827 went through the U.S. canal, and 1,088,960 through the Canadian canal.

A. F. Bowman, Southampton, Ont., has been awarded the contract for dredging at Fort William, Ont., at 12c. a yard; and at Port Arthur, Ont., at 14c. a yard, by the Department of Public Works.

The Department of Public Works has placed an automatic water gauge at Collingwood, and will install another at the mouth of French River, to ascertain the rise and fall of the waters in Georgian Bay.

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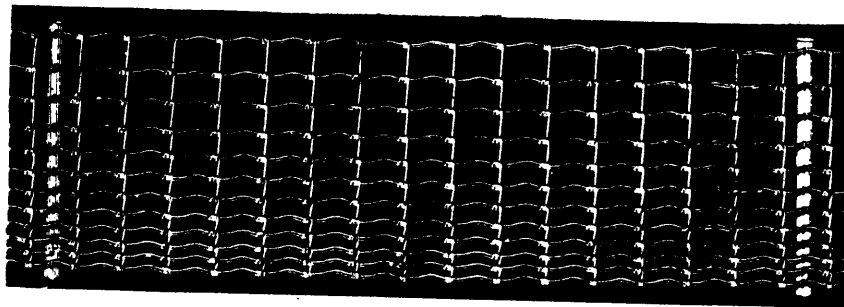
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 5th; S.S. Southwark, August 12; S.S. Dominion,  
 August 19; S.S. Ottawa, August 26.

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The Turbine Steamship Co. of Hamilton, Ont., is negotiating with the builders of the Turbinia for another steamer, W. Hyslop, one of the directors, and the secretary, G. Hope, being in Newcastle-on-Tyne, Eng., for that purpose.

The Richelieu and Ontario Navigation Co.'s str. Kingston had a section of one of her paddle boxes ripped off by a projecting boom from the barge Jennie Matthews, when entering Brockville, Ont., June 3. The damage was not serious.

The str. Cuba in entering lock 21, Welland Canal, recently, carried away three of the gates and did other damage. The total damage is estimated at about \$10,000. The passing of vessels through the canal was only delayed for 24 hours.

The str. Geneva has been placed on Lake Couchiching, and is running between Orillia and Geneva Park, Ont. The steamer is a new one, the hull having been built at Kingston, Ont., and the engines constructed at the Bertram Engine Works, Toronto.

The new anchorage for up-bound vessels which may be detained at the mouth of the Detroit river by low water, was completed June 1. It extends from the new water signal station on Point Elliott, for 1,600 ft. up the river, opposite Amherstburg, Ont.

Toronto marine men propose to ask the Minister of Marine to move the fog horn station at the eastern channel to a location near the old lighthouse on the Island shore. It is stated that the sounding of the horn from the pier is rather deceiving out in the lake.

The Ontario Legislature at its recent session authorized the Toronto City Council to expend \$45,000 on the construction of a freight shed on the east side of block D, Harbor Square, and \$15,000 for buildings on wharf between Yonge and Bay streets, and to pay for the same out of the \$110,500 of debentures authorized to be issued by the act.

The full service of the three steamers of the Niagara Navigation Co. across the lake from Toronto to Lewiston, N.Y., has been in effect since the beginning of June. The Corona's machinery has been thoroughly overhauled and a number of improvements made in the passenger accommodation. The Chippawa was also given an overhaul before going into service for the season.

The dynamite laden steamer Dorothy was towed into Kingston, Ont., June 1, having broken her propeller at Farran's Point. She was refused admission to the Government dry dock for repairs, the rules not permitting vessels having explosives on board to enter. A new propeller arrived from Buffalo, N.Y., and was placed in position by the Donnelly Salvage and Wrecking Co., a box having been built around the stern to enable this to be done.

The limits of the jurisdiction of the Harbor Master of Fort William, Ont., have been enlarged, the waters of the port now comprising the navigable waters of the Kaministikwia River, including McKellar and Mission channels; and the waters of Thunder Bay, bounded on the north by a line drawn due east from the dividing line between Fort William and Port Arthur, and on the south by a line drawn east from Whisky Jack point, and on the east by the six fathom line.

The Dominion cruiser Vigilant found the U.S. tug Grace M fishing in Lake Erie, over five miles north of the boundary line, June 7. The captain of the tug refused to stop when called upon to do so, and in making an effort to escape by crossing the Vigilant's bow the tug was run down, two of the crew being drowned. At the Government investigation subsequently held the captain of the tug admitted that he was poaching, and had taken over 300 lbs. of fish that morning.

The Department of Trade and Commerce has informed the Dominion Marine Association that no instructions were issued to stop weighing or sampling cargoes after six o'clock p.m., at Port Arthur or Fort William, Ont., and so prevent the loading of vessels. A communication was sent to the C.P.R., however, stating that the samplers would stop whenever it became too dark to properly see the grain. The Inspector of Grain at Fort William states that his men are always ready for duty between daylight and dark.

Three of the 100 ft cribs of the new outer breakwater at Goderich, Ont., which the Government is having built, have been towed into position. Another crib of the same size is being prepared. After the cribs are weighed down with stone, they will be topped with concrete blocks. The footing blocks weigh 5 tons each, and there are two courses of these, which will be topped by 6 ft. of concrete blocks of smaller size. This is the first section of the breakwater and is to be completed by the fall. The contractors are Battle and Conlon, Thorold, Ont.

The Hydraulic Navigation Co. is in process of formation at Hamilton, Ont., for the purpose of developing the invention of J. Dudley, for propelling vessels by a new process. The invention consists of a tube running the full length of the hull, in which valves are arranged. Through the tube water is pumped, and it is claimed that the compression of the water makes the vessel move. A small model was tried in 1904, and a 45 ft. boat was tested in Hamilton bay June 6, it is reported with satisfactory results. The pumping power in the boat was supplied by a 37 h.p. gasoline engine.

The Dominion Marine Association has been advised, in reply to its memorial relative to the new regulations governing the use of winches for hauling vessels into, through and out of, the locks of the Cornwall canal, that the Department of Marine has received reports from the chief officer of the canal to the effect that it does not appear that there are any serious grounds for complaint in the matter. The introduction of the new system, it is stated, is naturally attended with some difficulty, owing to inexperience, neither the crews of the vessels nor the canal lockmen being, at first, as apt at handling the vessels as they will become with practice. The reply is not considered satisfactory, but the association has not decided whether it will take any further immediate action, or wait to see if the faults complained of will be remedied as the lockmen gain experience.

The capital stock of the Bertram Engine Works Co., Toronto, has been acquired by the Canadian Shipbuilding Co., of which F. Nicholls, Second Vice-President and Managing Director of the Canadian General Electric Co., is President, and A. Angstrom, formerly of the Bertram Co., is General Manager. The Bertram Co.'s yards and engine works will be used for the construction of steamers and other vessels of canal size, passenger steamers for the Lake Ontario and St. Lawrence River trade, and steamers for the smaller inland waters. The first vessel to be built under the new control at its yard will be the new steamer for the Niagara Navigation Co. The Canadian Shipbuilding Co.'s new yard at Bridgeburg, on Lake Erie, will be utilized, for the construction of large freight steamers for the Upper Lakes trade. F. Nicholls has been elected President and A. Angstrom Vice-President of the Bertram Engine Works Co.

H. C. Spaulding, of New York, who was the principal promoter of a project for the construction of canals, connected by portage railways, between Georgian Bay and Lake Ontario, near Toronto, which was vetoed at the current session of the Dominion Parliament, attended before the York County Coun-

cil June 5, to explain his project. He said the proposal was to build a ship canal from near Victoria Harbor, Georgian Bay, to Lake Simcoe. Vessels could then use this lake to a second canal which would utilize the channel of the Humber River and terminate in Humber Bay. The rise of 131 ft. from Georgian Bay and the drop of nearly 600 ft. from the height of land to Lake Ontario would be overcome, not by a costly system of locks, but by a system of portage railways over which the vessels would be conveyed by a patented vehicle. This would reduce the cost from \$60,000,000 to about \$35,000,000 and three-fifths of the time of locking would be economized. The council promised to give consideration to the proposal. When the matter previously came up in Parliament the council appeared in opposition to the bill.

The Ontario Government maintains a number of locks and wharves, and spends a considerable sum annually in dredging and otherwise improving the waterways in the Muskoka district. The report of the Minister of Public Works recently issued, gives details of the work done during 1904. The old wharf at Port Carling was repaired and a new addition, 127½ ft. by 16 ft., constructed on an adjoining lot; the wharf above the lock at Magnetawan was rebuilt, and a new lock constructed. Dredging operations were carried on at Burk's Falls, on Ahmic Lake, Goose Lake, and a number of the smaller rivers and lakes in the vicinity. The locks at Port Carling and other points were placed in thorough repair. Following are figures showing the number of steamers, etc., passing through the locks during the year:—

Lock.	Steam- ers.	Small Boats.	Scows.	Timb'r Rafts.
Port Carling.....	3,475	637	738	210
Mary's and Fairy Lake...	596	34	109	63
Magnetawan.....	779	25	280	27
Lindsay.....	218	307	150	103
Young's Point.....	1,344	136	161	252
Balsam River.....	460	129	188	50
Total.....	6,872	1,268	1,576	705

The Transportation Commission held a session at Port Arthur, Ont., June 8, at which J. J. O'Connor recommended the municipalization of as much of the water front as possible and the appointment of a harbor commission. R. Reford, chairman, pointed out that this was a local question, and Mr. O'Connor went on to state that owing to the increasing size of the vessels coming to the port it was necessary to have a greater depth of water in the harbor. He thought there should be a depth of 23 ft. maintained, and that a concrete shore line should be provided so that the dredging could be done up to it. He also advocated the establishment of a clearing elevator, so that vessels should not have to waste time in going from elevator to elevator picking up fragments and ends of grain left. There was also a necessity for further breakwater extension at the port; an icebreaking steamer or tug should be subsidized or maintained by the Government, and the lighthouse season should be extended to Dec 20. The number of vessels reported inwards during the season of 1904 was 657, and outwards, 635. The commissioners promised to take all these matters into consideration in making a report to the Government.

The Northern Navigation Co.'s str. City of Collingwood was burned at her dock at Collingwood, Ont., early on the morning of June 19. The vessel reached port from her regular run to Sault Ste. Marie, June 18, and was subsequently sent out to tow in the Britannic, which had become disabled. The two steamers reached port on the night of June 18. Early next morning the City of Collingwood was discovered to be on fire, and so quickly did the flames spread that it was impossible to save anything, four members of the crew being burned to death before aid could reach them. The str. Britannic was

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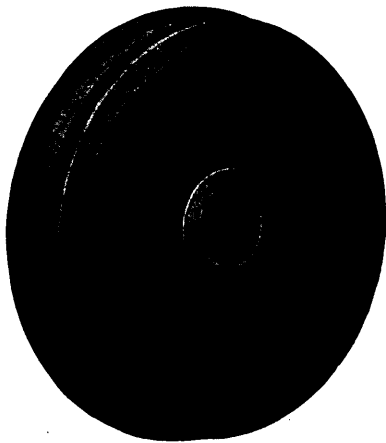
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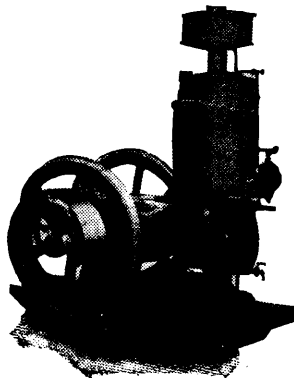
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ESTIMATES PROMPTLY FURNISHED.



towed out of danger, but the G.T.R. freight sheds were considerably damaged. The City of Collingwood was valued at about \$60,000 and was fully insured. The G.T.R. loss is estimated at \$10,000. The City of Collingwood was a screw steamer constructed of wood, in 1893, at Owen Sound, Ont., having the following dimensions: length, 213 ft.; breadth, 34 ft.; depth, 12½ ft.; tonnage—gross, 1,387 tons; register, 893 tons. She was fitted with engines of 107 nominal horse power.

Our Winnipeg correspondent wrote on June 15: "The lake freight business during the past month has been fairly satisfactory to the bulk carriers even in the face of a poor demand for tonnage from the grain trade, as the coal and ore movement for Canadian vessels has so far this season been the best in the history of the lake trade, the steel rail movement taking care of the surplus tonnage to the entire satisfaction of all concerned. The general results have been so satisfactory to vessel men that no less than three new steel steamers with a combined capacity of about 250,000 bush. of wheat are now on order in Great Britain for fall delivery on the Great Lakes, and even with this additional tonnage, the old cry of the grain shippers, of lack of Canadian vessels, will again be heard in the West if the present crop prospects are maintained. The question of more elevators at Eastern ports was brought to the attention of the transportation commission at its recent Winnipeg sitting, and evidence produced showing that the early blocking of the present Ontario elevators last fall, lost a majority of the grain carriers one trip, equivalent to 2,500,000 bush., at the season of the year when most important. This blocking has the effect of driving a large percentage of even a moderate crop to United States channels. The package freight business is also good westbound, and shows some slight signs of improvement eastbound. Rates to Georgian Bay ports 1½c., and to Montreal 3½c. to 4½c., according to the need of the tonnage offering."

The Temagami Navigation Co. has been incorporated under the Ontario Companies' Act with a capital of \$50,000 and offices at Toronto, to carry on a general navigation business, and any other businesses that may be carried on in connection therewith. The provisional directors are—J. E. Russell, S. Hall, J. M. Sinclair, J. Munro, J. J. Main, and A. H. Jeffrey, of Toronto. The object of the company is mainly to place steamers on the Temagami Lake and adjacent waters which, since the opening of the Temiskaming and Northern Ontario Ry., have been attracting an increasing number of tourists. Among those principally interested in the company are, F. B. Polson, J. B. Miller, J. J. Main, and A. H. Jeffrey, all of the Polson Iron Works; J. E. Russell, and J. M. Sinclair, Toronto. The company has acquired two steamers, the Bobs and the Wanda, the former of which has already been transferred from Parry Sound to Temagami Lake. The Wanda, which it is proposed to rename the Temagami, will be taken in by rail from Muskoka early in July, when the Polson Iron Works has delivered a faster yacht which it is building for Mr. Eaton. The Bobs is a screw steamer, hitherto owned by the Parry Sound Lumber Co., and was built at Toronto, 1900, her dimensions being: length, 66 ft.; breadth, 10.5 ft.; depth, 5 ft.; tonnage—gross, 38 tons; net, 26 tons. She is fitted with engines of 6 n.h.p. The Wanda is a screw steam yacht, hitherto owned by T. Eaton, Toronto, and was built there by the Polson Iron Works, 1898. The dimensions are: length, 53.5 ft.; breadth, 8.1 ft.; depth, 4 ft.; tonnage—gross, 12 tons; register, 8 tons. She is fitted with engines of 10 n.h.p. A. H. Jeffrey is manager of the company, and Capt. F. Mackay, of Lefroy, has been appointed local manager at Temagami station.

### B.C. and Pacific Coast Shipping.

F. J. Hart & Co., New Westminster, B.C., have been appointed agents there for the Pacific Coast Steamship Co.

At the opening of navigation on the Yukon River, June 1, there was awaiting transportation at Whitehorse, over 3,000 tons of general merchandise.

A steam barge built at Vancouver, B.C., for Capt. J. McDowell, was launched May 26. She is 71 ft. long, 16 ft. beam and 7 ft. depth of hold.

The Dominion Government has let a contract for the construction of a no. 6 order lighthouse at Poulteney point, Malcolm Island, to — Frost of Nanaimo.

The C.P.R. str. Princess Victoria was placed on the Vancouver-Victoria-Seattle run for the season June 1. She makes 340 knots during the round trip, which is made every 24 hours.

A launch for the Vancouver Power Co. was launched at Vancouver at the beginning of June. She is 38 ft. long, with a breadth of 7 ft., and is propelled by twin screws, driven by two 15 h.p. motors.

B.C. press reports state that the C.P.R. will begin the construction at an early date, of a steel steamer for the Nelson-Kootenay Landing run. The steamer, it is stated, will cost \$150,000 and will be built at Nelson, B.C.

Capt. Gaudin, agent of the Department of Marine, has been directed to hold an investigation into the conduct of Capt. Bonser, formerly of the str. Hazleton. The charges made include an alleged attempt to ram a rival steamer on the Skeena River.

A rate war has been started on the Fraser River between the C.P.R. str. Transfer and the Pheasant, the first named having cut the rates. On June 6, the new rates—25c. one way for passengers, and 75c. a ton for freight between New Westminster and Delta points—went into effect.

The str. Le Roi has hoisted the Canadian flag, under the command of Capt. Kickham, and the management of H. A. Jones. Her dimensions are: length, 126 ft. 8 in.; breadth, 21½ ft.; depth of hold, 12 ft.; registered tonnage, 133 tons. She is fitted with triple expansion engines, 11 in., 20 in., and 32 in., diameter, by 23 in. stroke, having 5.13 nominal horse power.

Capt. C. P. Marshall, who has been in command of the C.P.R. Pacific steamer Empress of India, since she was placed on the service in 1891, has retired, and is succeeded by Lieut. Bleatham, R.N.R., heretofore master of the C.P.R. str. Tartar. Capt. Marshall has been appointed a member of the Elder Brethren of Trinity House, the corporation which has charge of the lighthouses round the British coast.

The Minister of Marine recently stated in the House of Commons that the British Government had given over to Canada the work of the hydrographic surveys on the Pacific coast. It was of great importance, he said, that this work should be proceeded with, especially to prepare the way for traffic to Port Simpson. In 1904 a party of inspection had the misfortune to have their vessel run on an uncharted rock.

The recently appointed shipping master at Victoria, B.C., has decided that Capt. Hickey, who holds a certificate granted in Canada, cannot act as master of the C.P.R. str. Princess Victoria, now on the Victoria-Vancouver-Seattle run. The ground on which he bases the decision is that the Princess Victoria, being registered at London, Eng., and running to a foreign port—Seattle, Wash.—must be commanded by a master holding a British certificate. The Minister of Marine has been appealed to by the company.

### Manitoba and the Northwest Territories.

A new steamer, Chieftain, has been placed on Lake Winnipeg by J. Sigurdson, making daily trips between Selkirk and Hnusa, calling at Gimli. She is 90 ft. long, with a breadth of 16 ft., and is fitted with compound engine capable of developing 150 h.p.

Admiral Sir C. Markham, speaking in London, Eng., recently expressed regret that the Admiralty had sold the exploration str. Discovery to the Hudson's Bay Co., for its trade between Hudson Bay points and Great Britain. Admiral Markham is an advocate of the opening up of Hudson Bay to navigation by the establishment of a regular port therein.

The Transportation Commission at its recent sittings at Winnipeg took into consideration the questions of the navigation of the Red River, and the promotion of a route to Hudson Bay, with a view of having a regular line of steamers established between a suitable port there and Great Britain. In connection with the first matter it was pointed out that in the early days of Manitoba a fleet of 17 river steamers came to Winnipeg. The U.S. Government had expended a large sum in improving the navigation of the river south of the International boundary. In 1900 the Dominion Government let a contract for the construction of a dam, with a canal and lock, on the river at St. Andrew's rapids, some 18 miles below Winnipeg, but the contractor had done very little work. He has now abandoned his contract, and the plant is to be taken over at valuation by the Government. About \$120,000 had been expended out of the \$500,000 which the work was to have cost. The canal and lock was to have been completed in three years. The Winnipeg Board of Trade urged upon the commissioners the desirability of this work being completed at once so as to provide an 8 ft. waterway between Winnipeg and Lake Winnipeg; and the clearing of the Red River of snags and rocks, between Winnipeg and the International boundary. The board also urged the importance of charting Lake Winnipeg, upon which there was considerable steamer trade; and of improving the Assiniboine and Saskatchewan rivers so as to make them available for navigation. The latter river was at present being navigated by steamers on the northern branch between Edmonton, Lloydminster, Battleford and Prince Albert. Only two barriers of any consequence would have to be cleared on this river and an immediate survey was asked for. R. Reford, chairman of the commission, stated that Lord Strathcona had expressed the opinion that it would not pay to deepen the Saskatchewan so as to make it navigable through to the lake. As far as the Red River was concerned, he did not see there would be much difficulty in making it navigable. Referring to the proposed Hudson Bay route to Great Britain, he said unless there was some other inducement than grain offering there was little use in thinking this route a practicable one. The Board of Trade promised to furnish certain information on specific points mentioned by the chairman, and the commission subsequently heard evidence dealing with the probable traffic, and the improvements thought to be necessary at Fort Nelson and Fort Churchill, to provide for the accommodation of vessels having a 27-ft. draught.

### Among the Express Companies.

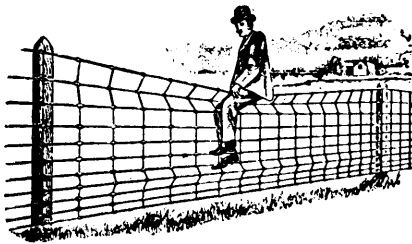
The Western Ex. Co. has opened offices at Paynesville and Karlstad, Minn.

The Canadian Northern Ex. Co. has closed its offices at Wakopa and Homefield, Man.

W. R. Russell has been appointed agent Canadian Northern Ex. Co. at Fort Frances, Ont.

The Alaska Pacific Express Co. has resumed its Yukon service, navigation having been opened June 1,





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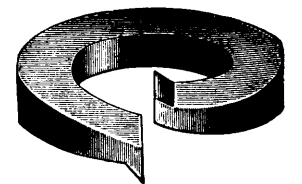
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**PIPE LAYING AND CONTRACTING**

The Newfoundland Legislature has passed an act imposing a tax of \$2,000 a year on all express companies doing business in the colony.

The Dominion Ex. Co. announced the opening of the remainder of its summer routes on the steamer lines for the current season, June 1.

L. E. Wright has been appointed agent Canadian Ex. Co., at Collingwood, Ont., succeeding A. Henser, who has resigned to go to the Northwest.

The names of the Dominion Ex. Co.'s offices at Rat Portage, Ont., and Arundel, Que., have been changed to Kenora and Huberdeau respectively.

The Dominion Ex. Co.'s general circular no. 77 contains lists of the points to which Boundary district, Kootenay district, and Puget Sound point rates apply.

The Canadian and American Ex. Co.'s are arranging for a new office in St. John, N.B., the present offices not having the yard accommodation required by the increased business.

The Dominion Ex. Co. has placed its service on the Tillsonburg, Lake Erie and Pacific Ry., and has opened offices in connection therewith at Eden, Mount Elgin, Port Burwell, Salford, Staffordville, Tillsonburg and Vienna, Ont.

The Canadian Northern Ex. Co. has adopted the new uniform money order. The new issue is in light and dark chocolate, with the company's trade mark in the centre and the words "Canadian Northern Express Co." in minute type covering the background.

D. J. McFeggan, heretofore Route Agent Dominion Ex. Co., at North Bay, Ont., has been appointed Route Agent at Toronto, succeeding C. A. Dobson, transferred, and W. Aitchison, heretofore agent at Sault Ste. Marie, Ont., has been appointed Acting Route Agent at North Bay, and is succeeded by H. E. Baker.

The Dominion Express Co. and the C.P.R. Telegraphs have heretofore had a joint agency at Hamilton, Ont., in charge of C. J. Jones. Owing to increased business it has been found necessary to establish separate offices. The Dominion Express office has been opened at 10 James St. south, with C. A. Dobson, heretofore route agent at Toronto as agent. C. J. Jones remains as agent of the C.P.R. Telegraphs, with office at 8 James St. south.

The Canadian Northern Ry. has completed its main line construction as far west as Battleford, Sask., and the Canadian Northern Ex. Co. is placing a service on that section with offices at Carmel, Bruno, Dana, Lally, Vonda, Aberdeen, Clarkboro, Warman, Dalmeny, Elbow, Lacrosse, Baltimore, Goodrich, Hartboro, Maymont, Lucerne, Denholm, Brada, North Battleford. The company also expects to operate very shortly a service on new short line built by the C.N. Ry. between Winnipeg and Brandon, Man.

### Telegraph and Cable Matters.

The G.N.W. Telegraph Co. moved into its new offices, St. Peter St., Quebec, early in June.

The C.P.R. Telegraph Department has arranged to inaugurate a call-box and telegraph messenger service in Quebec city.

The C.P.R. Telegraph Department announces a reduction of 20c. a word in cable rates to Japan, taking effect July 1.

The Canadian Northern Telegraph Co. recently announced a reduction of rates between Port Arthur, Ont., and Winnipeg.

J. H. Kent, Manager C.P.R. Telegraph Department, has been elected an honorary member of the American Association of Railway Telegraph Superintendents.

The Canadian Northern Telegraph Co. has opened offices at the following points: Fork River, Mafeking, Sanford, St. Laurent, Marchand, Ogilvie, Underhill, Man.; Humbolt, Melfort, N.W.T.

The Cunard str. Campania, on a recent voyage, while in mid-ocean, was in communication with the Marconi wireless telegraph stations in England and on the American coast at the same time.

The Western Union Telegraph Co. is installing a telegraphic call-box system in St. John, N.B. The C.P.R. Telegraph Department has decided to install a call-box system there and at Halifax, N.S.

The Marconi wireless telegraph station, which the Dominion Government is fitting up on Sable Island, was expected to be completed by the end of June. It will communicate with the recently completed station at Camperdown, N.S.

Referring to the new cable tax in Newfoundland, the Premier recently stated it was the intention to charge the Marconi Wireless Telegraph Co. \$4,000 for each of its three stations, established without official sanction, in the island if it were proved that a commercial business was being done.

The C.P.R. Telegraph Department has opened offices at Maryville, Ryan, B.C.; Harding, Man.; Filmore, Forget, Francis, Howard, Leavings, Redvers, Walsh, N.W.T.; International Pier, Stellarton, N.S.; Bouchette, Que., in addition to opening offices at tourist points for the summer season.

In connection with the corps of engineers branch of the Canadian militia, a field telegraph company is to be organized. The present equipment of this company will consist of two cable wagons with four drums, each containing two miles of wire, and the other necessary fixtures and instruments.

The Fessenden Wireless Telegraph Co.'s station at Ottawa has not proved a success, and it is stated that a new site will have to be chosen. The Dominion charter, which the company is applying for, is similar to that already granted to the Marconi Wireless Telegraph Co. The location of the stations, etc., will be subject to the approval of the Governor-in-Council.

The Postal Telegraph Cable Co. has issued a notice calling attention to the fact that the British Pacific cable route to Australia, Fanning Island, Fiji Island, New Caledonia, New Zealand, Norfolk Island and Tasmania, offers the cheapest tariff to the places named from all points in the U.S., and directing that unless specially routed otherwise by the sender, all messages are to be sent by the British line.

The Government telegraph lines in the Northwest Territories and British Columbia have been placed under the charge of J. S. Macdonald of Qu'Appelle, Assa., with the title of General Inspector of Government Telegraphs. The Yukon telegraph line from Ashcroft, B.C., to the Alaskan boundary will also be under the charge of a General Inspector of Government Telegraphs, J. E. Gobeil having been appointed to that position. His headquarters have not yet been fixed.

A. B. Macdonald, of Meat Cove, N.S., has been appointed Inspector of the Dominion Government Telegraph lines in Nova Scotia and New Brunswick. The department is about to have a building for office and dwelling erected at Bay St. Lawrence, 12 miles from Meat Cove, to which point the Magdalen Islands and St. Paul's cable terminals will be carried for more convenient operation. For the present Mr. McDonald's headquarters will be at Meat Cove, but, later on, he may be

moved to Bay St. Lawrence. His title will be General Inspector Cape Breton Telegraphs.

M. W. Crean, who is at present superintending the construction of a telegraph line paralleling the cable stretch between Bersimis and Manicouagan, rendered desirable in consequence of the liability of the cable to interruptions and delays, has been appointed Inspector for the Government telegraph lines below Quebec, on the north shore of the St. Lawrence to Chateau Bay, and in the counties of Montmorency, Charlevoix, Chicoutimi and Saguenay, including Grosse Isle. His title will be General Inspector of North Shore Telegraphs, and his headquarters will be at Quebec.

The U.S. Signal Corps has issued a map showing its telegraph lines in Alaska, and the cable connection with Seattle, Wash. The junction points with the Canadian telegraph lines in Yukon Territory are also shown. The telegraph line extends from Valdes to the Yukon boundary, near Eagle City, 437 miles; with a branch from Ketchumstock to St. Michael, 817 miles, and from Safety to Nome, 24 miles; St. Michael and Safety, 107 miles, are connected by wireless telegraph apparatus. The land lines and the wireless stations cover 1,385 miles. The cable system extends from Seattle to Valdes, with a branch from Sitka to Skagway, a total of 1,666 miles.

According to the figures contained in the recent budget speech of the Minister of Finance of Newfoundland, the colony expended during 1904 \$6,000 on Marconi wireless telegraph apparatus for the Labrador coast, and \$1,250 for alterations at the post office for the telegraph service. Out of the surplus revenue it was proposed to expend \$14,000 for an extension of the Marconi wireless telegraph system and \$10,000 on new postal and telegraph offices. The general estimates for the current year provide \$350,014 for post office and telegraph purposes, and the estimated receipts show \$48,000 from telegraphs, and \$22,800 from the cable and telephone tax. A resolution imposing a tax of \$4,000 is levied on every cable landed in the colony. The Government has in contemplation the laying of a cable between Basque, Nfld., and Canso, N.S. For this purpose, and for the purpose of extending the telegraph lines in the island a loan of £68,500 is being arranged. At the same time a loan of £322,717 will be raised to pay the telegraph award to the Reid-Newfoundland Co.

The Marconi wireless telegraph station near Halifax, N.S., was completed June 3. It is located close to the Camperdown signal station of the Imperial Government, some 14 miles down the harbor from the city of Halifax. It is said to be complete in every detail and is reported to be now in perfect working order. The Marconi construction crew is now at Sable Island erecting a station. This station is expected to be completed early in July, and the Marconi Co. expects to get messages through between Camperdown and Sable Island on July 1. These stations are the two most important ones for navigation and commercial purposes in North America. An average of five vessels fitted with Marconi wireless apparatus pass within radius of the Sable Island station every day, and the Marconi Co. officials expect that they will receive an average of at least 60 commercial messages a day from these vessels. These messages will be retransmitted to the Camperdown station. Both the C.P.R. and the Western Union Telegraph companies are putting in wires to this latter station. This will ensure a good land wire service, and it is now only a question of a few weeks before a passenger on board a New York liner will be able to be in telegraphic touch within a radius of 150 miles from Sable Island. During the



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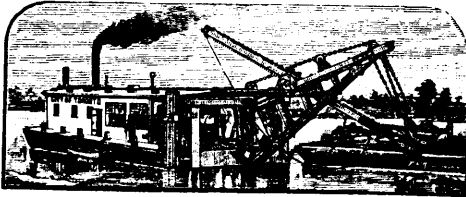
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### Chicago, Milwaukee and St. Paul Railway

The Overland Limited leaves Union Passenger Station, Chicago, 6.05 p. m. Arrives Omaha 7.35 a. m., and Denver 10.00 p. m. the next day, and San Francisco the third day in time for dinner.

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PENNSYLVANIA RAILROAD STEAMERS

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CHAS. E. MARKHAM, G.P.A.  
BUFFALO, N.Y.

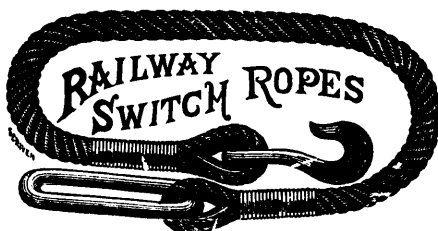
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MARQUETTE, FROM PORT  
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ALL LINES TICKET VIA  
PERE MARQUETTE TO  
MICHIGAN POINTS.

past years there has been an average of three wrecks per year on Sable Island, and no means have been available of learning of these disasters beyond reports from ships that happened to pass close to the island. In future, however, reports of shipwrecks should be known throughout the world within a few minutes after the disaster has occurred.

A paper on high tension wires on railway right-of-way, read by W. J. Camp, Electrical Engineer, C.P.R. Telegraphs, before the American Association of Railway Telegraph Superintendents, was published in our last issue. In the discussion which followed, Mr. Kinsman, Wabash Rd., stated that Michigan had a somewhat similar law to that of Canada. The Secretary said that the minutes of the 1902 meeting contained a report on the subject. Mr. Chenery, Missouri Pacific Rd., stated that Kansas had passed a law this year giving rules for crossing railways. All poles to be of sound timber, 6 inch tops, 5 ft. in ground, wires 25 ft. above rail, poles braced and guyed, arms braced, poles not less than 10 ft. nor more than 52 ft. from the rail. To cross at right angles to track wherever practicable, clear telegraph wires at least 2 ft. If underground, to be not less than 3 ft. below rail. Notice of intention to cross to be served on nearest station agent, etc. Trolley wires to be at least 22 ft. above rails and supported on poles with 7 inch tops, the companies crossing the railway to maintain in proper order, etc. Mr. Kaiser, Missouri and Kansas Telegraph Co., said this law had been brought about through the Union Pacific Rd. A farmer's telephone line had caught and killed a brakeman. Mr. Miller, Superintendent Western Union Telegraph Co., Cincinnati, said that the bad effects from high tension lines was becoming very serious. From Indianapolis to Rushville, 35 miles, an alternating current line paralleled their wires, and prevented them working wheatstone, quad or tickers on that route, although the transmission line was 300 ft. from the W.U. wires. A box relay placed on one of the telegraph circuits simply roars, but they were able to work ordinary morse and duplex. This line will be extended to 95 miles, and he expects still more trouble. When the transmission line only extended for 15 or 20 miles they did not experience any trouble. There are substations every 10 miles for supplying a trolley line with alternating current power. A committee consisting of E. P. Griffith and L. B. Foley, of New York, and C. P. Adams, of the Southern Ry., Washington, D.C., was appointed to bring this matter to the attention of the American Railway Association, with the object of having that body request all state legislatures to enact laws for the protection of the railroads from the erection of wires over their rights-of-way.

#### Aliens in the G.N.W.T. Co.

In the House of Commons, June 19, F. D. Monk, M.P., brought up the question of what he described as "an impending danger to the Canadian telegraph system by the Americanizing of a portion of that system in violation of the provisions of the alien labor act." He referred particularly to the Americanizing of the G. N. W. Telegraph Co. About 20 years ago that system had been formed by interests controlled by the Western Union Telegraph Co., by an absorption of the Montreal, Dominion and Mutual Union Telegraph Companies in this country. A certain dividend was guaranteed, and the new company had operated the system ever since. Not much attention was paid to it at the time, but within the last two or three years the attention of the U.S. capitalists interested had been directed anew, and since that time they had undertaken to completely

Americanize the system, and in doing so they were violating the alien labor act. Mr. Monk quoted newspaper clippings, relating to some of the appointments of U.S. citizens recently made by the company. These included the dismissal of T. Rodgers, chief operator at Montreal, and the probable withdrawal of Manager Powell and the chief accountant; the appointment of I. McMichael, of Minneapolis, as General Manager, to succeed H. P. Dwight, and S. B. McMichael, of Chicago, as superintendent at Toronto. The attention of the Department of Labor was drawn to this, but when they looked into it, S. B. McMichael was temporarily withdrawn, said to have been owing to illness. Later F. R. Carney, of Chicago, was appointed local manager at Ottawa, in place of Mr. Bethune, and Mr. Callaghan, of Chicago, was brought to Montreal as cashier. Several minor appointments had also been made, and he had been informed that it was in contemplation to bring linemen from Boston to Montreal to operate there in place of the present employes. Mr. Monk said it was not in the interest of Canadians that the service of that company should be placed in the hands of aliens, as he had indicated. If the law was being violated there should be a prompt remedy. If Judge Anglin's decision was well founded it might be necessary for the Government to make some changes in the law to protect Canadians. It was, of course, hostile legislation, but it had been commenced by the U.S., and as long as they enforced it, it was the duty of the Government to protect labor in our own country.

Sir Wilfrid Laurier said it had been understood when the G.N.W. Telegraph Co. was incorporated that a large amount of U.S. capital was being invested in it. It had not been, however, provided that a certain proportion of directors should be British subjects.

Mr. Monk interrupted to say he thought there was a provision that a majority of directors should be British subjects. At all events there were only two U.S. directors—I. McMichael and B. Brooke. The Canadian directors are H. N. Baird, W. C. Matthews, Adam Brown, J. Hedley and, until he died recently, Hon. Wm. McDougall. The board were not, however, consulted in regard to these changes.

"Then," commented Sir Wilfrid, "these offences have been committed, or at all events sanctioned, by the Canadian directors." Sir Wilfrid said there appeared to be a misapprehension in regard to the matter. From information which he had received only one of the officials mentioned by Mr. Monk had been replaced by a U.S. citizen, Mr. Bethune, at Ottawa. The others had all been replaced by Canadians. However, the Government would look into the matter. "We had an alien labor law three days ago, but it is a question if we have one now," Sir Wilfrid added, smiling.

"Is there no appeal from that?" asked Mr. Foster.

"The Judge says not," observed Mr. Fitzpatrick.

"I am not sure; all these things will have to be looked into," the Prime Minister added. "It was taken in self-defence, and I hope we still have the act."

Mr. Monk concluded the discussion by repeating his firm belief in the truth of the statements he made, saying there was no doubt about the facts.

The Dominion Line Str. Scotsman was wrecked at East Point in the Gulf of St. Lawrence, Oct., 1898, and no serious attempt was made at recovering the cargo which was valued at over \$750,000. The St. Lawrence Floating and Wrecking Co. has fitted out a schooner with the necessary apparatus, and expects to save a good deal of the cargo.

#### General Telephone Matters.

The Bell Telephone Co. is arranging for the erection of a new office at Brantford, Ont.

The B.C. Telephone Co. is reconstructing the 25 miles of line between Phoenix and Cascade, B.C.

The Newfoundland Government has passed a resolution to collect a tax of \$4 upon all telephones in use in the colony.

J. M. Martin, the Bell Telephone Co.'s local manager at Barrie, Ont., absconded recently. An audit of his accounts showed a shortage of \$1,200.

The Nova Scotia Telephone Co. is arranging to extend its underground conduit system in Halifax, in order to meet the objections to the pole lines.

The B.C. Telephone Co. has purchased three lots on the west side of Seymour St., New Westminster, for the purpose of erecting a central exchange and office building.

The Bell Telephone Co. entertained the House of Commons Committee on Telephones at luncheon, on the occasion of their visit to Montreal, May 27. The committee inspected the company's exchanges, etc.

E. H. Farrow, local manager of the Bell Telephone Co., at Belleville, Ont., was recently presented with a gold cross by the Boys' Brigade of St. Thomas' Church, of which he had been instructor, on the occasion of his removal from the city.

At the recent session of the Ontario Legislature an amendment to the assessment act was proposed, by which telephone companies were to be assessed at the rate of \$135 a mile in addition to the assessment on gross earnings. The bill was withdrawn.

During the absence of Sir Wm. Mulock in England, A. Zimmerman, M.P. for Hamilton, Ont., is acting as chairman of the House of Commons Telephone Committee. He stated that there would not be any legislation this session as the outcome of the committee's work.

The Wallacetown and Lake Shore Telephone Association has completed the installation of a local line of 18 instruments extending from Port Talbot to three miles west of Wallacetown, Ont. The rental has been placed at \$4 a year. Dr. Crane, Wallacetown, is Secretary-Treasurer of the association.

The Russell Telephone Co. has been incorporated under the Manitoba Companies' Act, with a capital of \$5,000 for the purpose of establishing a telephone system in the rural municipalities of Russell, Silver Creek, Boulton and Shell River. The provisional directors are: A. Gale, P. Smellie, W. J. Doig, J. J. Moon, T. A. Wright, and A. Tingley. Office, Russell.

The Bell Telephone Co. is increasing its capital to \$9,000,000 by the issue of an additional \$1,000,000 of stock at \$125. Shareholders of record June 15, were entitled to subscribe for one share of the new stock for each eight shares of old stock held. Payment is to be made in five instalments of \$25 per share: July 3, Oct. 2, 1905, and Jan. 2, April 2, and July 2, 1906.

The North Wellington Telephone Co. has been incorporated under the Ontario Companies' Act, with a capital of \$15,000 and offices at Arthur, Ont., to carry on a general telephone business in Wellington county, and the townships of East Luther and East Garafraxa in Dufferin county. The provisional directors are: M. Heffernan, D. Brocklebank, J. Goetz, G. Dodge, H. J. Colwill, J. M. Roach and J. H. Thomas.

It was recently stated that an arrangement had been arrived at between the C.P.R. and the municipal authorities of Port Arthur and Fort William, Ont., as to the compensation to

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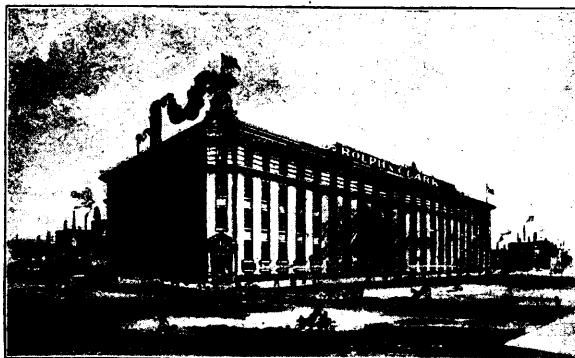
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Manchester Ship Canal Co.'s Elevator, Manchester, Eng.....	"	1,500,000 "
Burlington Elevator Co., Peoria, Ill.....	"	500,000 "
Canada Atlantic Railway Elevator, Coteau Landing, Que.....	"	500,000 "
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be paid to secure the installation of the municipal telephone system to the railway stations there. Any arrangement made will do away with the necessity of the appeal to the Supreme Court which it was proposed to make. The arrangement will be confirmed in a judgment of the Railway Commission.

The Bell Telephone Co.'s new up-town exchange in Montreal will be situated on Mountain St., and will have a frontage of 56 ft., with a depth of 114 ft. The building will be set back from the street 15 ft., and will conform to the residential character of the street. In the basement in addition to the furnace room, etc., will be the runways for the cables; on the first floor will be the public room, room for batteries, etc., and the 10,000 instrument switchboard will be placed on the second floor.

The New Brunswick Telephone Co.'s annual meeting was held at Fredericton, June 12, when it was decided to make a number of extensions during the current year. These lines will include one from Chatham to Dalhousie, connecting with Bathurst, Campbellton and other places along the north shore; one from Canterbury to McAdam; one from St. Stephen to Moore's Mills, and one from Lepreau to Musquash. It was also decided to erect a \$6,000 building on Carleton St., Fredericton, for head offices; to extend and improve the lines in Moncton, and to extend the line to Edmondston, to connect with the line of the Kamarouska Telephone Co. A dividend of 4% was declared for the half year. The officers and directors for the current year are: President, Hon. A. G. Blair; Vice-President, J. L. Black; Treasurer, Hon. F. P. Thompson; Secretary, W. E. Smith; other directors: Dr. Stockton, M.P., St. John; C. F. Sise, Montreal; C. Fawcett, W. T. Whitehead, M.P.

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(Continued from third page of cover.)

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W. Kennedy & Sons, Ltd. . . . . Owen Sound, Ont.  
Montreal Steel Works . . . . . Montreal.  
Rhodes, Curry & Co. . . . . Amherst, N.S.

**Cast-Steel Hammers**  
American Brake Shoe & F'dry Co. . . . . Mahwah, N.J.

**Cast-Steel Track Tools**  
American Brake Shoe & F'dry Co. . . . . Mahwah, N.J.

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

**Cement**  
Thorn Cement Co. . . . . Buffalo, N.Y.

**Cement Machinery**  
Jas. W. Pyke & Co. . . . . Montreal.

**Coal Hauling Ropes**  
The B. Greening Co. . . . . Hamilton, Ont.

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Thorn Cement Co. . . . . Buffalo, N.Y.

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(Continued on page 335.)



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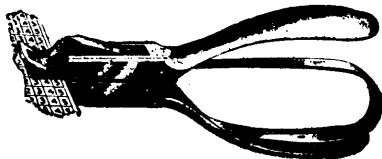
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**PURCHASING AGENTS' GUIDE.**

(Continued from page 333.)

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

**Lamps, Incandescent**  
Canadian Westinghouse Co.....Hamilton, Ont.

**Lamps and Lanterns**  
The Hudson's Bay Company.....  
N. L. Piper Railway Supply Co.....Toronto.

**Lathes**  
The John Bertram Sons Co.....Dundas, Ont.  
H. W. Petrie.....Toronto.  
Williams & Wilson.....Montreal.

**Launches**  
Polson Iron Works.....Toronto.

**Lights, Contractors' and Wrecking**  
F. H. Hopkins & Co.....Montreal.  
W. H. C. Mussen & Co.....Montreal.

**Lithographing**  
Rolph & Clark (Ltd.).....Toronto.

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

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

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

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

**Locomotives (Logging)**  
Lima Locomotive and Machine Co...Lima, Ohio.

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

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

**Locomotive Stack Netting**  
The G. B. Meadows Wire, etc., Co.....Toronto

**Locomotive Tile**  
Garden City Sand Co.....Chicago, Ill.

**Machine Tools**  
W. Abbott.....Montreal.  
H. W. Petrie.....Toronto.  
Williams & Wilson.....Montreal.

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

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

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

**Manganese Steel Castings**  
Montreal Steel Works.....Montreal.

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

**Maps**  
Rolph & Clark (Ltd.).....Toronto.

**Marine Insurance**  
Dale & Co.....Montreal.

**Mats and Matting**  
The Canadian Rubber Co. of Montreal.

**Mechanical Draft Fans**  
Babcock & Wilcox (Ltd.).....Montreal.

**Millpost Numbers**  
Acton Burrows Co.....Toronto.

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

**Milling Machines**  
The John Bertram Sons Co.....Dundas, Ont.  
H. W. Petrie.....Toronto.

**Mills, Boring and Turning**  
The John Bertram Sons Co.....Dundas, Ont.  
H. W. Petrie.....Toronto.

**Mill Tools and Supplies**  
J. A. Dawson & Co.....Montreal.

**Moulding Sand**  
Garden City Sand Co.....Chicago, Ill.

**Nickel**  
The Orford Copper Co.....New York.

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

**Numbers**  
Acton Burrows Co.....Toronto.

**Nuts, Cold Pressed**  
John Morrow Machine Screw Co.....Ingersoll.

**Nuts, Square and Hexagon**  
Canada Foundry Co.....Toronto.  
Montreal Rolling Mills Co.....Montreal.  
Toronto Bolt and Forging Co.....Toronto.

**Oakum**  
The Hudson's Bay Company.....

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

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

**Office Railings**  
The G. B. Meadows Wire, etc., Co.....Toronto.

**Office Signs**  
Acton Burrows Co.....Toronto.

**Oils**  
Galena Signal Oil Co., Franklin, Pa., and Toronto.

**Packing**  
The N. L. Piper Railway Supply Co.....Toronto.  
Williams & Wilson.....Montreal.

**Packing, High Pressure Sheet**  
The Canadian Rubber Co. of Montreal.

**Packing, Piston**  
The Canadian Rubber Co. of Montreal

**Paints, Acid Proof and Anti-rust**  
American Asphaltum & Rubber Co...Chicago, Ill.

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

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

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

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

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

**Pinch Bars**  
The N. L. Piper Railway Supply Co.....Toronto.

**Pipe**  
Erie Heating Co.....Chicago, Ill.

**Pipe and Pipe Coverings**  
W. C. Baker.....New York.

**Pipe Covering**  
Mica Boiler Covering Co.....Montreal.

**Planers**  
The John Bertram Sons Co.....Dundas, Ont.  
H. W. Petrie.....Toronto.

**Ploughs, Contractors'**  
W. H. C. Mussen & Co.....Montreal.  
Toronto Pressed Steel Co.....Toronto.

**Porter**  
E. L. Drewry.....Winnipeg.

**Portable Boilers**  
Babcock & Wilcox (Ltd.).....Montreal.  
Canada Foundry Co.....Toronto.  
Robb Engineering Co.....Amherst, N.S.

**Portland Cement**  
Thorn Cement Co.....Buffalo, N.Y.

**Power Plants, Contractors'**  
Erie Heating Co.....Chicago, Ill.

**Printing**  
The Hunter, Rose Co.....Toronto.  
The Mail Job Printing Company.....Toronto.

**Propeller Wheels**  
W. Kennedy & Sons (Ltd.).....Owen Sound, Ont.  
Sheriffs Manufacturing Co.....Milwaukee, Wis.

**Pumps**  
Canada Foundry Co.....Toronto.  
Erie Heating Co.....Chicago, Ill.  
Gould, Shapley & Muir Co.....Brantford, Ont.

**Pumps (Centrifugal)**  
M. Beatty & Sons.....Welland, Ont.

**Punches**  
F. J. Myers Mfg. Co.....Hamilton, Ohio.

**Punching and Shearing Machines**  
The John Bertram Sons Co.....Dundas, Ont.

**Rail Benders, Roller**  
Montreal Steel Works.....Montreal.

**Rails (new)**  
Drummond, McCall & Co.....Montreal.  
F. H. Hopkins & Co.....Montreal.  
J. J. Gartshore.....Toronto.

**Rails (for relaying)**  
F. H. Hopkins & Co.....Montreal.  
J. J. Gartshore.....Toronto.  
T. A. Morrison & Co.....Montreal.  
W. H. C. Mussen & Co.....Montreal.  
Jas. W. Pyke & Co.....Montreal.

**Railway Equipment**  
F. M. Hicks & Co.....Chicago, Ill.

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

**Railway Pile Drivers**  
W. H. C. Mussen & Co.....Montreal.

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

**Railway Supplies**  
J. A. Dawson & Co.....Montreal.  
The W. H. Kelson Co.....Montreal.  
The N. L. Piper Railway Supply Co.....Toronto.

**Reamers**  
W. Abbott.....Montreal.

**Refrigerators**  
Geo. R. Prowse.....Montreal.

**Ribbons and Carbon Paper**  
United Typewriter Co.....Toronto.

**Rivets, Boiler, Bridge and Structural**  
Canada Foundry Co.....Toronto.  
Montreal Rolling Mills Co.....Montreal.  
Toronto Bolt and Forging Co.....Toronto.

**Rolled Wheels**  
Standard Steel Works.....Philadelphia, Pa.

**Rolls, Plate Bending**  
The John Bertram Sons Co.....Dundas, Ont.

**Roof Trusses**  
Canada Foundry Co.....Toronto.  
Dominion Bridge Co.....Montreal.

**Roofing Composition**  
American Asphaltum & Rubber Co...Chicago, Ill.

**Roofing Pitch**  
American Asphaltum & Rubber Co...Chicago, Ill.

**Roofing, Ready**  
American Asphaltum & Rubber Co...Chicago, Ill.

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

**Rope**  
The Hudson's Bay Co.....

**Rotary Snow Ploughs**  
Crossen Car Mfg. Co.....Cobourg, Ont.

**Rubber Tiling, Interlocking**  
The Canadian Rubber Co. of Montreal.

**Sand, White**  
Garden City Sand Co.....Chicago, Ill.

**Saw Steel**  
Montreal Steel Works.....Montreal.

**Scrapers (Wheel and Drag)**  
W. H. C. Mussen & Co.....Montreal.  
Toronto Pressed Steel Co.....Toronto.

**Screws, Coach and Lag**  
Montreal Rolling Mills Co.....Montreal.  
Toronto Bolt and Forging Co.....Toronto.

**Semaphore Arms**  
Acton Burrows Co.....Toronto.

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

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

**Shaking Grates**  
Babcock & Wilcox (Ltd.).....Montreal.

**Shaping Machines**  
The John Bertram Sons Co.....Dundas, Ont.

**Ship Lamps**  
The N. L. Piper Railway Supply Co.....Toronto.

**Ships**  
Canadian Shipbuilding Co.....Toronto.  
Polson Iron Works.....Toronto.

**Shovels**  
F. H. Hopkins & Co.....Montreal.  
The Hudson's Bay Co.....

**Side Bearings**  
Simplex Railway Appliance Co.....Montreal

**Signal House Numbers**  
Acton Burrows Co.....Toronto.

**Signals**  
General Railway Signal Co.....Buffalo, N.Y.  
N. L. Piper Railway Supply Co.....Toronto.

**Signs**  
Acton Burrows Co.....Toronto.

**Slack Adjusters**  
Chicago Railway Equipment Co.....Chicago, Ill.

**Slotting Machines**  
The John Bertram Sons Co.....Dundas, Ont.

**Snow Ploughs**  
Crossen Mfg. Co.....Cobourg, Ont.  
Rhodes, Curry & Co.....Amherst, N.S.

**Specialties in Brass and Iron Wire**  
The G. B. Meadows, Wire, etc., Co.....Toronto.

**Speedicut High Speed Steel**  
Montreal Steel Works.....Montreal.

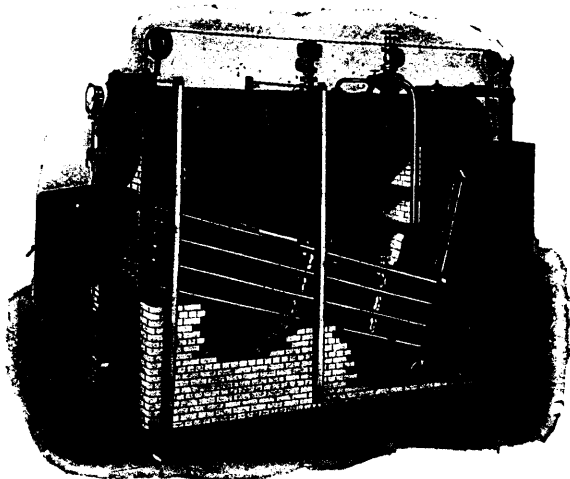
**Spikes, Railway, Ship or Pressed**  
Montreal Rolling Mills Co.....Montreal.  
Toronto Bolt and Forging Co.....Toronto.

**Springs**  
Montreal Steel Works.....Montreal.  
Standard Steel Works.....Philadelphia, Pa.

**Station and Tower Heaters**  
W. C. Baker.....New York.

**Stationery**  
Rolph & Clark (Ltd.).....Toronto.

<b>Station Name Signs</b> Acton Burrows Co. .... Toronto.	<b>Tests</b> R. W. Hunt & Co. .... Montreal. H. Jarvis & Co. .... Chicago, Ill. Standard Inspection Bureau. .... Toronto.	<b>Washers</b> Montreal Rolling Mills Co. .... Montreal.
<b>Steam Attachments for Car Heating</b> W. C. Baker. .... New York.	<b>Ticket Punches</b> F. J. Myers Mfg. Co. .... Hamilton, Ohio.	<b>Waste</b> N. L. Piper Railway Supply Co. .... Toronto.
<b>Steam Couplers</b> Safety Car Heating and Lighting Co. .... New York.	<b>Ticket Wickets</b> The G. B. Meadows Wire, etc., Co. .... Toronto.	<b>Water Filters</b> Geo. R. Prowse. .... Montreal.
<b>Steam Hammers</b> The John Bertram Sons Co. .... Dundas, Ont.	<b>Tie Plates</b> Montreal Rolling Mills Co. .... Montreal.	<b>Water Pipe (Cast Iron)</b> Gartshore-Thompson Pipe & F'dry Co., Hamilton.
<b>Steam Shovels</b> M. Beatty & Sons. .... Welland, Ont. F. H. Hopkins & Co. .... Montreal. W. H. C. Mussen & Co. .... Montreal.	<b>Time Table Racks</b> The G. B. Meadows Wire, etc., Co. .... Toronto.	<b>Water Softeners</b> Babcock & Wilcox (Ltd.) .... Montreal.
<b>Steamship Supplies</b> The W. H. Kelson Co. .... Montreal.	<b>Tires</b> Standard Steel Works. .... Philadelphia, Pa.	<b>Wheelbarrows</b> F. H. Hopkins & Co. .... Montreal. Toronto Pressed Steel Co. .... Toronto.
<b>Steamships</b> Canadian Shipbuilding Co. .... Toronto. Polson Iron Works. .... Toronto.	<b>Tool Steel</b> W. Jessop & Sons. .... Sheffield, Eng. Montreal Steel Works. .... Montreal.	<b>Wheels, Car</b> John McDougall & Co. .... Montreal. Jas. W. Pyke & Co. .... Montreal. Rhodes, Curry & Co. .... Amherst, N.S. Standard Steel Works. .... Philadelphia, Pa.
<b>Steamship Signs</b> Acton Burrows Co. .... Toronto.	<b>Towers</b> Goold, Shapley & Muir Co. .... Brantford, Ont.	<b>Wheels, Locomotive</b> John McDougall & Co. .... Montreal.
<b>Steam Steering Engines for Tugs</b> Sheriffs Mfg. Co. .... Milwaukee, Wis.	<b>Track Jacks</b> F. H. Hopkins & Co. .... Montreal. Montreal Steel Works. .... Montreal. W. H. C. Mussen & Co. .... Montreal. A. O. Norton. .... Coaticook, Que.	<b>Wheels, rolled, solid forged</b> Standard Steel Works. .... Philadelphia, Pa.
<b>Steel</b> W. Abbott. .... Montreal. F. H. Hopkins & Co. .... Montreal. Wm. Jessop & Sons. .... Sheffield, Eng. Williams & Wilson. .... Montreal.	<b>Track Tools</b> F. H. Hopkins & Co. .... Montreal. Montreal Steel Works. .... Montreal. W. H. C. Mussen & Co. .... Montreal.	<b>Wheels, steel tired</b> Standard Steel Works. .... Philadelphia, Pa.
<b>Steel Buildings</b> Canada Foundry Co. .... Toronto. Dominion Bridge Co. .... Montreal.	<b>Trackage Lorrys</b> Crossen Car Mfg. Co. .... Cobourg, Ont.	<b>Windmills</b> Ontario Wind Engine and Pump Co. .... Toronto.
<b>Steel for Springs</b> James Hutton & Co. .... Montreal.	<b>Tramway Equipment</b> J. J. Gartshore. .... Toronto.	<b>Wire and Wire Rope</b> Dominion Wire Rope Co. .... Montreal. The B. Greening Co. .... Hamilton, Ont. W. H. C. Mussen & Co. .... Montreal. The Wire and Cable Co. .... Montreal.
<b>Steel Plate</b> Jas. W. Pyke & Co. .... Montreal.	<b>Trucks (Electric Car)</b> Baldwin Locomotive Works. .... Philadelphia, Pa. Canada Foundry Co. .... Toronto. Montreal Steel Works. .... Montreal.	<b>Wire Cloth</b> The B. Greening Co. .... Hamilton, Ont. F. J. Myers Mfg. Co. .... Hamilton, Ohio.
<b>Steel, Nickel for Nickel</b> The Orford Copper Co. .... New York.	<b>Trucks (Railroad and Warehouse)</b> Toronto Pressed Steel Co. .... Toronto.	<b>Wire, Copper</b> E. F. Phillips Electrical Works, Ltd. .... Montreal. The Wire and Cable Co. .... Montreal.
<b>Steel Rolling Doors</b> W. H. C. Mussen & Co. .... Montreal.	<b>Turbine Waterwheels</b> W. Kennedy & Sons (Ltd.) .... Owen Sound, Ont.	<b>Wire, Electric</b> Canadian General Electric Co. .... Toronto. E. F. Phillips Electrical Works, Ltd. .... Montreal. The Wire and Cable Co. .... Montreal.
<b>Steel Tyres</b> James Hutton & Co. .... Montreal. Jas. W. Pyke & Co. .... Montreal.	<b>Turnbuckles</b> Montreal Steel Works. .... Montreal.	<b>Wire, Insulated Copper</b> Canadian General Electric Co. .... Toronto. E. F. Phillips Electrical Works, Ltd. .... Montreal. The Wire and Cable Co. .... Montreal.
<b>Structural Metal Work</b> Canada Foundry Co. .... Toronto. Dominion Bridge Co. .... Montreal. Locomotive and Machine Co. of Montreal. .... Montreal. Jas. W. Pyke & Co. .... Montreal.	<b>Turntables</b> Canada Foundry Co. .... Toronto. Dominion Bridge Co. .... Montreal.	<b>Wire Lockers (Employees)</b> The G. B. Meadows Wire, etc., Co. .... Toronto.
<b>Superheaters</b> Babcock & Wilcox (Ltd.) .... Montreal.	<b>Typewriters</b> United Typewriter Co. .... Toronto.	<b>Wire, Telegraph and Telephone</b> E. F. Phillips Electrical Works, Ltd. .... Montreal. The Wire and Cable Co. .... Montreal.
<b>Switches</b> Montreal Steel Works. .... Montreal.	<b>Typewriter Repairs</b> United Typewriter Co. .... Toronto.	<b>Wire, Transmission and Trolley</b> The Wire and Cable Co. .... Montreal.
<b>Switch Lamps</b> The N. L. Piper Railway Supply Co. .... Toronto.	<b>Typewriter Supplies</b> United Typewriter Co. .... Toronto.	<b>Woodworking Machinery</b> H. W. Petrie. .... Toronto.
<b>Switch Ropes</b> The B. Greening Co. .... Hamilton, Ont.	<b>Underwriters</b> Dale & Co. .... Montreal.	<b>Wrecking Cranes</b> W. H. C. Mussen & Co. .... Toronto.
<b>Switch Targets</b> Acton Burrows Co. .... Toronto.	<b>Valves, Iron and Brass</b> Canada Foundry Co. .... Toronto.	<b>Wrought Steel Piping</b> Babcock & Wilcox (Ltd.) .... Montreal. Canada Foundry Co. .... Toronto.
<b>Tanks and Tank Fixtures</b> Canada Foundry Co. .... Toronto. Goold, Shapley & Muir Co. .... Brantford, Ont. Ontario Wind Engine and Pump Co. .... Toronto.	<b>Valves, Rubber</b> The Canadian Rubber Co. of Montreal.	<b>Yachts</b> Polson Iron Works. .... Toronto.
<b>Telegraph and Telephone Office Signs</b> Acton Burrows Co. .... Toronto.	<b>Varnishes</b> McCaskill, Dougall & Co. .... Montreal.	
	<b>Vessels</b> Polson Iron Works. .... Toronto.	



Babcock & Wilcox Patent Water-Tube Boiler  
with Superheater.

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PATENT

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# The Purchasing Agents' Guide

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

## Accident Insurance

Accident & Guarantee Co. of Canada, Montreal.  
Canadian Ry. Accident Ins. Co., Ottawa, Ont.

## Aerated Waters

E. L. Drewry ..... Winnipeg.

## Air Brakes and Fittings

Canada Foundry Co. .... Toronto.  
Canadian Westinghouse Co. .... Hamilton, Ont.

## Ales

E. L. Drewry ..... Winnipeg.

## Angle Bars

Montreal Rolling Mills Co. .... Montreal.

## Asphalt, Pure

American Asphaltum & Rubber Co., Chicago

## Axe Steel

Montreal Steel Works ..... Montreal.

## Axles

James Hutton & Co. .... Montreal.  
Jas. W. Pyke & Co. .... Montreal.  
Rhodes, Curry & Co. .... Amherst, N.S.

## Babbitt

Williams & Wilson ..... Montreal.

## Bearings, Side

Chicago Railway Equipment Co., Chicago, Ill.

## Belting, Rubber

The Canadian Rubber Co. of Montreal.

## Billing Machines

United Typewriter Co. .... Toronto.

## Blankets and Bedding

The Hudson's Bay Co. ....

## Block Signals

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

## Boiler Covering

Mica Boiler Covering Co. .... Montreal

## Boilers

Canada Foundry Co. .... Toronto.  
Polson Iron Works ..... Toronto.  
Robb Engineering Co. .... Amherst, N.S.  
Williams & Wilson ..... Montreal.

## Boilers, Internally Fired

Robb Engineering Co. .... Amherst, N.S.

## Boilers, Portable

Babeock & Wilcox (Ltd.) ..... Montreal.  
Canada Foundry Co. .... Toronto.  
H. W. Petrie ..... Toronto.  
Robb Engineering Co. .... Amherst, N.S.

## Boilers, Stationary and Marine

Babeock & Wilcox (Ltd.) ..... Montreal.  
Canada Foundry Co. .... Toronto.  
H. W. Petrie ..... Toronto.  
Robb Engineering Co. .... Amherst, N.S.

## Boilers, Steam

Erie Heating Co. .... Chicago, Ill.  
H. W. Petrie ..... Toronto.

## Boilers, Water Tube

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

## Boiler Tubes

Jas. W. Pyke & Co. .... Montreal.

## Bolsters

Simplex Railway Appliance Co. .... Montreal.

## Bolts, Bridge

Canada Foundry Co. .... Toronto.  
Montreal Rolling Mills Co. .... Montreal.  
Toronto Bolt and Forging Co. .... Toronto.

## Bolts, Carriage and Machine

Toronto Bolt and Forging Co. .... Toronto.

## Bolts, Track

Canada Foundry Co. .... Toronto.  
Montreal Rolling Mills Co. .... Montreal.  
Toronto Bolt and Forging Co. .... Toronto.

## Book Typewriters

United Typewriter Co. .... Toronto.

## Box Car Loaders

W. H. C. Mussen & Co. .... Montreal.

## Brake Beams

Chicago Railway Equipment Co., Chicago, Ill.  
Simplex Railway Appliance Co. .... Montreal.

## Brake Shoes

Allen & Morrison Brake Shoe Mfg. Co., Chicago.  
American Brake Shoe & Fdry Co., Mahwah, N.J.

## Brass and Copper Cloth

The B. Greening Co. .... Hamilton, Ont.

## Brass Castings

St. Thomas Brass Co. .... St. Thomas, Ont.

## Bridge Numbers

Acton Burrows Co. .... Toronto.

## Bridges

Canada Foundry Co. .... Toronto.  
Dominion Bridge Co. .... Montreal.

## Buoy Lighting

Safety Car Heating and Lighting Co., New York.

## Cables, Electric and Feeder

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

## Caboose Heaters

Geo. R. Prowse ..... Montreal.

## Calendars

Rolph & Clark (Ltd.) ..... Toronto.

## Car Castings

American Brake Shoe & Fdry Co., Mahwah, N.J.

## Car Fenders

F. J. Myers Mfg. Co. .... Hamilton, Ohio.

## Car Heating

W. C. Baker ..... New York.  
Safety Car Heating and Lighting Co., New York

## Car Jacks

F. H. Hopkins & Co. .... Montreal.  
W. H. C. Mussen & Co. .... Montreal.

## Car Kitchen Equipments

Geo. R. Prowse ..... Montreal.

## Car Lighting

Safety Car Heating and Lighting Co., New York

## Car Movers

W. H. C. Mussen & Co. .... Montreal.

(Continued on page 333.)

# "PARIETTE" READY ROOFING

FOR

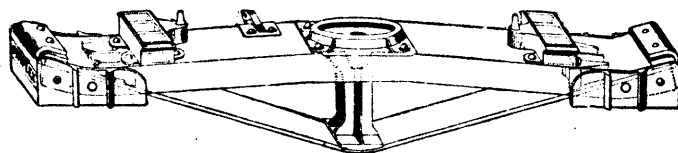
Engine Cabs, Train Sheds, Freight  
Sheds, Station and other Buildings

WATERPROOF — WEATHERPROOF

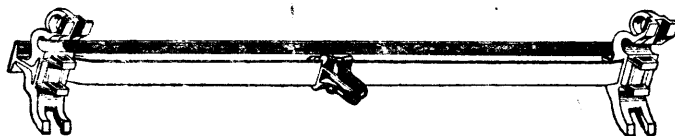
## American Asphaltum & Rubber Co.

721-2-3 WOMAN'S TEMPLE, CHICAGO

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# **BRAKE BEAMS**



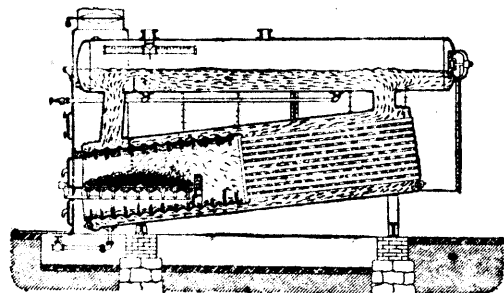
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Your coal bill is a large item in your expense account, and if it could be reduced **TEN PER CENT.** it would mean a large addition to your net profit.

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