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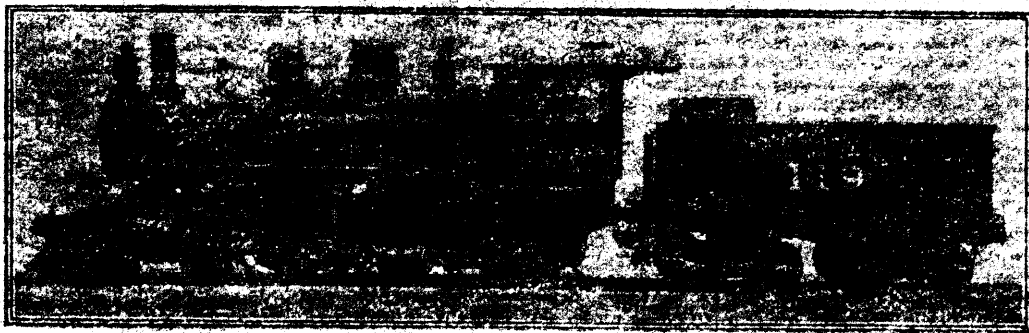
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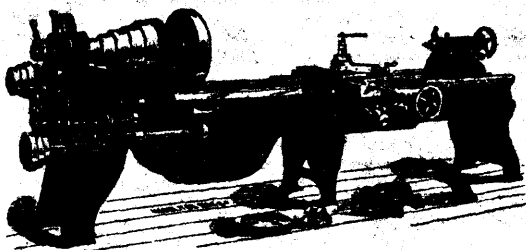
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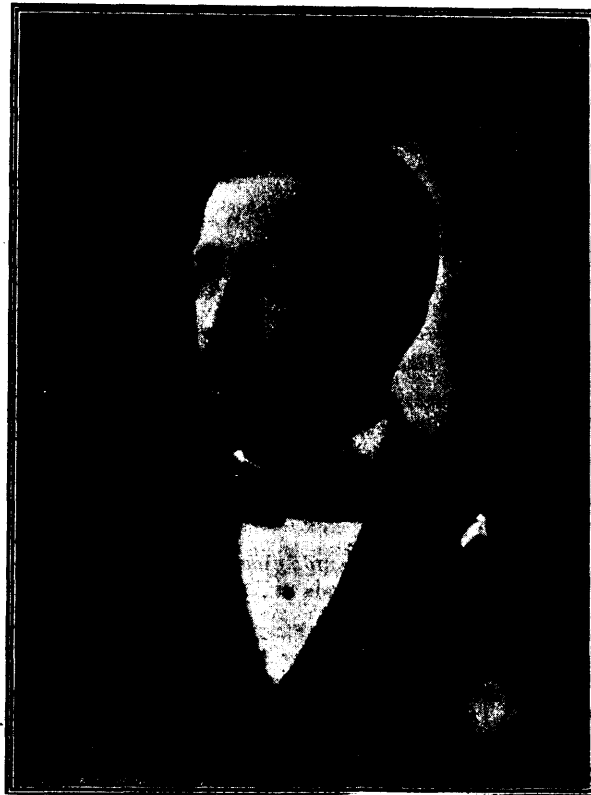
## The Construction of the Great Northern Railway of Canada.

By J. M. Shanly, M. Can. Soc. C. E.

The first portion of this article was published in our last issue.

Eleven miles west of the Maskinonge is the Chicot—a small stream flowing through a deep valley. It is crossed by a steel viaduct of two 40 ft. towers and three 60 ft. intermediate spans resting on eight pedestals and two abutments. The total length is 260 ft., and the extreme height from cap to base of rail 57 ft. The pedestals were founded on rock, and the abutments on hard gray clay. Owing to the great height of these trestles it was impracticable to so design them that the windward legs would never be in tension, therefore resistance to overturning had to be provided by anchoring them securely to the masonry and making the pedestals sufficiently large and heavy to withstand the lifting force due to the extreme wind pressure. In order to ensure the necessary holding power the anchor bolts required to be very long, and it was therefore necessary to build them into the masonry. This was a very difficult matter to do, and at the same time keep the heads in exactly the proper position to receive the shoes, as a very slight displacement would cause a misfit between them and the iron work of the towers. To overcome this, the following method was adopted: The position of the bolts was first fixed accurately on the foundations, and a round stick 6 to 8 ins. in diameter, and long enough to project above the level of the cap, slightly tapering downwards, was set up perpendicularly over the point and firmly fixed in position; the masonry was then built up around the stick as high as the under side of the cap; the sticks were then withdrawn and the cap placed in position. The position of the anchor bolts was then again located and marked on the caps, and holes of proper size drilled through them into the space below to admit the anchor bolts. When the time came to set the anchorages, these holes and the space below were filled with grout and the bolts dropped into place. This method worked very well, though in a few cases the holes in the stone plates had to be slightly enlarged, and in one or two cases the bolts had to be withdrawn and reset. When the iron was put on, a few bolts were found to be loose, owing probably to some inferiority in the grouting; it was deemed prudent, therefore, to test them all, and any that were found loose were withdrawn and reset. It seems to the writer that this method

of anchorage, which depends entirely on the holding power of a threaded rod set in cement, might be improved upon. If the cement is good, and the work well done, it is no doubt absolutely safe, but such work is always liable to careless handling, and where so much depends on the anchorages, no chances should be taken. The next river is the Bayonne, about 7 miles further west. It is crossed by a through lattice span of 100 ft. on masonry abutments. The foundations were carried down through stiff clay to the rock, which



J. C. M. BUNTZEN,  
General Manager British Columbia Electric Ry. Co.

was found at about 7 ft. below low water. About seven miles further west is the L'Assomption river, at Joliette. This is crossed by a single span of 176 ft. through pin connected truss on masonry abutments founded on piles and timber grillage. This is the last bridge on the eastern division. On the western division there are only two iron bridges, apart from that at Hawkesbury, and five small timber trestles. These bridges are both at Lachute—the first one across the North river is a single through pin connected span of 204 ft., and the other across the West

river, a single through lattice truss of 103 ft. span. They are both on masonry abutments founded on piles and timber grillage.

The Hawkesbury bridge is made up as follows:—Commencing at the east end there is a through lattice pony truss of 114 ft. span across the Grenville canal, with flanking spans of 55 ft. deck plate girders at either end; these spans rest on an abutment, and three piers of masonry founded on solid rock, which is here close to the surface of the ground. There is a clearance of 42 ft. between the lowest member of this bridge and the water surface of the canal. Next comes 315 ft. of wooden trestle, and then the main bridge, which consists of seven spans pin connected deck trusses of 206½ ft. each, on stone piers. The floor being placed between the upper chords and the base of rail, 3 ft. 3 ins. below their top. Piers 1 and 8 are built with square ends, and the rest with cutwaters. The shore piers are founded on the rock, which is here almost bare at low water. The depth of water at the other piers varied from 6 to 16 ft. at extreme low water. Pier 2, counting from the Hawkesbury side, was the only one that gave any serious trouble in getting in the foundation. When the original soundings were made, the bottom at this pier was found to be covered with boulders, but what appeared to be solid rock was found to be only a foot or two lower down, and the coffer dam was put in on the supposition that this was correct. However, when the excavation was under way, it turned out that the supposed rock was only boulders, and a new coffer dam had to be built outside the first one. The excavation was carried down 9 ft. before a suitable foundation was found, through a mass of boulders and stones mixed with sawdust, slabs, etc., which had been no doubt accumulating for years. At the other piers there was comparatively little excavation, but some large boulders had to be removed from most of them before the caissons could be finally placed. The method of putting in the foundations was by means of a coffer dam for piers 2, 3 and 4, and for piers 5, 6 and 7 by bottomless caissons fitted to the rock, which had been previously cleared of boulders and loose material. The excavated space, inside the coffer dams, and the caissons were then partly filled with concrete mixed in the proportions of 1 cement, 2 sand and 5 broken stone. This was deposited under water by means of a box holding about 1 cubic yard, and after the concrete was set the water was pumped out, and the masonry commenced. Masonry was started in each pier at 3 ft. below low water. Portland cement was used

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for concrete, and for the masonry. Piers 6  
and 7 were in the main channel in 14 and 16 ft.  
of water respectively, and as the bridge was  
just at the foot of the Grenville rapids and the  
current very strong, it required great care  
and careful handling to get them set accurate-  
ly in place. The substructure was begun in  
July, 1899, as soon as the water fell sufficient-  
ly to allow of it, and the whole of the masonry  
and foundations were completed before Christ-  
mas of that year. The stone was quarried  
and cut about eight miles up the river, near  
L'Orignal, and was brought down to within  
a short distance of the work on scows, and  
then hauled by teams from there. There  
were 2,323 cubic yards of masonry, and 799  
cubic yards of concrete in the main river  
bridge. The western approach consisted of  
a timber trestle 1,320 ft. long, commencing  
with a height of 54 ft., three decks, and de-  
scending on a 1% grade till a height of about  
20 ft. was reached. The main street of  
Hawkesbury is crossed by two I beam spans  
of 20 ft. each, supported at the ends on tim-  
ber bents, and in the middle by a steel one.  
From the end of the trestle a short embank-  
ment leads to the Hawkesbury yard, beyond  
which is situated the junction with the  
Hawkesbury branch of the Canada Atlantic  
Ry. The total weight of steel in the Hawkes-  
bury bridge is 1,727 tons.

The station buildings are generally frame  
structures on cedar posts in two stories, with  
dwelling for the agent, and freight shed under  
the same roof. The station at Joliette is a  
much finer building than the others, built of  
pressed brick on a stone foundation, with a  
separate freight shed of wood. Five tanks  
were erected on the 88 miles of new line, of  
40,000 gallons capacity each, with steam  
pumps under the tanks, except in the case of  
the one at Joliette, which is supplied from the  
town waterworks. The foundation at Joliette  
was of rubble masonry with cut stone caps,  
but the others were of concrete, which proved  
to be cheaper and just as good. There is a  
four-stall wooden engine house at Hawkes-  
bury with a turntable in front, and the tank is  
set on 24 ft. posts so as to give sufficient  
head to supply the engine house with water  
for washing engines, etc. The turntable is  
65 ft. in length. It is on roller bearings, and  
is so balanced that a heavy engine can be  
readily turned by one man. The pivot founda-  
tion is a block of concrete set well below the  
frost into hard boulder clay; the track ap-  
proaches are of cribwork filled with stone.  
There are four level crossings with other rail-  
ways on the line. The first of these is with  
the C.P.R. St. Gabriel branch, near Joliette;  
the next with the Labelle branch near St.  
Jerome, and the 3rd with the C.P.R. north  
shore main line near Lachute. These cross-  
ings are protected by interlocking and  
derailing apparatus. The fourth crossing  
is with the Carillon and Grenville Ry.  
near Grenville. This railway is an un-  
quated line of 5 ft. 6 in. gauge, open-  
ated, in the summer only, in connection  
with the Ottawa river boats. The cross-  
ing is protected by four interlocking distant  
signals, but has no derails nor home signals.  
The general arrangement of signals, etc.,  
at these crossings is the same, viz., derails  
500 ft. from the diamond, home signals 50 ft.  
farther on, and distant signals 1,200 ft. from  
the home signals, or 1,750 ft. from the cross-  
ing. A guard rail of 56 lbs. steel is laid from  
each derail for a distance of 400 ft. towards  
the diamond to prevent derailed trains from  
running off the ties and being ditched.  
The ties are of iron, and are spaced  
ings averaging about 1,500 ft. in length  
put in at all stations, with additional freight  
sidings at the more important points.  
The track was laid with 70 lb. rails of Am. Std.  
C.E. section laid broken joints, with 24 in.  
angle bars and 4 bolts to the joint. The  
angle bars weighed 48 lbs. a pair, and the  
bolts and nuts 17 ozs. each. The spikes were

9x9-16 ins. Seventy pound rails were provided for the sidings also, but it was afterwards decided to replace seven miles of the 56 lb. rails on the old line east of St. Jerome, with 70 lbs., and use the 56 lbs. for the sidings. Ties were mostly of hemlock and black spruce with a few cedar and other woods. The standard size was 6 ins. x 6 ins. x 8 ft., and they averaged 15 to the 30 ft. rail. There was practically no timber along the line fit for making ties, so that the question of supplying them was quite a serious one. The greater part of them came from the mountains north of St. Jerome, along the Labelle branch C.P.R. and the Montfort and Gatineau Ry., while some were brought from the south shore of the St. Lawrence, coming by water to Three Rivers, and thence over the C.P.R. to destination. The question of track-laying was complicated by the number of bridges which could not be put in until they could be reached by rail; where possible to do so temporary structures were put in, but this was, of course, impossible with the large ravines. The original intention had been to do the work with a track-laying machine, but this was abandoned and the laying done by hand. The first track-laying was done in June, 1899, commencing at the crossing of the St. Gabriel branch of the C.P.R., near Joliette, and extending eastwards. The object of this was to furnish storage ground for track and other materials that were then beginning to come in, but once started the work was kept going until the River Chico was reached, when it was stopped until the bridge there was erected. Track was also laid during the fall from St. Boniface to the East Yamachiche, and from Montcalm to Joliette, where a temporary trestle was put in and the track connected across the river; a ballast pit was also opened at Joliette, and the work of ballasting carried on until the winter set in. In Nov. the track-laying gang was moved up on to the western division, and track laid from St. Jerome to the North river at Lachute, about 20 miles, and considerable train filling was done during the early part of the winter. Early in the spring of 1900 track-laying was resumed at both ends on the eastern division, and pushed on until the River du Loup and the Maskinonge gully respectively were reached, and the work of ballasting went on until the bridges were finished at these points, when the track was completed through and the ballasting finished. Track laying on the western division was also resumed early in the summer, temporary bridges having been put in at Lachute and pushed through to Grenville, the work of ballasting following up as closely as possible. Track had been laid during the previous summer from the Canada Atlantic Ry. junction to the west end of the Hawkesbury bridge, so that as soon as the last span of that structure was in place the rails were connected across, and all that remained to be done was to ballast and complete the short piece on the Ontario side of the river. Ballast averaged about 3,000 cubic yards per mile. On the eastern division some very good gravel pits were opened, but on the western, although the country was searched for miles, nothing could be found but sand, and that of a poor quality.

About the end of Oct. the first train from Quebec crossed the Ottawa on its way to Parry Sound, and a few days later the first cargo of grain came through from the west for shipment from the former port, where a million bushel elevator had been built to handle such cargoes.

In reply to an enquiry as to the ruling gradients on the G.N.R., A. E. Doucet, Chief Engineer, informs us that they are, or rather will be, 6-10ths compensated opposed to east bound traffic, and 1% compensated opposed to west bound traffic. The exception will be

between Grand Mere and Garneau Jct., two miles, where the gradients in either direction will be 1-25, and where pushers will have to be used. As the G.N.R. was built in sections, the ruling gradients, as at present established, were not sufficiently looked after, but the changes can easily be made, and will be done in the near future. The 7° reversed curve at New Glasgow will be taken out in the spring. On all new portions of the line, which are now under contract, the curvature is limited to 4° with ruling gradients as above.

**White Pass and Yukon Ry. Finances.**

The Railway Share Trust and Agency Co., of London, Eng., recently offered at par £255,555 of 6% debentures of the White Pass and Yukon Ry. Co., repayable at par Jan. 1, 1911 or earlier, at the option of the Co., on six months' notice. Following are extracts from the prospectus:—

The W.P. and Y. Ry. Co. was incorporated in 1898 under the companies' acts, to carry out and develop certain charter rights and concessions for (inter alia) the construction and equipment of a railway extending about 325 miles from Skagway harbor, at the head of the Lynn canal, an inlet of the Pacific ocean, to Fort Selkirk on the Yukon river. The charter rights and concessions under which the W.P. and Y. Ry. from Skagway to Whitehorse (some 112½ miles) has been constructed, are vested in three local companies, namely:—

	Capital, stocks and shares issued.	Bonds.
The Pacific and Arctic Ry. and Navigation Co. ....	\$1,000,000 or say £206,185	£169,073
The British Columbia Yukon Ry. Co. ....	\$1,000,000 or say £206,185	£228,550
The British Yukon Ry. Co. ....	£500,000	£354,600
	say £912,370	£752,223

In the spring of last year the W.P. and Y. Ry. Co. purchased the business and assets of the Canadian Development Co., Ltd., which carried on the chief transport trade on the Yukon river between Whitehorse and Dawson, and in payment issued to the latter company £255,555 of 6% debentures. The property purchased was transferred to a new local company, called the British Yukon Navigation Co., Ltd., which was incorporated according to the laws of British Columbia for the purpose of owning the purchased business and operating the fleet of steamers acquired with it upon the terms of the railway company, receiving in exchange the capital, stock and a bond or bonds for £255,555 of the local company.

In addition, as one of the terms of sale, the Canadian Development Co. provided the purchasing company with £65,000, to enable it to acquire new steamers, and to effect other improvements in connection with the purchased business, and out of this three new steamers have been acquired and equipped.

The capital stock of the British Yukon Navigation Co. is \$100,000. The whole of these shares (with the exception of directors' qualification shares) have been vested in the Railway Share Trust and Agency Co., as trustees for the holders of the 6% debentures referred to, and in addition it is provided by a deed of trust that the trustees shall receive 1st mortgage bonds of the British Yukon Navigation Co. for £255,555 (carrying interest at 6%), and to be secured by a mortgage deed so as to constitute an exclusive first charge on the property and assets of the local company so soon as the security is completed in British Columbia. The authorized share capital of the W.P. and Y. Ry. Co. is £1,700,000, in 170,000 shares of £10 each, 137,500 of which have been issued, and are fully paid up or issued as fully paid. The authorized amount of 5% consolidated 1st mortgage de-

benture stock is £750,000, of which £746,702 has been issued and paid up in full.

The £255,555 6% debentures now offered are secured by a trust deed, and are a first charge on the £255,555 1st mortgage bonds, and the whole capital stock (with the exception of directors' qualification shares) of the British Yukon Navigation Co., and, subject to the charges for the benefit of the 5% consolidated 1st mortgage debenture stock of the W.P. and Y. Ry. Co., a charge on the above specified £752,223 bonds and capital stock and shares (with the exception of directors' qualification shares) of the three local companies owning the railway, and a floating charge on the other assets of the W. P. and Y. Ry. Co.

The profit and loss account of the W.P. and Y. Ry. Co. from July 30, 1898, to June 30, 1900, during which period the first portion of the line from Skagway to Bennett was in operation only for part of the time, viz., from July 6, 1899, shows a profit of £83,315 5s. 3d., after deducting £32,053 6s. 3d. for debenture interest and interest on advances. The profit and loss account for the year ended June 30, 1901, shows a profit of £261,057 17s. 7d., after deducting £41,211 6s. 4d. for debenture interest. The annual interest on the whole £750,000 of 5% consolidated 1st mortgage debenture stock (£3,298 of which have not yet been issued) will absorb £37,500. The annual interest on the 6% debentures will absorb £15,333 6s.

It will be observed by the extracts above quoted that the debentures recently offered are not secured on the property of the railway itself, but on the assets of the British Yukon Navigation Co. The interest on them is, however, a charge on the railway secured to the 1st mortgage 5% debentures.

The gross earnings of the W.P. and Y. Ry. for the six months ended Dec. 31, 1901, were \$927,670.

**Lake Erie and Detroit River Ry.**

The recent project of the Pere Marquette Rd. to acquire the L. E. and D. R. Ry. has not been successful, the price offered not being equal to what is asked. F. H. Walker, President of the L.E. and D.R. Ry., recently met the principal stockholders in the P. M. Rd. at New York, and discussed the matter with them. He stated the terms on which the L.E. and D.R. Ry. could be purchased, but the price asked was considered too high, and the proposal to buy was declared off. In a subsequent interview Mr. Walker stated that the L.E. and D.R. Ry. was a paying property, that the Co. was in no hurry to sell, and that if any prospective purchaser was not prepared to give the price asked, a deal could not be made, as the Co. had no intention of reducing the price. The Co. has a Dominion charter to extend its line from St. Thomas to opposite Buffalo, 115 miles, through a level country which will permit the line to be cheaply constructed, and is therefore a valuable property to any U.S. company desiring a connection between the Eastern and Western States by the short route through Canada. If such a company wanting the line is not prepared to pay the price asked, the L.E. and D.R. Ry. will continue in business on its own account. It is understood that other companies besides the Pere Marquette have made offers for the line. The failure to effect a sale, we are informed, in no way affects the traffic agreement between the Pere Marquette Rd. and the L.E. and D.R. Ry., and the operation of the projected car ferry between Sarnia and Port Huron. The L.E. and D.R. Ry. has completed its slip dock on the Sarnia side of the river, and the P.M. Rd. slip dock at Port Huron is expected to be completed in April. The G.T.R. Car Ferry International was purchased by the L.E. and D.R. Ry. for service between the two Co.'s



docks, and it will be put in service as soon as the dock at Port Huron is completed.

The L.E. and D.R. Ry. Co. is applying at the current session of the Dominion Parliament for an Act confirming the amalgamation of the Erie and Huron Ry. Co. with the L.E. and D.R. Ry. Co.; the ratification of the lease of the London and Port Stanley Ry.; and for the rearrangement of the mortgage debentures of the L. and P.S. Ry.

#### Recent Manitoba Legislation.

The following acts relating to transportation interests were passed at the recent session of the Manitoba Legislature:

Incorporating the Suburban Rapid Transit Co.

Respecting certain guarantee bonds of the Canadian Northern Ry. Co.

Incorporating the Winnipeg General Power Co.

To confirm and enlarge the powers conferred on the Manitoba Electrical Co.

Amending the act incorporating the Winnipeg and St. Andrews Ry. Co.

Respecting the Virden Northern Ry. Co.

Respecting the construction of certain lines of railway and the guarantee of the bonds

of the Canadian Northern Ry. received thereon.

Further particulars of most of these acts will be found in our Railway Development department on pg. 121 and subsequent pages.

**M. Beatty & Sons, Welland, Ont.**, report the following orders as having been filled during the past month: 1 hoisting engine to Canadian Locomotive Works, Kingston, Ont.; 1 hoisting machine and 1 swinger to Brown & Aylmer, Cambridge, Ont.; 1 hoisting engine to J. S. Gibbon & Co., St. John, N.B.; 1 hoisting engine to Dept. Public Works, New Brunswick, shipped to St. John, N.B.; 2 hoisting engines to Mr. Flemming, St. John, N.B., for use on ships for unloading cargoes; 1 hoisting engine to Williams & Fallon, Cornwall, Ont.; 1 steam shovel to Don Valley Brick Works, Toronto; 1 set ditcher machinery to Dept. Public Works, N.W.T., shipped to Edmonton, Alta. M. Beatty & Sons have received from Hogan and Macdonell a contract for a steel hull 93 by 27½ ft. for a drill boat for submarine rock drilling, to be used on the Port Colborne, Ont., harbor contract.

**Mackenzie, Mann & Co., (Ltd.)**—W. Mackenzie and D. D. Mann, contractors; Z. A.

Lash, K.C.; E. W. McNeill, solicitor's clerk, Toronto; and R. J. Mackenzie, contractor, Winnipeg, have been incorporated under this title, under the Ontario Companies' Act, for the following purposes: To acquire in whole or part the business of the partnership of Mackenzie, Mann and Co. and the assets thereof and to assume in whole or part the liabilities thereof; to contract for, construct, execute and carry on all descriptions of works and, generally, to carry on the business of a contractor; to acquire, hold and dispose of the bonds, debentures and other securities and stocks of other corporations and to use its funds therefor; to promote and assist financially, by guarantees or otherwise, the enterprises and undertakings of other corporations, and to acquire by purchase or otherwise, and hold and dispose of and develop and utilize lands, water-privileges and rights and interests thereon and therein; and to search for and develop and utilize minerals and mines in and upon any lands. The Co. is not to be deemed a mining company within the intent of the Ontario Mining Companies' Incorporation Act, nor to come within the operation of that act. The capital is to be \$5,000,000, in \$100 shares. The head office is to be at Toronto, and the incorporators are to be the provisional directors.

# Galena-Signal Oil Company,

Franklin, Penna.

Successor to Galena Oil Company and Signal Oil Company, sole Manufacturer of the celebrated Galena Coach, Engine and Car Oils, and Sibley's Perfection Valve and Signal Oils.

**CHARLES MILLER,**  
PRESIDENT.

## RAILWAY DEVELOPMENT.

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

**Alaska.**—The Alaska, Copper River and Yukon Ry. Co. has been incorporated in the state of Washington, with E. D. Bannister, A. Biles and T. L. Parker as incorporators, to construct a railway from Prince William's sound through the Copper and Tananna river country to near Eagle on the Yukon river, and to operate a steamship line from Seattle to Prince William's sound. The capital is placed at \$25,000,000. The distance between the two points is about 480 miles, and it has been surveyed by J. C. Heney, who was engaged on the construction of the White Pass and Yukon Ry.

The Alaska Southern Ry., which has been incorporated in Oklahoma, I.T., proposes to construct a railway from Barrow's Bay, Alaska, to Laketon, B.C., about 250 miles. The offices are at Guthrie, Okla. and Danville, Ill., among those interested being: J. C. Strang, C. H. Filson, and C. H. Woods, of Guthrie; J. J. Campbell, F. T. Hill, W. I. and A. Cork, of Danville; J. W. Daly, of Ketchikan, Alaska, and W. D. Ford, of Galena, Kan. There is no Dominion or Provincial charter in existence under which such a line could be built, and no notice of application for one has been given for the current sessions of either Parliament or Legislature.

Officials of the Trans-Alaskan Ry. state that the location surveys have been completed of a portion of the projected line from Cook's Inlet to Behring Strait, 850 miles; and that bids will shortly be asked for the construction of the first 100 miles of the line. The Co.'s exploration party has constructed a horse trail from the Yukon river to Iliamna lake on the way to Cape Nome. (Feb., pg. 54.)

**Albert Ry.**—Application is being made for Provincial and Dominion subsidies to aid in the construction of 8 miles of railway from Baltimore siding, on the Salisbury and Harvey Ry., to the Petitcodiac bridge at Moncton, N.B. The construction of this line would shorten the route from Hillsboro' and other points in Albert county to Moncton by 18 miles. A survey of the proposed line was made in 1900 by P. S. Archibald, C.E. If the subsidies are granted, Dr. Swan, of New York, receiver and practical owner of the Salisbury and Harvey Ry., states that he will proceed with its construction at once.

**Algoma Central and Hudson's Bay Ry.**—F. H. Clergue, President, stated, Mar. 6, that the Co. would have completed the line upon which construction was then proceeding, 225 miles, by the end of this year. 3,000 men are at work on various portions of the line. Of this 225 miles, 71 miles are in operation, viz., from Sault Ste. Marie to Ogidaki, 48 miles; from Michipicoten to Helen Mine, 12 miles, and from Josephine Jct., 10 miles from Michipicoten, to Josephine Mines, 11 miles. The grading from Ogidaki to Pangissin, 22 miles, is ready for tracklaying, and the remainder of the grading to where the main line will effect a junction with the Michipicoten branch at Park Lake, and from thence to a junction with the C.P.R. transcontinental line, near Missanabic, is reported to be well under way. (Feb., pg. 54.)

Replying to a question in the Ontario Legislature recently, the Commissioner of Crown Lands stated that no lands had yet been appropriated for the A.C. and H.B. Ry. Co., the surveys not being completed. He also stated, Feb. 28, that the Co. had applied for land at Otter Head and Pilot harbors, for terminals for the railway and steamer services of the Co., but that no decision had been arrived at on the applications.

**Atlantic and Lake Superior Ry.**—The trustees for the bondholders, who are now completing the line to the 100th mile, are seeking power to extend the line to Fort Daniel, about 25 miles further. Mileage 100 is 2 miles beyond New Carlisle. The work now in progress is expected to be completed during next summer. (Feb., pg. 55.)

**Aylmer, St. Thomas and London Electric Ry. Co.**—See Middlesex and Essex Interurban Ry. Co.

**Battleford and Lake Lenore Ry.**—G. D. Wood, Winnipeg; A. J. Adamson, Rosthern, Sask.; J. H. Lamont, Prince Albert, Sask.; R. Prefontaine, Montreal; A. R. Auld, Toronto; and C. Peterson, Guelph, Ont., are applying at the present session of the Dominion Parliament for an Act to incorporate a company under this title to construct a railway from Hobbema station, on the Calgary and Edmonton Ry., easterly, crossing the line of the Qu'Appelle, Long Lake and Saskatchewan Ry. at Osler station, to Lake Lenore, thence north-easterly to Crooked river on the Canadian Northern Ry., with a branch from tp. 40, range 24 west of the 2nd meridian, to Yorkton, Assa. The Co. asks two years to commence and six years to complete its lines; and for power to lease its lines to, or amalgamate with, either the Canadian Northern Ry. or the C.P.R.

**The Bay of Quinte Ry. Co.** is applying at the current session of the Dominion Parliament for an Act authorizing the extension of the Co.'s line from Deseronto, or near there, to Lake Ontario, near Picton, Ont., with power to build a bridge across the Bay of Quinte, and if found expedient to construct a branch into Picton.

The Ontario Legislature, at the recent session voted a subsidy of \$150,000, of which \$90,000 is a revote of a subsidy to the Kingston, Napanee and Western Ry., voted in 1893. The lines covered by the subsidy are not to exceed 50 miles in length, and will extend from Tweed, northerly to the iron and mineral deposits in Hastings County.

**Belleville Traction Co.**—Lewis and Alford, who recently purchased this line from the Bank of Montreal, propose applying to the city council for a new franchise. They have applied to the county council for a right of way to Trenton and Shannonville with a view to extending the line. It is stated that a new company is to be formed to take over the line and extend it. We are informed that it is the intention of Lewis and Alford to break up the line unless they can sell it very shortly. (Feb., pg. 55.)

**The Brantford Street Ry. Co.** has applied to the city council for permission to lay additional tracks in order to provide the necessary facilities for handling the traffic on the lines to be constructed from Paris and other points by the Von Echa Construction Co. (Feb., pg. 55.)

**B. C. Electric Ry.**—It is understood that the B.C. Government will contribute \$50,000 towards the cost of the new bridge at Point Ellice, Victoria. (Feb., pg. 55.)

The Co. expects to have track laid to Cedar Cove, 1½ miles from the present terminus at the sugar refinery; and to the city limits from 9th avenue, by May 1, on its lines in Vancouver.

**B. C. and Yukon Ry. Co.**—T. O'Brien, Dawson, Yukon; G. L. Milne, H. M. Cleland, R. Hall, Victoria, B.C.; and J. England, Vancouver, B.C., are making application at the current session of the Dominion Parliament for an act incorporating a company under this title to construct a railway from the northern boundary of B.C. between 140 and 130 degrees, longitude, to the Yukon river, below Rink rapids; thence via Selkirk to Dawson. The capital of the Co. is fixed at \$15,000,000

and it seeks power to issue bonds for \$40,000 a mile.

**The Bruce Mines and Algoma Ry.**, from Bruce Mines, on the C.P.R. Sault Ste. Marie line to the Rock Lake Mining Co.'s concentrating mill at Rock lake, 15 miles, has been inspected by R. McCallum, C.E., of the Ontario department of Public Works. The line is partially ballasted, and this will be completed as soon as possible. Birmingham & McMartin of Sault Ste. Marie, Ont., are the contractors. The Co. proposes to build 2 miles of track from the C.P.R. crossing into Bruce Mines village, and also 15 miles northerly from Rock lake, but no time has been fixed for going on with the work, as the Co. has not been voted the subsidy which it asked from the Ontario Government. The Co. was, however, voted a subsidy of \$3,200 a mile for 4 miles, from Bruce Mines to the shore of Lake Huron. (Feb., pg. 55.)

**Buffalo, N. Y., Union Station.**—The New York Central Rd. asks that the Hamburg Canal from Hamburg st. west to Main st. be filled and given to the railways; that the city and the railways buy the property bounded by Exchange, Main, Scott and Washington streets, the eventual ownership to be determined later; that in the station built thereon all the railways at present entering Buffalo shall have the right to come on terms agreed upon between them and the New York Central, the city to have no voice in the matter of terms, not even to the arbitration of differences. The railways will decide whether any new road shall be admitted. In event of the first two features being agreed upon President Newman promises to at once take up the proposition with the other lines and push matters to a conclusion as speedily as possible. In event of the failure of the negotiations the New York Central will build its own new station in Exchange st. on plans already prepared, but this work will be delayed some years and preparatory to it the roof of the present station will be taken off and sheds built out over the tracks as a makeshift.—Railroad Gazette.

**Calgary and Edmonton Ry.**—A preliminary survey has been made for an extension of the C. and E. R., from its present terminus at McLeod, Alberta, to the international boundary, under the supervision of N. E. Brooks, the field party being in charge of G. H. Garden, C.E., of Lethbridge. The proposed extension will run via Cardston to the boundary. Nothing has been announced as to construction, but it is possible that it may be gone on with this year.

Application is being made at the current session of the Dominion Parliament for an act authorizing the construction of branches from the main line easterly from Wetaskiwin and Lacombe, and easterly and westerly from Strathcona. (Feb., pg. 55.)

**Canada Atlantic Ry.**—Permission has been given by the Railway Committee of the Privy Council for the proposed crossings in Nepean, Haggerty, Fitzroy and March to be constructed.

**Canada Central Ry. Co.**—T. W. Patterson, Vancouver, B.C., T. H. Johnson, Winnipeg, Man.; E. F. B. Johnson, Toronto; J. Milne, Duluth, Minn., and M. B. Lloyd, Minneapolis, Minn., were incorporated at the recent session of the Ontario Legislature under this title to construct a railway from near the mouth of French river, north-westerly to Whanapitae lake; then northerly to the headquarters of the Montreal river, and thence to a point on the Albany river, with power to construct a branch to Port Arthur and Fort William. The Co. is given power to operate the line by steam or electricity; to issue \$1,000,000 of capital stock, to issue bonds to the extent of \$20,000 a mile; to construct telegraph and telephone lines; to agree with companies for the hire of rolling stock; to acquire and erect



power houses, water powers, docks, etc.; to carry on a general navigation business on waters touched by the railway, and to enter into agreements with the C.P.R., the Canadian Northern Ry., the G.T.R., the Canada Atlantic Ry. or the Algoma Central Ry. The Co. is applying for a Dominion charter under the same title with power to extend its lines to the Pacific coast. (Feb., pg. 55.)

**The Canada and Michigan Bridge and Tunnel Co.**, which was incorporated to build a bridge across the Detroit river from Windsor or Sandwich, Ont., to Detroit, Mich., is applying at the present session of the Dominion Parliament for an act extending the time within which it may commence and complete its undertaking to two and five years after the U.S. authorities have sanctioned the construction of such a bridge. It is stated that U.S. opposition to the construction of the bridge will be withdrawn on the promoters deciding to erect a high level instead of a low level structure.

**The Canada National Ry. and Transport Co.**, which has a charter to construct a line from Toronto to Collingwood, Ont., has informed the Collingwood Enterprise that construction will be commenced within twelve months, and that negotiations for terminal facilities will shortly be opened. (Nov. 1901, pg. 332.)

**The Canada Southern Ry. Co.** is making application at the present session of the Dominion Parliament for an act continuing its powers under the Erie and Niagara Ry. Co.'s acts of 1863, and the Ontario acts relating to the Canadian Southern Ry. Co. of 1872 and 1873.

**Canada Western Ry. Co.**—D. C. Cameron, T. R. Deacon, of Rat Portage, Ont.; J. M. Smith, A. M. Royce, F. C. Annesley, of Toronto; F. H. Sangster, Wabigoon, Ont.; M. B. Lloyd and A. C. Paul, of Minneapolis, Minn., were incorporated at the recent session of the Ontario Legislature under this

title to construct a railway from Fort Frances via Dryden or Rat Portage, to the confluence of the Winnipeg and English rivers, and to operate it by steam or electricity. The Co. is given power to issue \$200,000 of capital stock, and to increase the same under the provisions of the general railway act of Ontario, and to issue bonds to the extent of \$20,000 a mile. The Co. has also been given general powers for developing electricity and industries in unorganized territory, to carry on a general navigation business on waters touched by its railway, and to enter into agreements as to running powers, etc., with any railway approached or crossed by its line. The line is to be commenced in three years and to be completed within seven years.

**Cape Breton Electric Co.**—Reports have been current that the C.B.E. Co. had sold out its rights and franchises to the Dominion Coal Co., but Jas. Ross and C. Shields of the latter Co., and W. C. Forbes and T. C. Creedon of the former, say there is no foundation for any such statement. An amicable arrangement, they say, has been entered into by both companies for the establishment and operation of a first class service between Sydney and Glace Bay. Stone & Webster, of Boston, have relinquished no part of their interest in the C.B.E. Co. Possibly, however, a new company may be formed to do interurban business between the two towns, but the whole system will be operated as a unit by the officers of the C.B.E. Co. Part of the interurban line will run over the old right of way of the Dominion Coal Co.

The C.B.E. Co. is negotiating with the North Sydney Electric Light Co. for the purchase of its rights, so as to operate the lighting franchise in connection with its street railway franchise. (Feb., pg. 55.)

**Cape Breton Ry. Extension Co.**—The grading of the 30 miles between Port Hawkes-

bury and St. Peters is being pushed forward and track has been laid for eight miles from Port Hawkesbury. It is expected that this section of the line will be completed by July 1. The surveys for the extension of the line from St. Peters to Louisburg, 80 miles, are completed, and the right of way between St. Peters and Grand River is being cleared. The bridge which it is proposed to construct over the river Inhabitants will have 4 spans of 87 ft. each, and one of 50 ft. Surveys for a branch into Sydney have been completed, and a line to North Sydney is now under survey. The property purchased at a cost of \$25,000 in Louisburg for terminals, has a water frontage of half a mile. No further contracts have been let.

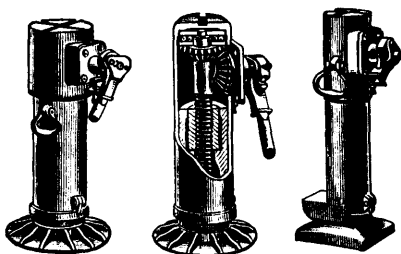
J. M. Daly, General Manager, has had an interview with the Cape Breton county council with respect to the right of way. The memorial submitted to the council by the Ry. Co. stated that the main line would be 37 miles from the county line to Louisburg and estimated 448 acres required in the right of way, about 90 of which would cost \$40 an acre and the balance \$5 an acre, making the total cost \$5,390. The right of way to Sydney would cost \$2,225, giving a grand total cost of \$7,615. A special meeting of the council was called for Mar. 18 to take action on the memorial.

The Co., it is reported, has bonded 11 square miles of coal lands at the Basin, river Inhabitants.

It is reported that the head office of the Co. will be removed from Port Hawkesbury to St. Peters. (Feb. pg. 55.)

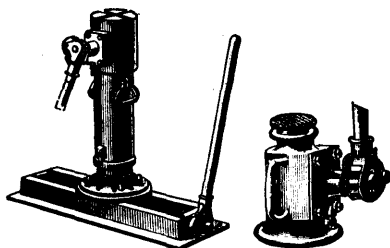
**Cape Breton Northern Ry. Co. (Ltd.)**—H. Donkin, C.E., J. Vooght, D. D. McKenzie, A. C. Bertram, North Sydney, N.S.; J. Macdonald, West Bay, N.S.; J. T. Burchell, New Campbellton, N.S.; W. F. McCurdy, Baddeck, N.S., and J. A. Farquhar, Halifax, are making application at the current session of the N.S. Legislature for an act incorporating a company under this title

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to construct a railway from North Sydney across the island of Boulardarie to Baddeck thence through the Middle river valley and Margaree to the Inverness and Richmond Ry.

**The Central Ontario Ry.** is reported to have let a contract for a new station and freight sheds at Picton, to cost about \$10,000. The station will be built of pressed brick with stone trimmings.

**Chilcat River to Whitehorse.**—It is reported from Seattle that arrangements are being made to construct a railway from the Chilcat river on the international boundary between B.C. and Alaska, to Rainy Hollow, B.C., thence northeasterly to Coal lake and Whitehorse. New York and Seattle people are said to be behind the Co., which is being capitalized at \$1,000,000.

**Comox and Cape Scott Ry.**—See Canadian Northern Ry.

**La Compagnie Electrique de Beauce.**—Application is being made at the current session of the Quebec Legislature for an Act incorporating a company under this title with

two iron bridges are being put in to replace other structures.

A press report states that the Co. intends constructing a line from Springhill to Advocate harbor, about 70 miles. (Feb. pg. 56.)

**Detroit River Bridge.**—General Manager Hays, of the G.T.R., recently stated that if the companies interested in the construction of a railway bridge over the Detroit river at Detroit, would agree upon a location the bridge would soon be built. Both the Michigan Central Rd. and the G.T.R. are interested in bridge projects and each advocates a particular site. Negotiations are in progress for a compromise and if an arrangement can be made a union station will be built at Detroit for all lines. Such a building will mean the abandonment of the G.T.R. tracks on Dequindre st., and the Brush st. station, with the possible abandonment of the Michigan Central station on Third st. See also Canada and Michigan Bridge Co., and River St. Clair Ry. Bridge and Tunnel Co.

**Duluth, Virginia and Rainy River Ry.**—The surveys for the extension from Rice

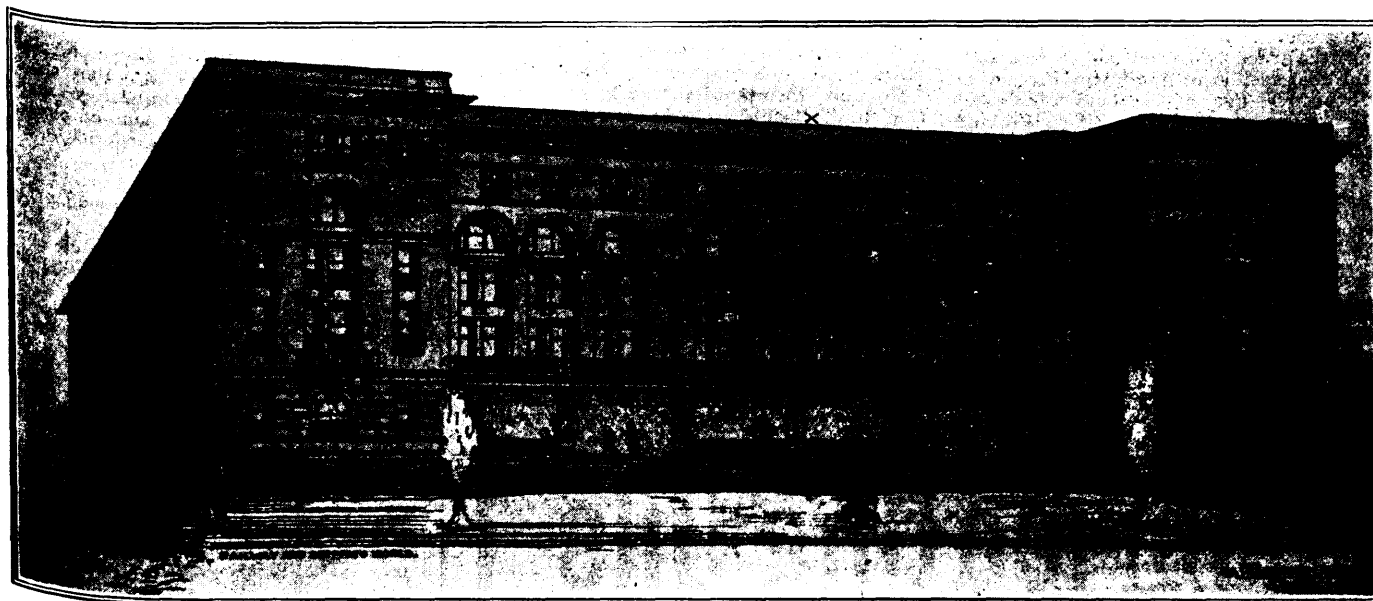
hand, and track laying is expected to be completed to Edmonton at an early date. (Feb., pg. 56.)

**Esquimalt and Nanaimo Ry.**—See Canadian Northern Ry.

**The Essex and Kent Radial Ry. Co.'s** application for an extension of time to construct its lines has been granted by the Ontario Legislature. (Feb., pg. 56.)

**The Fort Erie Ferry Ry. Co.** recently made application to the Ontario Legislature for very considerable powers, and has been granted an act extending the time for the completion of its proposed extensions from Fort Erie to Port Colborne and to Crystal Beach until 1905. The power asked for to construct a line from Fort Erie to the Jockey Club property was refused.

**Fraser River Bridge.**—The contracts for the erection of the bridge over the Fraser River at New Westminster, B.C., have not been awarded as this is written. It is stated that the lowest tenderer for the superstructure is the Dominion Bridge Co. for \$411,000, and for the substructure Bain & Co. of New



THE CANADIAN PACIFIC RAILWAY COMPANY'S HOTEL VANCOUVER, VANCOUVER, B.C.

This illustration shows the hotel as it will appear when completed. The portion from the X at the top of the illustration to the right hand side of the illustration is now being built. From the X to the left hand side of the illustration the site is occupied by the present hotel, which, except the last built wing, containing the dining-room and bedrooms, will be taken down and re-built.

power, among other things, to construct a tramway.

**Crow's Nest Southern Ry.**—It is reported that the grading is being pushed ahead rapidly and that track will be laid and the line in operation to Elko, B.C., early in the summer. (Feb., pg. 55. See also Great Northern Ry. (U.S.))

**Cuba Co.**—Sir Wm. Van Horne, who has returned to Montreal after being in Cuba for some time inspecting the work done on the Co.'s railway, has expressed himself as greatly pleased with the results obtained during the last six months and says that an immense amount of railroad construction has been accomplished. He expects to run trains between Havana and Santiago de Cuba within a year.

**The Cumberland Railway & Coal Co.** proposes to improve its coal shipping facilities at Parrsboro, N.S. The new arrangements include the construction of three miles of line from Parrsboro to East Bay, where a large shipping pier will be erected. In order to provide for the heavier rolling stock ordered, the line is being relaid with heavier rails, and

Lake to Koochiching, Minn., opposite Fort Frances, Ont., have been completed, and it is reported that the 40 miles of line will be built by July 1. (Feb., pg. 56.)

**Durham Switch Line Ry. Co.**—W. F. Cowhan, of Jackson, Mich.; P. W. Stanhope, F. B. Cumberland, W. Pinkerton, of Toronto; A. F. McLaren, M.P., Stratford, Ont., and W. McKechnie, Durham, Ont., were incorporated at the recent session of the Ontario Legislature under this title to construct a railway in connection with the National Portland Cement Co.'s undertaking. The Co. may enter into an agreement with the G.T.R. or other Company for the leasing or working of its line. (Jan., pg. 2.)

**The Edmonton and Slave Lake Ry. Co.**, incorporated by the Dominion Parliament in 1899, is making application at the current session for an act reviving its charter and granting an extension of two years within which work may be commenced, and of five years within which the line is to be completed. (Nov., 1901, pg. 334, and Dec., 1901, pg. 354.)

**Edmonton, Yukon and Pacific Ry.** Ties have been distributed and the rails are on

Westminster, and Armstrong, Morrison & Balfour, Vancouver, are close together at about \$250,000. (Feb., pg. 51.)

**Great Lakes Ry. Co.**—See Ontario Ship Ry. Co.

**Great Northern Ry. of Canada.**—Some differences arose with the firm to whom the contract for the construction of the cut-off from Garneau Jct. to St. Catharines was let, and arrangements with another firm are in progress. Work will be started at the earliest possible moment. When the cut-off is completed a saving of 171 miles will be effected on the main line. The present line will not be abandoned but will be used as a feeder, as it taps a country full of pulpwood. (Feb., pg. 56.)

Two branch lines have been surveyed and construction will probably be proceeded with on them in the spring if the usual subsidies are voted by the Dominion and Provincial governments. One branch will be from Ste. Julienne to Rawdon, about 8 miles. Rawdon is at present without railway accommodation, although as far back as 1856 a charter was obtained for the incorporation of the Rawdon

and Industry Ry. Co. A proposition has been made, and surveys have been completed for the construction of a branch from Montcalm to Lac Ourieu, about 32 miles, and work will probably be commenced this year if a Dominion subsidy can be obtained.

**Great Northern Ry. (U.S.)**—Track is reported to have been laid on the Montana and North Western Ry. from Jennings, Mont., to Tobacco Plains on the international boundary, 51 miles, where connection is made with the Crow's Nest Southern Ry., under construction from Fernie, B.C. Surveys have been made for a cut-off from Columbia Falls on the Great Northern main line to Great Falls, Mont., so as to save the expense of hauling coal round by Shelby Jct., but it is understood that no practical route has been found.

On the Washington and Great Northern Ry., which is the U.S. section of the Vancouver, Victoria and Eastern Ry., track is reported to have been laid from Marcus, Wash., on the Spokane Falls and Northern Ry., to near Cascade on the international boundary, 27 miles, and the grading is completed to the boundary. At Hall's Ferry, seven miles on the U.S. side of Cascade, a large trestle, requiring 550,000 ft. of timber, has been constructed, and we were officially informed Mar. 17 that the track had been laid to Cascade. On the next section of line in the U.S., from the boundary five miles south of Grand Forks, B.C. into Republic, the W. and G.N.R. Co. and the Co. owning the Kettle Valley Lines are having some difficulties over the right of way. Both companies are constructing a railway into Republic with a view of carrying ore to the smelter at Grand Forks, B.C., and it is alleged on the part of the G.N.Ry. that the K.V.L. is usurping its grade; while T. W. Holland, General Manager of the K.V.L., says that not only is this absurd, but that the charter under which the G.N.Ry. is seeking to construct this particu-

lar piece of line has lapsed. The matter is still before the courts not only in Washington but also in B.C., and also before the Railway Committee of the Privy Council at Ottawa.

In addition to these lines, J. N. Hill, Vice-President of the G.N.Ry. recently said: "We have about 40 miles of road under construction in the eastern district and will standardize the Great Falls & Canada Ry. from Great Falls to the international boundary during the coming spring and summer. This, together with the improvements we are making to the main line west of the Rocky Mountains, will constitute about all the work we care to undertake just now." (Feb., pg. 56.)

**The Haliburton, Whitney and Mattawa Ry. Co.** was, at the recent session of the Ontario Legislature, granted a further extension of three years within which it may commence operations on its proposed line from Haliburton to Mattawa, or other convenient point. (Feb., pg. 56.)

**The Halifax Electric Tramway Co.** has ordered a 1000-h.p. generator for its power station.

**Halifax and South Western Ry. Co.**—Copies of the agreement and contract entered into between the Commissioner of Works for Nova Scotia and Mackenzie, Mann & Co., who were incorporated under the above title, have been presented to the N.S. Legislature and a bill ratifying the agreement and contract has been introduced. The plans and specifications for the line between Halifax and Barrington, which it is proposed to construct under the agreement, are also before the Legislature. (Feb., pg. 56.)

**The Hamilton, Ancaster and Brantford Ry. Co.** was, at the recent session of the Ontario Legislature, empowered to vary the route authorized in the original charter, and granted an extension of time for two years

within which its line has to be commenced. The Co. was given bonding powers to the extent of \$20,000 a mile. (Feb., pg. 56.)

**Hamilton and Caledonia Electric Ry.**—The promoters of this Co. have obtained franchises from a number of municipalities on the route of the proposed line, and negotiations are in progress for obtaining others. No arrangements have been made for construction. J. G. Gauld, W. Anderson of Hamilton, and A. Shirra of Caledonia, Ont., are the principal promoters of the Co. (Feb., pg. 61.)

**The Hamilton, Grimsby and Beamsville Electric Ry.**, according to C. J. Myles, President, purposes extending its line to St. Catharines, and some negotiations have taken place with the Niagara, St. Catharines and Toronto Ry. Co. regarding the building of a bridge at St. Catharines for the joint use of both roads. (Feb., pg. 57.)

**Hamilton Suburban Ry. Co.**—The bill applying for the incorporation of a company under this title has been withdrawn from the Ontario Legislature, as very general opposition was given it. (Feb., pg. 57.)

**Huron, Bruce and Grey Electric Ry. Co.**—J. T. Goldthorpe, Colborne; D. McGillcuddy, J. Wilson, and M. G. Cameron, Goderich, were incorporated at the recent session of the Ontario Legislature under this title to construct a system of electric railways radiating from Goderich and serving Blyth, Wingham, Brussels, Wroxeater, Kincardine, Tiverton, Port Elgin, Warton, Walkerton and Owen Sound. The Co. asked power to construct lines in Middlesex county to London, but this was struck out, and the title of the Co. amended by substituting Grey for Middlesex. The Co. was given bonding powers of \$15,000 a mile instead of the \$20,000 a mile asked for. D. H. Green, C.E., Montreal, is acting for the

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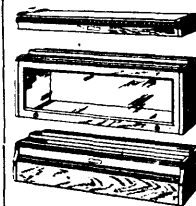
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Co. which has secured the right of way from nearly all the municipalities interested.

**Huron and Bruce Ry. Co.**—G. Kastner, Wiarton; J. E. Campbell, Amabel township; W. McGregor, Southampton; D. Geddes, Port Elgin; N. D. McDougall, Bruce township; J. Barker, Kincardine; and J. Wilson, Goderich, were incorporated at the recent session of the Ontario Legislature under this title to construct a railway from Wiarton to Goderich passing through or near Southampton and Kincardine, and to construct branches therefrom none of which may be more than 12 miles in length. The capital of the Co. is placed at \$500,000, and power is given to issue bonds to the extent of \$20,000 a mile. The Co. is given authority to enter into agreements for running powers over other lines, and to amalgamate with the C.P.R., G.T.R. or Manitoulin and North Shore Ry. The promoters of the line are understood to have completed arrangements with F. H. Clergue by which the line will be constructed and operated as part of the M. and S. S. Ry. (Feb., pg. 57.)

**The Huronian Co. (Ltd.)**—R. M. and J. J. Thompson, of Bayonne, N.J.; R. G. Leckie, of Truro, N.S.; W. Nesbitt, K.C., and R. McKay, of Toronto, were incorporated at the recent session of the Ontario Legislature under this title with power among other things to construct a railway from the Massey Station Mining Co.'s properties in the townships of Salter and May, Algoma, southerly to the C.P.R. Sault Ste. Marie branch, thence to the navigable waters of the Spanish river. The Co. also asked power to engage in a general navigation business.

**Indian River Ry.**—M. P. Davis, R. J. Devlin, W. P. Davis, and J. W. Thompson, of Ottawa, and H. G. Harrison, of Montreal, are applying at the current session of the Dominion Parliament for an act incorporating a company under this title with power to construct a railway from the north end of Lake Megantic southerly along the shores of the lake to the international boundary at Riviere Mort. (Feb., pg. 57.)

**Intercolonial Ry.**—Work on the rearrangement of the I.C.R. station, North st., Halifax, was commenced Feb. 17, and it is expected that it will be completed within three months. The main features of the alterations being carried out are these: In the present train shed there are only three tracks; in the new one there will be four inside, and two outside with covered approaches to them. The old tracks are to be extended about 200 ft. further north than the end of the present platform or train shed. In the main building the whole interior has been ripped out and is being reconstructed; the baggage room will be an addition to the main building, and instead of the old approach from Lockman st. a new one is to be put in running from the corner of North st., where the street cars stop, running on the front concourse, which will be totally covered with a glass roof. Instead of the present entrance, which runs into the waiting room, the new concourse will be taken right through the building into the train shed, and from this will be the main entrance into the waiting room. On the left of this concourse will be the baggage and express room, into which baggage and mail, etc., will be conveyed by an electric lift, the capacity being equal to handling a wagon load of either baggage or mail at one time. The general arrangement of the ground floor of the building will be similar to what it is at present, with the exception of the sleeping and dining car departments which are moved up to the second floor, the ground floor thus being given over altogether to the use of passengers.

The interior finish throughout is to be equal to or better than any station of its size in

Canada. The floors throughout will be marble terazzo; the main waiting room will be finished in white enamel with a heavily beamed and caissoned roof; the women's waiting room will have Flemish oak trim and timber roof, with toilet room finished entirely in oak.

The exterior of the building will not be altered, but more light will be given by putting an additional 1,600 ft. of glass in the train shed on a line with the main station building, and by adding a number of glass bays.

An electric light plant for lighting the building will be put in, and the whole building will be heated by steam.

The entire work is being done under the supervision of Sproatt and Rolph, architects, Toronto. The contractors are Illsley and Horne, Toronto.

Tenders for the additions and alterations to brick sheds at North st., Halifax, are under consideration of the Manager.

Among the improvements contemplated at Sydney are the erection of a coal conveyer, a machine shop, car repair shop and an office building. E. T. Horn, assistant to the Manager, and J. E. Muhlfield, Mechanical Superintendent, have been in Sydney deciding on the location of the new buildings.

The new 18-stall roundhouse at Stellarton has been completed, also a reservoir of 50,000 gallons capacity in connection.

The new station at Westville, N.S., has been completed. The building is 77 ft. long by 39 ft. wide and cost \$16,000. There are covered walks 100 ft. in length, parallel to the tracks on each side of the building.

An unconfirmed press report says that a line of railway is projected from New Glasgow to Guysboro, a link between New Glasgow and Lochbroom, to avoid the heavy grades between Stellarton and Westville, and a line from Pugwash Jct. to Amherst which would save 25 miles between Amherst and New Glasgow, and relieve the line from Cape Breton west.

Sproatt & Rolph, architects, Toronto, are preparing plans and specifications for new car shops at Moncton, which will be the first of their kind in the Dominion.

A coal shed is to be built at Moncton. Sproatt & Rolph, architects, Toronto, have prepared the plans, and tenders are asked for its construction.

In connection with the enlargement of the yards and general improvement of the terminal facilities at St. John, N.B., tenders are asked for the blasting of rock at Gilbert's island, the land recently acquired by the I.C.R.

The estimates submitted to the House of Commons for the year ending June 30, 1903, contain the following amounts for the I.C.R., chargeable to capital:—

Steel rails and fastenings	\$600,000 00
To increase accommodation at Sydney	77,000 00
Original construction	2,000 00
To strengthen bridges	175,000 00
To increase accommodation at Levis	22,000 00
Additional sidings	50,000 00
Machinery for locomotive and car shops	10,000 00
Superstructure for 6 spans Miramichi Bridge	51,000 00
Sea walls	5,000 00
Increased accommodation at Stellarton	15,000 00
Superstructure for Restigouche Bridge	102,000 00
Superstructure for north-west Miramichi Bridge	123,000 00
Double tracking between Windsor Jct. and Halifax	30,000 00
Improvements at Point Tupper	30,000 00
To provide yard for freight business at Riviere du Loup	25,000 00
Addition to erecting shop at Moncton	15,000 00
To extend freight car repair shop at Moncton	25,000 00
Engine house, machine shop, car shops, stores, office, etc., at Riviere du Loup	50,000 00

The Inverness and Richmond Ry. has made application to the Montreal Harbor Commissioners for a wharfage space of 1,000 ft. frontage at Windmill point. The Commissioners did not grant the application but decided to advertise all unleased coal wharfage space for rental, applicants to state area wanted and rental proposed by Feb. 28. No allotment of areas has yet been made.

The town of Port Hawkesbury is making application to the Nova Scotia Legislature for an act enabling it to borrow money to pay for land, etc., acquired for the right of way for the I. and R.

**The Irondale, Bancroft and Ottawa Ry. Co.** was voted the following subsidies at the recent session of the Ontario Legislature: from the junction with the G.T.R. near Kinmount to Irondale, 10 miles; from 35 miles east of Irondale, easterly for 10 miles; and from Palmers' Rapids easterly to Renfrew about 50 miles; in all about 70 miles at \$3,000 a mile, \$210,000. Of this \$30,000 is a revote of subsidies previously voted but unearned. According to the report of the Dominion Department of Railways for 1901, the Ontario Legislature had from time to time voted \$165,000, (representing 55 miles at the usual rate of \$3,000 a mile) in aid of the line, of which \$105,000 representing 35 miles of construction at \$3,000 a mile had been paid. The subsidy paid would, therefore, appear to cover the line constructed between Irondale, mileage 9½ from the junction, and near Baptiste, mileage 45 from the junction. Of the subsidies voted this year, the first will apparently cover the distance between the junction and Irondale; and from near Baptiste to about 5 miles beyond the present end of the track at Bancroft station, 2¼ miles from the village of that name. In 1898 a subsidy of \$30,000 was voted for 10 miles easterly from 45 miles east of Irondale, which subsidy is apparently still available, and with the balance of the second 10 miles subsidized this year would carry the line 15 miles beyond the present track end. The Dominion Parliament voted \$160,000 in respect of 50 miles of line at the rate of \$3,200 a mile and of this \$144,000 has been paid, in respect of 45 miles of line, leaving \$16,000 unearned, but apparently still available, as it was revoted in 1897.

The I. B. and O. Ry. is in operation from a junction with the G.T.R., 2.30 miles north of Kinmount, 102.12 miles from Toronto on the line to Haliburton, to Bancroft station, 50 miles, situated at Mud Lake about 2¼ miles from Bancroft Village. Irondale, 9½ miles from the junction, is the headquarters of the Co. The line passes through a good agricultural and timber country, a number of iron mines are being opened up, and a tourist trade is being developed. Bancroft, 554 inhabitants, is the most populous village, but the townships served by the line are fairly well populated. (Feb., pg. 57.)

**James' Bay Ry.**—The recently constructed line from Quebec siding, on the Canada Atlantic Ry., to Parry Sound, about 5 miles, has been put in operation. Application is being made at the current session of the Dominion Parliament for an act extending the time for the construction of the uncompleted portion of the line, and for power to construct a line from Sudbury to Batchawana Bay, on Lake Superior. In 1900, the Ontario Legislature voted \$15,000 in respect of the line from the C.A. Ry. to Parry Sound, and at the last session an additional subsidy of \$5,000 was voted. For the construction of the line from Parry Sound to Sudbury the Ontario Legislature voted a cash subsidy of \$3,000 a mile, and at the last session an additional \$1,000 a mile was voted in respect of this 90 miles of line. There is also in existence an Ontario subsidy of \$2,000, and 5,000 acres of land a mile for a line from Sudbury to Lake Abitibi, 175 miles. In 1899 the Dominion Parliament voted a subsidy of \$3,200 a mile for 20 miles of line from Parry Sound northerly; and in 1900 an additional subsidy of \$3,200 a mile from 20 miles north of Parry Sound to the French river, 35 miles. A location survey was made last year, and it is understood that construction will be started at an early date. The country through which the line

will run presents few engineering difficulties, and an average grade. (Feb., pg. 57.)

**Kitamaat Inlet to Peace River Pass.**—Application is being made by John Westren, of Toronto, at the current session of the Dominion Parliament, for an act incorporating a company to construct a railway from Kitamaat Inlet, on the Pacific coast, via Hazelton, to the northern boundary of B.C., at Teslin or Atlin lake; also from Hazelton via the Skeena, Omenica and other river valleys to Peace river pass and thence to the easterly boundary of B.C.

**Kamou-Tem. Littoral Electrique.**—Application is being made at the current session of the Quebec Legislature for the incorporation of a company under this title to construct electric railways in the counties of l'Islet, Kamouraska, Temiscouata and Rimouski.

**Kettle Valley Lines.**—We were recently officially informed that grading had been completed and that rails had been laid as far as Curlew, Wash., and it was hoped to have the steel into Republic, Wash., 42 miles from Grand Forks, B.C., and 37 miles from the in-

ternational boundary, by Mar. 15. Steam shovels are being used for surfacing and ballasting. Some delay has been experienced by the bridge work being a little behind. It was reported that the Co. had come to an agreement with the Great Northern Ry. on the matters in dispute between them, but later information does not bear this out. T. W. Holland, General Manager, said in an interview at Vancouver, Feb. 28: "It is true I had engineers out taking the contours of the country for the Kettle River Valley Ry. This company has a charter covering the territory from Cascade via Grand Forks up the north fork of Kettle river to Franklin camp with a branch from near Grand Forks to Midway. It is the intention of the K.R.V.R.Co. to survey and locate the entire line covered by its charter, with a view to the early construction of the same. The recently discovered coal fields on the north fork, coupled with its timber resources and the potential ore tonnage, has emphasized the importance of a road being constructed into this district as soon as possible." On Mar. 11, we were informed that on Mar. 15, a daily service for the carriage of passengers, mail and freight, would be

operated in conjunction with the construction trains from Grand Forks, B.C., to Pelham Flats, Wash., 24 miles, and that at Pelham Flats connection would be made with a stage running into Republic, 16 miles. The line when completed will be 42½ miles long. There will be two important stations between the terminals at Republic and Grand Forks, viz.: Curlew and Nelson, Wash., but stations will probably be established at the foot of Curlew lake and at Trout creek, about six miles from the Sherman mining camp. The scenic features of the road are excellent. Almost a complete loop is made west of Curlew and at Republic. While a 1½% grade is encountered for about six miles, it will not interfere with traffic, as the ore haul will be down grade. A branch seven miles in length is projected from Ferguson to Sheridan Camp, Wash. (Feb., pg. 58.)

**Kingston and Pembroke Ry.**—It has been decided to carry out considerable improvements on the roadbed between Kingston and Sharbot Lake as soon as the spring opens. (Jan. pg. 3.)

(Continued on page 141.)

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**Canadian Northern Ry. Construction.**

**Port Arthur Terminals.**—A contract has been let for the construction of an addition, 400 ft. long and 100 ft. wide, to the no. 1 dock at Port Arthur, and for the erection thereon of a shed 350 ft. long by 52 ft. wide. Two lines of track will be laid on the dock, which will be used for handling the Co.'s through freight. Vigers & Co., of Port Arthur, have the contract, and the work is to be completed by July 1.

**The Port Arthur Elevator** was completed at the end of Feb., and the first shipment of wheat was received and stored Mar. 8. It is proposed to add to the elevator accommodation by putting up one or more elevators of 1,500,000 bush. each, but no definite decision has been reached on the point as yet. (Sept. 1901, pg. 262.)

**The West Fort William Coal Docks** are to be enlarged during the summer so as to provide accommodation for handling 150,000 tons.

**Duluth Extension.**—A steel bridge is to be built over the Kaministiquia river at Stanley, on the Duluth extension, the old Port Arthur, Duluth and Western Ry. The bridge will be built on stone abutments. At present the railway is carried across the river by a trestle.

H. K. Wicksteed, C.E., is at present engaged on a survey for the continuation of the Duluth extension from the international boundary near Gunflint Narrows, 66 miles from Stanley, to Ely, Minn., on the iron range where a junction will be effected with the Duluth and Iron Range Ry. (Dec. 1901, pg. 360.)

**Winnipeg Terminals.**—The Co. is reported to be negotiating for the purchase of the remaining frontage on the Red river owned by the city, and not at present occupied by railway companies, with a view to rearranging the tracks of the Winnipeg Transfer Co., and making a connection with the old Winnipeg and Great Northern Ry. which is referred to in the following paragraph.

**Branch to Oak Point.**—The Manitoba Legislature at its recent session confirmed an agreement entered into between the Co. and the Government for the construction of a branch from near Winnipeg, through Rosser, Woodlands, St. Laurent and Posen to Lake Manitoba, about 55 miles, the work to be completed this year. This covers 40 miles of the line constructed under the charter of the Winnipeg Great Northern Ry. to St. Laurent, but never operated, and carries the line 15 miles further to Oak Point. No contract has been let for the work.

**Carman Branch.**—The agreement between the Co. and the Manitoba Government to construct a line from St. Charles to Somerset, about 70 miles, was ratified at the recent session of the Legislature. Track was laid for 55 miles in 1901, and grading was completed for 8 miles further. The branch will be completed this year. Surveys have been made for a branch from Carman to Morden, about 25 miles. A contract is expected to be let at an early date.

**Portage la Prairie Station.**—Plans are being prepared for a new station at this point of about the same size as that on the C.P.R. The station will be built this summer, but its dimensions have not been decided.

**Beaver to Gladstone, Man.**—The piece of line between these points, 18.3 miles, which gives the Co. its own through line, was constructed in 1901, by the C.N. Ry. Co., under an agreement with the Manitoba Government, which was ratified at the recent session.

**Neepawa Branch.**—Under an agreement with the Manitoba Government, confirmed at the recent session of the Legislature, the Co. has to construct this year a line from 6 miles south of Gladstone, near Golden

Stream station on the main line, westerly to tp. 13, range 15, about 25 miles; thence northerly via Neepawa to tp. 17, range 15, 22 miles; and thence to tp. 17, range 18, about 20 miles. This latter portion of line runs out in the direction of the Riding mountains. The agreement calls for the completion of the whole of the 67 miles this year. A contract is expected to be let for the work in about a month.

**Gilbert Plains Branch.**—A contract has been let to Strelvel & Son, of Winnipeg, for 50 miles of grading westerly from Grand View, the present terminal of this branch which starts from the main line 2.7 miles west of Dauphin. The surveys being made in connection with this branch indicate that it may be utilized as the western extension of the main line. However nothing has been decided and will not be until all the survey parties in the field to Edmonton have reported. (Feb., pg. 63.)

**Manitoba Branches.**—The aid to be given by Manitoba to the Co. in respect of lines constructed or to be constructed under the agreement confirmed at the recent session of the Legislature is as follows:—

Beaver to Gladstone, guarantee of debentures for \$8,000 a mile, on an approximate distance of 20 miles, \$160,000.

Winnipeg to Lake Manitoba, guarantee of debentures on 40 miles of the old Winnipeg Great Northern line, for \$5,000 a mile, and at the rate of \$8,000 a mile for the remaining 15 miles, \$320,000.

St. Charles to Somerset, guarantee of debentures for \$8,000 a mile on an approximate distance of 75 miles, \$600,000.

Neepawa branch, guarantee of debentures for \$8,000 a mile for an approximate distance of 67 miles, \$536,000.

This makes a total of \$1,576,000 of debentures guaranteed under the last agreement, in addition to the \$9,619,280 of debentures guaranteed on the other portions of the line, making a total of \$11,195,280 the interest of which the Province has guaranteed.

**Erwood Westerly.**—During the winter a wagon road has been built from Erwood, Sask., the present track end, about 90 miles, through Melfort and the Carrot river settlement, to help settlers to get in, and to facilitate construction on the railway. A good deal of grading has been done on the muskeg portion of the route from Erwood to near Prince Albert, beyond the end of the portion graded last year. What work will be done beyond Erwood this year depends on the decision as to whether it is to be on the main line or not. A suggested crossing of the south branch of the Saskatchewan is near Rosthern, and it is reported that a townsite is being laid out on the river about 25 miles south of Prince Albert. J. R. Armstrong, C.E., is running trial lines westerly from the North Saskatchewan to Battleford, with a view to finding the best crossing of the river near Battleford. From Battleford the line will, it is understood, be carried to a junction with the 4 miles constructed from Strathcona into Edmonton, and thence to the Yellowhead pass. It is the intention of the Co. to complete about 400 miles of line between Manitoba and Edmonton this year, bringing the line to within 100 miles of Edmonton. (Feb., pg. 63.)

**British Columbia Lines.**—As the result of the negotiations between the Commissioner of Public Works for B. C., and Mackenzie, Mann & Co., an agreement was entered into which was laid before the B. C. Legislature Mar. 7, for approval. The agreement elicited considerable discussion in the Legislature, but the election in Victoria, which resulted in the return of Colonel Prior, over E. V. Bodwell, ensured its confirmation. Application is being made for Dominion subsidies for the mileage proposed to be constructed, and as soon

as these are secured active work will be commenced. J. N. Greenshields, K.C., of Montreal was engaged in the negotiations and it is understood that he is acting for the B.C. Government in arranging for the subsidies with the Dominion Government. The agreement provides that the C.N. Ry. Co. will construct a railway from Bute inlet, B.C., easterly to near Quesnel, and thence to the eastern boundary of the province at the Yellowhead pass, where connection is to be made with the Co.'s line now being constructed from Port Arthur, Ont., westward. Construction is to be commenced by June, 1, 1903, and the line is to be completed within five years thereafter. As soon as the first 100 miles of line is in operation the C.N.R. agrees to maintain a steam ferry to transport freight and passenger cars from Bute inlet to the terminal of the projected Comox and Cape Scott Ry. on Vancouver Island. The C.N.R. agrees to deposit \$50,000 as security for the performance of the work, and to pay the province 2% of the gross earnings of the line after it has been placed in operation. The B.C. Government on its part agrees to pay the following subsidies: for 50 miles from Bute inlet, \$4,800 a mile; from mileage 50 to Quesnel, \$4,000 a mile; and from Quesnel to the Provincial boundary \$4,500 a mile; such subsidy to be in cash, or in the B.C. Government 3% 50 year debentures, at 95%; a right of way 200 ft. in width, and a land grant of 20,000 acres a mile, such land to be free of provincial or municipal taxation until alienated; and the railway and equipment to be free from taxation for 10 years. Free miners may search over the Co.'s land and may purchase mineral lands at not exceeding \$5 an acre. The total amount of the subsidy involved in this project is estimated at \$1,800,000 in addition to about 8,000,000 acres of land. As soon as the Dominion Government has given assurance of its assistance the surveys will be started, and contracts will be let for the commencement of construction at Bute inlet.

To complete the plan which the B.C. Government has in view, viz.: the securing of the terminal of the C.N.R. in Victoria, Mackenzie, Mann & Co. have secured an option on the Esquimalt and Nanaimo Ry., in operation from Victoria to Wellington, 78 miles; and have secured the charter of the Comox and Cape Scott Ry. Co. This Co. was authorized to construct a railway from the terminus of the E. and N. Ry. to a point on the coast opposite Bute inlet, thence to Cape Scott. The incorporators of the C. and C. S. Ry. were: Jas. Dunsmuir, J. A. Lindsay, O. H. Solby, and H. K. Prior of Victoria. J. Dunsmuir is also president of the E. and N. Ry. Co., and Premier of B.C. Under the special act passed in 1901 by the B.C. Legislature power was given to subsidise a railway from the present terminus of the E. and N. Ry. to the northern end of Vancouver island, about 240 miles, at \$4,000 a mile, which subsidy will be available for the C. and C. S. Ry.

The E. and N. Ry. is practically owned by the Dunsmuir estate and San Francisco people, Geo. Crocker of that city being a director, and was opened for traffic in 1886, three years after the act of incorporation was obtained. It extends from Victoria to Wellington, B.C., 78 miles, which is laid with 54 and 60 lb. steel rails. The line was built to open up the Nanaimo and Wellington collieries, and there are some short spurs from the main line connecting with the different collieries, making the total mileage 81.38. In addition to the Dominion subsidy of \$750,000 the Co. was given a grant of 1,900,000 acres of land by the B.C. Government. The rolling stock on June 30, 1901, was reported to comprise 7 locomotives, 2 drawing-room cars, 5 first class cars, 4 second class cars, 3 baggage and express cars, 14 cattle, freight and box cars, 42 platform cars, 19 coal and dump cars, 3 conductors cars, and 28 tool cars. Of the cars 31



were fitted with air brakes and 120 with automatic couplers. The ordinary share capital is \$3,000,000, of which \$2,500,000 has been subscribed and paid up; there are no preference shares or bonds; the Dominion subsidy of \$750,000 makes the total capital \$3,250,000, and the total cost of the line is given as \$3,132,111.77. The gross earnings for the year ended June 30, 1901, were \$234,190.10, and the net earnings \$18,027.71. The option to Mackenzie, Mann & Co. covers the railway and its equipment only, and not the collieries, or the land grant.

**Recent Ontario Legislation.**

The following acts relating to railway and transportation interests were passed at the recent session of the Ontario Legislature :

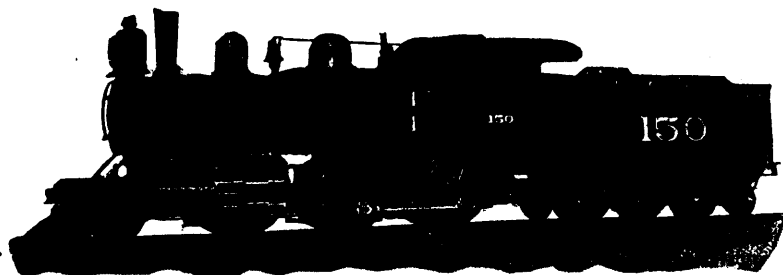
- Respecting aid to certain railways.
- Respecting the Street Railway Act.
- Respecting electric railways.
- Respecting the township of Etobicoke, (agreement with Toronto Suburban Ry. Co.)
- Incorporating the Canada Central Ry. Co.
- Incorporating the Canada Western Ry. Co.
- Incorporating the Durham Switch Line Ry. Co.
- Respecting the Essex and Kent Radial Ry. Co.
- Respecting the Fort Erie Ferry Ry. Co.

- Respecting the Great Lakes Ry. Co.
- Amending the act incorporating the Haliburton, Whitney and Mattawa Ry. Co.
- Respecting the Hamilton, Ancaster and Brantford Ry. Co.
- Incorporating the Huron and Bruce Ry. Co.
- Incorporating the Huron, Bruce and Grey Electric Ry. Co.
- Incorporating the Huronian Co., (Ltd.)
- Legalizing by-laws of municipalities granting aid to the Lake Erie and Detroit River Ry. Co.
- Incorporating the Lake Superior, Long Lake and Albany River Ry. Co.
- Incorporating the Lambton Central Electrical Ry. Co.
- Respecting the London Street Ry. Co.
- Incorporating the Middlesex and Elgin Interurban Ry. Co.
- Incorporating the Morrisburg Electric Ry. Co.
- Respecting the Nepigon Ry. Co.
- Incorporating the New Ontario Ry. Co.
- Incorporating the Ontario Electric Ry. Co.
- Respecting the Ontario, Hudson's Bay and Western Rys. Co.
- Respecting the Pacific and Atlantic Ry. Co.
- Respecting the Pembroke Southern Ry. Co.
- Incorporating the Peterborough Radial Ry. Co.

- Incorporating the Petrolia Ry. Co.
- Respecting the Port Dalhousie, St. Catharines and Thorold Electric Street Ry. Co. (Ltd.)
- Respecting the Sandwich, Windsor and Amherstburg Ry.
- Respecting the South West Traction Co.
- Respecting the Windsor, Essex and Lake Shore Rapid Ry. Co.
- Amending the act incorporating the Woodstock, Thames Valley and Ingersoll Electric Ry. Co.
- Respecting the Sao Paulo Tramway, Light and Power Co., (Ltd.)
- Respecting the town of Collingwood and the Collingwood Shipbuilding Co., (Ltd.)
- Respecting the township of Pelee, (re bonus for steamship service.)
- Respecting the village of Point Edward, (re elevator.)
- Further particulars of most of these acts will be found in our Railway Development department on page 121 and subsequent pages.

**Ontario Railway Subsidies.**

The act respecting aid to railways passed at the recent session of the Ontario Legislature provides for the payment of the following subsidies :



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Pembroke Southern Ry. For a railway from Pembroke to Ross township, not exceeding 15 miles, \$45,000.

Bay of Quinte Ry. Formerly the Kingston, Napanee and Western Ry., for such extensions of branches or additions to its projected and authorized line of railway northerly of Tweed, not exceeding 50 miles, as will enable the Co. to connect its line with the iron ore deposits north of Tweed, in renewal and extension of the amount granted to the K. N. & W. Ry. in 1893, \$150,000. (Revote, \$90,000).

Irondale, Bancroft and Ottawa Ry. Co.—From Kinmount Jct., to Irondale, (subject to the conditions in the act respecting railways) 10 miles; and from 35 miles from Irondale, easterly for 10 miles; also from Palmer rapids to Renfrew, about 50 miles, in all not exceeding 70 miles, \$210,000. (Revote, \$30,000.) This subsidy is subject to the condition that the Co. gives to the Toronto, Lindsay and Pembroke Ry. running powers over the line between Bird creek and Palmer rapids; and that in the event of that piece of line being constructed by the T. L. and P. Ry. the I. B. and O. Ry. shall be entitled to running powers over it.

For a line from Dinorwic station, Algoma, northerly to Lake Minetakie, 15 miles, \$15,000. This is understood to be for the C.P.R. James' Bay Ry. Co. From near Rose Point on the Canada Atlantic Ry. to Parry Sound, 5 miles; and from Parry Sound to Sudbury 90 miles; in all 95 miles, in addition to subsidies already voted, \$95,000.

Thunder Bay, Nepigon and St. Joe Ry. From 30 miles east of Port Arthur, for 10 miles, 5,000 acres of land and \$20,000.

Lindsay, Bobcaygeon and Pontypool Ry. From Bobcaygeon to Lindsay, 19 miles, \$57,000.

Bruce Mines and Algoma Ry. From Bruce Mines to Lake Huron, 4 miles, \$12,000.

Nepigon Ry. Co.—From Nepigon station to Long Portage, 14 miles, \$42,000.

Lake Superior, Long Lake and Albany River Ry. From near Peninsula harbor, Lake Superior, northerly 10 miles, \$30,000.

The general conditions attaching to the subsidies are that they lapse if unearned in five years; that Canadian rails and Canadian rolling stock are to be used if procurable, and that the lines aided may be acquired by the Government at a price to be fixed by arbitration.

### Ontario Railway Legislation.

At the recent session of the Ontario Legislature an endeavor was made to amend the Railway Act by the insertion of a clause in sec. 29, compelling railway companies to protect all level crossings by erecting gates or bars, and to employ a man at each crossing to raise and lower the same as may be required. The bill failed to pass, and a bill to insert a similar clause in the Electric Ry. Act was withdrawn.

The Street Railway Act was amended by declaring that the provisions as to placing fenders on motor cars passed in 1901, shall apply to every street railway company now, or hereafter, established, and shall be deemed to be incorporated with every special act incorporating a street railway company.

Two bills were introduced, one by Mr. McKay, and the other by Mr. Pattullo, proposing to amend the Electric Ry. Act, by having clauses inserted dealing with the construction of through electric lines, their connection with the existing street railway lines and the financial arrangements, but neither passed, their sponsors giving way to the Government bill establishing a railway committee consisting of the Commissioner of Public Works and two other members of the Cabinet, to be appointed by the Lieut.-Governor. The Commission has

power to regulate all questions regarding connection between electric lines, crossings and rights of way over the tracks of other lines, such powers are to be exercised in cities and towns only on consent of the municipalities affected. The Commission is to settle disputes between two or more companies as to rights of way, construction of agreement, etc., and its decisions are to have the same effect as an order of the High Court of Justice. Questions of law may be submitted by stated case to the Court of Appeal; and the Commission may sit anywhere in Ontario. It has also power to make arrangements governing agreements for running powers between companies, and may vary or rescind any order made by it, should it be found expedient to do so.

### Per Diem Charges for Foreign Cars.

By W. H. Rosevear, General Car Accountant G.T.R.

There can be no question that the per diem basis of settlement for the use of foreign cars would be more equitable, and more in line with up-to-date business methods, than the present mileage plan. Many years' experience in the working of the mileage system has brought to light its many serious defects, and strengthened my convictions in favor of per diem; I have therefore earnestly advocated its adoption, and had the honor at the car accountants' convention of 1899 to move a resolution on the subject: "That this association is in favor of a per diem method of settlement for use of cars," which was unanimously carried, and committed the International Association of Car Accountants and Car Service Officers to the principle of per diem.

The mileage method is incomplete, as it takes in only one side of car service; it cannot therefore be considered permanent, but merely educative in character, and must eventually be superseded—as a matter of progress and evolution—by a more equitable and perfect plan. Dissatisfaction with the mileage basis would not have become so general if, as originally intended, cars were run promptly to destination and returned to owners with a minimum of delay; but the tendency of the present plan is to take account only of the interest of the user of the cars, and often that interest is considered to be best served by a tie-up of cars for a number of days, weeks, or even months, as in this system there is no recognition of the fact that each car represents about \$500 of the owner's capital, on which a reasonable return should be made; but such cars are too often looked upon as players view pieces on a chess-board, to be moved so as to win the traffic game for the users, and not infrequently with little or no regard for the interest or advantage of the owners.

One great defect of the mileage system is that it practically estimates a car to be of value to its owner only when in transit, and the deadening result on the railway conscience is illustrated by the fact that the very long detention of, say, 1,000 of such cars at terminals with hay, grain or other freight, and especially at the seaboard, is as a rule only considered by the users in relation to the inconvenience caused, or the extra expense for yard space and tracks for their accommodation.

Much has been said also of the unreliable character of mileage as a basis of settlement for use of cars, and it is almost, if not quite, impossible to institute a check sufficiently close to ascertain if all mileage earned is paid for; it is hoped that no intentional errors are now being made, but the system is so defective that serious errors may occur through the employment of incompetent clerks, and a case of this nature came to my notice during the

past six months, in which a car accountant, failing to obtain satisfactory explanation of apparent shortages, sent a clerk to check up, and found errors in the addition of columns in mileage books extending over a few months, amounting to a shortage of nearly 300,000 miles.

The fatal defect of the mileage plan, however, is that instead of favoring the early return of cars to their owners, it, in a large percentage of cases, works in the opposite direction, especially in long distance traffic, as there is naturally a disinclination to pay mileage on the return empty haul of cars if, by a longer or shorter wait, loads in the direction of home can be secured.

During the past few years various measures have been proposed for improving the mileage plan and making it more acceptable, but these have all been discarded; and after exhaustive discussion on the subject, the conviction is almost universal that nothing short of the per diem basis for settlement and regulation of car interchange will meet the requirements and give satisfaction.

The three leading features of the per diem are:—First—All its accounts will be susceptible of verification and can be checked as easily and fully as other railway accounts. Second—The interests of car owners will be always kept in sight and safeguarded. Third—The influence of the system will always tend in the direction of prompt movement and early return of foreign cars.

The adoption of this new method, in offices not hitherto working up car days, will require some small addition to the clerking staff, that is, if railway companies desire a continuation of the monthly mileage reports of foreign cars, and no doubt these will still be required for statistical purposes.

Objections to per diem come principally from small roads which depend on other railways for cars, having usually two or more connections, so they can play off one against the other, and hold cars at their own sweet will. One or two larger railways also object for various reasons. These objections, I believe, will ultimately be found to a great degree baseless, being founded on experience under the present system; for it is freely conceded that the introduction of per diem will create an entirely new experience, and infuse new energy into car movement and car interchange, bringing this branch of railway service right into line with the progressive spirit of this wonderful age; and it is estimated that the new up-to-date system, if loyally carried out by all the railways of this continent, will so accelerate the movement and consequent return of cars to owners that it will be equal to an addition of at least 33½%, and probably more than 50% to the total freight car equipment, thus furnishing ample carrying capacity for all requirements, and relegating "car famines" to the forgotten past.

All who have had experience in car service are agreed as to the superiority of per diem over the present system, and it is my firm conviction that it is the coming method, and will surely be adopted by the railways of this continent, sooner or later, as surely as excelsior is the watchword of the age; to doubt this is to question the wisdom and forethought of the able men who preside over the destinies, and conserve the interests of our great railway systems, and who are becoming convinced that the mileage plan has failed to secure a reasonable return on the more than \$550,000,000 invested in freight car equipment.—Railway Age.

A. Pushie, of the Dominion Coal Co., has returned to Nova Scotia from Norway and Sweden, where he has been superintending tests of N.S. coal on the railways there. He says that everything was satisfactory and that large orders for coal will be received from Norway and Sweden during the year.

**The Canadian Railway Club.**

There was an attendance of about 125 at the meeting at the Windsor Hotel, Montreal, Mar. 11, the notice calling which was published in our last issue. The chairman pro tem. of the preliminary committee, W. H. Rosevear, jr., occupied the chair, M. P. Kelly acting as secretary. A number of letters were read from railway officials and others approving of the proposal to establish a railway club.

The committee appointed to draft a constitution and by-laws reported, their draft being adopted with slight amendments. The name selected was the Canadian Railway Club. The objects are declared to be the advancement and dissemination, by means of reports, papers, investigation and discussions, of knowledge concerning the construction, operation and maintenance of railways and railway equipment and the cultivation of sociability among its members. The membership is to be composed of persons connected with any branch of railway service, locomotive or car manufacturing, or the manufacture or sale of railway supplies, and others of kindred interest. The officers are to consist of a president, 1st vice-president, 2nd vice-president, executive committee of five, and finance committee of three. A secretary and a treasurer are to be appointed by the executive committee, and the salary is to be fixed by the executive committee. Regular meetings are to be held at Montreal, on the second Tuesday of each month at 8 p.m., except in June, July and Aug. A majority of the executive committee may change the date and place of any meeting. The annual meeting is to be held on the second Tuesday of January each year. The subscription is \$2 a year.

The chairman pro tem. appointed a nominating committee, of which L. Gleason, of the Galena-Signal Oil Co. was chairman, and which brought in a report recommending the following officers for the current year: President, E. A. Williams, Supt. Rolling Stock, C.P.R., Montreal; 1st Vice-President, T. McHattie, Master Mechanic, G.T.R., Montreal; 2nd Vice-President, S. King, Master Car Builder, I.C.R., Moncton, N.B.; Executive Committee: T. H. Hopkirk, chief clerk, office Supt. Rolling Stock, C.P.R., Montreal; J. Powell, chief clerk, office Supt. Motive Power, G.T.R., Montreal; W. H. Rosevear, Jr., chief clerk, office Supt. Car Department, G.T.R., Montreal; F. Sutherland, Master Car Builder, G.T.R., Montreal; Acton Burrows, Editor and Publisher RAILWAY AND SHIPPING WORLD, Toronto. Finance Committee: J. Farrar, chief clerk, Stores Department, G.T.R., Montreal; H. Osborne, Master Mechanic, C.P.R., Montreal; A. Plow, Mechanical Inspector, C.P.R., Montreal. The report was unanimously adopted.

The Secretary was instructed to convey the greetings of the Club to the various railway clubs in the U.S.

Prior to and at the meeting 139 enrolled as members, and letters were received from 36 more, so that the Club starts with a membership of 175.

The Executive Committee met after the general meeting and appointed M. P. Kelly, chief clerk, office Master Car Builder, C.P.R., Montreal, as Secretary, and S. F. Underwood, chief draughtsman, Car Department, G.T.R., Montreal, as Treasurer. The Secretary's address is 242 St. Hubert st., Montreal. T. H. Hopkirk, W. H. Rosevear, Jr., and Acton Burrows were appointed a sub-committee on printing.



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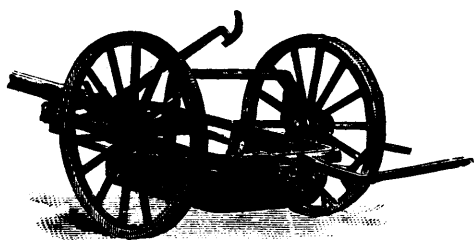
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The next monthly meeting of the Club will be held at the Windsor Hotel, Montreal, April 8, at 8 p.m., when there will be an illustrated lecture on coal combustion, and S. King, 2nd Vice-President, will read a paper on Car Construction.

**Canadian Society of Civil Engineers.**

At the ordinary meeting on Feb. 27, J. M. Shanly occupied the chair. The following applications for admission were announced:— T. S. Scott, J. H. Preston, A. A. Gobeil, H. Melancon, F. A. McKay.

A discussion took place on Mr. Shanly's paper on "The construction of the Great Northern Ry." J. S. Costigan, A.M. Can. Soc. C.E., read a paper on "Data and notes derived from tests on cement and also on concrete taken from regular batches used in actual works." The discussion on this paper was postponed until a future meeting.

At the ordinary meeting on Thursday, Mar. 13, the following applications for admission and transfer were announced:—For admission, S. R. Newton and G. H. Blanchet. For transfer from the class of associate member to the class of member, C. H.

four trucks, and the electrical equipments for the cars have been increased by six motors and six controllers. The track mileage has been increased by 1½ miles with necessary turnouts, paving, etc., connecting the former terminals at Willow park and Coburg road. The power station equipment has been increased by one 3,000 light unit. Adjoining the power station an extensive wharf and coal handling facilities have been installed, reclaiming 4,800 sq. ft. of land and effecting a large saving in the cost of handling coal. Transformers of 2,300 light capacity and 237 meters have been installed. A new contract for lighting the streets of the city has been entered into for five years from July 1, 1902, which will necessitate a considerable expenditure for lamps and apparatus of the most modern type.

The directors recommend that the shareholders be asked for authority to make a further issue of 1,000 shares of common stock to provide for this expenditure and for such other extensions and improvements as may be found necessary. The surplus, as in previous years, has been expended in enlarging the power plant, extensions of track, additions to the rolling stock and electrical equipments, and new wharf and coal handling

**Railway Equipment Notes.**

The C.P.R. has hired 20 locomotives from the I.C.R.

The Winnipeg Electric St. Ry. has ordered several open and closed motor cars.

The Port Arthur Electric Street Ry. is building an open motor car at Port Arthur.

The Quebec & Lake St. John Ry. has ordered 100 box cars from Rhodes, Curry & Co., Amherst, N.S.

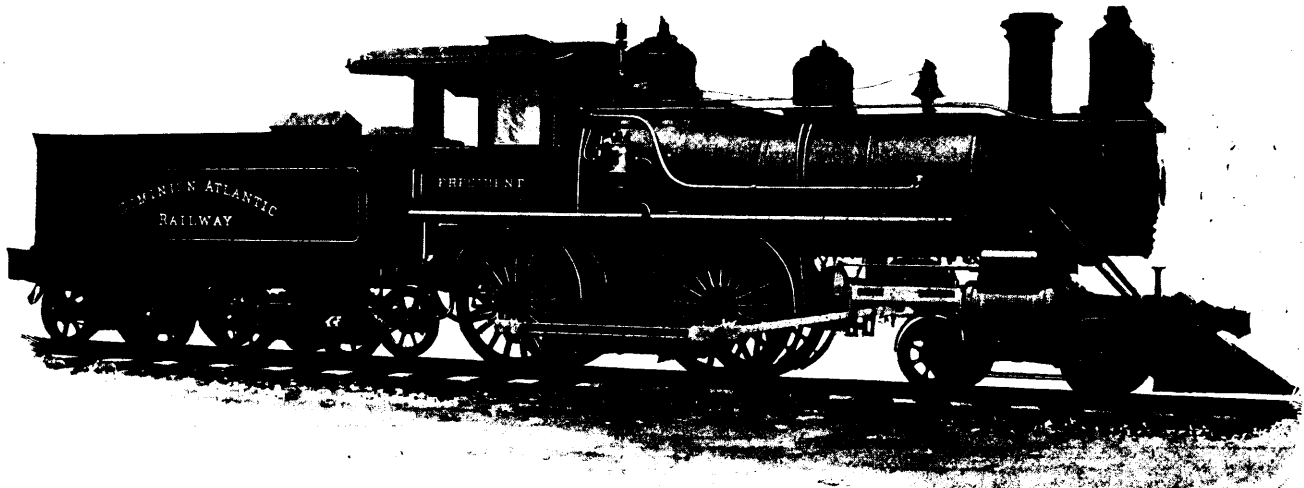
The C.P.R. has ordered from Rhodes, Curry & Co., Amherst, N.S., 500 box cars, 40 tons, 30 ft. long.

The Lake Erie and Detroit River Ry. is reported to have ordered three 45-ton mogul locomotives in the U.S.

The Halifax Electric Tramway Co. purchased the two cars of the abandoned Moncton, N.B., street railway.

The G.T.R. is reported to have placed an order for building 24 locomotives at its Montreal and Stratford shops.

The Michigan Central Rd. has ordered 19 more locomotives from the American Locomotive Co. An order has also been placed for 5 dining cars.



DOMINION ATLANTIC RAILWAY LOCOMOTIVE, BUILT BY BALDWIN LOCOMOTIVE WORKS.

Mitchell. For transfer from the class of student to the class of associate member, N. M. McLeod.

A paper by C. H. Davis on competition of steam vs. electric parallels was read by J. G. Kerry. Discussion on it was postponed until a future date.

**Halifax Electric Tramway Company.**

The report for the year ended Dec. 31, 1901, presented at the recent annual meeting, states that the year's business showed a net profit, notwithstanding an increase expenditure of \$8,211.00 for coal, of \$79,232.40, as compared with \$74,631.93 for 1900. From the year's profits there were paid four quarterly dividends of 1¼% each, amounting to \$40,000, leaving a surplus of \$39,232.40. The roadbed, rolling stock, buildings and other property have been efficiently maintained, and the cost has been charged to operating expenses as in previous years. The lighting system shows a steady increase, the equivalent of 3,668 sixteen candle power incandescent lamps were installed during the year, making the present total installation the equivalent of 23,343 sixteen candle power incandescent lamps throughout the city. The rolling stock was increased during the year by two closed motor cars, one construction car,

facilities, making a total of over \$100,000 expended in this way out of surplus earnings.

ASSETS.	
Property .....	\$1,400,000 00
Accounts receivable .....	23,157 56
Coal and supplies .....	9,890 61
Unexpired accounts (insurance, etc.) .....	4,826 49
Suspense account .....	6,992 30
Deposit with city .....	500 00
Cash on hand .....	34,132 84
	<b>\$1,479,199 80</b>

LIABILITIES.	
Capital stock.....	\$ 800,000 00
5% bonds .....	600,000 00
Accounts payable .....	39,756 74
Security for light accounts .....	68 38
Tickets outstanding .....	1,090 16
Bond interest .....	15,000 00
Dividend due Jan. 1, 1902 .....	10,000 00
Surplus Jan. 1, 1902 .....	22,284 52
	<b>\$1,479,199 80</b>

Passenger receipts .....	\$137,195 18
Light and power earnings .....	112,828 30
Sundry railway earnings .....	521 77
Sundry receipts .....	1,099 14
	<b>\$251,644 39</b>
Operating expenses .....	\$142,411 99
Coupons .....	30,000 00
Four dividends .....	40,000 00
Surplus .....	39,232 40
	<b>\$251,644 39</b>

The C.P.R. has completed 4 of the 12, ten-wheel passenger locomotives under construction at its Montreal shops.

The Quebec Central Ry. is having two locomotives built by the American Locomotive Co. at its Manchester works.

The Cape Breton Ry. has placed an order for freight and passenger cars with Rhodes, Curry and Co., Amherst, N.S.

The Dominion Atlantic Ry.'s locomotive "President," illustrated on this page, was described in our Feb. issue, pg. 71.

The Algoma Central and Hudson's Bay Ry. is reported to have ordered 4 locomotives from the Canadian Locomotive Co.

The Kingston and Pembroke Ry. will considerably improve its locomotives, and may possibly secure some additional ones.

The Minneapolis, St. Paul and Sault Ste. Marie Ry. has recently ordered 6 passenger cars, 5 mail cars and 200 platform cars.

The Cumberland Ry. and Coal Co. has ordered 75 coal hopper cars, 15 tons capacity, from Rhodes, Curry and Co., Amherst, N.S.

The Quebec Southern Ry.'s equipment consists of 12 locomotives, 5 passenger cars, 60 freight cars, 2 snow plows, and 2 flangers. The Co. is in the market for 1,000 box cars, and in the course of a month or two will be open to buy passenger cars.

The C.P.R. car Earnscliff, which was used by the late Sir John A. Macdonald, has been assigned for the use of W. Whyte, Assistant to the President.

From 1897 to 1901 there were 332 locomotives imported into Canada from the U.S. as follows:—1897, 18; 1898, 108; 1899, 67; 1900, 72; 1901, 67.

The Montreal Street Ry. is building at its Hochelaga shops 10 cars of a new design for use during the summer on the Montreal Park and Island Ry. lines.

The Metropolitan Ry. Co. has been directed by the York, Ont., township council, to provide 2 motor cars of an up-to-date design by June, and 2 more by Oct.

The White Pass and Yukon Ry. is not in the market for additional locomotives, as recently reported, having sufficient locomotive power to handle its present business.

The James Bay Ry. has secured from the Canada Atlantic Ry. a locomotive and a passenger car to operate on its 5 miles of line from the junction with the C.A. Ry. into Parry Sound, Ont.

The G.T.R. during 1901 placed orders for building the following cars in its Montreal shops:—2 café parlor, 10 passenger, 2 combination baggage and smoker, 500 box, and 300 furniture.

The Rutland Rd. has ordered 30 locomotives from the American Locomotive Co.'s Schenectady works. It is said orders will also be placed for about 20 passenger coaches and 1,000 box and coal cars.

The Shore Line Ry., N.B., recently received four platform cars from Rhodes, Curry & Co., Amherst, N.S. They are lettered "N.B. Southern Ry.," which is expected to be the line's name in the near future.

The Algoma Central and Hudson's Bay Ry. is reported to be building 50 box and 300 flat cars at its shops at Sault Ste. Marie, Ont. They will be of 80,000 lbs. capacity and will be fitted with Westinghouse air brakes.

The C.P.R. recently, on account of the crowded condition of its shops, asked for quotations from manufacturers at St. John, N.B., and elsewhere, for building tenders for the passenger locomotives being built at the Co.'s Montreal shops. A contract will probably be let for building six tenders.

The C.P.R. will expend \$10,000,000 of its new capital stock in building and purchasing locomotive cars and other equipment. The application to the Government for leave to increase the capital mentioned the following items:—200 locomotives, about \$3,800,000; 5,000 freight cars, \$3,750,000; 100 passenger cars, \$800,000; 40 sleeping, dining, and parlor cars, \$720,000.

The Prince Edward Island Ry. recently received two 8-wheel locomotives from the Canadian Locomotive Co. Following are the general dimensions: gauge, 3 ft. 6 in.; fuel, bituminous coal; cylinders, 15x20; wheels, 54 in.; weight, 65,000 lbs.; tank capacity, 2,200 gals.; couplers, standard; lubricators, automatic; headlights, round cased; sand valves, automatic; brakes, Westinghouse quick action.

The Intercolonial Ry. is having 6 switching locomotives built by the Canadian Locomotive Co., the general dimensions of which are as follows: Cylinders, 18 in. by 26 in.; weight, 120,000 lbs.; boiler, Belpair; wheels, 51 in. diameter; axle boxes and crossheads, cast steel; cab, steel; couplers and sand boxes, automatic; tank, steel, 4,000 gals.; tender frame, steel; brakes and air signals, Westinghouse automatic.

The Crow's Nest Pass Coal Co. recently ordered from the Canadian Locomotive Co. a 4-wheel saddle tank locomotive. Following are the general dimensions:—Gauge, 3 ft. 6 in.; fuel, bituminous coal; cylinders, 10x14 in.; wheels, 29 in.; weight, 27,000 lbs.; tank capacity, 300 gals.; couplers, links and pins; lubricators, automatic; headlights, round cased; sand valves, hand; brakes, combination hand and steam.

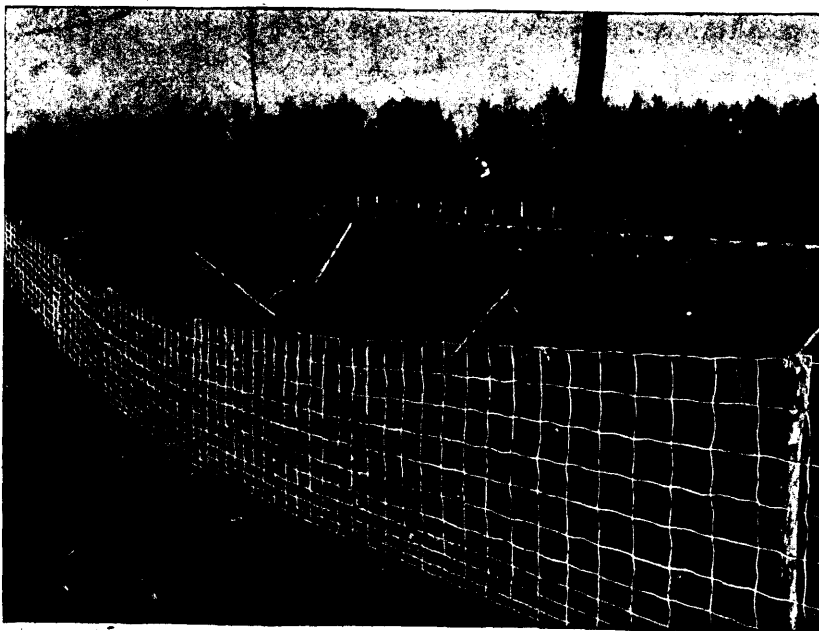
The Quebec & Lake St. John Ry. is having 2 mogul locomotives built by the Baldwin Locomotive Works. They are of the same dimensions as the two recently delivered (see Jan., pg. 14) except that they will be equipped with Vaucrain compound cylinders, h. p. cylinders 14 in. diameter, l. p. cylinders 24 in. diameter, stroke of both cylinders 26 in. The weight of the locomotives will be correspondingly increased.

The G.T.R. during 1901 placed orders for locomotives as follows:—At its own Montreal shops, 2 simple mogul, total weight, 161,976 lbs., cylinder 20x26 inches; Brooks' Locomotive Works, 6 simple mogul, same weight and size of cylinder; at its own Montreal shops, 12 Richmond compound mogul, total weight 163,704 lbs.; cylinders 28½ and 35 by 26 inches; 8 simple 10-wheel, total weight 177,772 lbs., 20 by 26 inches.

The Dominion Iron and Steel Co., Sydney, N.S., has ordered for delivery, April 30, two 6-wheel switching locomotives from the Canadian Locomotive Co. Following are the general dimensions: gauge, 4 ft. 8½ in.; fuel, bituminous coal; cylinders, 18x24 in.; wheels, 52 in.; weight, 104,000 lbs.; tank capacity, 2,500 gals.; couplers, automatic; lubricators, automatic; headlights, round cased; sand valves, automatic; brakes, steam.

The Canadian Northern Ry. has received from the Canadian Locomotive Co., Kingston, Ont., since Feb. 1, 5 locomotives, and has placed an order for 5 more to be delivered in June next. The general dimensions are as follows: 10 wheelers; cylinders, 19 in. x 24 in.; driving wheels, 4 ft. 8 in.; driving wheel base, 11 ft. 6 in.; total wheel base, 49 ft. 3 in. Weight of engine in working order, 133,000 lbs.; tank capacity, 4,000 imperial galls.

In its Record of Recent Construction, No. 32, the Baldwin Locomotive Works, of Philadelphia, gives some interesting information of the development and growth of its business during the 70 years the works have been in existence. The first locomotive constructed by it took a year to build, while to-day the



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TORONTO.

works are capable of turning out 1,500 a year. With the completion of the 70th year of its existence, the works is completing engine no. 20,000, a 10-wheel compound, which is specially described and illustrated. The contrast between engine no. 1 and engine no. 20,000 is very striking.

The Cape Breton Electric Ry. Co. has placed an order for cars.

The Winnipeg Electric St. Ry. is adding six closed motor cars and six trailers to its equipment.

The Cumberland Ry. & Coal Co. is receiving some additional cars from Rhodes, Curry & Co., Amherst, N.S.

The Dominion Iron & Steel Co., Sydney, N.S., has recently received a switching locomotive from the United States.

The Quebec Ry. Light & Power Co. is having a number of 60 ft. cars built for the pilgrim traffic between Quebec and Ste. Anne de Beaupre.

The Nova Scotia Steel & Coal Co. is reported to be placing 16-ton cars on its line between North Sydney and Sydney mines and to be in the market for 75 ton locomotives.

The Canadian Northern Ry. has recently received box cars and other equipment from the U.S. to the value of \$350,000, on which duty of \$9,000 was collected by the custom officers at Winnipeg.

The Reid Newfoundland Co. has placed an order with the Baldwin Locomotive Works, for 2 consolidation locomotives, gauge 3½ ft., cylinders 18 by 24 inches, driving wheels 42 in. diameter, for Nov. delivery.

The Prince Edward Island Ry., during the year ended June 30, 1901, according to a return recently submitted to the House of Commons by the Minister of Railways, placed an order with W. Hartly & Co., of Kingston, Ont., for 2 narrow gauge locomotives at \$10,150 each.

The C.P.R. has decided on additional orders for rolling stock for the current year as follows: 80 locomotives, 20 first-class coaches, 6 combination smoking and 1st-class coaches, 2 dining cars, 6 sleeping cars, two parlor cars, 5 baggage cars and 2 observation cars for the Rocky Mountains.

The Canada Atlantic Ry. recently obtained estimates on materials for the construction of 1,500 box cars to be constructed at the Co.'s shops at Ottawa, Ont. We were officially informed that the Co.'s plans had not been formally formulated and it was impossible to say what, if anything, would be done.

The Kettle Valley Lines has purchased the following equipment: 3 locomotives, of 215,000 lbs. each; 2 passenger coaches, 2 combination cars; 30 ore cars, 20 flat cars, and 5 box cars. It has also leased 30 ore cars from the C.P.R., and is reported to have ordered an 8-wheel passenger locomotive, one passenger and one combination coach, 5 box cars of 60,000 lbs capacity and 45 steel ore cars.

The Intercolonial Ry. estimates for the year ending June 30, 1903, as submitted to the House of Commons, contains the following amounts chargeable to capital:—

Air brakes to freight cars.....	\$ 10,000
Changing car couplers of passenger cars.....	10,000
Exchanging draw bars of freight cars.....	15,000
Equipping 10 cars with Pintsch light.....	8,000
Rolling stock.....	500,000
Changing air brakes of passenger cars to quick action brakes and apply air signals.....	20,000
Changing air brakes of locomotives to quick action brakes and apply air signals.....	5,000

The C.P.R., since the orders mentioned in our Jan. issue, pg. 14, has placed orders for building cars in its shops at Hochelaga, Farnham and Perth, as follows:—1 official, 2 dining, 2 combination parlor and buffet for Kootenay district, 50 refrigerator, 30 tons; 200 stock, 30 tons; 50 stock, 30 tons, double deck; 300 coal, 40 tons; 50 vans; 2 standard

snow plows, and 16 cars for the construction department, 4 dining, 4 combination and 8 sleeping; 12 Richmond compound, total weight, 163,704 lbs., cylinders 22½ and 35 by 26 inches, and simple 10 wheel, total weight 177,772 lbs., cylinder 20 by 26 inches.

The American Locomotive Co.'s gross earnings from June 15 to Dec. 31, 1901, were about \$12,515,000 and the operating expenses about \$10,800,000. The surplus, after payment of dividends, has been expended in the purchase of machinery, and the enlargement of the plants at Dunkirk, Schenectady and Pittsburg. Several reports have been published regarding the plans of the Co. for increasing the output of the various works. The latest announcement is that \$2,000,000 will be expended on improvements to the plants. The largest additions will be made to the Schenectady works, which will be enlarged to have a capacity of 1,000 locomotives a year.

The C.P.R. has ordered from the American Locomotive Co., in addition to the orders mentioned in our Jan. issue, pg. 14, 10 compound consolidation freight locomotives for August delivery, and three 6-wheel switching engines, making total orders for 34 compound consolidation, three 10-wheel passenger and three 6-wheel switching engines placed with the A. L. Co. An order has also been placed with the Canadian Locomotive Co. for 8 compound consolidation freight locomotives for Sept. delivery. In each case the freight locomotives will be duplicates of those which were built for the C.P.R. last year by the two companies named, and the general dimensions of which we published then.

The Cumberland Ry. and Coal Co. has ordered a consolidation freight locomotive from the Richmond Works of the American Locomotive Co. for April delivery. Following are the general dimensions: gauge, 4 ft. 8½ in.; cylinders, 21 by 28 in.; boiler, extended wagon top, 70 in. diam., with a working pressure of 200 lbs.; tubes, no. 347, diam. 2 in., length, 14 ft. 2½ in.; tank capacity, 6,000 gals.; coal capacity, 10 tons; driving wheels, 70 in.; driving wheel base, 17 ft.; total, 25 ft. 3 in.; weight on drivers about 165,000 lbs.; total, 184,000 lbs.; light weight of engine, 166,000 lbs.; light weight of tender, 45,000 lbs.; weight of tender with fuel and water, 115,000 lbs.; Westinghouse brakes.

The Klondike Mines Ry. has placed an order for 4 Baldwin locomotives, 3 ft. gauge, similar to those in use on the White Pass and Yukon Ry. They will be taken by steamship from Seattle to Skagway, Alaska, thence over the W. P. & Y. R. to Whitehorse, where they will be placed on specially constructed barges and taken down the Yukon river to Klondike city, the starting point of the line, opposite Dawson. Five 1st class passenger coaches will be taken in the same way and three more will be added towards the end of the year. An order has been placed to build 20 box and 15 platform cars at the W. P. & Y. R. Skagway shops which will be also taken in via Whitehorse and the Yukon river in knock-down shape. Further orders will be placed later in the season.

The Canadian Northern Ry., it is reported, will expend \$2,000,000 on equipment during the current year. In addition to the 10 locomotives ordered from the Canadian Locomotive Co., 5 of which have been delivered, orders for 6 more are contemplated. The Co.'s passenger coach requirements, we were recently informed, had not been definitely determined on, but heavy purchases will be made on an early date. An order has been placed for 200 box cars of 60,000 lbs. capacity in Canada; the material for 100 box cars of the same size is in stock at Winnipeg, and orders have been placed for material for 200 cars, which will also be constructed at the

Co.'s Winnipeg shops. These shops are to be enlarged and it is understood that 500 cars will be constructed during the year.

The Intercolonial Ry. placed the following orders for rolling stock during 1901: Manchester Locomotive Works, 8 ten-wheeled passenger locomotives; 10 simple consolidation locomotives. Richmond Locomotive Works, 5 compound consolidation locomotives; 5 simple consolidation locomotives. Canadian Locomotive Co., 20 simple consolidation locomotives; 6 switching locomotives. Dickson Locomotive Works, 5 Cleveland consolidation locomotives; 7 ten-wheel passenger locomotives; 1 Cleveland and 6 simple cylinder. Moncton shops, 4 simple 10-wheel passenger locomotives. Rhodes, Curry & Co., 1,500 box cars; 20 stock cars. Orders were also placed in Canada for 525 box cars, 200 platform cars, 6 second class sleeping cars, 5 postal and baggage cars, and 5 baggage cars. Orders were placed in the U.S. for 6 first-class day coaches, 3 dining cars, 4 sleeping cars and 3 50-ton steam wrecking cars.

The Intercolonial Ry. placed the following contracts during the year ended June 30, 1901, according to a return recently submitted to the House of Commons by the Minister of Railways:—Dickson Manufacturing Co., 12 locomotives at \$15,000 each; Manchester Locomotive Works, 10 locomotives at \$15,000; Barney, Smith Car Co., six first-class passenger cars at \$11,995, 3 dining cars at \$15,775, 4 sleeping cars at \$19,255; W. Hartly & Co., 20 locomotives at \$19,000; Rhodes, Curry & Co., 17 refrigerator cars at \$1,158; Crossen Car Manufacturing Co. 150 box cars at \$747, 200 flat cars at \$455, 5 baggage cars at \$4,650, 5 postal and baggage cars at \$5,750, six second class sleeping cars at \$8,000; Rhodes, Curry & Co., 1,000 box cars at \$718, 20 stock cars at \$875; Manchester Locomotive Works, 8 locomotives at \$13,500; Richmond Locomotive and Machine Works, 5 simple locomotives at \$14,485, 5 compound locomotives at \$14,985; Rathbun Company, 125 box cars at \$747.

The Algoma Central & Hudson's Bay Ry. has ordered 4 locomotives from the Canadian Locomotive Co. Following are the general dimensions:—

ONE TEN-WHEELED PASSENGER LOCOMOTIVE.

Gauge.....	4 ft. 8½ in.
Fuel.....	Bituminous coal.
Cylinders.....	20x26 in.
Driving wheels.....	69 in. diameter.
Weight of engine, working order about.....	150,000 lbs.
Weight of tender, about.....	110,000 lbs.
Tank capacity.....	4,500 Imperial gals.

ONE CONSOLIDATION LOCOMOTIVE.

Cylinders.....	20x21 in.
Driving wheels.....	56 in.
Weight of engine, working order about.....	164,300 lbs.
Weight of tender, about.....	107,000 lbs.
Tank capacity.....	5,000 Imperial gals.

TWO SIX-WHEELED SWITCHING ENGINES.

Cylinders.....	19x26 in.
Driving wheels.....	50 in. diameter.
Weight of engine, working order about.....	125,000 lbs.
Weight of tender, about.....	9,000 lbs.
Tank capacity.....	4,000 lbs.

The Minneapolis, St. Paul & Sault Ste. Marie Ry. recently received from the American Locomotive Co. 4 two-cylinder compound consolidation locomotives. The cylinders are 22½ and 35 by 30 in., and the driving wheels are 55 in. in diam. over tires. The total wheel base is 24 ft. 7 in., and the driving wheel base is 16 ft. 6 in. The weight in working order is 177,000 lbs., 152,000 of which is on the drivers. The outside diameter of the boiler at the first ring is 70½ in. and the center line of boiler above rail is 9 ft. 2 in. The firebox is 102 in. long, 65 in. wide, and 75½ in. deep at the front end, and has 159 sq. ft. of the total of 2,633 sq. ft. of heating surface. The grate surface is 46 sq. ft., and



there are 326 tubes, 2 in. in diam., 14 ft. 6 in. long. The working steam pressure is 210 lbs. per sq. in. The frames are of hammered iron, and the piston rods, stay-bolts and crank pins are iron, the latter being case-hardened. The iron axles have main journals 9½ in. in diam. by 10 in. long, and the other journals are 8½ in. in diam. by 10 in. long. The driving boxes are steel.

The Alberta Ry. and Coal Co. has ordered from the Canadian Locomotive Co. 3 mogul locomotives to be delivered in July. Following are the general dimensions: gauge, 4 ft. 8½ in.; fuel, bituminous coal; weight in working order, 105,000 lbs.; weight on drivers, about 90,000 lbs.; cylinders, 18 in. by 24 in.; driving wheels: 50 in. diameter, leading and trailing, cast centers, main, cast-steel centers, fitted with 3 in. Krupp crucible cast steel tires; driving wheel base, 14 ft. 6 in.; total engine wheel base, 22 ft. Boiler: extended wagon top type, 56 in. diameter at smoke box; firebox of sloping wide type; working pressure, 190 lbs.; tubes, 220, 2 in.; engine truck, center bearing, 2 wheels, 30 in. Tender: two 4-wheel trucks; iron sides, and steel crossbeams, center and side bearing; tender frame: steel; capacity 3,500 imp. gals.; wheels 33 in. diameter; reinforced brake beams; automatic couplers, M.C.B. standard, Westinghouse automatic brakes, for train and tender, and equalized brake on drivers; journals 5 in. by 9 in.; metallic packing for valve stems and rods.

The annual meeting of the shareholders of Rhodes, Curry and Co. (Ltd.), was held at Amherst, N.S., Feb. 25, when a dividend of 10% was declared, and the retiring directors were re-elected. The annual report showed a total volume of business of \$1,750,000, and the following particulars relating to the car building operations were given: Wages paid, \$167,573.11; freight paid to I.C.R., \$105,573.11; freight paid to vessels, \$15,815.10; materials used in cars constructed: 7,000,000 ft. lumber; 5,000 tons car wheels, 5,600 tons wrought iron and steel, 2,600 tons cast iron, and 80 tons of brass. The firm commenced business at Amherst in 1877; and in 1890 the Harris car works at St. John, N.B., was purchased, and the combined businesses were carried on as a joint stock company. The works of the firm at Amherst cover 8 acres. On Feb. 22 the erecting shops were destroyed by fire when the damage done amounted to \$30,000. New buildings are under construction, and the capacity of the works will be increased by several cars a day, so as not to delay delivery of the orders on hand.

The L'Assomption Ry., Que., has been re-opened for traffic.

The Dominion Atlantic Ry. carried 260,000 barrels of apples for export during the past season.

## RAILWAY APPOINTMENTS, ETC.

**Algoma Central and Hudson's Bay Ry.**—W. H. Cowell has been appointed Purchasing Agent.

The position of General Manager, occupied by the late E. V. Clergue, has been abolished. B. J. Clergue, heretofore Assistant to the President, has been appointed Manager.

W. C. Barr has been appointed Superintendent of the Algoma Central steamship line, of which he was previously Assistant Superintendent.

**Canadian Pacific.**—W. Apps, Master Car Builder since Dec., 1895, has resigned and has been succeeded by W. E. Fowler.

H. Goldmark has received an appointment in the Chief Engineer's office and will assist the Acting Chief Engineer H. E. Vautelet, especially in connection with the erection of the new shops in Montreal.

F. Dillinger has been appointed acting Superintendent of the Chapleau and White river sections, Lake Superior division, with office at Chapleau, vice T. Hay, resigned.

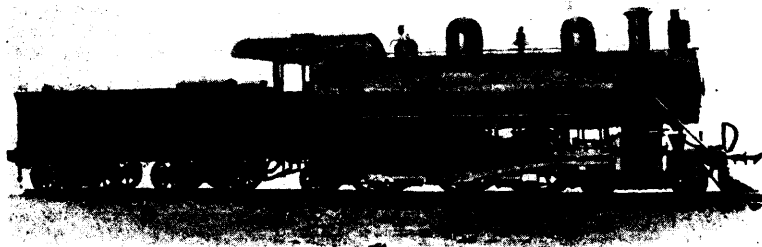
T. Hay has been appointed Claims Agent for the Lake Superior division. Office at North Bay, Ont.

**Grand Trunk.**—R. S. Logan has been appointed Assistant to the 2nd Vice President, vice J. E. Dalrymple, resigned to take service with another company.

M. S. Blaiklock has been appointed Superintendent of the Eastern division, with office

## BALDWIN LOCOMOTIVE WORKS.

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at Montreal, vice W. G. Brownlee, transferred.

W. G. Brownlee has been appointed Superintendent of the Western division, with office at Detroit, Mich., vice F. W. Egan, resigned to enter the service of the Denver & Rio Grande Rd.

The appointments of F. Payette as locomotive foreman at Montreal, and of J. E. Linahen as road foreman on the Portland division, mentioned in our last issue, are said to be only temporary, no permanent promotion having taken place.

**Intercolonial Ry.**—F. G. Hunter, who was general foreman of the Moncton locomotive shops, which position has been abolished on account of H. Ashton having been appointed Master Mechanic, has been made foreman of the brass foundry department there.

**Michigan Central.**—S. H. Palmer, Canadian Passenger Agent, with office at St. Thomas, has been relieved of his duty as city ticket agent there so that he may devote all his time to the general passenger business. He is succeeded as ticket agent by C. Singer, heretofore chief clerk.

**Montreal Street Ry.—Montreal Park and Island Ry.**—D. Robertson has been appointed Assistant to the General Manager to carry out such duties as may from time to time be assigned to him.

H. J. Kennedy has been appointed Superintendent of the M.S.R. and the M. P. and I. R., with charge of traffic arrangements on both systems.

W. Punt, foreman of car sheds at Hochelaga, has been appointed Assistant Superintendent under Mr. Kennedy.

H. R. Lockhart has been appointed superintendent of the power house and overhead work on both systems.

J. S. Vindin has been appointed engineer in charge of permanent ways, buildings and bridges on both systems.

H. G. Taylor has been appointed Mechanical Superintendent of both systems, in charge of all shops at Hochelaga.

**Montreal Warehousing Co.**—The directorate has been slightly changed and is now as follows: President, C. M. Hays; Vice-President, W. M. Ramsay; other directors, W. Wainwright, C. Percy, J. W. Loud. Manager and Secretary, G. B. Hanna.

**Northern Navigation Co.**—The position of Manager, heretofore held by W. Askin, at Collingwood, has been abolished. Mr. Askin has been appointed Assistant Manager at Sarnia, Ont., in charge of the Northwest Transportation Co., which is owned by the N. N. Co. A. B. Pratt, heretofore General Freight Agent, has been appointed Assistant Manager at Collingwood. It is probable that a General Manager will be appointed. At present the Co.'s business is in direct charge of Vice-President J. J. Long.

**Northern Pacific Rd.**—G. W. Vanderslice, heretofore Superintendent of the Manitoba division, has been appointed Superintendent of the Superior division, with office at Minneapolis, succeeding E. L. Brown, appointed General Superintendent of the Montana Great Northern Ry.

**Pullman Co.**—As a result of the death of A. M. Parent, General Manager of the car works, the following appointments are announced: E. R. Slagle, assistant to General Manager of the manufacturing department, is detailed as acting Manager of car works. T. Dunbar, heretofore general foreman of the passenger department of car works, is appointed Superintendent of car works.

**Woodstock, Thames Valley & Ingersoll Electric Ry.**—Robt. Hill, formerly of the Hamilton Street Ry., has been appointed Manager.

### Mainly About People.

P. A. Peterson, Consulting Engineer of the C.P.R., has gone to Europe for two or three months.

J. A. Cameron, formerly Superintendent of the C.P.R. at Cranbrook, B.C., is now residing in Winnipeg, Man.

R. Archibald, who was for many years foreman of the G.T.R. shops in Hamilton, died there, Mar. 19, aged 69.

Mrs. R. A. Perry, wife of the C.P.R. ticket agent and postmaster at Bracebridge, Ont., died there Mar. 20, aged 49.

W. Mackenzie, of Mackenzie, Mann & Co., Mrs., the Misses and Jos. Mackenzie, sailed from New York, for England, Mar. 5.

Wm. Matthie, formerly of Lindsay, Ont., has been appointed trainmaster of the 4th and 5th districts of the Chicago Great Western Ry.

C. F. Sise, President of the Bell Telephone Co., has been elected one of the Canadian directors of the North British and Mercantile Insurance Co.

The late Jas. H. Beatty, of the Northwest Transportation Co., left an estate valued at \$202,550, including \$145,987 cash in bank, and \$46,162 in stocks.

E. T. Galt, President of the Alberta Ry. and Coal Co., who recently underwent an operation in the Royal Victoria Hospital, Montreal, is convalescing.

J. A. McCrossen, Manager of the Rat Portage Electric Light and Telephone Co., has resigned to take the management of a smelting machinery business in B.C.

P. Giffkins, General Manager Dominion Atlantic Ry., has gone to London, Eng., to attend the annual meeting of the Co. and to visit his native place after an absence of 31 years.

J. F. Deems, Superintendent of Motive Power on the Chicago, Burlington and Quincy Rd., has resigned to become Superintendent of the American Locomotive Co.'s Schenectady Works.

Mrs. Hays, wife of the 2nd Vice-President and General Manager of the G.T.R., and her family, who are at present residing in St. Louis, Mo., are expected to take up their residence in Montreal in May.

F. W. Egan, who recently resigned the superintendency of the western division of the G.T.R. at Detroit, Mich., is said to have been appointed General Superintendent of the Denver and Rio Grande Rd.

Lieut.-Col. P. H. Attwood, who died at Winnipeg recently, was the father of Mrs. John Nibblock, wife of the C.P.R. Superintendent at Calgary, Alta., and of J. Attwood, C.P.R. agent at Fort Steele, B.C.

Mrs. Spencer, wife of John Spencer, conductor C.P.R., and mother of C. W. Spencer, General Superintendent, Eastern Division, C.P.R., Montreal, and H. B. Spencer, Superintendent at Ottawa, died at Ottawa, Mar. 18.

C. E. E. Ussher, General Passenger Agent, C.P.R., has been elected a member of the Executive Committee of the North American Fish and Game Protective Association at the annual meeting recently held at Burlington, Vt.

Sir Wm. Van Horne returned to Montreal, Mar. 13, after spending six weeks in Cuba, in the interests of the Cuba Co., of which he is President. He says there is no friction between Canadian and U.S. interests in the island.

Miss Edith McPeake, daughter of the Superintendent of the Shore Line Ry., N.B., who has been acting as night superintendent of the General Hospital at Boston, Mass., has received an appointment in a Porto Rico hospital.

C. E. E. Ussher, General Passenger Agent C.P.R., has been elected an honorary president, to represent former pupils, or the organization having in charge the celebration of the semi-centennial of the Galt, Ont., Collegiate Institute.

David Starr, formerly manager of the Cornwall, Ont., Electric Ry., has gone to England to take charge of the London sales department of the British Westinghouse Electric & Manufacturing Co.

F. Dillinger, who has been appointed acting Superintendent of the C.P.R. at Chappleau, Ont., is 32 years of age. He came from Pennsylvania some five years ago and entered the service of the C.P.R. and for the past four years has been dispatcher at Ottawa.

R. P. Dalton, formerly Superintendent G.T.R. Terminals at Montreal and later Superintendent of the Valley Division of the St. Louis, Iron Mountain and Southern Rd., has been appointed to the Central division of the latter line, with office at Van Buren, Ark.

Wm. Gibson, of Beamsville, Ont., recently appointed Senator, was born at Peterhead, Scotland, in 1849. He has carried out some large masonry contracts, particularly on the G.T.R., including the St. Clair Tunnel and the substructure of the Victoria Jubilee bridge.

Capt. C. J. Armstrong, of the staff of Sir Percy Girouard, director of Imperial Military Railways, Johannesburg, who has been in Montreal for several months, visiting his father, C. N. Armstrong, formerly of the Atlantic and Lake Superior Ry., has returned to South Africa.

Lord Mount Stephen, who some time ago placed in the hands of trustees a large sum for the better endowment of ministers of the Church of Scotland in his native district, has made provision through the same trustees for the payment to the ministers of four other parishes of a sum amounting in all to £300 a year.

The reported probable early withdrawal of Hon. A. G. Blair, Minister of Railways, from public life, on account of ill-health, is stated by him to be incorrect, as he has not the remotest intention of resigning. He has been regularly in his place in the House of Commons, and his health appears to have improved considerably.

The headquarters of no. 1 company of the Army Service Corps have been changed from London, Ont., to Quebec. E. A. Evans, General Manager of the Quebec Railway Light and Power Co., has been given the command of the corps, and Messrs. Blair and Blanchet, other officials of the railway, will act as lieutenants.

The engagement is announced of Major Henri Panet, D.S.O., Royal Canadian Artillery, Staff Adjutant of the Royal Military College, Kingston, to Miss Molly Bermingham, sister of C. Bermingham, Managing Director of the Canadian Locomotive Co., and sister-in-law of W. Harty, President of the Canadian Locomotive Co.

H. B. Payne of Cleveland, Ohio, who died in 1898, had about \$4,000,000 invested in Ontario, among the securities held being 753 bonds, 1,800 shares of preferred stock, and 2,670 shares of common stock of the Central Ontario Ry. The Ontario Government is seeking to collect succession duties from the estate with interest from 1898.

J. Brownne, who was cashier in the C.P.R. freight department at Vancouver from 1888 until 1897, died there recently, aged 57. He was a son of John Brownne, who owned the wharf at the foot of Yonge St., Toronto, and after some years' experience as purser on the lower lakes, entered railway service as station agent for the G.T.R. at Collingwood, Ont.

Jas. Webster, who has recently been appointed General Freight and Passenger Agent of the Nickel Plate Rd., was born in Derby tp., Grey county, Ont. He entered railway service on the Great Western Ry. at Hamilton, and left there some 20 years ago for the U.S. Until recently he was commercial agent on the Nickel Plate at Chicago.

M. S. Blaiklock, who has been appointed Superintendent of the Eastern Division of the G.T.R. at Montreal, was born in 1859, and entered railway service in 1880, since which he has been consecutively to 1889, assistant engineer G.T.R.; 1889 to 1891, assistant engineer St. Clair Tunnel; 1892 to 1896, Inspector, 1896 to 1902, resident engineer eastern division, G.T.R., at Montreal.

W. P. Cooke, who has been appointed chairman of the Port Arthur Electric Street Ry. Commission, was born at Markham, Ont., 1848, and was in charge of the telegraph office at Cannington, Ont., until 1873, when he moved to Port Arthur. In 1876 he opened the first telegraph office in connection with the C.P.R., and in the following year made telephonic connection with Rat Portage. He was the original projector of the Port Arthur Electric Street Ry.

J. W. Fogg, Master Mechanic of the Chicago Terminal Transfer, is 33 years old. At an early date he entered the service of the Great Western Ry. of Canada as a locomotive fireman, and held a similar position on the Canada Southern and the Wisconsin Central, later becoming engineman on the Chicago Terminal Transfer. After serving in this capacity for 12 years he was appointed to the position of travelling engineer, and in Oct., 1901, became Acting Master Mechanic, from which position he has just been promoted to that of Master Mechanic.—Railroad Gazette.

Harry Ashton, who has been appointed Master Mechanic in charge of the Moncton shops of the I.C.R., was born in Nottinghamshire, Eng., 39 years ago. He served his apprenticeship with the Great Northern Ry. at Doncaster, and from there went to the North British Ry. He came to Canada in 1883 and was employed by the G.T.R. in

Montreal for a number of years; then entering the service of the C.P.R. as charge hand in the erecting shops, but returned in the same capacity to the G.T.R. at Montreal, where he remained until he received his present appointment.

H. G. Goldmark, who was recently appointed to a position on the C.P.R. engineering staff, especially in connection with the erection of the new shops at Hochelaga, is a native of New York, and has had a varied experience of engineering. Among the positions he has held have been the following: resident engineer, bridge over Missouri river at Atchenson, Kan.; bridge and building construction, Kansas City, Port Scott and Memphis Rd.; survey of U.S. canals from 1898 to 1900; bridge and building construction, Erie and West Shore Rds.; and latterly planning and construction for the Swift Co., Chicago.

Johannes Charles Martin Buntzen, B.A., General Manager British Columbia Electric Ry. Co., whose portrait appears on the first page of this issue, was born at Copenhagen, Denmark, Dec. 16, 1859, and after completing a legal and mercantile education in Denmark, England and Canada, became business manager of the Vancouver Electric Ry. and Lighting Co., in 1893; his subsequent record being: July 1895 to April 1897, Secretary Consolidated Ry. and Light Co. in Vancouver; April 1897 to April 1898, sub-manager British Columbia Electric Ry. Co.; April 1898 to date, General Manager same Co.

A. C. Dennis, Division Engineer Construction Department, C.P.R., Winnipeg; F. P. Gutelius, Inspecting Engineer, C.P.R., Montreal; F. H. McGuigan, Manager G.T.R. Montreal; W. McNab, Assistant Engineer, G.T.R., Montreal; D. MacPherson, Division Engineer C.P.R., Montreal; G. A. Mountain, Chief Engineer, Canada Atlantic Ry., Ottawa; W. F. Tye, Chief Engineer of Construction C.P.R., Montreal; and H. A. Woods, Assistant Engineer, G.T.R. western lines, Detroit, Mich., were present at the convention of the American Ry. Engineering and Maintenance of Way, Association, at Chicago, Mar. 18-21.

R. R. Jamieson, who has been appointed Superintendent of the C.P.R. at Cranbrook, B.C., was born in Wentworth county, Ont., Dec. 12, 1856, and entered railway service in 1871, as telegraph operator Great Western Ry. since which he has been consecutively: 1874 to 1879, telegraph operator G.T.R.; 1879 to 1880, in charge of construction of telegraph Indianapolis, Delphi and Chicago Ry. at Delphi, Ind.; 1880 to 1884, agent Credit Valley Ry., Ont. In 1884 the C.V. Ry. was absorbed by the C.P.R. and Mr. Jamieson was appointed train dispatcher, and assistant superintendent in 1890, subsequently being Superintendent at Farnham, Que., until Mar. 1902.

W. Phillips, who has been appointed General Agent, Passenger and Freight Department of the Canadian Northern Ry., at Toronto, was born there Jan. 31, 1870. Entered transportation service April, 1886, since which he has been consecutively to March 31, 1896, in the G.T.R. offices at Toronto; April 1, 1896, to Feb. 28, 1902, Northwest Agent, Northwest Transportation Co. at Winnipeg. On Jan. 1, 1897, he was also appointed General Agent of the Chicago Great Western Ry., and on April 1, 1900, Northwest Agent of the Northern Navigation Co. at Winnipeg, occupying both these positions, as well as the Northwest agency of the Northwest Transportation Co., until Feb. 28, 1902, when he resigned to enter the service of the C.N.R.

Martin Murphy, D.Sc., C.E., Provincial Engineer of Nova Scotia, who has recently been elected President of the Canadian Society of Civil Engineers, was born at Coolycarney, Wexford county, Ireland, 1832, and at the age of 20 joined the staff of Wm. Dargan, a celebrated engineer of Dublin, and was engaged on a number of Irish railways until 1868, when he came to Canada, locating in Halifax, N.S., as city engineer. In 1870-71 he was engaged as chief engineer for the survey of projected lines by the N.S. government; and was appointed, in 1871, to the unsalaried position of Provincial Engineer. Resigning that position, he spent three years in construction work on the I.C.R. and in 1875 was appointed Provincial Engineer of N.S.,

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## THE PLACE VIGER MONTREAL.

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

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with a fixed salary. He has been engaged as consulting engineer by the New Brunswick, Newfoundland and Bermuda governments in respect of railways and other public works, and has been a frequent contributor to the professional journals. At the engineering congress at the Chicago Exposition, in 1892-93, he was awarded a medal for the best and most modern designs for bridge construction.

G. J. Bury, who has been appointed Assistant General Superintendent of the Lake Superior division of the C.P.R., was born at Montreal, Que., Mar. 6, 1866, and entered railway service in 1883 as clerk in the purchasing department of the C.P.R., and was later on clerk in the General Manager's office, since which he has been consecutively: 1887 to 1889, secretary to Vice-President and President; 1889 to Mar., 1890, acting Supt. dining, sleeping and parlor car service; Mar., 1890, to Sept., 1899, successively Assistant Supt. in charge of division from Chalk River to Cartier and Sault Ste. Marie, 430 miles of road, and Supt. at North Bay, Ont.; 1899 to Feb. 1, 1901, Supt. at Fort William, Ont.; Feb., 1901, to Feb., 1902, Supt. at Cranbrook, B.C.

G. J. Bury, on leaving Cranbrook, B.C., to become Assistant General Superintendent of the C.P.R. at North Bay, Ont., received the following letter:—"On behalf of the members of the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen, the Order of Railroad Trainmen and the Order of Railroad Telegraphers employed on the Crow's Nest division of the C.P.R., we desire to extend to you our felicitations on the well-merited promotion which has come to you. Nothing could exceed our pleasure at this expression of the Co.'s confidence in your ability, were it not for the fact that it means your transfer to another territory. The twelve months you spent in charge of this division were marked by many improvements in the service which contributed to the safety and expedition in the handling of traffic, and thereby made our lot easier. The reputation which preceded you to this division was that of being a strict disciplinarian, and this we found to be a fact, but on the other hand we found that in all your decisions you endeavoured to be just and fair; and while jealously guarding the company's interest, you always displayed a clear appreciation of the difficulties under which we sometimes labored."

**The Pass Pacific.**

The C.P.R. General Passenger Department has received the following acknowledgment of an annual, which is worth reproduction:

There are some who pass the bottle, there are some who pass away, or pass us by upon the street, or pass the time of day;  
 And some may pass a wormy plague, or some digestive riot, and some may pass a jack-pot, or an ace (upon the quiet).  
 There are those who, in their anger, make a quick pass at a foe—others pass examinations, sometimes when they do not know.  
 There are others who pass opinions in their self-conceit and pride; there are those—both priest and Levite—those pass by the other side.  
 There are those who pass their rivals in all struggles here below, there are others who pass people to the circus or the show.  
 But the boss of all the passes is the one that passes me from the shore of old Atlantic plumb to the Pacific sea.  
 Storied passes have been fought for by the legions fierce of old—and our boys are storming passes in the Africa land of gold.  
 And the passing war is bitter, may it gain that perfect peace (that which passes understanding when earth's bloody wars shall cease).  
 For I love not warlike clamor, though for some it hath a zest—and to me the pass Pacific far surpasses all the rest.

**April Birthdays.**

Many happy returns of the day to Adam Brown, formerly President Wellington, Grey and Bruce Ry. (now G.T.R.), Vice President G.N.W. Telegraph Co., and Postmaster of Hamilton, born at Edinburgh, Scotland, April 3, 1826.

A. H. Clark, Master Mechanic, Irondale, Bancroft and Ottawa Ry. at Irondale, Ont., born April 5, 1867.

G. M. Clark, K.C., Consulting Counsel, C.P.R., Cobourg, Ont., born April 14, 1828.

A. P. Cockburn, President Muskoka Navigation Co., Manager Muskoka and Georgian Bay Navigation Co. at Gravenhurst, Ont., born in Finch tp., Stormont, Ont., April 7, 1837.

G. H. Garden, C.E., Chief Engineer Alberta Ry. and Coal Co. at Lethridge, Alta., born at Woodstock, N.B., April 5, 1849.

E. A. Geiger, Superintendent, General Freight Agent and Treasurer Brockville, Westport and Sault Ste. Marie Ry. at Brockville, Ont., born at Newark, N.J., April 10, 1863.

A. L. Hertzberg, Division Engineer, C.P.R. at Toronto, born in Norway, April 30, 1855.

Thos. Long, director Northern Navigation Co. of Ontario, Toronto, born at Limerick, Ireland, April 7, 1836.

E. V. Skinner, General Eastern Agent Canadian Pacific Ry. at New York, born in London, Eng., April 22, 1849.

A. M. Sutherland, Assistant Superintendent, Duluth, South Shore & Atlantic Ry. at Thomaston, Mich., born at Hartford, Conn., April 2, 1844.

J. E. Schwitzer, Resident Engineer, C.P.R. at Winnipeg, Man., born at Ottawa, Ont., April 19, 1870.

S. Thomas, President Duluth, South Shore & Atlantic Ry. New York, born at South Point, Ohio, April 27, 1840.

J. R. VanCleve, Master Mechanic, White Pass and Yukon Route at Skagway, Alaska, born at Little Falls, Minn., April 6, 1859.

W. Wainwright, General Assistant and Comptroller, G.T.R. at Montreal, born at Manchester, Eng., April 30, 1840.

J. J. Wallace, General Freight Agent., I.C.R. at Moncton, N.B., born in Albert Co., N.B., April 20, 1847.

Hon. J. Wood, President and General Manager, New Brunswick & Prince Edward Island Ry. at Sackville, N.B., born at Sackville, N.B., April 18, 1843.

W. Woollatt, General Manager Lake Erie & Detroit River Ry. at Walkerville, Ont., born at Weedon, Hertfordshire, Eng., April 2, 1855.

**"What's in a Name?"**

The boys who fire the oil burners call the coal burners "muzzle loaders." The big compounds (12 wheelers) are called "possum bellies." Some of the Santa Fe engines running into Mojave are called "tarantulas" and "cotton tails."—Locomotive Engineering.

The Vaucrain compounds on the Intercolonial are called "Doukhobors," after the Russian sect which settled in the Northwest Territories.—Railroad Digest.

**Quebec Ry. Light and Power Co.**—In the railway statistics for the year ended June 30, 1901, published in our last issue, this Co. was placed under the head of electric railways, for its line in Quebec, 17.22 miles, and under the head of steam railways for the line between Quebec and Cap Tourmente, the old Quebec, Montmorency and Charlevoix Ry., 30 miles. This latter mileage is operated as a steam railway in the ordinary manner, and also with large electric cars run on the same tracks and at the same rate of speed, namely, 45 miles an hour.

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

Gross earnings, working expenses, net profits and increases or decreases over 1900-01, from July 1, 1901:—

	Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July	\$2,851,455.31	\$1,755,588.37	\$1,095,866.94	\$211,493.04+
Aug.	3,118,551.32	1,812,919.23	1,305,632.09	251,156.49+
Sept.	3,264,024.16	1,911,292.44	1,352,731.72	292,031.71+
Oct.	3,582,403.05	2,115,363.83	1,467,039.22	388,864.81+
Nov.	3,583,383.47	2,142,595.33	1,440,788.14	375,329.82+
Dec.	3,497,733.70	1,929,042.19	1,568,691.51	130,325.90+
Jan.	2,621,791.71	1,801,330.91	820,460.80	172,264.25+
Feb.	2,349,039.34	1,674,678.66	674,360.68	53,680.84+
	\$24,868,382.06	\$15,142,720.96	\$9,725,661.10	\$1,877,146.96+

**SUBSIDIARY LINES.**

**DULUTH, SOUTH SHORE AND ATLANTIC RY.**—Approximate earnings for Feb., 1902, \$195,175 against \$166,064 in Feb., 1901.

**MINERAL RANGE RY.**—Approximate earnings for Feb., 1902, \$41,259, against \$39,939 in Feb. 1901.

**MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.**—Approximate earnings for Feb., 1902, \$387,462, against \$294,880 in Feb., 1901.

**Canadian Pacific Railway Land Sales.**

	Acres.		Amount.	
	1900-01	1901-02	1900-01	1901-02
July	40,715.46	49,089.06	\$129,483.42	\$154,646.84
Aug.	32,178.50	50,747.82	103,480.78	165,871.16
Sept.	21,807.57	60,000.46	69,012.54	197,057.61
Oct.	18,858.89	150,572.96	63,760.54	465,655.62
Nov.	22,408.68	151,922.89	66,297.27	512,862.94
Dec.	27,388.15	132,151.16	83,528.59	493,261.98
Jan.	27,928.80	109,846.99	86,752.54	347,761.91
Feb.	29,370.22	78,039.43	91,189.58	256,156.70
	220,666.27	782,243.67	\$772,488.38	\$2,503,274.56

**Grand Trunk Ry. Earnings, Expenses, &c**

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

	1902.	1901.	Increase.	Decrease.
Jan.	\$2,278,978	\$2,242,117	\$36,861	.....
Feb.	2,018,926	2,005,341	13,585	.....
	\$4,297,904	\$4,247,458	\$50,446	.....

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

**GRAND TRUNK RY.**

Revenue statement for Jan.:

	1902.	1901.	Increase.	Decrease.
Gross receipts	£364,000	£373,600	.....	£9,600
Working expenses	253,400	261,000	.....	7,600
Net profit	£110,600	£112,600	.....	£2,000

**GRAND TRUNK WESTERN RY.**

Revenue statement for Jan.:

	1902.	1901.	Increase.	Decrease.
Gross receipts	£21,000	£70,300	£10,700	.....
Working expenses	65,800	58,700	7,100	.....
Net profit	£15,200	£11,600	£3,600	.....

**DETROIT, GRAND HAVEN AND MILWAUKEE, RY.**

Revenue statement for Jan.:

	1902.	1901.	Increase.	Decrease.
Gross receipts	£23,100	£16,800	£6,300	.....
Working expenses	13,200	12,400	800	.....
Net profit	£9,900	£4,400	£5,500	.....

**TRAFFIC RECEIPTS OF THE SYSTEM.**

Aggregate from Jan. 1 to Feb. 28:

	1902.	1901.	Increase.	Decrease.
Grand Trunk	£703,131	£711,460	.....	£8,329
G. T. Western	143,590	129,695	£13,895	.....
D., G. H. & M.	36,410	31,549	4,861	.....
Total	£883,131	£872,704	£10,427	.....

W. E. Fowler, who has been appointed Master Car Builder, C.P.R., comes from the Southern Pacific Ry., where he is reported to have been assigned to the Master Car Builder.

### Long Rails on the M.C.R.

Some time ago we described an experiment with rails of 500 ft. length on the Michigan Central Rd. Experiments in this line began several years ago on sections of track in the suburbs of Detroit, Mich. Thirty-foot rails are butted end to end without any allowance for expansion, and the splices are screwed up very tightly with machine-made bolts. This arrangement provides a practically continuous rail over the 500-ft. section. To provide for expansion and contraction at the ends of these sections specially designed slip joints are used, which carry the wheels over the opening of 2 to 4 ins. without a drop. At Detroit the rails are anchored at the middle of each 500-ft. section by embedding several ties in a foundation of concrete and slot-spiking the joint splices. During the past year experiments in this line have been carried out on a much larger scale, at a point on the Saginaw division of the road, a few miles out of Detroit. A mile of track has been laid with rails tightly spliced together in 500-ft. sections, without allowance for expansion. Slip joints are used between the long sections, as at Detroit, but the method of anchoring in this case is somewhat different. The rail at the middle of each section is anchored to a piece of rail about 15 ft. long set vertically in concrete in a hole excavated into the roadbed. The top of this anchor rail rests against, and projects slightly above, the flange of the track rail, fitting into a notch in the horizontal leg of a splice bar. This experiment, which is being carried out under the supervision of Chief Engineer A. Torrey, will undoubtedly be watched with a good deal of interest.—*Railway and Engineering Review.*

### When Double Track Is Necessary.

J. Osborne, General Superintendent C.P.R., St. John, N.B., writes:—"It is my opinion that a railway should not be double-tracked until the grades and curves have been reduced to the lowest practicable limit, the roadbed is thoroughly ballasted and equipped with from 80 to 100-lb. rails and the limit of weight and capacity of power for economical freight train operation is supplied; and crossing sidings of sufficient length to accommodate two of the longest trains, which sidings should be placed six or seven miles apart and arranged so that they will form part of the second track. The survey for these should be made and determined upon several years before the work of double tracking is begun. Then when the traffic justifies the running of over 18 trains in each direction daily, or one train every 90 minutes, the second track should be put in, especially if the heavy traffic is regular throughout the year, or for a period of over four months."—*Railway & Engineering Review.*

An agreement has been signed by which the telegraphers engaged on the Michigan Central Ry., Canada Southern Division, from Niagara to Windsor, Ont., have had their minimum rate of wages increased from \$40 to \$45 a month.



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Works in any soil.  
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50 BAY ST., TORONTO.

### Bell Telephone Co. of Canada.

Following is the annual report for 1901 presented at the annual meeting, Feb. 27:—4,498 subscribers have been added during the year, the sets of instruments now earning rental being 42,858. The Co. now owns and operates 343 exchanges and 514 agencies. 2,843

miles of wire were added to the long distance system in 1901; 1,303 miles in the Ontario department, and 1,540 in the eastern department. The long distance lines owned and operated by the Co. comprise 24,193 miles of wire on 6,634 miles of poles. \$550,000 of 5% bonds were sold during the year, the net premium on which, \$53,361, has been carried



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The Neatest, Cleanest and most indestructible Ware on the market.

FOR SALE BY ALL FIRST-CLASS DEALERS.

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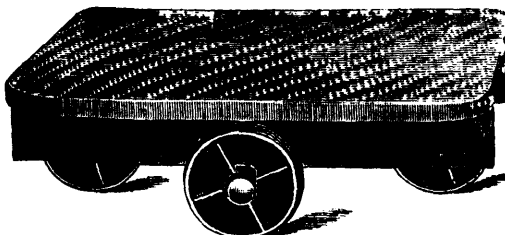
## TORONTO, CANADA.

The Best Equipped Boiler and Engine Works in Canada.

WE MANUFACTURE

Steel Boilers. The Brown Automatic Engine  
Single, Compound and Triple Marine Engines  
Hoisting and Mining Engines  
Steel Steam Vessels of every description  
Steam Yachts and Launches

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TRUCK ESTABLISHMENT  
IN THE WORLD.

SLINGSBY'S PATENT

We manufacture trucks for all classes of work—Baggage, Hardware, Warehousemen, etc. Trucks have a wheel at each end which slides sideways besides revolving.

Truck turns in its own length. Above is only ONE of our many styles for different purposes.

F. E. CAME, Manager.

H. C. SLINGSBY FOR CANADA

CANADIAN FACTORY AND OFFICE—MONTREAL



to contingent account; the total bond issue now being \$1,750,000. From the balance of revenue account \$91,821.65, \$50,000 has been written off plant and patent account; \$10,000 has been carried to insurance reserve account, and \$10,000 to accident reserve account; leaving balance of revenue to be carried to 1902, \$21,821.65. Applications for the construction of long distance lines are constantly being received, such lines—particularly in sparsely settled districts—being of great value to the public; but the Co.'s expansion in that direction has been checked because of lack of capital for construction purposes. The shareholders at a special meeting, Dec. 5, 1900, authorized application to Parliament for power to increase the capital from \$5,000,000 to \$10,000,000, and this is receiving attention.

REVENUE ACCOUNT, DEC. 31, 1901.

Receipts.	
Exchanges	\$1,281,660 11
Long distance lines	435,183 74
Private lines	11,147 53
Miscellaneous	123,543 84
	\$1,851,535 22
Expenses.	
Operating	\$1,324,424 53
Legal	11,481 42
Insurance	17,727 42
Bond interest	73,923 62
Miscellaneous	6,242 45
	1,433,799 44
Net revenue for 1901	417,735 78
Less dividends (inc. Jan. 15, 1902)	400,000 00
	17,735 78
Balance revenue from 1900	74,085 87
	91,821 65
Written off plant and patent account	50,000 00
Carried to insurance reserve account	10,000 00
Carried to accident reserve account	10,000 00
	70,000 00
Carried forward to 1902	\$ 21,821 65

BALANCE SHEET, DEC. 31, 1901.

Stock account	\$5,000,000 00
Bond account	1,750,000 00
Contingent account, 1901	\$ 900,000 00
Add premium on bonds sold	53,361 00
Revenue account	953,361 00
Unearned rental reserve	21,821 65
Insurance reserve	219,404 21
Accident reserve	113,038 09
Bond interest reserve	34,058 43
Sundry creditors	21,875 00
	186,593 81
	\$8,300,152 19
Plant and patent account, Dec. 31, 1900	\$6,053,015 27
Plant and patent account added in 1901	\$457,677 73
Less brought from revenue account	50,000 00
	407,677 73
Plant and patent account, Dec. 31, 1901	6,460,693 00
Stores on hand	245,556 86
Real estate	808,777 92
Stock in other companies	670,106 50
Due from agencies	79,474 71
Debtors and cash	35,543 20
	\$8,300,152 19

A shareholder having taken exception to the capital being increased \$5,000,000, President Sise said that the surplus revenue was not sufficiently large to meet the requirements of the increasing service which the Co. had had to keep up with. He mentioned that during the coming year something like \$1,000,000 would be needed to make the extensions required. It might require the same amount for years to come. If the Co. was satisfied to stand still with its present business it would be another matter, but it was not the policy of the present directors to do so, and until the board was replaced by others it would go on extending the field of the Co.'s operations. They were inaugurating a long-distance service in the Northwest which gave

promise of being a great benefit to the people there as well as being of profit to the Co. Were they to stand still and see another company go in and take hold of that territory? For his part he believed the Co. was pursuing the best policy, and one that met with the approbation of the shareholders, and the policy of extension would be continued throughout the official life of the present directorate.

The report having been adopted, the following were elected directors:—C. F. Sise, R. Mackay, F. P. Fish, W. R. Driver, H. Paton, C. Cassils and T. Sherwin.

Hamilton Steamboat Company, Ltd.

Following is the last financial statement presented:—

ASSETS.	
Steamer Modjeska	\$91,000 00
Macassa	50,000 00
	\$141,000 00
Wharf, James St., Hamilton	\$13,975 40
Elisnore	500 00
	14,475 40
Outstanding Debentures L. B. & L. and accrued interest	1,934 67
Cash on deposit	15,250 00
	53,234 51
	\$224,994 58
LIABILITIES	
Capital	\$187,000 00
Profit and Loss	37,994 58
	\$224,994 58

A press dispatch tells the story of a runaway train of passenger coaches in the yards of the G.T.R. at Detroit. A number of cars were on a repair track which ends at the wall of a freight and telegraph office. The cars started rolling by gravity and running through an open switch crushed through the brick wall of the office building and into the telegraph office, four employees in the latter narrowly escaping death. At the time the cars began to roll three of the repair force were under one truck. Two of these hung to the truck and were pushed through the wall with the car, being slightly injured.

W. Apps, who has resigned his position as Master Car Builder of the C.P.R., is making a trip to Pensacola, Fla., after which he intends residing in Toronto. Prior to leaving Montreal, he was entertained at a banquet at Her Majesty's cafe, there, by a number of citizens, and he was also presented with an address, marble timepiece, marble candelabra, and a set of silver fish and fruit cutlery, by the staff and foremen at the Montreal, Farnham and Perth shops. M. P. Kelly, chief clerk, made the presentation.

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

**New Capital Expenditure.**—Of the \$22,500,000 of capital expenditure proposed \$20,000,000 of which will be raised by the issue of new common stock, \$6,900,000 is to be devoted to the reduction of grades, improvement of alignment, and the putting in of second tracks where necessary. In the application to the Government for permission to increase the capital this was distributed as follows: Reduction of grades and improvement of alignment between North Bay and Carleton Jct., \$500,000; between Winnipeg and the mountains, \$3,000,000; on short line between Montreal and St. John, N. B., \$900,000; second track between Fort William and Winnipeg, \$2,500,000. (Mar., pg. 96.)

**St. John, N.B., Terminals.**—Negotiations are in progress for the renewal of the Co.'s lease from the city council for 25 years from Nov., 1902, when the present agreement expires. J. Osborne, General Superintendent, in presenting the case for the Co., pointed out some \$40,000 had been expended by the

Co., in connection with the terminals which perhaps, under the agreement, should have been provided by the city. The question has not been decided by the city council.

Further work in connection with the improvement of the terminals is in contemplation. The works commenced in 1901, will be completed and followed up by the construction of the second section of the terminal yard at Bay shore, in which will be 11 storage tracks with accommodation for 375 cars; additional tracks will be provided at the round house; a 100-ton track scale will be put in; a new air compressor will be provided in the engine house, and an additional section of Rodney wharf will be filled in. (Feb., pg. 64.)

**Atlantic Division.**—During the year the crossing sidings on the St. John section, 16 in all, will be lengthened to a uniform length of 2,500 ft. At Fredericton a baggage shelter will be provided; eight cottages will be erected at McAdam Jct., and an additional mileage of the Maine sections will be laid with heavier steel rails. A number of culverts and trestles will be replaced with permanent structures, and a considerable amount of line fencing will be done.

**McAdam Jet.**—Coal chutes with a capacity of 75 tons have been erected. They are fed by means of buckets hoisted by an electric gasoline engine, and by the use of trippers are operated from the ground. The coal is dumped into any chute required, and by gravity the empty bucket returns to the point from which it started. The electric gasoline power is calculated to be cheaper than air.

**Missisquoi River Bridge.**—It is reported that a new bridge is to be built across the Missisquoi river at Richford, Vt., on the through line to Newport, N.H., 77 miles from Montreal.

**Farnham Shops.**—Replying to a deputation from Farnham, Que., Sir Thomas Shaughnessy recently stated that shops would be maintained at Farnham and would continue as in the past doing repair work for the eastern division.

**Montreal Cattle Yards, etc.**—Officials of the Co. recently stated that they had no knowledge of an intention to build large cattle yards or an abattoir in the east end of Montreal, as reported in the daily press. (Feb., pag. 64.)

**Place Viger, Montreal.**—It is reported that land is being purchased in the vicinity of Lacroix st., with a view of adding to the station yard at Place Viger, which is inadequate for the increasing traffic.

**Windsor St. Station Improvements.**—A piece of land has been purchased west of Seigneurs st. to Plymouth Grove, the acquirement of which will enable the Co. to straighten the curve outside the station which has been complained of by the locomotive engineers as preventing them seeing far enough ahead when entering and leaving the station. By the extension of the tracks at this point and as far east as Aqueduct st. the Co. will be enabled to complete its plan for a large car yard.

A large safe has been placed in the offices at Windsor st. station. The interior measures 12 ft. 6 in. by 9 ft. 3 in., and it is fitted with an exterior door with 22 locking bolts; a triple time lock, and an interior door with 30 locking bolts.

**Montreal Shops.**—The Co. at the end of Feb. completed arrangements for the purchase of about 380 acres of land in Hochelaga, extending from its tracks on the west to the city limits at Maisonneuve on the east, and Nolan st. on the south to the city limits on the north. The price paid varies from \$350 to \$2,000 an acre, the total aggregating \$450,000. Upon the land thus acquired it is proposed to erect locomotive and car shops, at a cost of about \$1,500,000, which has been appropriated for this purpose out of the \$20,000,000 of new



capital to be raised. H. G. Goldmark has been appointed to prepare plans for the new works in conjunction with the acting Chief Engineer, H. E. Vautelet, and as a preparation for that work, recently visited the works of a number of railways in the U.S. Although nothing has been definitely decided it is stated that the locomotive works will have a capacity of three locomotives a week, and that the car shops will be capable of turning out about 25,000 a year. There will be 14 buildings erected, the largest of which will be the machine and boiler shop, about 1,200 ft. long, built of pressed brick on stone foundations, and, with one or two exceptions, one storey high. The general lay-out of the works will follow the plan of those of the Lake Shore Rd. and the Michigan Central. The general plans are expected to be completed early in April. The Co.'s Tax Commissioner has made application to the city to fix the assessment of the land and buildings proposed to be erected thereon. Heretofore the land has been assessed at \$101,505, and the application is that the land and buildings should be assessed at not exceeding \$300,000 for 20 years. (Feb., pg. 64.)

**Ottawa.**—Press reports state that a line will be constructed across Ottawa during the summer connecting the main transcontinental line with the short line at the Deep Cut, so that trains can be run over the short line to Montreal. Options on the property required are reported to have been secured. Another report says the Co. is negotiating for the purchase of the Ottawa, Northern & Western Ry. which would enable it to connect via the Interprovincial bridge.

**Hotel for Ottawa.**—An unconfirmed press report says that land has been purchased on Mackenzie Avenue, on which the Co. will

erect a hotel and station similar to the Place Viger in Montreal.

**Montreal to Fort William.**—A considerable mileage will be laid this year with 80 lb. steel rails in place of the 60 lb. rails at present in use on some sections.

**Fort William Elevators.**—It has been decided to erect a cleaning and drying elevator, having a capacity of 500,000 bush., at a cost of about \$100,000. J. King, manager of the Co.'s Port Arthur cleaning elevator, has been visiting various points in the U.S. investigating improvements in elevators. A contract has not yet been let for the erection of the elevator, but it will probably be given to a U.S. firm. It is also proposed to double the capacity of elevator D, at Fort William, making it a 3,000,000 bush. elevator. Additional steel tanks will be provided giving the additional storage capacity, and the bottoms of the present tanks, which are flat, will probably be made of the hopper bottom type. The machinery in the elevator is sufficient for a storage capacity of 3,000,000 bush. The contract had not been let up to Mar. 25. It is the intention to have both elevators ready for handling this year's crop. (Feb., pg. 64.)

**Fort William Coal Docks.**—A new dock will be constructed this year at the end of the present coal dock, and a large plant for handling the coal will be installed. A track will be run along the front of the dock so that cars can be run in and loaded from the vessels or from the pile. At the freight shed end of the present coal dock a large shed for handling the flour traffic will be constructed.

**Kaministiquia Hotel.**—Plans have been prepared for extensive alterations to be made at the Kaministiquia hotel, Fort William, at a cost of \$15,000. The basement is to be ex-

tended so as to be under the whole building; this will enable a number of departments to be removed downstairs; the ground floor will be rearranged, and on the upper floors there will be a number of alterations including the addition of seven bath rooms.

**Repair Shops at Fort William.**—It is likely that shops will be erected at Fort William for the repair of locomotives and cars.

**Fort William to Winnipeg.**—Nothing will be done in the way of double tracking the line between Fort William and Winnipeg this year, but a good many long sidings will be put in for crossing purposes, and they will be so laid out that they will form part of the double tracking. The reduction of gradients will be gone on with between Fort William, mileage 1,001 from Montreal, and Ignace, 1,146 from Montreal; and between Rat Portage, mileage, 1,291; and Winnipeg, mileage, 1,424. The intention is to reduce the ruling gradient to 4-10 of 1 per cent, east bound; the theoretical ruling grade is 5-10 of 1 per cent, but actually is nearly 7-10 of 1 per cent. Some work is likely to be done this year, but it is not likely that anything will be done on the intervening section between Ignace and Rat Portage, as the results would not justify the outlay that would be required. A train of 105 cars, or about a mile long, is being hauled over the line between Fort William and Winnipeg to test the tonnage that can be handled on the various grades. (Feb., pg. 65.)

**Ignace to Turtle River.**—The surveys referred to in our Feb. issue as having been made between Raleigh and Bonding Lake, and between Ignace and Turtle River, were in reference to a line to open the same area. It is not expected that any construction will be done this year. (Feb., pg. 65.)

## C. P. R. LANDS.

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

Lands in Manitoba and Assiniboia average \$3 to \$6 an acre.

Lands in Alberta and Saskatchewan with the exception of some special locations where prices range from \$3.50 to \$5.00 per acre, generally \$3.00 per acre.

### TERMS OF PAYMENT.

In the case of an actual settler who goes into residence upon and cultivates the land, the aggregate amount of purchase money and interest is divided into ten instalments, as shown in the table below; the first to be paid at the time of purchase, the second two years from date of purchase, and the remainder annually thereafter.

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

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

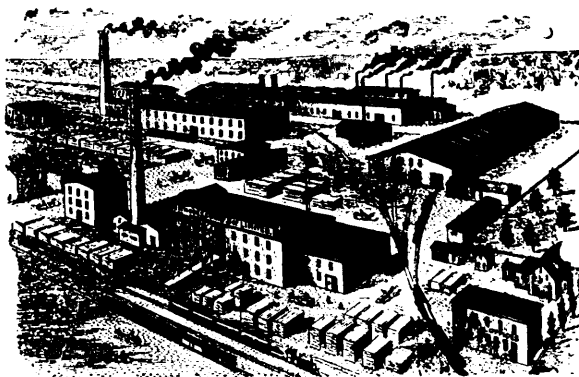
**DISCOUNT FOR CASH.** If land is paid for in full at time of purchase, a reduction from price will be allowed equal to ten per cent. of the amount paid in excess of the usual cash instalment.

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

Write for maps and full particulars.

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

**WINNIPEG.**



## Rhodes, Curry & Co.,

Ltd.,

### Railway and Street Cars

of all descriptions.

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

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

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802 THE TEMPLE, CHICAGO, ILL.

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

	Capacity	
Burlington Elevator, St. Louis, Mo.	1,300,000 Bushels	
Grand Trunk Elevators, No. 1 and No. 3, Portland, Me.	2,500,000	"
Export Elevator, Buffalo, N.Y.	1,000,000	"
J. R. Booth Elevator, Depot Harbor, Ontario	1,000,000	"
Cleveland Elevator Company's Elevator, Cleveland, O.	500,000	"
Erie R. R. Transfer & Clipping House, Chicago, Ill.	100 cars in 10 hrs.	"
Manchester Ship Canal Co.'s Elevator, Manchester, Eng.	1,500,000	"
Burlington Elevator Co., Peoria, Ill.	600,000	"
Canada Atlantic Railway Elevator, Coteau Landing, Que.	500,000	"
Northern Grain Co., Manitowoc, Wis.	1,350,000	"
Union Elevator, East St. Louis, Ill.	1,100,000	"
Montreal Warehousing Co.'s Belt Conveyor System		

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

## RAILWAY DEVELOPMENT.

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

*(Continued from page 126)*

**Klondike Mines Ry.**—We are officially informed that it is intended to construct about 82 miles of line this season, commencing at Klondike City, Yukon, and connecting all the mines in the vicinity of Dawson, and reaching Stewart river. The routes of the proposed lines have been formally approved by the Government officials, and authority has been given by the Minister of the Interior to take possession of the necessary right of way over Crown lands. It is reported that the North American Trading and Transportation Co. has been awarded a contract to supply 35,000 ties for the first 12 miles of line from Dawson to Grand Forks. A meeting of the shareholders of the Co. was called for Mar. 3, in Ottawa for organization purposes. E. C. Hawkins, Seattle, Wash., is the principal promoter. (Feb. pg. 58.)

**Lake Bennett Railway Co.**—M. King, H. A. Munn, Victoria, B.C.; and D. G. Marshall, Vancouver, B.C., are applying at the current session of the Dominion Parliament, for an act incorporating a company under this title to construct a railway from the international boundary between B.C. and Alaska, at Dyea river, to Lake Bennett, thence to the Yukon river at Selkirk. The capital proposed is \$1,000,000 and the head offices are to be at Vancouver. The Co. asks for power to convey or lease its powers or railway to the C.P.R.

**The Lake Erie and Detroit River Ry. Co.** is making application at the current session of the Dominion Parliament for an act granting an extension of time within which it may commence and complete the line authorized to be constructed from Simcoe to Fort Erie, Ont., by its act of 1896.

The Ontario Legislature at its recent session confirmed bylaws passed by the township of Orford and the village of Dutton voting bonuses in aid of the extension recently completed from Ridgetown to St. Thomas. (Dec., 1901. pg. 355.)

**Lake Superior, Long Lake and Albany Ry. Co.**—H. S. Cane, Newmarket, Ont.; A. Yule, Aurora, Ont.; J. W. Cheesworth, F. J. Andrews and M. J. Patterson, Sr., Toronto; and S. T. Clarke, Chicago, Ill., were incorporated by the Ontario Legislature, at the recent session, under this title to construct a railway from the C.P.R. transcontinental line near Peninsula harbor, Lake Superior, to Martin's Falls on the Albany river, about 210 miles; with power to construct a branch line to Hudson's bay. The Co. is given five years to commence and nine years to complete its line. A subsidy of \$30,000 was voted for the first 10 miles of this line at the recent session of the Ontario Legislature, and application is being made to the Dominion Parliament for a subsidy for 95 miles, to the Kenogami river.

A preliminary survey has been made by H. DeQ. Sewell, the route followed being up the valley of the Pic river, to the height of land north of McKay's lake, thence to the falls of the Kenogami at the outlet of Long lake, and then almost due north to Martin's Falls, on the Albany river, 210 miles from Peninsula harbor. The river at this point is 1,980 ft. wide, and the falls are 45 ft. in height. From the falls to Fort Albany, at the mouth of the river, there is a low-water depth of 11 ft., increasing by 20 ft. in times of extreme high water, unobstructed except by a number of low sandy islands, and open for navigation six months in the year. The proposed branch line is from the Kenogami falls to the mouth of the Albany river. The country to be opened up includes large areas of pulpwood and agricultural land, the latter being

in the same latitude as Winnipeg. The construction of the line to the height of land does not present any serious engineering difficulties, a route giving an easy grade with but little curvature having been found. We are informed that arrangements have been completed for commencing work as soon as a Dominion subsidy has been voted.

**Lambton Central Electric Railway.**—D. Milne, W. B. Collins, F. J. Winlow, of Sarnia, and J. H. Smallman, London, were incorporated at the recent session of the Ontario Legislature under the above title to construct a railway from Sarnia to Florence, via Petrolia, with power to construct a branch to Dresden. The Co. is given power to make connections and to enter into agreements for running powers with other companies, and to operate its line by electricity, compressed air or other power. Its capital is fixed at \$200,000, and its bonding powers at \$20,000 a mile.

**Levis County Ry. Co.**—A. Conyer, Montreal; C. Blouin, J. Paquette, P. E. Bourassa, Levis; G. U. Holman, Quebec; W. J. Remick, and R. D. Wycoss, New York, are making application at the current session of the Quebec Legislature for an act incorporating a company under this title to construct tramways and electric railways in Levis and adjoining counties. Preliminary surveys are being made by Mr. Fitzpatrick, C.E., Ottawa.

**Lindsay, Bobcaygeon and Pontypool Ry.**—At the recent session of the Ontario Legislature a subsidy of \$57,000 was voted for the construction of 19 miles from Bobcaygeon to Lindsay. In 1899 the Dominion Parliament voted \$128,000 for the construction of 40 miles between Pontypool and Bobcaygeon via Lindsay. Local municipalities in 1899 voted \$100,000 in aid of construction, but how far these latter would now be available is a matter of conjecture. (Aug., 1901, pg. 231.)

**The Manitoba, Midland and Western Ry. Co.**'s application at the recent session of the Manitoba Legislature for an extension of time within which it could commence and complete its undertaking, was thrown out. In the course of the discussion on the bill it was announced that this charter had been acquired in the interests of the Northern Pacific Ry. Co. See also Northern Pacific Ry. (See Feb., pg. 58.)

**Mantoulin and North Shore Ry.**—F. H. Clergue recently stated that the line from Meaford to Owen Sound, 22 miles, and from Sudbury to Little Current would be constructed this year. The line from Sudbury to the Gertrude mine, 13 miles, with a branch of one mile to the Elsie mine, is in operation; and a section of 1½ miles, from the C.P.R. Sault Ste. Marie branch to the Spanish River Pulp and Paper Mills, has been constructed. Contracts for the other sections of the line to the shore of Georgian bay have not been let, though the right of way is reported to have been cleared. In the Ontario Legislature the Commissioner of Public Works recently stated that the Co. had not asked for an extension of time; and also that it was expected the plans for the Meaford-Owen Sound section of the line would be definitely settled by May 1. (Feb., pg. 58.)

The residents of Thornbury and Clarksburg, Ont., have had an interview with the Commissioner of Public Works in regard to an extension of the M. & N. S. Ry. from Meaford, through the Beaver river valley to a junction with the C.P.R., and the G.T.R. at Mount Forest. Mr. Latchford approved of the proposal and suggested that the local people get their plans into shape for submission to the Co.

See also Huron & Bruce Ry.

The Ontario Legislature at the recent session amended the conditions under which it might expropriate the M. and N.S. Ry. as set forth in sec. 14 of the act of 1901. The Co.

must now produce when required by the Commissioner of Public Works, the books showing the cost of the railway, car ferry, etc.; and the railway, etc. shall become the property of the Government upon payment of the cost, less the value of the subsidies calculated at 50c. an acre, and one half of the Dominion subsidy. In the event of any dispute the value is to be found by arbitration. The right to expropriate must be exercised within 15 years, otherwise it lapses.

**Matane and Gaspé Ry.**—The Quebec Legislature has amended the Act for the incorporation of this Co. by requiring the commencement of work within four years, and the completion of the lines within 10 years. (Jan., pg. 3.)

**Middlesex and Elgin Interurban Ry. Co.**—At the recent session of the Ontario Legislature an act was passed incorporating, under the above title, the persons who applied for an act of incorporation as the Aylmer, St. Thomas and London Electric Ry. Co. (Feb., pg. 55.)

**Middleton and Victoria Beach Ry.**—The plans and profiles for the 48 miles of line proposed to be constructed connecting these two points have been deposited with the Department of Railways at Ottawa, and the Commissioner of Public Works at Halifax, N.S. D. S. Noble, C.E., who had charge of the surveys, will be in charge of construction. (Feb., pg. 58.)

A project is on foot for the construction of a line from Middleton to Centerville, about 35 miles.

**Midland Ry. of N. S.**—It is reported that a project is under consideration for the extension of this line from Windsor to Middleton, connecting with the Middleton and Victoria Beach Ry. The distance would be about 50 miles. (Feb., pg. 59.)

**Montford and Gatineau Ry.**—The proposed extension from Arundel, 30 miles westerly, would touch two or three small villages, but generally would open up new territory for lumbering and colonization. It is intended ultimately to connect with the Ottawa and Gatineau Ry., but at what point is uncertain. No construction will be undertaken until a subsidy has been obtained, for which an application has been made to the Quebec Legislature. (Feb., pg. 59.)

**The Montreal Light, Heat and Power Co.** is applying at the current session of the Quebec Legislature for an act extending its powers in every direction, and giving it power to operate anywhere in the province west of and including the city of Three Rivers. The Co. possesses the charter of the Provincial Light, Heat and Power Co., and of the Canadian Electric Light Co. It may construct anywhere within the province tramways for transporting the produce of its mills, etc., not exceeding in any one case 10 miles in length, connecting with its factories, or with the line of any railway.

**Montreal-Longueuil Bridge.**—The competition between the promoters of the various bills seeking the incorporation of companies for the construction of a bridge over the St. Lawrence, between Montreal and Longueuil, promises to be the feature of the current session of the Dominion Parliament. There are four applications, but interest is centered in two only, viz.: that promoted in the interests of W. S. Webb and his associates, and that of the Montreal Bridge Co. asking for an extension of time in which to build their bridge. This latter charter is one in which C. N. Armstrong and R. Prefontaine were jointly interested and which they had practically disposed of to W. S. Webb and his associates. Some differences arose as to title and the deal was not completed. Mr. Armstrong now states that he has no interest in any bridge charter, and Mr. Prefontaine is under-

stood to be interested in one of the other applications. The Atlas Construction Co. is reported to have bought out all interests in the charter of the Montreal Bridge Co., and to have purchased 300 acres of land in Hochelega, from H. Hogan, President of the Bridge Co. It has also prepared plans for the bridge and is said to be ready to go on with con-

struction as soon as it obtains the powers asked. The Co.'s representatives have interviewed the Minister of Public Works with a view of its project being recommended for a Dominion grant; have made application to the city council asking for \$1,000,000; and are promoting a bill in the Quebec Legislature authorizing any municipality

benefited to vote money towards the construction of the bridge. The Co. proposes to name its bridge the Royal Albert bridge.

The project in which W. S. Webb is interested is to be financed by the Dominion Securities Co., of New York, which is financing the Cape Breton Ry., the South Shore Ry., and other railway projects and amalgamations

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## MANITOBA

The Government Crop Bulletin issued Dec. 12th, 1901, gives the following statistics for the year:

### CROPS.

ACRES.	AVERAGE YIELD.	TOTAL.
Wheat.....2,011,835	25.1 bus.	50,502,085 bus.
Oats..... 689,951	40.3 "	27,796,588 "
Barley..... 191,009	34.2 "	6,536,155 "
Potatoes.. 24,429	196. "	4,797,433 "

### STOCK.

Number of stock in the Province, July 1, 1901:  
Horses..... 142,080 Sheep..... 22,960  
Cattle..... 263,168 Pigs..... 94,680  
Value of Dairy Products..... \$926,314

### 18,375 FARM LABORERS

Came from Eastern Canada to assist in the harvest fields of Manitoba in 1899—and the demand was not fully satisfied.

### MANITOBA FARMERS ARE PROSPEROUS.

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

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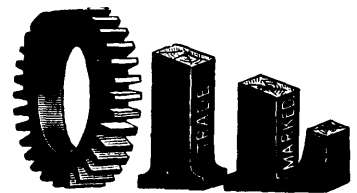
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D. L. WHITE, Vice-President.

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in which this syndicate is engaged in Canada. M. H. Regensburger, counsel to the syndicate, recently purchased 85 acres of land at Longueuil from the Government, fronting on the river, for \$31,000, for the southern terminal of the proposed bridge. The bridge which the syndicate proposes to erect will, according to the *Railway World*, be upwards of 8,000 ft. in length, and will be the largest bridge of its kind in the world. Provision will be made for two parallel steam railway tracks, two parallel electric railway tracks, a vehicle highway at either side of these tracks, and a wide footpath at both sides. This is to cost \$6,000,000, and is to give entrance to several railways which have already applied for running rights over it into the city of Montreal. (Feb. pg. 59.)

**The Montreal and Southern Counties Ry. Co.**, which was incorporated by the Dominion Parliament in 1897 to construct a railway from Chambly to Sherbrooke, Que., with considerable powers as to amalgamating with or acquiring other lines; and which secured an act amending its powers, and authorizing it to operate its lines by electricity, in 1898, is making application at the current session of the Dominion Parliament for an act granting further extension of time. It also desires power to engage in a general navigation business.

**Montreal Park and Island Ry.**—It is reported that all the Co.'s lines, including the Back River, Lachine, Cartierville, and Mountain divisions, are to be lifted, rebalasted and new ties put in, with a view of improving the service. Improvements will also be carried out at the power house by two additional boilers, two more engines, and two new dynamos.

**The Montreal Terminal Ry. Co.** is making application at the current session of the Quebec Legislature for an act confirming and extending the rights now possessed for constructing electric lines in Montreal and adjoining municipalities.

The approval of the Railway Committee of the Privy Council has been given to the Co.'s proposed branch line through the village of Delorimier.

The Co. is making an application to the Railway Committee of the Privy Council with a view to securing an entry into Montreal. The city council does not object to granting an entrance, but contends that it has the power generally and under the M.T.Ry.Co.'s act to fix terms and conditions. The Co. originally had a charter for an elevated railway, obtained from the Dominion Parliament in 1894, and in 1899 it was given power to operate its lines by electricity and on such streets as might be designated by the city. The Co. contends that its statutory powers give an entrance to the city and that the terms proposed by the city are unreasonable.

The M.T.Ry.Co. has submitted a proposal to the Montreal Harbor Commissioners to construct a series of elevated and surface railway tracks connecting the G.T.R. at Victoria bridge, with the C.P.R. at Berri st., with all necessary spurs and sidings. No action has been taken on the matter, but the plans have been submitted to the Minister of Public Works.

**The Morrisburg Electric Ry. Co.** was incorporated at the recent session of the Ontario Legislature, the powers asked for in regard to steamers and ferries being struck out, and limiting any telegraph and telephone lines to be erected to the Co.'s own use. (Feb., pg. 59.)

**Mount Sicker Ry.**—The difference between the owners of this line and the Esquimaux and Nanaimo Ry. Co. in regard to the crossing of the latter's line by the bridge carrying the M.S. Ry. tracks, is said to have arisen on account of the height of the false work. This the E. and N. management claim was not as

high as is required by law. The Railway Committee of the Privy Council is to be appealed to to settle the matter. (Feb., pg. 59.)

**Musquodoboit Ry. Co.**—See Nova Scotia Eastern Ry. Co.

**Nepigon Ry. Co.**—The act of the Ontario Legislature of 1898 incorporating this Co. was amended at the recent session by inserting as incorporators the names of F. S. Wiley, A. J. McComber, J. Whalen, of Port Arthur, Ont.; N. W. Rowell, J. G. Shaw, Toronto, and P. Weidner, Detroit, Mich. The location of the line is defined as being from Nepigon bay, or from the C.P.R. transcontinental line at Nepigon station, northerly to Lake Nepigon, thence northeasterly to James' Bay, with a branch from the main line into Port Arthur; and the Co. is given power to amalgamate with or enter into agreements with the Algoma Central and Hudson's Bay Ry. Co., the Canadian Northern Ry., as well as with the C.P.R. An extension of time for three years is given within which work on the line has to be started. The Ontario Legislature at the recent session voted a subsidy of \$42,000 for the first 14 miles of this line.

**New Brunswick Coal and Ry. Co.**—The scarcity of labor and the early frost prevented the completion of grading on the 15 miles of line from Chipman to Newcastle, N.B., but we are informed that it will be ready for traffic by June 30. The bridges on this section are being built of hard pine. No contract has been let for the construction of the balance of the line from Newcastle to Gibson, the Co. devoting its attention to surveying and testing its coal fields. (Feb., pg. 59.)

**New Ontario Central Ry. Co.**—P. Livingstone, C. R. Dunsford, and B. McConnell, of Morden, Man., F. Crandell and H. O'Leary, of Lindsay, Ont., were incorporated at the recent session of the Ontario Legislature under the above title, to construct a railway from the C.P.R. transcontinental line between Wabigoon and Eagle River, to the west end of Lac Seul; and one or more branch lines not to exceed in any one case 12 miles in length. The capital of the Co. is fixed at \$250,000, and power is given to issue bonds to the extent of \$20,000 a mile. The line may be constructed in 10 mile sections; electrical power may be developed, and used for operating the line; and a general navigation business may be engaged in on navigable waters reached by the railway. The Co. has power to enter into agreements with the C.P.R. for amalgamation and otherwise.

**The Niagara, St. Catharines and Toronto Ry. Co.** is making application at the current session of the Dominion Parliament for an act giving an extension of time for the completion of its lines, and granting authority to acquire stock or bonds or other securities of any electric railway or navigation company with which it has connection, or to guarantee the same, and to issue bonds upon its vessels.

Surveys have been made with a view to the extension of the Co.'s line from St. Catharines to Hamilton, which it has power to do under its charter, but C. J. Myles, President of the Hamilton, Grimsby and Beamsville Ry., says that the franchise which the N. St. C. and T. Ry. secured from the county of Lincoln to build such a road has lapsed. (Feb., pg. 59.)

**Nipissing and Ottawa Ry. Co.**—J. Pearson, W. Clarke, J. H. Denton, Toronto; J. H. Taylor, of York township, are applying at the current session of the Dominion Parliament for an act incorporating a company under this title to construct a railway from the southeast end of Lake Nipissing across the township of Ferris to Trout lake, thence through the townships of French and Phelps, thence to the Ottawa river, near the Opemicon river. The Co. asks power to carry on a general navigation business on the waters reached by its railway.

**North Colchester Ry.**—The construction of a railway from Truro to Brule Harbor, N.S., has been projected and surveys have been made of several routes, the most recent being in 1901 by W. G. Yorston, C.E., Truro. We are informed that it is not likely that a charter will be applied for at the present session of the N.S. Legislature; that the Midland Ry. of N.S. has the franchise to build the North Colchester railway, and that that Co. will probably take the matter up pending negotiations now in progress.

The route projected for the new line was considered in 1860 for the I.C.R., but other lines were favored. It is claimed that it would give the shortest connection between Halifax and Charlottetown, P.E.I., the route by Truro and Brule Harbor being 129 miles, against 175 via Truro and Pictou. The length of the proposed line is 38 miles, the worst feature of the route being the crossing of the Cobequid mountains at an elevation of about 600 ft.; but there is a shorter route which would cross the mountains at an elevation of about 800 ft. The N.C.Ry. will be an expensive line to construct and to operate. F. W. W. Doane, C.E., made a complete survey of the country and prepared a report in 1890, which survey has been gone over by H. Donkin, C.E., reporting to the Premier of N.S., and W. G. Yorston, reporting to F. A. Laurence and B. F. Pearson, of Halifax, who are interested in the promotion of the line. (Feb., pg. 59.)

**The Northern Colonization Ry. Co.** is making application at the current session of the Dominion Parliament for an act to extend the time for the commencement and completion of its undertakings; to ratify certain agreements, to authorize the construction of branches and extensions of its line; and for other purposes. (June, 1901, pg. 175.)

**Northern Michigan Ry.**—It is reported that the line between St. Ignace and Sault Ste. Marie, Mich., for which plans have been filed with the state railway department, will be completed in Aug.

**The Northern Pacific Ry. Co.** secured two charters authorizing construction of a large mileage of railways in Manitoba. One of these, the Manitoba Central Ry., was obtained in 1901, and the other, the Manitoba, Midland and Western Ry., came before the Legislature at its recent session for renewal. This bill was defeated when it came before the Railway Committee. On behalf of the promoters of the bill it is claimed that the building of 900 miles of railway, for which no subsidies would be asked, has been prevented; while the Winnipeg Telegram, the Provincial Government newspaper, says: "The N. P. now has a charter under which it can build. If it wants to build it can do so, and its building will be welcomed by the Government and by everyone in the Province. If the N.P. wishes to build lines in this Province it will receive all the encouragement it needs. But there is absolutely no evidence to show that the N.P. has altered its intention expressed last year, to build no more lines in this Province. It was only after the company had declared that it would do nothing more in the way of railway construction or reduction of rates that the Government decided to take over the road. If the Co. has changed its mind within the year, it can proceed to build at once. It has a charter and will get all reasonable encouragement from the Government and the people." (Feb., pg. 59.) See also Manitoba, Midland and Western Ry.

**Nova Scotia Eastern Ry. Co.**—Application is being made at the current session of the N.S. Legislature for an act confirming the amalgamation of the Musquodoboit Ry. Co. with the N.S.E. Ry. Co., under the above title. An act is also being applied for by the county council of Halifax authorizing it to borrow

money to assist the N.S.E.Ry. by defraying the cost of the right of way.

M. H. Fitzpatrick, who is one of the promoters of the Co., stated recently in Montreal that there will be two sections of the line, the united length being 190 miles, one portion to run from New Glasgow to the Strait of Canso, and the second from Windsor Jct., near Halifax, to a point on the main line south of the strait, the second part being designed to connect with the projected Halifax and South Western Ry. The routes proposed by the Co. do not meet with the approval of the residents of the Musquodoboit valley, or of those in the vicinity of Caledonia in Guysboro county; and petitions have been presented to the Legislature asking the Government in making the contract with the Co. to have the route of the line so altered as to give the service desired by the petitioners.

Press reports are current that W. S. Webb and his associates are endeavoring to secure the charter of the N.S.E.Ry. and to utilize it in connection with the Cape Breton Ry. now under construction and the projected bridge over the Strait of Canso. (Feb., pg. 59.)

**Nova Scotia Northern Ry. Co.**—T. McMullin, Truro, N.S.; J. Richardson, Kingston, Ont.; and R. J. Campbell, New York, are making application at the current session of the N.S. Legislature for an act incorporating a company under this title to construct a railway from the I.C.R. in Pictou county (the Eastern Extension Ry.) to the Oxford and New Glasgow branch of the I.C.R.; and from the latter branch to the boundary line between Nova Scotia and New Brunswick.

**The Ontario Electric Ry. Co.** was incorporated at the recent session of the Ontario Legislature. The Co.'s application was amended by the addition of the word "railway" as part of the title, and the curtailing of power to construct branches, and protecting the rights of the municipalities through which the projected line will pass. The capital of the Co. is fixed at \$5,000,000, and power to issue bonds to the extent of \$15,000 a mile is given. (Feb., pg. 59.)

**Ontario Ship Ry. Co.**—H. Blain, K. Tully, S. C. Wood, J. Fleit and J. Blakeley have been named as provisional directors of the company incorporated under the Ontario act of 1892, by an amending act passed at the recent session of the Ontario Legislature, with power to construct a ship railway from Georgian bay to Lake Ontario. The application of the Co. for an extension of time for the commencement and completion of its undertaking was opposed by the Canada National Ry. and Transport Co., which has a charter to construct a standard gauge railway between the same points. The Co. was given an extension of three years on condition that \$50,000 be spent on the project within a year, and its title was changed to the Great Lakes Ry. Co. (Feb., pg. 60.)

**Ottawa and Dundas Ry.**—An act incorporating a Co. to construct a line of railway 45 miles in length, from Ottawa through the counties of Russell and Dundas to the St. Lawrence river, was passed in 1900 by the Ontario Legislature. An application was made to the Government during the recent session to grant a subsidy of \$3,000 a mile towards its construction. Consideration was promised but the subsidy was not recommended for legislative approval.

**The Pembroke Southern Ry. Co.**, by an act passed at the recent session of the Ontario Legislature, has been given power to extend its line from the northerly terminus at Pembroke to the Ottawa river, and to amalgamate with the Canada Atlantic Ry.; Toronto, Lindsay and Pembroke Ry.; or the Pontiac, Pacific Ry. The Co.'s existing line is now

operated under lease by the Canada Atlantic Ry.

**Peterborough Radial Ry. Co.**—An act incorporating a company under this title was passed at the recent session of the Ontario Legislature, power being given to construct lines from Peterborough to Chemong, 8 miles; to Lakefield, 11 miles, and to Rice lake, 20 miles; but no branches are to be constructed. The general clauses of the bill were amended so as to conform to the Electric Ry. Act. The

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RICHARD SOUTHAM, MANAGER



Co. may issue bonds to the extent of \$20,000 a mile. (Feb., pg. 60.)

**The Port Dover, Brantford, Berlin and Goderich Ry. Co.** is making application at the current session of the Dominion Parliament for an act extending the time for the construction of the lines authorized, to change its name to that of the Grand Valley Traction Co. and giving power to issue bonds to the extent of \$30,000 a mile, and to commence construction within two years. (Feb., pg. 60.)

**Prince Edward Island Ry.**—A plan has been prepared for an improved station at Charlottetown, but has not yet been approved. The proposed site is at the foot of Prince st. where the roundhouse now stands, and it is proposed to put up a new roundhouse on the site of the present station. Building will probably be commenced early in July. (Feb., pg. 60.)

The estimates submitted to the House of Commons for the year ending June 30, 1903, contain the following amounts for the P.E. I.R., chargeable to capital:—

Addition to freight house at Morell	\$ 450 00
Addition to freight house at Mount Stewart	500 00
A new station at Georgetown	6,200 00
To widen wharf at Summerside	1,500 00
To straighten line near North Wiltshire	1,000 00
To straighten line near Blue Shank	1,000 00
Murray Harbor branch and Hillsboro' bridge	500,000 00
	\$510,650 00

**Quebec and Lake St. John Ry.**—The cut-off from Valcartier to St. Catherines, 4 miles, was completed Mar. 10, and trains commenced running over it Mar. 24. The old line will not be abandoned, but will be used for siding purposes for the present. (Feb., pg. 60.)

**Quebec and New Brunswick Ry.**—It is reported that work will be commenced this year on this projected line from Chaudiere Jct., Que., on the G.T.R., to Connor, N.B., the terminus of the St. Francis branch of the Temiscouata Ry., about 130 miles. T. Malcolm, of Campbellton, N.B., contractor for the Restigouche and Western Ry., will, it is said, have charge of the work. (Aug. 1901, pg. 233.)

**The River St. Clair Ry. Bridge and Tunnel Co.** is making application at the current session of the Dominion Parliament for an act granting it an extension of time within which it may commence and complete its undertaking. The Co. has been delayed in making progress by reason of the U.S. authorities refusing to sanction the building of the bridge. (June 1900, pg. 76.)

**The Sandwich, Windsor and Amherstburg Ry. Co.**'s act of incorporation was amended at the recent session of the Ontario Legislature on the lines of the notice. (Feb., pg. 61.)

**The Sault Ste. Marie Bridge Co.** has been licensed under the Ontario Companies' Act to do business in the province. This is one of the numerous projects of the Clergue Syndicate, the intention being to build a bridge across the St. Mary's river.

**Shawenegan Falls Terminal Ry. Co.**—J. E. Aldred, W. C. Johnson, R. W. Douglas, Montreal; V. Burrell, F. Staughton, Shawenegan Falls, are making application at the current session of the Quebec Legislature for an act incorporating a company under this title to construct an electric railway in Shawenegan Falls, the parish of St. Boniface, and the counties of St. Maurice and Champlain.

**Shediac and Coast Ry.**—We are informed that tenders are likely to be asked at an early date for the construction of 20 miles of the proposed line from Shediac, to Cape Tormentine, N.B. This section would carry the line from Shediac to Great Shemogue. (Aug., 1901, pg. 233.)

**Sorel Electric Co.**—Application is being made at the current session of the Quebec Legislature for an act incorporating a company under this title, with power, among other

things, to construct electric railways in the counties of Vercheres, Richelieu, Yamaska and Nicolet; and to develop the water power on the St. Francis river.

**The South West Traction Co.**—F. G. Rumball, T. H. Purdom, K.C., T. C. Knott, A. E. Welch, O.B. O'Donnell, of London; R. McEwen, Byron, and J. Boles, Ingersoll, were incorporated at the recent session of the Ontario Legislature under this title to construct an electric railway from London to Ingersoll, Brantford and Hamilton, and from London to Strathroy. Power was given to carry freight on its line, and to operate telegraph and telephone lines. The capital of the Co. is \$500,000, and power is given to issue bonds to the extent of \$25,000 a mile. The line may be built in sections of not less than 10 miles each, but the whole is to be completed in five years. The proposed title of the Co. was changed from the London Ry. Co. to the above. (Feb., pg. 58.)

**South Shore Ry.**—The authorized extension of this line from Sorel to Chaudiere, Que., where connection will be made with the Quebec bridge, has been constructed and is in operation as far as St. Francois du Lac, 7.5 miles from Sorel, and 61.50 miles from the S.S.R.'s junction with the G.T.R. at St. Lambert, and surveys have been made over the rest of the route, the line to Nicolet having been located. Contracts will likely be entered into at an early date, and it is expected that the line will be in operation from Montreal to Chaudiere this year. The line will be practically a straight one, and the ruling gradient will be about 26 ft. to the mile for both east and west bound traffic. The work will be light. There will be a number of bridges on the route, the most important being that over the Yamaska river at St. Francois du Lac. It will be 800 ft. long, and, like all the other bridges, will be built to Dominion Government class 1 specifications. The line will be laid with 80 lb. new steel rails, all openings and structures will have masonry and concrete foundations. (Feb., pg. 61.)

**The St. Chrysostome Ry. Co.** is making application at the current session of the Quebec Legislature for an act granting an extension of five years within which it may construct its line, and authorizing it to make arrangements with other companies to operate the line.

**The St. John Ry. Co.** is desirous of extending its tracks to Fairville, N.B., but cannot do so as the suspension bridge is not wide enough to provide for car tracks in addition to vehicle and pedestrian traffic. A new bridge is, therefore, necessary and Mr. Neilson, the manager of the Co., says it will come. The city of St. John is making application at the current session of the Dominion Parliament for an act empowering the city to build a bridge across the harbor and river of St. John within the city limits.

The Co. proposed to extend its tracks this year about a mile to the C.P.R., crossing at the approach to the cantilever bridge. (Feb., pg. 61.)

**The St. Lawrence and Maritime Provinces Ry. Co.** is making application at the current session of the New Brunswick Legislature for an act changing its name to the Edmundston, Moncton and St. John Ry. Co., and authorizing it to construct its line from the present authorized terminus into St. John, and granting an extension of time for the commencement and completion of its line and for other purposes.

**St. Lawrence and Northern Ry. Co.**—P. E. Lane, New York city; F. S. Tourigny, L. E. Dufresne, A. Houleston and P. A. Gouin, Three Rivers, Que., are making application at the current session of the Dominion Parliament for an act incorporating a company under this title with power to con-

struct a railway from Three Rivers, northerly to St. Tuque, crossing the Great Northern Ry. near Shawenegan, with a branch from near the mouth of the Mattawan river to St. Michel des Saints, and for other purposes, among which are included power to subscribe for stock in tramways, docks, piers, etc., in connection with its line; and to enter into agreements for running powers with other railway companies. Bonding powers to the extent of \$25,000 a mile are asked.

**St. Maurice Colonization Ry. Co.**—Application is being made at the current session of the Dominion Parliament for an act incorporating a company under this title to construct a steam or electric railway from Three Rivers, Que., to La Tuque, not exceeding 10 miles, among numerous other powers.

**The St. Thomas Street Ry. Co.** applied at the recent session of the Ontario Legislature for an act increasing its powers, and authorizing the construction of a number of radial lines, but the Railway Committee held the legislation asked for was not necessary or expedient. (Feb., pg. 61.)

**Suburban Rapid Transit Co.**—W. L. Harris, St. Charles, Man.; E. S. Harrison, W. Gregson, H. J. Macdonald and C. Bell, Winnipeg, were incorporated at the recent session of the Manitoba Legislature under this title to construct an electric railway from Winnipeg, on both sides of the Assiniboine river to Headingly, for freight and passenger traffic. The Co. may enter into agreements with other companies; has power to use "sleighs or other conveyances" in addition to electric cars; to engage in a general navigation business on the Assiniboine river; and to operate telegraph and telephone lines. The capital of the Co. is fixed at \$100,000, and it may issue bonds.

**Sydney and Glace Bay Ry. Co.**—C. Shields, A. Dick, B. F. Pearson, J. H. Creedon, A. C. Ross and W. Crowe are making application at the current session of the N.S. Legislature for an act incorporating a Co. under this title to construct an electric tramway from the boundary of Sydney through Reserve, Dominion No. 3, Dominion No. 4, Caledonia, Glace Bay, Dominion No. 2, Bridgeport, Dominion No. 1, and thence back to Reserve, with power to extend to Mira and Louisburg, and from Dominion No. 1, to Langan Beach. The capital stock proposed is \$500,000 with power to increase to \$2,000,000. (Feb., pg. 62.)

**Sydney and Louisburg Ry.**—Surveys are being made of the line from the colliery to the shipping pier at North Sydney, N.S., with a view to straightening the track and reducing heavy grades, so as to afford better facilities for the conveyance of heavy trains of coal to the piers.

**Temagami Ry. Co.**—W. A. Cockburn, A. M. Paradis, L. E. Bolster, H. E. McKee, J. Holdatch, L. O. Armstrong, G. P. Cockburn, of Sturgeon Falls, Ont.; R. J. McLaughlin and F. A. McDiarmid of Lindsay, Ont., were incorporated in 1898 by the Dominion Parliament under this title to construct a railway from near Verner station on the C.P.R. transcontinental line, via the Sturgeon river valley to the southern end of Lake Temagami. In 1900 an act extending the time within which work was to be commenced was passed. It is now reported that a contract will shortly be let for the construction of the first 10 miles of the 40 authorized, and that work will be started by May 1. G. E. Silvester of Sudbury, Ont., is acting as engineer for the Co.

**Temiskaming and North Ontario Ry.**—By an act passed at the recent session of the Ontario Legislature the Provincial Government is authorized to construct a railway from North Bay to Lake Temiskaming and to equip and operate the same. The line to be constructed, according to the present inten-



ASSESSMENT SYSTEM



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THE BEST FRATERNAL BENEFIT SOCIETY IN EXISTENCE.

**Cost to Join the I.O.F.**

(For \$1,000 Mortuary Benefit.)

Initiation fee (minimum).....	\$1 00
Certificate fee.....	1 00
Registration fee.....	1 00
Medical Examination fee.....	1 50

Total minimum cost..... \$4 50

(For more than \$1,000 Mort. Benefit.)

Cost to take \$2,000 Mort. Benefit..	\$6 00
" " \$3,000 " " "	7 00
" " \$4,000 " " "	9 00
" " \$5,000 " " "	10 00

Sick benefits, when required, cost extra.

**Benefits given by the I.O.F.**

- 1.—The Mortuary Benefit of \$500, \$1,000, \$2,000, \$3,000 \$4,000 or \$5,000.
- 2.—A Total and Permanent Disability Benefit of one-half of face value of policy, with exemption from further payment of premiums or Court Dues.
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- 4.—An Old Age Disability Benefit of one-tenth of face value of policy payable yearly for ten years, on being declared totally and permanently disabled by infirmities of age after the seventieth birthday.
- 5.—An Old Age Pension payable during disability, which may be taken as a substitute for the Old Age Disability Benefit.
- 6.—Free Medical Attendance by Court Physician where not dispensed with by Court by-law; also trained nurses in certain cases.
- 7.—A Sick Benefit of \$3 to \$5 per week, subject to provisions of the Constitution and Laws of the Order; optional, and when taken costs extra.
- 8.—A Burial Benefit of \$100 at death of a Pensioner.
- 9.—A Funeral Benefit of \$50 at death of a member enrolled in Sick and Funeral Benefit Department.
- 10.—Social and Fraternal Privileges of the Court Room.

**The Members, the Benefits, and the Surplus**

At 31st December Each Year.

Year.	Total Membership.	Benefits Paid.	Total Surplus.	Surplus per Capita.	Death Rate per 1,000.
1881	1,019	\$ 1,300 00	\$ 4,568 55	\$ 4 48	4.50
1882	1,134	12,058 86	2,967 93	2 61	11.00
1883	2,210	9,493 68	10,857 65	4 91	4.73
1884	2,558	13,914 31	23,081 85	9 01	4.23
1885	3,642	26,576 99	29,802 42	8 18	7.76
1886	5,804	28,499 82	53,981 28	9 30	4.85
1887	7,811	59,014 67	81,384 41	10 44	5.78
1888	11,800	89,018 16	117,821 96	9 98	6.43
1889	17,349	116,787 82	188,130 36	10 84	5.85
1890	24,604	181,846 79	283,967 20	11 54	5.18
1891	32,303	261,436 21	408,798 20	12 65	6.40
1892	43,024	344,748 82	580,597 85	13 49	6.25
1893	54,484	392,185 93	858,857 80	15 76	5.47
1894	70,055	511,162 30	1,187,225 11	16 94	5.47
1895	86,521	685,000 18	1,560,733 46	18 03	5.67
1896	102,838	820,941 91	2,015,484 38	19 60	5.50
1897	124,685	992,225 60	2,558,832 78	20 52	5.56
1898	144,000	1,176,125 14	3,186,370 36	22 12	5.67
1899	163,610	1,430,200 33	3,778,543 58	23 09	6.30
1900	180,717	1,545,145 64	4,483,364 44	24 81	6.53

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

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

James Marshall, 24 Charing Cross, London, Eng.

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

Or Any Officer or Member of the Order.

tion of the Government, is about 110 miles, and the act provides that its construction is to be in charge of a commission of not less than three or more than five, who are to be paid \$1,000 a year each. The material used for the construction of the line, and the equipment is as far as possible to be of Canadian origin and manufacture. It is provided that the cost of construction is to be met by issuing debentures redeemable out of a fund created by the sale of lands, of which not exceeding 20,000 acres a mile are to be set aside in tiers of townships. Aliens are not to be employed, and the current rate of wages for similar work is to be paid by the contractors. The commissioners are to have full power to appoint surveyors, accountant and other necessary officials for the construction of the line, fix the route, etc., and report to the Legislature. The commissioners are declared to be a corporation, and to be vested with all the powers usually conferred on railway companies by the railway acts.

According to the survey made by W. B. Russell, C.E., the route proposed to be followed is from North Bay through the townships of Widdifield, Mulock, Merrick, Stewart, and Osborne, then across unsurveyed territory, crossing the projected Nipissing and James' Bay Ry., the construction of which was started in 1901, at Redwater lake, to the north east arm of lake Temagami, then due north through the timber reserve to the township of Bucke, and thence to Thornloe, on Lake Temiskaming. Of this route about 50 miles has been located and is ready for construction. It is not improbable that this route will be abandoned, and an arrangement made whereby the route of the Nipissing and James' Bay Ry. will be utilized. In the course of the discussion in the Legislature the Commissioner of Public Works said that the length of railway at present contemplated was 110 miles, but it might be desirable at an early date to extend it through the agricultural belt. The estimated cost of the line was \$2,234,000; the highest estimated cost of any portion was \$40,000 for a mile or so of rough country about 29 miles north of North Bay, the total cost for 10 miles there being \$278,000. Elsewhere the country does not present any serious difficulties, although the cost would be somewhat heavier than other lines, owing to the use of Canadian rails and materials generally. The Premier stated that the Dominion Government had been interviewed with regard to a subsidy, but a decision had not then been reached. As to the operation of the line, the Commissioner of Public Works said the Government might operate it, but at any rate the right had been retained to give running powers to any railway wishing to get into the Temiskaming country. (Feb., pg. 62.)

**Thunder Bay, Nipigon and St. Joe Ry.**—The Ontario Legislature has voted \$2,000 a mile for 10 miles of line from a point 30 miles east of Port Arthur, Ont., in addition to 5,000 acres of land. In 1901, a cash and land bonus to the same extent was voted in respect of the first 30 miles. D. F. Burk, President, and his associates are making application for a Dominion subsidy. As soon as this is voted, it is stated that construction will be commenced. (Aug. 1901, pg. 233.)

**Tilsonburg, Lake Erle and Pacific Ry.**—We were recently informed that work would be resumed on the extension from Tilsonburg to Ingersoll during March, and that the line would be completed and in operation by July 1. J. A. Dart, the contractor, had the ties distributed and everything ready for completing the work last year, but a deviation of a mile had to be made to comply with the requirements of the Railway Committee of the Privy Council. (Dec. 1901, pg. 359.)

Application is being made at the current session of the Dominion Parliament for an act

declaring the Co.'s corporate powers in force although the line was not completed within the time limit, and authorizing its extension from Ingersoll through the counties of Oxford, Perth, Waterloo, Wellington, Dufferin, Grey and Simcoe to Georgian Bay. (Feb., pg. 62.)

**Toronto and Hamilton Ry. Co.**—The bill to incorporate a company under this title was withdrawn by the promoters at the recent session of the Ontario Legislature, the subcommittee appointed to consider it having voted unanimously against its consideration. (Feb., pg. 62.)

**Toronto, Lindsay and Pembroke Ry.**—By a special clause in the Railway Subsidy Act passed at the recent session of the Ontario Legislature the periods within which work must be commenced and completed were extended by three years each, viz. from 1902 and 1905 to 1905 and 1908 respectively.

**Toronto Suburban Ry. Co.**—An act was passed at the recent session of the Ontario Legislature ratifying a by-law passed by the township council of Etobicoke, confirming an agreement between the township and the Co. respecting the operation of the latter. The agreement gives the T.S. Ry. Co. permission to lay its tracks from the present terminus at Lambton Mills, along Dundas St. through the village of Islington to the westerly limit of the township of Summerville.

**The Trans-Canadian Ry. Co.** was incorporated by the Dominion Parliament in 1895 to construct a railway from or near Quebec, westerly in a straight line as near as possible to Lake Winnipeg, thence westerly by way of the Yellowhead pass, thence via the Skeena valley to Port Simpson or Port Essington, on the Pacific coast. The Co. was not limited as to time, but in 1897 the name of the Co. was changed to the Trans-Canada Ry. Co.; it was given power to construct a branch from the main line at the crossing of St. Maurice river southerly to the village of Montcalm, thence in a direct line to Montreal, such branch not to be constructed until 200 miles of the main line beginning at Quebec shall be in operation. The Co. was given four years within which to commence construction and 10 years to complete its lines. On June 30, 1901, some construction was done at Roberval, Que., the terminus of the Quebec and Lake St. John Ry., 190 miles from Quebec, in order to keep the charter alive. Application is being made at the current session of the Dominion Parliament for an act declaring the corporate powers of the Co. in full force and effect and to consolidate the acts relating to the Co. Power is also sought for an extension of time to complete the railway commenced at Roberval, Que., in July, 1901, to the Nottawa river, James bay, and for running powers over the Quebec & Lake St. John Ry. from Roberval to Quebec and Chicoutimi and for other purposes.

At a meeting held in Quebec, Mar. 4, the Co. was formally organized. J. G. Scott, General Manager of the Quebec and Lake St. John Ry., and of the Great Northern Ry. of Canada, with others connected with these railways, are among the promoters of the line. It was stated that a construction firm in Chicago was ready to commence work on the first 60 miles from Roberval as soon as the act is obtained. The capital of the Co. is \$20,000,000. See Quebec and James Bay Ry., Aug., 1901, pg. 232.

**Vancouver, Victoria and Eastern Ry. and Navigation Co.**—It is reported that negotiations have been going on between the promoters of this line and the B.C. Government with a view to making it a part of the Canadian Northern Ry. system, but nothing appears to have been decided along this line, so far as a contract between the Co. and the government is concerned.

The spur lines projected to Phoenix and to the Granby smelter, Grand Forks, about which difficulties arose between the Co. and the Kettle Valley Lines, will not be constructed at present. So far as the Granby smelter spur is concerned the right of way for the tracks has been granted by Grand Forks and the difficulties between the two companies arranged.

Application is being made at the current session of the Dominion Parliament for an act granting an extension of time within which the lines authorized to be constructed may be commenced and completed. (Feb., pg. 62.)

**Vancouver, Westminster, Northern and Yukon Ry.**—Negotiations are still proceeding with the Vancouver city council respecting right of way, etc. The Co. proposes to locate its terminus at the Royal City Mills, which will be reached by a bridge from the north side of the creek, and asks for a triangular strip of the creek flats about 100 acres in extent. It is said that as soon as an agreement is reached construction will be commenced. President Hendry recently stated in an interview that he anticipated that the Vancouver, Victoria and Eastern Ry., the Northern Pacific Ry., and the Great Northern Ry. (U.S.), would enter Vancouver over the V., W., N. and Y. Ry. Surveys have been made on the northern extension of the projected line as far as Lillooet. Thence the line is projected by the Buckley valley and will strike the Blackwater river at the point where the Canadian Northern Ry. from Port Arthur, Ont., to Bute Inlet, B.C., will cross. (Jan., pg. 5.)

**Velvet (Rosland) Mine Ry. Co.**—F. E. Harman, G. B. Mee, A. Davidson, and H. Frisby, of London, Eng., are making application at the current session of the Dominion Parliament for an act incorporating a company under this title to construct a narrow gauge railway from Rosland, B.C., to Velvet Mines, on the west side of Sophia mountain, thence south-easterly to the international boundary, to a connection with a U.S. line; and with power to enter into an agreement with the C.P.R., the Columbia and Western Ry., the Red Mountain Ry., and the Great Northern Ry. for conveying or leasing the line. The head office of the Co. is to be in London, Eng., the capital \$500,000 and bonding powers to the extent of \$30,000 a mile are sought.

**Vernon to Lumby.**—A proposition is under consideration for the construction of a tramway between Vernon and Lumby, B.C., about 15 miles. P. Ellison, M.L.A., Vernon, is one of the promoters.

**Victoria Terminal Ry. and Ferry Co.**—Work is progressing on the extension of the Victoria and Sydney Ry. to the old market building in Victoria, which is being converted into a terminal station. Pending the construction of the permanent ferries, transfer barges will be used to carry the cars to the mainland, and these will probably operate to Vancouver until the slips and the connecting lines via New Westminster are completed. It is reported that the Great Northern Ry. (U.S.) is negotiating with McKenzie Bros., for the control of the line. (Feb., pg. 62.)

**Viriden Northern Ry. Co.**—W. J. Kennedy, J. F. Frame, H. C. Simpson, W. J. Wilcox, J. W. Higginbotham, B. Meek, R. E. Trumbell, F. R. McLellan, H. H. Goulter, J. F. C. Menlove, J. Joslin, W. D. Craig, D. McDonald, R. Langtry, and J. H. Agnew, of Viriden, Man., were incorporated at the last session of the Manitoba Legislature under this title to construct a railway, to be operated by steam or electricity, from township 1, ranges 24 to 27 west of the 1st principal meridian, northerly to Viriden, thence northerly or north-westerly to the northern or western boundary of Manitoba. The Co. may amalgamate with any other railway company; it may purchase

lines already constructed; and lease or acquire running powers over other lines; or may lease its lines to any other company. The capital of the Co. is fixed at \$1,000,000, and it is given three years within which to commence construction.

**The Windsor and Detroit Union Bridge Co.'s** bill asking for five years' extension of time within which work must be commenced, has passed the Railway Committee of the Dominion Parliament. (Feb., pg. 62.)

**The Windsor, Essex, and Lake Shore Rapid Ry. Co.** has been empowered, by an act passed at the recent session of the Ontario Legislature, to issue bonds to the extent of \$20,000 a mile, instead of \$10,000 as formerly. (Feb., page 63.)

**The Winnipeg Electric St. Ry.** proposes to extend its tracks on Portage avenue to Deer Lodge to improve the line to the exhibition grounds, and if possible to double track the line on Osborne St. (Feb. pg. 63.)

**Winnipeg General Power Co.**—The Manitoba Water Power Electrical Co., which was originally incorporated under the Manitoba Joint Stock Companies' Act, obtained at the recent session of the Manitoba Legislature an act granting very large extensions of its charter powers. The name has been changed to the Winnipeg General Power Co., and its capital increased to \$5,000,000. In addition to the very wide and general powers to develop water, electrical and steam powers and to supply the same for motive, lighting and heating purposes in Manitoba, the Co. can engage in any kind of industry requiring power, can construct telegraph and telephone lines, engage in lumbering, real estate and other businesses. The provisions of the Manitoba Railway Act are made applicable to the Co.'s railway undertaking. The Co. is authorized to construct an electric railway in Winnipeg, subject to existing rights, and thence to the Winnipeg river or Lac du Bonnet, or to Fort Alexander on Lake Winnipeg, for passengers and freight, and to carry on a general navigation business.

**Winnipeg River Power Co.**—W. Mackenzie, D. D. Mann, Toronto; F. W. Thompson, W. A. Black, Winnipeg, and F. S. Pearson, Halifax, N.S., were incorporated at the last session of the Manitoba Legislature under this title, with a capital of \$2,000,000, to develop water power on the Winnipeg river, or elsewhere in Manitoba; and supply electrical, steam or other power anywhere in the Province; carry on mills or factories of any kind, and to construct an electric railway from the boundary of the city of Winnipeg to West Selkirk, and from Winnipeg to the Winnipeg river via Selkirk or otherwise. The Co. may carry freight on its railway, amalgamate with other companies, or be amalgamated by any other company. The Co.'s right to construct the electric railway is subject to the consent of the municipalities through which it passes; and the rates to be charged are to be subject to the approval of the Government. It is reported that D. A. Kenzie, C.E., has purchased a right of way through the Cook's Creek district for the proposed line. (Feb., pg. 63.)

**The Winnipeg and St. Andrews Ry. Co.**, which has power to construct an electric railway from Winnipeg to St. Andrew's rapids, was granted an extension of two years within which to commence work, at the recent session of the Manitoba Legislature.

**The Woodstock, Thames Valley and Ingersoll Electric Ry. Co.** has been given by the Ontario Legislature until Nov. 30, 1906, to complete its line, of which a small section in Woodstock, Ont., and the proposed branch to Embro, has yet to be built. Power was also given to issue preference stock. (Feb., pg. 63.)

**The Woodstock and Centerville Ry. Co.** is making application at the current session of the New Brunswick Legislature for an act re-vising and continuing its act of incorporation, and extending the time for the commencement and completion of its railway. Press reports refer to this projected line, and the subsidy voted in 1897, as the St. John Valley and Riviere du Loup Ry. The latter railway was voted a subsidy to build from Woodstock to Prince William, 22 miles, in 1890; and two years later a subsidy to build 15 miles from the north end of the previously subsidized line. Neither of these subsidies have been earned. (Dec., 1901, pg. 360.)

**Yarmouth and Digby Electric Ry. Co.**—Application is being made at the current session of the Nova Scotia Legislature for an act incorporating a company to construct an electric railway between Yarmouth and Digby, about 70 miles.

The Railway and Shipping World has received from the French Ministry of Commerce, Industry, Posts and Telegraphs, a diploma certifying that the exhibit of bound volumes of this paper made at the Paris Exposition in 1900 was awarded honorable mention.

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**May 22, 23, 24, 26, 27, 28, 29, 30, 31.**

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**Six or More Races Each Day.**

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**W. P. Fraser,** Secretary-Treasurer.

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NOTICE is hereby given that the Ordinary General Half-Yearly Meeting of the Grand Trunk Railway Company of Canada will be held at the City Terminus Hotel, Cannon Street, London, E.C., on Thursday, 10th day of April, 1902, at Two o'clock, p.m., precisely, for the purpose of receiving a Report from the Directors, for the election of Directors and Auditors, and for the transaction of other business of the Company.

Notice is also given that the Transfer Books of the Company, in London, will be closed from Thursday, the 13th day of March, to the day of Meeting, both days inclusive.

By order,

C. RIVERS-WILSON, President.  
 H. H. NORMAN, Secretary.

Dashwood House,  
 9 New Broad St., London, E.C.,  
 March 5th, 1902.

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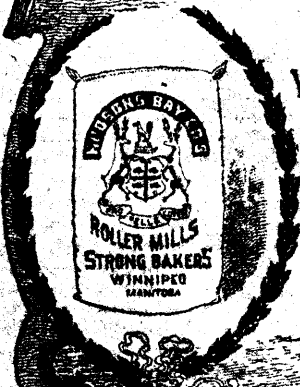
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<b>Air Brakes &amp; Fittings</b> Westinghouse Mfg. Co..... Hamilton, Ont.	<b>Fencing</b> Page Wire Fence Co..... Walkerville, Ont.	<b>Portland Cement</b> Rice Lewis & Son..... Toronto.
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<b>Boiler Covering</b> Mica Boiler Covering Co..... Montreal.	<b>Grain Elevators</b> John S. Metcalfe Co..... Chicago, Ill.	<b>Rice Lewis &amp; Son</b> ..... Toronto.
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<b>Contractors' Plant</b> M. Beatty & Sons..... Welland, Ont.	<b>Launches</b> Polson Iron Works..... Toronto.	<b>Signals</b> N. L. Piper Railway Supply Co..... Toronto.
<b>Cross Arms, Top Pins &amp; Side Blocks</b> The Firstbrook Box Co..... Toronto.	<b>Life Insurance</b> Independent Order of Foresters..... Toronto.	<b>Signs</b> Acton Burrows Co..... Toronto.
<b>Curtains</b> The Hudson's Bay Company.....	<b>Travelers' Insurance Co</b> ..... Montreal.	<b>Snow Ploughs</b> Rhodes, Curry & Co..... Amherst, N.S.
<b>Outs</b> Acton Burrows Co..... Toronto.	<b>Lights, Contractors and Wrecking</b> W. H. C. Mussen & Co..... Montreal.	<b>Spikes</b> Rice Lewis & Son..... Toronto.
<b>Diggers</b> Hall & Son..... Toronto.	<b>Linoleum and Floor Coverings</b> The Hudson's Bay Company.....	<b>Springs</b> Canada Switch and Spring Co..... Montreal.
<b>Ditchers</b> M. Beatty & Sons..... Welland, Ont.	<b>Locomotives (Compressed Air)</b> American Locomotive Co..... New York, N.Y.	<b>Station Name Signs</b> Acton Burrows Co..... Toronto.
<b>Derricks</b> M. Beatty & Sons..... Welland, Ont.	<b>Baldwin Locomotive Works</b> ..... Philadelphia, Pa.	<b>Steamboats</b> Polson Iron Works..... Toronto.
<b>Door Signs</b> Acton Burrows Co..... Toronto.	<b>Locomotives (Electric)</b> American Locomotive Co..... New York, N.Y.	<b>Steamboat Signs</b> Acton Burrows Co..... Toronto.
<b>Dredges</b> M. Beatty & Sons..... Welland, Ont.	<b>Baldwin Locomotive Works</b> ..... Philadelphia, Pa.	<b>Steam Couplers</b> Safety Car Heating and Lighting Co..... New York City, N.Y.
<b>Dry Goods</b> The Hudson's Bay Company.....	<b>Locomotives (Steam)</b> American Locomotive Co..... New York, N.Y.	<b>Co</b> ..... New York City, N.Y.
<b>Electric Car Route Signs</b> Acton Burrows Co..... Toronto.	<b>American Locomotive Co</b> ..... New York, N.Y.	<b>Steam Shovels</b> M. Beatty & Sons..... Welland, Ont.
<b>Electric Cranes</b> W. H. C. Mussen & Co..... Montreal.	<b>Baldwin Locomotive Works</b> ..... Philadelphia, Pa.	<b>James Cooper</b> ..... Montreal.
<b>Electric Trucks</b> Baldwin Locomotive Works..... Philadelphia, Pa.	<b>Canadian Locomotive Co</b> ..... Kingston, Ont.	<b>W. H. C. Mussen &amp; Co</b> ..... Montreal.
<b>Electric Wires</b> The Wire and Cable Co..... Montreal.	<b>Locomotives (Back)</b> American Locomotive Co..... New York, N.Y.	<b>Steel</b> Rice Lewis & Son..... Toronto.
<b>Enameled Iron Signs</b> Acton Burrows Co..... Toronto.	<b>Baldwin Locomotive Works</b> ..... Philadelphia, Pa.	<b>Switches</b> Canada Switch and Spring Co..... Montreal.
<b>Engines, Stationary &amp; Marine</b> Polson Iron Works..... Toronto.	<b>Machine Tools</b> John Bertram & Sons Co..... Dundas, Ont.	<b>Switch Targets</b> Acton Burrows Co..... Toronto.
<b>Engraving</b> Acton Burrows Co..... Toronto.	<b>Matches</b> The Hudson's Bay Company.....	<b>Telegraph and Telephone Wires</b> The Wire and Cable Co..... Montreal.
<b>Toronto Engraving Co</b> ..... Toronto.	<b>Milepost Numbers</b> Acton Burrows Co..... Toronto.	<b>Telegraph and Telephone Office Signs</b> Acton Burrows Co..... Toronto.
	<b>Mohair</b> The Hudson's Bay Company.....	<b>Tobacco and Cigars</b> The Hudson's Bay Company.....
	<b>Numbers</b> Acton Burrows Co..... Toronto.	<b>Toilet Paper</b> The Hudson's Bay Company.....
	<b>Oakum</b> Rice Lewis & Son..... Toronto.	<b>Tools</b> Rice Lewis & Son..... Toronto.
	<b>Oils</b> Galena-Signal Oil Co..... Franklin, Pa.	<b>Track Jacks</b> Duff Manufacturing Co..... Allegheny, Pa.
	<b>The Imperial Oil Company</b> ..... Toronto.	<b>W. H. C. Mussen &amp; Co</b> ..... Montreal.
	<b>The Queen City Oil Company</b> ..... Toronto.	<b>A. O. Norton</b> ..... Coaticook, Que.
	<b>Office Signs</b> Acton Burrows Co..... Toronto.	<b>Track Tools</b> F. E. Came..... Montreal.
	<b>Packing</b> Gutta Percha and Rubber Mfg. Co..... Toronto.	<b>Canada Switch and Spring Co</b> ..... Montreal.
	<b>Pipe Covering</b> Mica Boiler Covering Co..... Montreal.	<b>James Cooper</b> ..... Montreal.
	<b>Plushes</b> The Hudson's Bay Company.....	<b>Rice Lewis &amp; Son</b> ..... Toronto.
		<b>W. H. C. Mussen &amp; Co</b> ..... Montreal.
		<b>Tramway Equipment</b> J. J. Gartshore..... Toronto.

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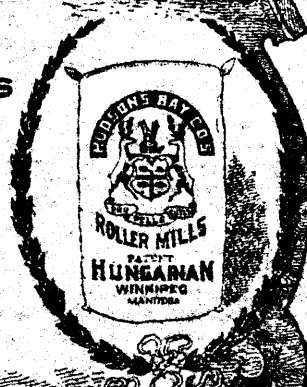
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