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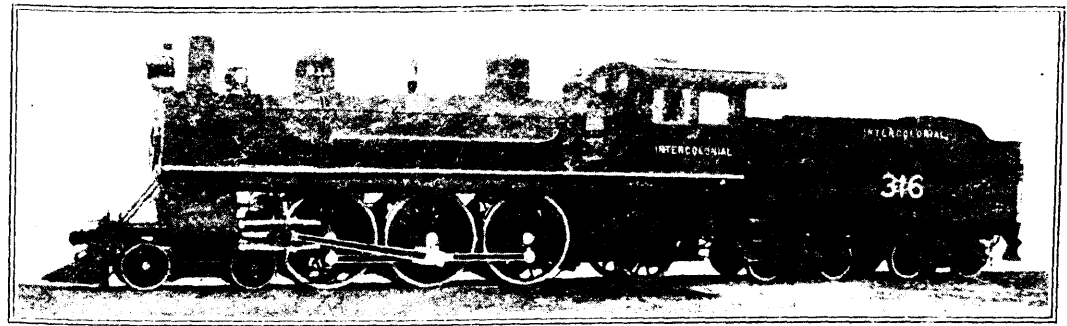
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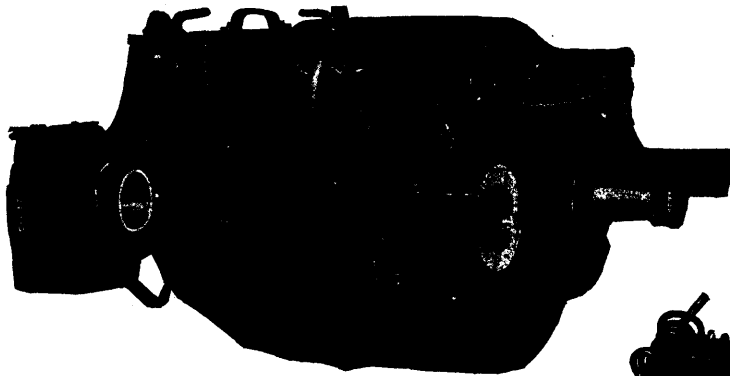
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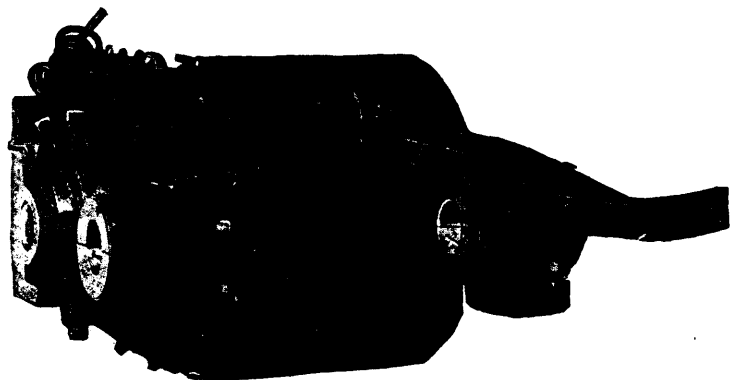
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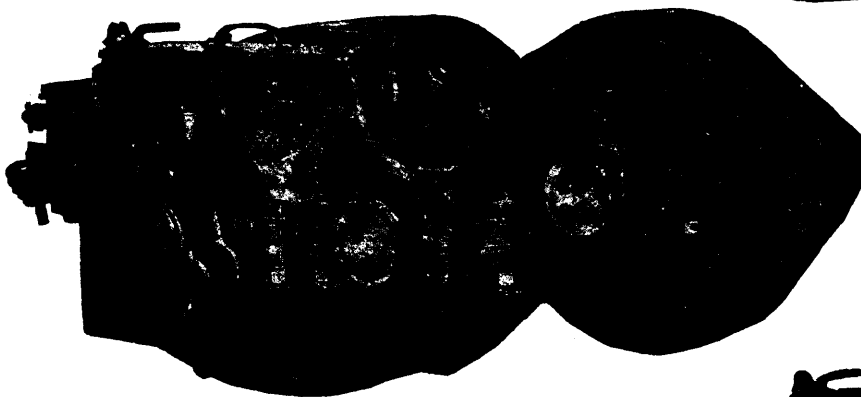


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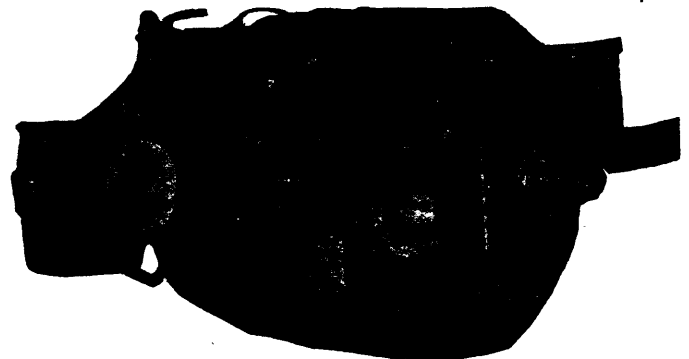


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Transcontinental Railway Report.

In our June issue we gave a brief advance summary of the interim report of the Transcontinental Ry. Commissioners, more extended reference to which will be of interest. The report was signed by F. B. Wade, Chairman, who died in May, shortly after the report had been completed, and whose place on the Commission has not yet been filled, C. A. Young having been appointed acting Chairman until such time as the new member is appointed.

The report deals with the work of the Commissioners from the date of organization in Sept., 1904, to Feb. 28, 1905. Permanent offices for the Commission have been obtained in the Corry Building, Ottawa, at a rental of \$8,500 a year. The Commissioners meet every week day when a quorum of two members is in town; the chief engineer attends all board meetings and takes part in the deliberations.

The first matter considered was as to what work should be undertaken during the then approaching autumn and winter. It was decided that as the G.T. Pacific Ry. Co. had had in hand the surveys from Winnipeg east to somewhere north of North Bay, and as it might prove desirable to purchase and take over these surveys, it would be well to first direct attention to placing in the field parties along the line from Moncton to Lake Abitibi. With regard to the route across the province of New Brunswick, as there was a great diversity of opinion as to whether a line across the centre of the province was obtainable at all, it was decided to run preliminary surveys from Moncton to Grand Falls by alternative routes, the one via Chipman, Fredericton and the valley of the St. John River to Grand Falls, and the other via or near Chipman direct across country to Grand Falls. As there was also a diversity of opinion as to whether the line further west should be located by the St. Maurice River and north of Lake Abitibi, or by the Mattawin River and south of Lake Abitibi, it was decided to explore both of these lines. It was also decided to ascertain if a location could be secured from Lake Clear down the River du Postes to St. Michael and on to Joliette. The survey parties for the several districts between the points named, having been organized and placed in the field, the work was prosecuted throughout the fall and winter. Subsequently additional parties were placed in the field between Lake Abitibi and Winnipeg, Man.

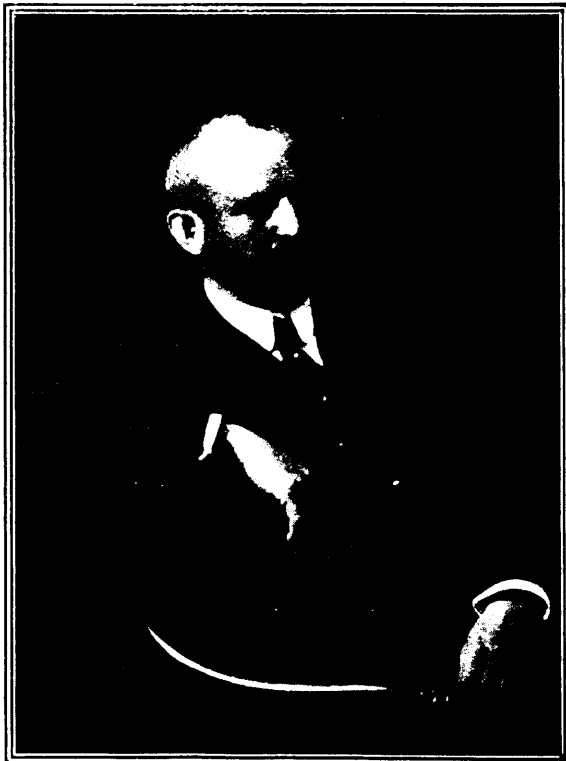
"The engineering work," the report states, "has been carried on under the supervision of the Chief Engineer, H. D. Lumsden, whose services and advice we have had to avail ourselves of in many other matters than

those strictly pertaining to engineering work, and which we have always found most valuable."

Early consideration was given to the desirability of purchasing the surveys, plans, etc., made by the G.T. Pacific Ry. Co., on the main line east of Winnipeg. It was deemed desirable that these should be secured as it would at once give the Commission a mass of valuable information, and negotiations were opened with the G.T.P. Ry. Co., Nov. 26, 1904. The terms upon which the Commissioners proposed to take over the

cost of the said surveys to be computed to Nov. 30, and all parties and materials in the field and elsewhere to be taken over by us on Dec. 1. (6) The accounting to commence forthwith and to be pushed through as rapidly as possible. (7) If necessary, a portion of the payment to be deferred until after a further appropriation by parliament to the Commission, such deferred payment to bear interest at the rate of 4%." The offer was finally accepted Jan. 13, 1905, and special auditors were appointed to go over the books and accounts of expenditure made in connection with the surveys. The audit was made under the supervision of the Commissioners' Assistant Engineer, M. J. Butler, who reported during its progress, "that he considered that 4-5 of section 3 of the surveys was not within the zone of the explorations which would have been made by the Commission upon the main line, and it was agreed as a result that the Commission would take over the cachés, equipment and outfits in connection with said section 3 and pay for 1-5 of the surveys made upon it, which would cover the portion which was reasonably within the zone of our explorations. The Commissioners agreed that if their chief engineer, after additional explorations, was of the opinion that any greater portion of section 3 was within the zone which would have been explored by the Commission, the difference would be added to the amount that we would pay. The amount arrived at as the cost of these surveys, including the supplies on hand, and 1-5 of section 3, is \$289,863.67, including interest up to Nov. 30, 1904. The total cost to the company of the surveys upon the main line east of Winnipeg, including the whole of section 3, was \$318,308.24, including interest from the date of payment to Nov. 30, 1904." The reason the Commission agreed to take over the cachés and supplies on the remaining 4-5ths of section 3, was because it was desirable to have the supplies in that part of the country, where they could be easily dropped down the streams, north, to the line projected by the Commission. It was also agreed

to pay for the cost of the parties working in the field upon that portion of the main line taken over by the Commission from and after Dec. 1, 1904, up to the date at which they were taken over. The cost of these parties has not been accurately ascertained as yet. Previous to the purchase of these surveys the Commissioners had sent out parties to survey a route between Winnipeg and Lake Abitibi, the headquarters of the district engineers in charge being Winnipeg (afterwards changed to Rat Portage, Ont.), Nepigon and North Bay, Ont. The Commissioners pro-



ARCHER BAKER,

European Manager Canadian Pacific Railway.

surveys were:—(1) We propose to purchase the surveys of the G.T.P. east of Winnipeg, other than those which have reference to its proposed branch lines to Thunder Bay and North Bay; also its depots, cachés, tents, outfits, provisions, instruments, etc. (2) We will pay for these their actual cost, allowing interest at the rate of 4% from the time the bills are actually paid by the company. (3) The cost to be determined by accountants appointed by us, who will examine the books and vouchers under the supervision of our engineer. (4) All maps, plans, field books and other data in connection with the said surveys to be handed over to us. (5) The

to pay for the cost of the parties working in the field upon that portion of the main line taken over by the Commission from and after Dec. 1, 1904, up to the date at which they were taken over. The cost of these parties has not been accurately ascertained as yet.

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(Continued on page 341.)

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Transcontinental Railway Report.

(Continued from page 337.)

posed to keep the route as far as possible in a line with Lake Abitibi, and not to deflect it south to North Bay, as was the object of the G.T.P.R. Co. The Commission had, at the time of making the report, only two of the survey parties sent out by the G.T.P.R. Co.

The Commission has a well-organized transportation staff, with headquarters at Ottawa, equipped and in a position to deliver all needed supplies required by the parties, all along the line, and is in a position to move its supplies into the interior with comparative ease and certainty, although the cost of transportation is, in some sections, heavy. The transportation through New Brunswick and the eastern end of the province of Quebec, extending as far as the western boundary of district B has been accomplished mostly by teams, and very little trouble has been experienced in these districts, except that arising from the unusually heavy snowfall of the past winter. A great deal of difficulty was met with in getting supplies up to the north waters of the Ottawa and Gatineau rivers. It was late before the supplies were started, after having secured the necessary canoes, boats and men. The men were overtaken by ice in some cases, before they had reached the distributing caches aimed at. The winter transportation up the Gatineau has been conducted by teams as far as the forks to a large cache there, from which point it has been distributed to the different parties by packers and dog teams. Dog teams have also been employed to advantage up through North Temiskaming to the east of Lake Abitibi. In order to get supplies up to the north and west of Lake Abitibi 46 miles of road had to be cut out. Although the winter was one of unusual severity, there were no disasters of any moment, with the exception of the death of W. Leamy, transport officer up the Temiskaming route. He went on ahead of his party, looking for the best way for moving his supplies on, and it is supposed that he broke through the ice and was drowned. The distance from the end of the railway track at Maniwaki to where the supplies are taken by teams to the forks of the Gatineau, is about 115 miles. From there to the south line is about 20 miles, and from the south line to the north line is about 50 miles. As there is no road or trail at all from the forks northward, the difficulty of transporting supplies by dog teams and packers can be appreciated. One of the greatest obstacles encountered in the transporting of supplies into the interior is the slush upon the lakes. After the lakes freeze up the weight of the first heavy fall of snow sinks the ice; consequently the water overflows it and saturates the snow, which is turned into slush, and will not freeze except when broken up. This slush will usually not bear the weight of a man, and is sometimes several feet in depth. Each successive fall of snow has the same result, and the lakes are sometimes rendered almost impassable. The purchase of supplies, etc., were made by the purchasing department, under the charge of A. L. Ogilvie.

So far as the Commissioners were aware, all its employes are British subjects and, with but few exceptions, Canadian born. "We feel confident," the report continues, "that we will have a full home supply of both skilled and common labor for the purposes of the work. During the rather hasty marshalling of our forces, we took on a few engineers, instrument men and laborers, who proved to be undesirable. This was to be expected. These have been about all weeded out, and we are confident that we have in our employ to-day, as fine a body of engineers, assistants and men as can be found upon any public work. We have laid down the rule—

and will adhere to it—that promotion must be made on merit alone, and in the matter of merit the judgment of the engineers will prevail in their department."

As to the work accomplished it is reported that the exploratory surveys in districts A and B had been completed, and the parties withdrawn. The Commission is now possessed of sufficient information to enable a decision to be arrived at as to whether the line via Fredericton and St. John River Valley or the one across the centre of New Brunswick should be adopted. It will be some little time before sufficient information is obtained to enable a decision to be arrived at as to whether the line north or south of Lake Abitibi will be preferable, although about all the information desirable for that purpose in the eastern portion of district B has been secured. It was proposed to commence location surveys in districts A and B as soon as the local conditions would permit, probably the first week in May. It was expected that location surveys in districts A, B and F would be completed so that tenders might be called for in the early autumn.

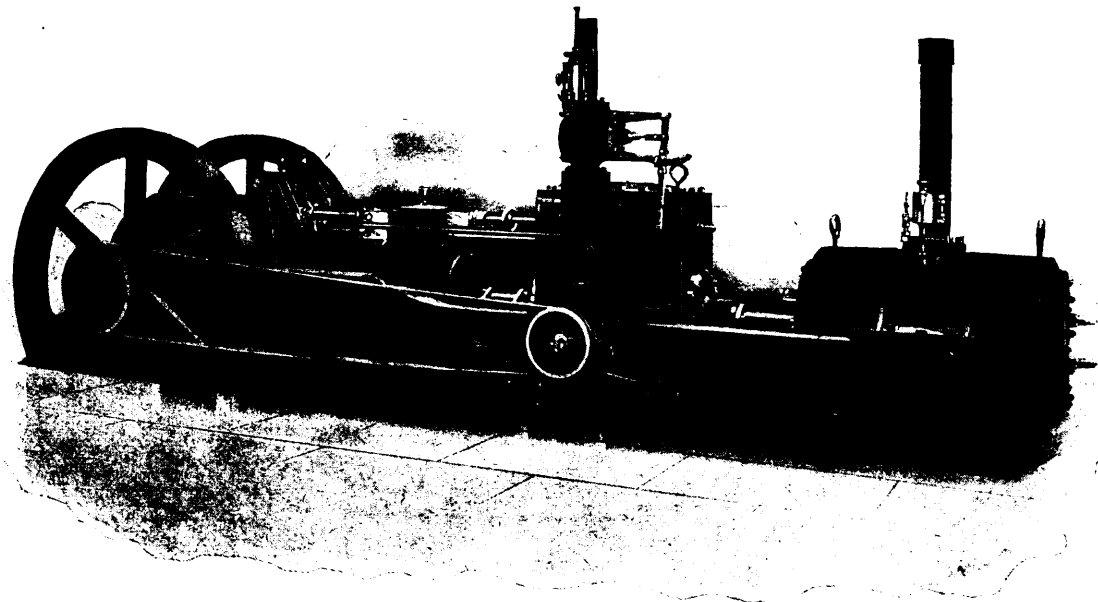
It was deemed advisable before tenders were invited that there should be prepared general specifications covering all works, forms and conditions under which tenders will be asked for, forms of contract that will be insisted upon. After some correspondence with the G.T.P.R., it was decided that there should be uniform specifications on the eastern and western divisions of the line. These specifications were prepared and have been approved by the company. They have been submitted to the Minister of Railways, who has also approved of them, although his sanction is not necessary. A copy of the specifications is appended to the report.

The Commissioners have, as far as possible, familiarized themselves with the country. They have visited Quebec, Edmundston, Grand Falls, Woodstock, Fredericton, Boiestown, St. John, Norton, Chipman, Minto, Moncton and Halifax, and also spent several days in Winnipeg, studying with the Chief Engineer the conditions there, and at the same time, visited Selkirk and Port Arthur. It will be necessary in the near future to decide upon the questions involved in connection with the terminals at Quebec and Winnipeg. The report continues:—

"The Commission feels that it should make special reference to the work which has been accomplished in connection with the surveys from Moncton to Chaudiere. It has been asserted and believed for many years that a line could not be secured across the centre of New Brunswick, with grades equal to the Intercolonial Ry., or any grades which at the time of the building of the I.C.R. would have been considered reasonable; also that it was impossible to secure such a line around the corner of the State of Maine, except by such an enormous expenditure as would make it prohibitive. It was also asserted that it would be necessary to use 1% or heavier grades the remainder of the way to Chaudiere. On the other hand, it was claimed that these difficulties did not exist; that the surveys which had apparently established them had not followed the right direction, or had not exhausted the possibilities of the territory traversed. In taking up this part of the work, the Commissioners decided to have an exhaustive and minute examination made of this country, and to acquire and present such information as would definitely settle and determine these conflicting contentions. We deemed it best to ascertain beyond doubt which was right and which was wrong in order that the public mind would be set at rest. To this end we directed our engineers to make the most exhaustive and careful explorations and surveys, so that having before them all that had been written or said they would be able to make complete and decisive reports. The first of the surveying

parties were placed in the field on Sept. 27, 1904, and continued at work through the whole winter (the most rigorous and with the heaviest snowfall in that part of the country within the memory of living man), and as a result we are in a position to state that we have secured a line from Moncton to Chaudiere with a maximum grade of 0.4 opposed to eastbound freight and 0.6 opposed to westbound freight, and with a maximum curvature of 6° and these only used in a few places. This line runs all the way through a valuable country, part of which is settled and the remainder is most desirable for settlement, and the opening of which will be of great advantage to the country. The probable length of this line, when finally concluded, if the cross country route in New Brunswick is adopted, will be shorter than the I.C.R. between the same points, but how much we cannot say until our location surveys have been completed. If, however, the grades in existence upon the I.C.R. were employed, a saving of at least 90 miles over the I.C.R. by the cross-country route would be effected, and nearly as much by the river route. The value of the road on the lines we have secured, and with the grades and curvatures we have obtained may best be understood by a comparison with the I.C.R. with its grades and curves, and in this connection we refer to the calculations contained in the report of the Assistant Chief Engineer, M. J. Butler, from which I will draw a few conclusions. The same motive power that will haul 660 tons on the I.C.R. will by the line secured haul 1,260 tons going east and 990 tons going west. If we take the workings of the two roads with 10 daily I.C.R. freight trains each way, we find that in 313 working days upon the I.C.R. there would be 4,131,600 pay tons of freight carried, and to haul this number of trains there would be 3,089,310 train miles per year. The cost of this, as per the report of the I.C.R. for 1903, would equal \$3,016,711. The Transcontinental Ry. would only have to run (via the centre route) 1,825,415 train miles per year to move the same quantity of freight, and which, at the same cost per train mile as the Intercolonial, would amount to \$1,782,518.72. It will thus be seen that the annual operating cost of the I.C.R. for the said quantity of freight is \$3,016,711.21, while that of the Transcontinental will only be \$1,782,518.72, a saving in favor of the Transcontinental of \$1,237,192.47, which capitalized at 4% per annum equals \$30,854,812.25; that is, we claim that the Transcontinental, with its lower grades and curves, the road being equally well constructed with the I.C.R., will be over \$30,000,000 more valuable. With increased business the difference would be much greater. If, however, we give the Transcontinental 10 fully loaded trains per day (of its own) instead of confining it to what would be equal in tons to 10 fully loaded trains upon the I.C.R., the difference would be much greater still and the net annual saving would amount to \$2,157,544.52, which capitalized at 4% per annum would give \$53,938,613 as the increased value of the Transcontinental low grade line over the I.C.R. If the grades are increased to the I.C.R. standard the distance would be reduced on the Transcontinental to 403.7 miles. Taking the same 10 trains per day comparison, there would be an annual saving in favor of the latter road of \$548,937.52, which being capitalized at 4% per annum, equals \$13,723,438, which represents the increased value of the Transcontinental Ry. over the I.C.R. for the handling of that amount of traffic. As the traffic increases, the difference increases. These calculations have all been made upon the centre line through New Brunswick. They can easily be applied to the other route. There are sundry other comparisons in the report of Mr. Butler which should be re-

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ferred to, in order to estimate the additional value of the line we are constructing. It has been suggested that the I.C.R. could be utilized for the eastern section of this line, but the judgment of the Commission is, from the information obtainable, that if it were attempted to lower the grades of the I.C.R. to the standard that we have secured over the Transcontinental, the distance from Chaudiere to Moncton would be increased by considerably over 100 miles, and this large section of valuable country would not be opened up. There are two points on the line between Chaudiere and Moncton where it may be found desirable to put in 'pusher' grades of 1%. If this is decided upon, a shortening of distance of 25 miles can be secured. It is a mere matter of calculation as to whether it would be more economical or not to put in these grades. As the heavy through traffic east beyond Quebec will only last about five months of the year, there is much to be said in favor of putting in these two 1% grades. On the other hand is placed the cost of construction, maintenance and operation all the year round, of 25 miles of line, as against a 'pusher' service at two points for about five months of the year. We cannot estimate accurately the cost of the proposed line from Moncton to Chaudiere, but we think we are safe in stating that it will not exceed an average of \$33,000 per mile, and we hope to very considerably reduce this estimate."

The expenditure to the end of March was \$440,462.03, leaving \$59,537.97 on hand of the vote of the session of 1904. There were on the same date liabilities of \$175,761.66. It was estimated that a further vote of \$290,500 would enable the Commissioners to carry on operations to the end of the fiscal year, and for 1905-06, it was estimated that \$1,328,500 would meet all expenditures, and in the event of tenders being asked for in the fall, the Commissioners estimated that it would be necessary to have a further sum of \$3,000,000 to meet payments to contractors. The supplementary estimates provided for \$1,000,000 for construction work, \$1,000,000 for terminals and right of way, and \$352,379.52 to pay the G.T.R. for the surveys, etc., taken over by the Commission.

The report of the Chief Engineer, H. D. Lumsden, set out that M. J. Butler was appointed Assistant Chief Engineer. The entire distance to be surveyed was divided into districts approximating 315 miles each, divided as follows: DISTRICT A, from Moncton to the boundary between New Brunswick and Quebec, under G. C. Dunn, district engineer, with headquarters at Fredericton, N.B. DISTRICT B, from the last mentioned boundary to the vicinity of longitude 74° west, under A. E. Doucet, with headquarters at Quebec, P.Q., and S. R. Poulin, his assistant in the field. The section in the vicinity of Quebec Bridge from St. Jean Chrysostome to the county line between Quebec and Portneuf, about 17 miles, was placed under E. A. Hoare, with headquarters at Quebec. DISTRICT C, from the vicinity of longitude 74° to near the boundary between Quebec and Ontario (east of Lake Abitibi) under A. N. Molesworth, district engineer, with headquarters at Ottawa, Ont., and A. T. Fraser and G. H. Garden, assistants in the field. DISTRICT D, from near the last-mentioned provincial boundary to near longitude 84° west, under J. Aylene, acting assistant district engineer, with headquarters at New Liskeard, Ont. DISTRICT E, from near longitude 84° to near longitude 89° 30', under C. E. Perry, district engineer, with headquarters at Nepigon, Ont., and C. F. Hannington, assistant in the field. DISTRICT F, from near longitude 89° 30' to Winnipeg, under A. E. Hodgins, with headquarters at Winnipeg. Instructions were issued to the engineers in charge respecting their duties. They were in-

structed to adhere to grades not exceeding 0.4% adverse to eastbound and 0.5% adverse to westbound traffic, though in regard to the last mentioned this has been changed to 0.6% in one or two exceptional cases. The maximum curvature was limited to 4°. The work done by the different parties is summarized by the Chief Engineer as follows:—

"DISTRICT A.—On Sept. 27, G. C. Dunn, who had been appointed acting district engineer for that district, organized and started out six survey parties, and during the following month six more parties; two of these, however, were disbanded before the end of Dec. Commencing at Moncton and extending through to Quebec boundary, a large area of country has been explored, and preliminary surveys have been made to Chipman on the Salmon River, and thence by what is known as the back route up the valley of the Gaspereau River, and passing south of Boiestown to the head waters of the Texas and Miramichi rivers, thence to near Plaster Rock, then to Grand Falls and Edmundston, and connecting with the surveys made in district B, at a point about 20 miles beyond the province line. Another route was surveyed branching off the foregoing near Chipman, striking the valley of the St. John River and crossing it at Fredericton, thence following the west side of the river to Woodstock, and Andover, and recrossing the river at the last-mentioned point, thence to Grand Falls, where it joined the back route survey. On both these routes many pieces of alternative lines were run or explored. The total distance by the back line from Moncton to the Quebec boundary is, say, 294 miles, which distance will probably be shortened on location. By the river route the distance is 311 miles, but will probably be lengthened on location. Total mileage covered in this district was, of barometrical explorations, 2,900 miles; preliminary lines, 1,320. Grades of 0.4% adverse to eastbound and 0.6% adverse to westbound traffic, with maximum curvature of 4° were obtained, except the curvature which may require the use of several 6° curves.

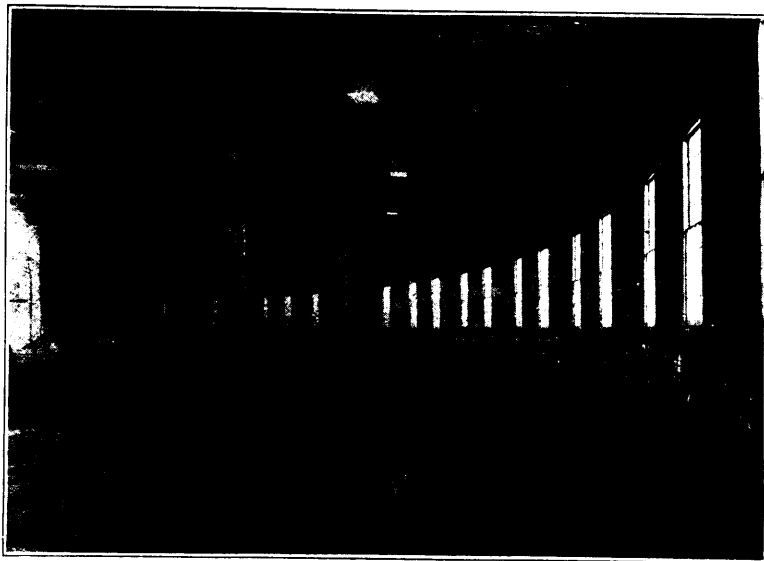
"DISTRICT B.—The first of 11 survey parties in this district was sent out on Oct. 10, 1904, from which date to Mar. 1, 1905, a large area of country was explored and examined, some 677 miles of exploratory and 540 miles of preliminary surveys having been run. The results of these surveys prove that for the entire distance (423 miles) from the boundary between the province of New Brunswick and Quebec, near Lake Baker to the westerly limit of the district near longitude 74° west, grades not exceeding 21.12 ft. per mile opposed to eastbound and 31.6 ft. per mile opposed to westbound traffic have been obtained, and the last mentioned grade has only to be made use of in a very few cases. The curvature was limited to 4°, but it has been found necessary to use 6° curves at two or three exceptional points. The portion included between St. Jean Chrysostome on the south, and the boundary between the counties of Quebec and Portneuf on the north side of the St. Lawrence River was put in charge of E. A. Hoare, and his section also includes the approaches and terminals for Quebec city. The main line distances were as follows:—Line 1 with viaduct over Cap Rouge River, I.C.R. Railway to B. & R. Company yard, 5.33 miles; B. & R. Co. bridge and line, 2.40 miles; Bridge to county line, 7.60 miles; total, 15.30 miles. Grade 0.4% each way. Line 2, avoiding viaduct—I.C.R. Railway to B. & R. Company yard, 5.33 miles; B. & R. Co. bridge and line, 2.40 miles; Bridge to county line, 13.14 miles; total, 20.87 miles. Grade 0.4 eastbound—0.6 westbound. City approaches, bridge to Champlain market, 6.40 miles. Grades adverse to westbound traffic about 53 ft. to

the mile. Total distance county line to Champlain market via line 1.14 miles. Branching off line 2, avoiding viaduct to Louise basin 6.40 miles. Maximum grade 0.4. Total distance county line to Louise basin via line 2, 12.75 miles. Maximum grade westbound 0.6%. Total length of location and preliminary survey lines run in this section, 85 miles.

"DISTRICT C.—The country through which the line in this district will pass is entirely uninhabited save by several Hudson's Bay or fur traders' posts and a few Indians, and unsurveyed with the exception of a few explorations, geological and others, along the principal rivers, and these generally at right angles to the direction of the proposed line. No reliable information is obtainable as to the country between the streams. As far as reports heretofore received by us would indicate, this country is dotted with numerous lakes, the land being more or less timbered with spruce, cypress, birch, poplar and small tamarac and cedar. Eight parties were organized and sent out in this district in Oct., four going out by way of Maniwaki, Que., and four others by way of Kippawa, Que. Owing to the lateness of the season, these parties took considerable time in reaching their destination, caused by the low state of the water in the rivers, the early forming of ice and difficulty in transporting considerable quantities of provisions beyond the regular transportation routes. They have now been at work for some time, but in many cases have had to abandon miles of line owing to their meeting with numerous lakes and stretches of country where it was impracticable to obtain the grades required. From the latest reports they are now making fair progress, but it will be some time before it can be decided whether the north or south line will prove the most advantageous. Cachés with provisions for all the necessary parties for the next 10 months have been provided at the forks of the Gatineau, and at the north end of Grand Lake Victoria. As soon as the ice moves out of the rivers and lakes supplies will be distributed east, west and north from these cachés for the use of the various parties. The reports so far received would indicate that the north line will probably be found the most advantageous, both as to cost of construction and nature of the country passed through in respect to its suitability for settlement.

"DISTRICT D.—The nature of the country and of the timber in this district is in many respects similar to that of District C, and there are no settlements in the vicinity of the proposed line other than Hudson's Bay and fur-trading posts on Lake Abitibi, close to which lake the lines will run. Two parties are now at work in this district, one on the line passing to the south and one on the line passing to the north of Lake Abitibi. From reports the party working on the south line will find a rough, broken country for at least 30 miles westward of their starting point, which is about a mile and a half from the upper end of Agotawekami Lake. So far, from this point eastward that party has had no trouble. Three more parties are just being sent out, one going on the north line from near the north-west bay of Lake Abitibi and running westward; a second party going down the Abitibi River to the vicinity of this proposed northern line and running easterly for say six miles and then westerly; the third party going in to near the north-east corner of the township of Beatty and running easterly to Ghost River, and then returning to their starting point and running westerly beyond Frederichouse River. These parties are all expected to be at work before the end of March.

"DISTRICT E.—The surveys in this district have all heretofore been conducted under J. R. Stephens, the engineer for the

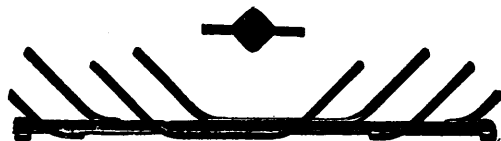


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G.T.P.R., and a line run across the entire distance; but from about 110 miles easterly from the north end of Nepigon Lake this line inclined too much to the south, especially after crossing the Missanabi River, near Albany rapids, at which point it turned south-easterly and headed for North Bay. At the last mentioned point near Albany rapids the line run would be about 18 or 20 miles south of a direct line passing to the north of Lake Abitibi, as now proposed. I am now arranging for parties who have been working for the G.T.P.R. during the winter in that vicinity to be put on to explore this direct line through to connect with parties which have just been sent out in District D, for a similar purpose. The surveys so far made in this district go to show that the country is rough and broken in places, with one or two expensive river crossings, especially that of the Pequtchewan river, but as the new proposed line is some distance north of the line as run, and I have been informed that a much better crossing can be found to the north of said line, it is probable that this crossing can be much reduced in cost. The line run in this district passes through what may be found to be fair agricultural lands of considerable extent, with large area of brule, but where not burnt over the timber is generally small spruce, cedar and tamarac, the latter generally dead, with occasional blocks of heavier timber, suitable for ties, etc.

"DISTRICT F.—The surveys in this district up to Jan. last were conducted by the G.T.P.R. engineers, who in Nov. commenced locating a line which showed heavy work in places. From the information furnished by them it was my opinion that there was not sufficient exploration through the country to warrant the continuance of location until such time as I was sure the line they had run was the best the country afforded. Accordingly in January last I sent out one preliminary and five exploratory survey parties under A. E. Hodgins, district engineer, to explore and examine other sections of the country than those shown to have been explored by the G.T.P.R. parties."

At the request of the Chief Engineer, M. J. Butler, Assistant Chief Engineer, who had recently been over considerable portions of districts A and B, made a report on the comparative distances by the Intercolonial Ry., from St. Jean Chrysostome to Moncton and by the Transcontinental preliminary line, and what difference would be made in this distance supposing grades of 1% were used in each direction; and comparing the operating values of the several lines on the basis of 10 freight trains per day each way; and showing what the difference in the capital account would be. Mr. Butler's report follows:—"The distance from Moncton to St. Chrysostome, by way of the I.C.R. is 493.5 miles. The distance from Moncton to St. Chrysostome via the preliminary survey lines as run for the Transcontinental Ry., is 504 miles. The estimated shortening of the preliminary line that will be secured by the final location is 18 miles, making the distance from Moncton to St. Chrysostome by way of the Transcontinental line, 486 miles. In arriving at this estimated shortening, I conferred with the district engineers of districts A, and B, and it is from their estimates that the above distances are fixed. My personal knowledge of the field work and plans, based upon a recent examination of the line through New Brunswick and a portion of Quebec, would lead me to expect a still greater shortening of these lines in the final location. Hence, I have taken the distance at 486 miles for all comparisons as the length of the Transcontinental Ry. from Moncton to St. Chrysostome. The estimated shortening from the preliminary survey lines, using 1% grades both ways, is 100.3 miles, making the distance from Mon-

ton to St. Chrysostome, by such 1% both ways grade, 403.7 miles. For the purpose of the calculation, I have taken the I.C.R. locomotive no. 310, a simple consolidation, recently built by the Canadian Locomotive Company, and which, I understand, is now in use on the line, the principal dimensions of which are as follows: Diameter of cylinder, 21 ins.; length of stroke, 28 ins.; height of driving wheels, 56 ins.; weight of driving wheels, 150,000 lbs.; weight of engine in working order, 165,000 lbs.; weight of tender, 120,000 lbs.; total weight of engine and tender, 285,000 lbs.; or 142.5 tons. The weight of the van or caboose is 14.5 tons. I assume that 30-ton capacity cars, which weigh when loaded, 46.15 tons, will constitute the train. The several cars which the above locomotive can haul at a speed of 15 miles per hour on the several grades below are as follows:—I.C.R. 1% grades, 22 cars, equal to 660 tons net pay load. Transcontinental Ry. eastbound 4-10ths of 1% grade, 42 cars, giving 1,260 tons net pay load. Transcontinental Ry. westbound, 6-10ths of 1% grade, 33 cars, giving 990 tons net pay load. The I.C.R., 10 daily freight trains each way, will haul in a year of 313 working days (length of line 493.5 miles), net pay tons 660x2, trains 2x10x313 days=4,131,600 pay tons; and to haul this number of trains will make 493.5x2 miles, 2x10 trains, 313 days, 3,089,310 train miles per year. The cost per train mile on the I.C.R. Ry. for 1903, as given in the report of the Department of Railways is 97.65c., which cost will be used for all comparisons. Hence 3,089,310 train miles x 97.65c. = \$3,016,711.21, which gives the annual cost of operating the ten daily trains on the I.C.R. The Transcontinental Ry. low grade line will handle the same tonnage, with 7 trains eastbound and 5 westbound, although they will not be quite loaded to the full limit, the ratio of eastbound to westbound traffic is taken at about 6 to 4. (Length of line 486 miles). Hence we get 486 miles x 12 trains x 313 days=1,825,415 train miles per year, which moneyed out at the same price per train mile of 97.65c. equals \$1,782,518.72, which gives the annual cost of operating the twelve trains on the Transcontinental Ry. The annual operating cost of the I.C.R. being \$3,016,711.21. The annual operating cost of the Transcontinental Ry. being \$1,782,518.72. Leaves a net annual savings in favor of the Transcontinental Ry. of \$1,234,192.49, which sum capitalized at 4% per annum equals \$30,854,812.25. And this amount is the increased value of the Transcontinental low grade line over and above the existing I.C.R., on the basis of 10 daily trains each way over the I.C.R. With increased business the difference will be much greater. For instance, on the basis of 10 fully loaded trains each way per day on the Transcontinental, we get 486 length line x 10 x 2 trains x 313 days=3,042,360 train miles, which will cost per year at 97.65c. \$2,970,864.54, and will transport 7,042,500 net pay tons. To do this business on the I.C.R. will require 34 daily trains, and we get 493.5 miles x 34 trains x 313 days=5,251,857 train miles, which will cost per year at 97.65c. \$5,128,409.06. The annual net savings in favor of the Transcontinental Ry. on this basis being \$2,157,544.52, which sum capitalized at 4% per annum, gives \$53,938,613, and this amount is the increased value of the Transcontinental low grade line over and above the existing I.C.R., on the basis of ten daily trains each way on the Transcontinental Ry. The next comparison required is, between the proposed 1% grade on the Transcontinental Ry., and other lines, the train loads to be the same as the I.C.R. as the grades are the same, the cost being affected by the shorter mileage. Length of line from Moncton to

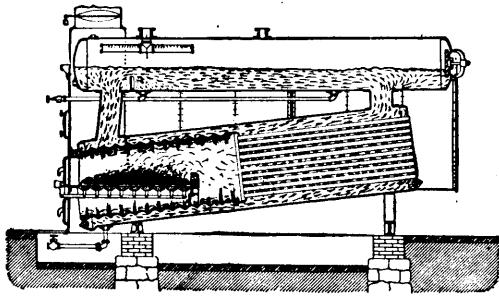
St. Chrysostome, 403.7 miles; ten daily trains each way per day for 313 working days; 403.7 miles x 10 x 2 trains x 313 days = 2,527,162 train miles per year. Tonnage hauled, same as on I.C.R., viz., 4,131,600 pay tons; 2,527,162 train miles at 97.65, \$2,467,773.69. As the I.C.R. cost for the same service is \$3,016,711.21, the net annual savings by the proposed 1% Transcontinental would be \$548,937.52, which sum, capitalized at 4% = \$31,723,438; and this amount is the increased value of the suggested 1% Transcontinental line over the I.C.R., on the basis of ten daily trains over each road each way. The comparison between the two proposed grades on the Transcontinental Railway works out as follows:—On the basis of ten daily trains each way per day, on the 1% grade line—1% per grade line train mileage cost \$2,467,773.69, Transcontinental low grade line train mileage cost, doing same business, \$1,782,518.72; net annual savings in operation \$685,254.97, which capitalized at 4% per annum = \$17,131,374.75. And this amount is the increased value of the low grade line over the 1% line. In all the above calculations no account has been taken of reduced operating cost for passenger trains. It is obvious that substantial savings will result from the use of lighter engines to haul the same passenger train. Less fuel, oil, etc., will be required, less wear and tear to track and bridges through lighter engines, better time and more uniform rates of speed may be maintained. In conclusion, the cost per ton on the several lines, based upon the above figures, are as follows:—I.C.R., Moncton to St. Chrysostome per ton, 73 cents; Transcontinental Ry., 1% grade, Moncton to St. Chrysostome, per ton, 59 7-10 cents; Transcontinental Ry., 0.4% and 0.6% grade, Moncton to St. Chrysostome, per ton, 43 cents."

Robert Larmour, Principal of Larmour's School of Telegraphy, Stratford, Ont., and formerly Superintendent of the G.T.R. Southern Division, writes:—"I read THE RAILWAY AND SHIPPING WORLD with much interest, as it keeps me in touch with many old friends with whom I was connected when in active railway life."

The question of the provision of standard rules for train operation which was taken up by the Board of Railway Commissioners and discussed with representatives of the railway companies, was referred to a committee consisting of representatives of the C.P.R. and the G.T.R. That committee has now practically completed its report, which will be submitted at a meeting of the representatives of all the railways operating in Canada, to be held in the near future. After being approved by the railway representatives the rules will be submitted to the Railway Commissioners for official sanction.

The Toronto Construction Co. has been formed with G. S. Deeks as President and A. B. Cook as Manager, to carry on the business of general contractors, including the construction of railways, canals, bridges, docks and public works, and in connection therewith to take over the contract of G. S. Deeks & Co. for grading on the Toronto-Sudbury branch of the C.P.R. between Bolton and Coldwater, and Severn River and Parry Sound, Ont. The company's offices are at 70 Victoria St., Toronto. Formerly mathematical master at the Collegiate Institute, Chatham, Ont., G. S. Deeks was associated for some years with his cousin, G. M. Deeks, as a contractor, at St. Paul, Minn., the firm carrying out large railway contracts in Washington, British Columbia, etc. G. S. Deeks recently married a daughter of A. Campbell, of Toronto Junction, M.P. for West York.

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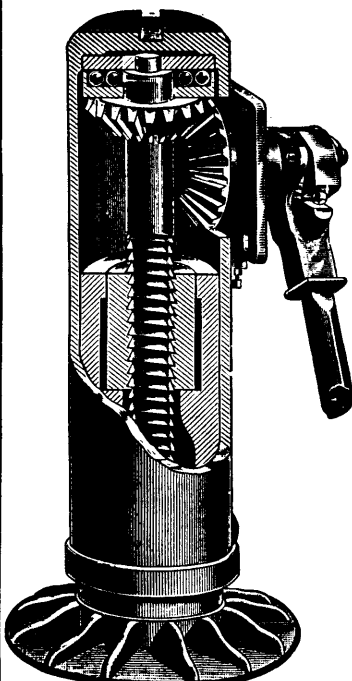
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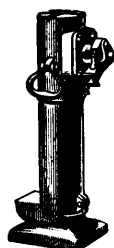
are cut from solid steel forgings, thereby giving highest efficiency and greatest durability.

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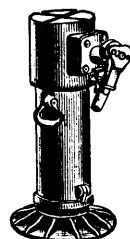
runs in a Phosphor Bronze Nut and is covered by a sliding sleeve which takes all the side strain, prevents the Screw from bending, and protects the working parts from Grit and Rust.



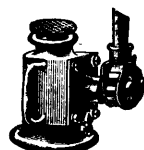
Sectional View of Norton Jack.



Foot-Lift Jack.



35 Ton Jack.



Journal Jack.

Made in 50 styles—8 to 70 tons capacity.

Manufactured by

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

Stock carried by

W. H. C. MUSSEN & CO., Montreal.

Orders by the Railway Commissioners.

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

Authorizing the C.P.R. to expropriate additional lands adjoining its lines at Toronto Junction, Ont. (June 9).

Sanctioning changes of location for the C.P.R. from the constructed line of the Souris branch, between Oxbow and Alameda, Assa. (June 13).

Sanctioning change from the previously located line of the Vancouver, Westminster and Yukon Ry., between the south side of Second Narrows and lot 775 on the north side of English Bay, B.C. (June 13).

Approving detail plans of substructures for bridges on the Guelph and Goderich Ry. (June 13).

Sanctioning change from the previously located line of the James Bay Ry. in Foley township, near Parry Sound Junction, Ont. (June 13).

Sanctioning change from the previously located line of the branch from Wetaskiwin easterly, between mileage 25.34 and mileage 100, for the Calgary and Edmonton Ry. (June 17).

Sanctioning change from previously located line between mileage 48 and mileage 50, in Georgina township, York County, Ont., for the James Bay Ry. (June 17).

Approving revised location of the located line of the C.P.R. between Osborne and Bois-sevain, Man. (June 17).

Approving detail plans of the substructure and draw span of a bridge over the Assiniboine River, Winnipeg, for the Canadian Northern Ry. (June 20).

Authorizing the Huronian Co. to erect wires across the track of the C.P.R. in Denison township, Ont., for conveying electric power, etc., in accordance with the terms of an agreement made between the companies. (June 27).

Sanctioning change from the previously located line of the James Bay Ry. in Mara and Thorah townships, Ont., between mileage 63.39 and mileage 69.02. (June 27).

Approving detail plans of superstructure of bridges over the St. Francis River at Sherbrooke and the Etchemin River at St. Anselme, Que., for the Quebec Central Ry. (June 27).

Approving an undercrossing of the Don road, at mileage 6 from Toronto, by the James Bay Ry. (June 27).

Sanctioning deviation from the previously located line of the James Bay Ry. between mileage 5.59 and mileage 6.35 from Toronto. (June 30).

Approving the location plans of the Klondike Mines Ry. from Klondike City to Grand Forks, Yukon, from mileage .89 to mileage 11.30. (June 30).

Approving plans for the reconstruction of the superstructures of bridges over the Rideau and Nation rivers for the Canadian Atlantic Ry. (July 4).

Sanctioning the location plans of the Toronto and Hamilton Ry. from Water St., Burlington, along Burlington Beach to mileage 35.33; and from mileage 35.24 along the beach to mileage 40.2 in Saltfleet. (July 4).

Authorizing the Laprairie Brick Co. to carry electric power lines over the G.T.R. tracks at Bresseau, Que., on terms mentioned. (July 4).

Authorizing the St. Catharines and Niagara Power and Fuel Co. to lay pipes for the conveyance of natural gas under the tracks of the G.T.R. in St. Catharines, Ont., on terms mentioned. (July 4).

Approving detail plans of the substructure of a bridge across Jeanette's Creek in Raleigh township, Ont., for the C.P.R. (July 5).

Approving location plans for a branch line from sec. 15, tp. 40, range 6, west of the 4th meridian, to sec. 13, tp. 42, range 10, west of the 4th meridian for the C.P.R. (July 8).

The Board has reserved judgment in the complaint of J. H. Duthie, Toronto, against the G.T.R. respecting demurrage charged on a consignment of coal sent to Belleville, Ont., in Sept., 1904. It was claimed that the G.T.R. was to blame for the delay for which demurrage was charged, and in default of payment of which by the consignees the company sold the coal for \$250. The G.T.R. claims that the coal was promptly forwarded from Detroit to Belleville, where the consignees refused to take it on account of financial difficulties, and was subsequently sold. The coal was on foreign cars for which the G.T.R. had to pay demurrage. The applicants asked for the return of the amount charged for demurrage.

The Railway Commissioners' Policy.

A recent press report stated that the Railway Commissioners had taken steps with the object of compelling the various railway companies to live up to the provisions of the Railway Act, that are designed to ensure the safety of the public and the convenience of shippers, and that to this end two inspectors were making a complete investigation of all railway methods and equipment. It was further stated that the inspectors were consulting with shippers and residents along the railway routes to get at the bottom of all complaints. Upon enquiry we learn that there has been no recent addition to the staff of the commissioners, such as the news item suggested. The staff consists of a secretary, chief engineer and two assistants, two inspectors of accidents, and a chief traffic officer with assistants, all of which are provided for by the Railway Act. An enquiry was made by the Deseronto, Ont., Board of Trade as to the report and that body was informed that while the Board had directed its accident inspectors to look over the railways and ascertain how far they were observing statutory obligations in the interests of the safety and accommodation of the public, it had not adopted the policy of sending persons to enquire into complaints about rates and freight service. The Board was of opinion that the public interest would best be served by parties submitting to the Board in clear and specific terms, any objections they may have to make about these matters, when such enquiries as seemed proper would be instituted. While experience may show that it would be desirable to adopt the policy of appointing persons to make the enquiries suggested the Board does not think such a course is required at present.

The Robb Engineering Co., Amherst, N.S., has received an order for a 75 horse power engine for the C.P.R. shops at Moose Jaw, Assa.

The boiler of a locomotive attached to a C.P.R. freight train blew up at Kincoth, Assa., recently, and an investigation showed that the use of muddy water in the boiler was the cause of the accident.

The Fairbanks-Morse Canadian Manufacturing Co. (Ltd.) has been incorporated under the Ontario Companies' Act, with a capital of \$250,000 to carry on a general manufacturing business. The offices of the company are in Toronto, and the provisional directors are: G. W. Sparks, Chicago, Ill., C. J. Brittain, and A. W. Holmsted, Toronto.

The Breckenridge and Lund Coal Co. has been incorporated with a capital of \$500,000 and offices at Lundbrook, Alta., to mine and sell coal. The incorporators include: J. Breckenridge, railway contractor, Calgary, Alta., and P. Lund, railway contractor, Wardner, B.C. The company's mines practically adjoin the Crow's Nest Pass Line of the C.P.R.

August Birthdays.

Many happy returns of the day to—

H. H. Adams, Superintendent Canadian Division, Michigan Central Rd., St. Thomas, Ont., born at Detroit, Mich., Aug. 13, 1876.

H. W. D. Armstrong, C.E., Lindsay, Ont., born at Ottawa Aug. 1, 1852.

W. E. Bishop, Manager Hamilton Steamboat Co., Hamilton, Ont., born at Brantford, Ont., Aug. 10, 1868.

G. J. Chadd, Purchasing Agent Central Ontario Ry., Trenton, Ont., born in London, Eng., Aug. 21, 1837.

J. F. Chapman, General Freight and Passenger Agent, Bay of Quinte Ry., Thousand Islands Ry., Oshawa Ry., and Deseronto Navigation Co., Deseronto, Ont., born at Frankford, Hastings Co., Ont., Aug. 25, 1863.

Barlow Cumberland, Vice-President Niagara Navigation Co., born at Portsmouth, Eng., Aug. 5, 1846.

H. G. Elliott, Assistant General Passenger and Ticket Agent, G.T.R., Montreal, born at Chambly, Que., Aug. 22, 1860.

Hon. W. Gibson, railway contractor, Beamsville, Ont., born at Peterhead, Scotland, Aug. 7, 1849.

G. H. Ham, Literary Department C.P.R., at Montreal, born at Trenton, Ont., Aug. 23, 1847.

W. P. Hinton, General Freight and Passenger Agent, Canada Atlantic Ry. and Canada Atlantic Transit Co., Ottawa, Ont., born at Hintonburg, Ont., Aug. 30, 1871.

R. Kerr, Passenger Traffic Manager, C.P.R., Montreal, born at Toronto, Aug., 1845.

G. M. Lang, Resident Engineer, C.P.R., at Winnipeg, born Ottawa, Ont., Aug. 16, 1859.

J. D. McDonald, District Passenger Agent, G.T.R., at Toronto, born there Aug. 27, 1855.

T. McHattie, Master Mechanic, G.T.R., at Montreal, born Dufftown, Banffshire, Scotland, Aug. 8, 1854.

J. E. Matthews, C.P.R. soliciting passenger agent, Charlottetown, P.E.I., born at Albany, P.E.I., Aug. 17, 1869.

W. E. Mullens, Superintendent of Transportation Central Vermont Ry., St. Albans, Vt., born at Stratford, Ont., Aug. 13, 1870.

W. S. Nevins, Travelling Freight Agent, C.P.R. and Minneapolis, St. Paul & Sault Ste. Marie Ry., Buffalo, N.Y., born at Towanda, Pa., Aug. 13, 1850.

W. M. Porteous, Freight Agent, C.P.R., at St. Louis, Mo., born at Edinburgh, Scotland, Aug. 3, 1857.

J. F. Richardson, Superintendent Eastern Division C.P.R. Telegraphs, Montreal, born at Granby, Que., Aug. 23, 1861.

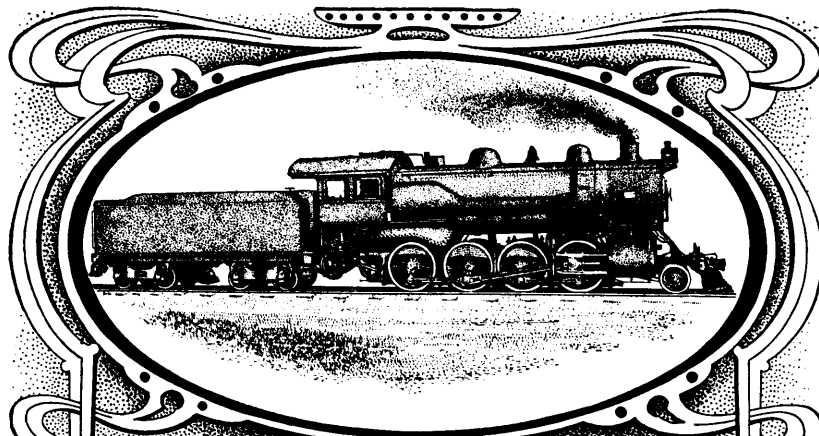
C. R. Scoles, General Manager, Atlantic and Lake Superior Ry., New Carlisle, Que., born at Grantham, Lincoln, Eng., Aug. 27, 1856.

M. C. Sturtevant, Car Service Agent, G.T.R., Montreal, born at St. Albans, Vt., Aug. 28, 1866.

W. N. Warburton, General Manager, Chatham, Wallaceburg and Lake Erie Ry., St. Thomas, Ont., born there Aug. 24, 1851.

The General Railway Signal Co., Buffalo, N.Y., has issued an illustrated catalogue, describing electric interlocking devices for railway signal work, which it manufactures. On Jan. 1, of the current year, 162 electric interlocking plants had been installed or contracted for by 41 railways, including the G.T.R.

M. Beatty and Sons (Ltd.) has been incorporated under the Ontario Companies' Act, with a capital of \$300,000, to acquire and take over the business of M. Beatty & Sons, Welland, Ont., and to manufacture and sell dredges, machinery of all kinds, and contractors' plant generally. The offices of the company are at Welland, and the provisional directors are: W. L., H. LeG., and A. O. Beatty.



**ENGINEERS AND CONTRACTORS
FOR
COMPLETE POWER PLANTS**

**OUR HEATING SYSTEM
IS ESPECIALLY DESIGNED FOR ROUNDHOUSES, MACHINE
SHOPS AND OTHER TERMINAL BUILDINGS**

**OUR
AUTOMATIC LOCOMOTIVE BOILER WASHER**
FOR CHANGING WATER, WASHING AND FILLING LOCOMOTIVES
WE USE THE WASTE STEAM AND WATER
FIVE TO SEVEN HOURS SAVED OVER PRESENT METHODS
WRITE FOR SPECIAL CATALOGUE

**WE ALSO MANUFACTURE
ENGINES, BOILERS, PUMPS, ETC.**
CORRESPONDENCE SOLICITED

ERIE HEATING COMPANY
225 RAILWAY EXCHANGE
CHICAGO.

C. P. R. LANDS

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

TERMS OF PAYMENT.

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

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

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

DISCOUNT FOR CASH.

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

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

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

CANADA NORTH-WEST LAND CO.

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

EVERYTHING IN
RUBBER GOODS

(HIGH GRADE)

for

**RAILWAY AND
STEAMBOAT
PURPOSES**

PACKINGS

For Every Contingency



Special Valves and Gaskets.
Mats, Matting and Stair
Treads.

HOSE

For Air Brakes, Steam, Gas,
Water, Pneumatic Tools,
Fire Protection.

**BETTER THAN THE BEST
OF OTHER MAKES.**

WRITE US YOUR REQUIREMENTS

**THE CANADIAN RUBBER CO.
OF MONTREAL,
Limited.**

SALES BRANCHES:
172 GRANVILLE STREET, - HALIFAX, N.S.
IMPERIAL BANK BLDG., - MONTREAL, QUE.
FRONT & YONGE STS., - TORONTO, ONT.
89 PRINCESS STREET, - WINNIPEG, MAN.
403 CORDOVA STREET, - VANCOUVER, B.C.

Canadian Northern Ry. Earnings, etc.

Gross earnings for May, \$349,400; expenses, \$248,800; net earnings, \$100,600 against \$76,100 gross; \$201,900 working expenses, and \$74,200 net earnings for May, 1904. Gross earnings for eleven months ended May 31, 1905, \$3,482,900; net earnings \$1,126,300 against \$2,827,200 gross, and \$917,500 net for same period 1903-04. Mileage increased to 1,876 miles, against 1,350 miles.

Approximate earnings for June, \$388,900 against \$297,700 for June, 1904.

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

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

Earnings.	Expenses.	Net Profits.	Increase or Decrease.
July \$4,398,833.95	\$2,949,181.81	\$1,449,652.14	\$131,125.02+
Aug. 4,474,237.64	2,946,307.21	1,527,930.43	93,877.93+
Sept. 4,220,876.03	2,952,068.47	1,268,807.56	66,541.75+
Oct. 4,743,961.93	3,177,848.02	1,566,113.91	87,913.10+
Nov. 4,751,970.43	3,082,395.69	1,669,574.74	191,593.56+
Dec. 4,562,142.45	2,899,473.62	1,662,668.83	81,523.57+
Jan. 3,252,501.93	2,829,833.46	422,668.47	65,016.44+
Feb. 3,056,094.05	2,753,922.73	302,171.32	219,630.51+
Mar. 4,132,961.50	2,950,134.46	1,182,827.04	331,972.76+
April 4,229,144.50	2,697,338.29	1,531,806.21	119,273.61+
May 4,229,131.47	2,841,196.59	1,387,934.88	3,630.10-

\$46,051,855.88832,079,700.35 \$13,972,155.53 \$1,208,961.95+

Approximate earnings for June, \$4,376,000 against \$4,365,000, for June, 1904.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Gross earnings for May, \$252,279.41; net earnings, \$62,695.43 against \$181,925.45 gross and \$52,118.89 net for May, 1904. Net earnings for eleven months ended May 31, 1905, \$990,905.87, against \$700,450.78 for same period, 1903-04. Approximate earnings for June \$245,238 against \$212,745 for June, 1904.

MINERAL RANGE RY.—Approximate earnings for June, \$60,419, against \$55,321 for June, 1904.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Gross earnings for May, \$672,966.81; net earnings, \$246,488.08, against \$489,228.88 gross and \$172,442.48 net for May, 1904. Net earnings for eleven months ended May 31, \$3,837,601.00 against \$2,920,410.12 for same period 1903-04. Approximate earnings for June, \$725,935, against \$562,401 for June, 1904.

Canadian Pacific Railway Land Sales.

	Acres.		Amount.	
	1904-05	1903-04	1904-05	1903-04
July	36,425.75	267,647.32	\$177,473.94	\$1,020,494.70
Aug.	15,669.90	263,339.45	88,735.88	1,217,529.81
Sept.	16,470.02	60,441.12	73,642.96	268,757.99
Oct.	23,792.84	15,950.97	104,843.47	236,611.59
Nov.	23,392.84	22,563.05	112,261.70	107,365.21
Dec.	32,196.59	30,146.00	142,583.40	125,676.00
Jan.	34,500.41	116,840.78	141,750.50	386,649.88
Feb.	27,503.56	14,729.69	116,276.76	73,428.94
Mar.	12,992.61	12,992.06	87,576.00	59,660.03
April.	22,030.37	24,064.44	125,210.08	116,349.19
May.	58,095.21	51,477.16	282,795.37	203,768.02
June.	64,968.62	153,973.24	340,759.75	712,812.21
	370,952.72	1,036,172.28	\$1,793,912.81	\$4,583,013.57

Grand Trunk Ry. Earnings, Expenses, etc.

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

	1905.	1904.	Increase.	Decrease.
Jan.	\$2,556,340	\$2,253,378	\$302,962	.....
Feb.	2,163,683	1,649,525	514,158	.....
Mar.	2,911,267	2,649,779	261,488	.....
April.	2,850,125	2,838,946	11,179	.....
May.	2,969,486	3,119,126	.....	149,640
	\$13,450,901	\$12,510,745	\$940,147	.....

GRAND TRUNK RY. CO.

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

Revenue for May:	1905.	1904.	Increase.	Decrease.
Gross receipts	£506,200	£499,300	£6,900	.....
Working expenses	321,200	315,600	5,600	.....
Net profit	£185,000	£183,700	£1,300	.....

Aggregate from Jan. 1 to May 31:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£2,199,100	£2,021,300	£177,800	.....
Working expenses	1,562,100	1,559,000	3,100	.....
Net profit	£637,000	£462,300	£174,700	.....

GRAND TRUNK WESTERN RY. CO.

Revenue for May:	1905.	1904.	Increase.	Decrease.
Gross receipts	£73,500	£92,100	.....	£18,600
Working expenses	66,000	70,100	.....	4,100
Net profit	£7,500	£22,000	.....	£14,500

Aggregate from Jan. 1 to May 31:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£440,700	£428,900	£11,800	.....
Working expenses	376,800	367,300	9,500	.....
Net profit	£63,900	£61,600	£2,300	.....

DETROIT, GRAND HAVEN & MILWAUKEE RY. CO.

Revenue for May:	1905.	1904.	Increase.	Decrease.
Gross receipts	£17,100	£20,100	.....	£3,000
Working expenses	16,900	17,600	.....	700
Net profit	£200	£2,500	.....	£2,300

Aggregate from Jan. 1 to May 31:

	1905.	1904.	Increase.	Decrease.
Gross receipts	£110,200	£90,900	£19,300	.....
Working expenses	91,500	81,500	10,000	.....
Net profit	£18,700	£9,400	£9,300	.....

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from Jan. 1 to June 30:	1905.	1904.	Increase.	Decrease.
Grand Trunk.	£2,729,610	£2,565,348	£164,262	.....
G. T. Western	505,793	506,545	.....	£752
D. G. H. & M.	130,213	115,110	15,103	.....
Total	£3,355,616	£3,187,003	£178,613	.....

The C.P.R. has purchased the Grand Hotel, and 560 acres of land, including the mineral springs, at Caledonia Springs, Ont. The purchase price is said to be \$500,000. The hotel will be operated along with the other C.P.R. hotels.

The Hudson's Bay Co.'s report for the year ended May 31 last shows comparative results as follows:—

	1905.	1904
Trading Profits	£102,969	£98,934
Land Profits	187,364	179,047
Total Profits	£290,233	£277,981

The dividends paid in the last year amounted to 56s. per share, or 29% as compared with 35s. or 17½% in the previous year, in which year £1 per share capital was returned to the shareholders.

The Canadian Westinghouse Co. has issued an illustrated booklet describing briefly the lines of electrical apparatus manufactured by the company at its works, Hamilton, Ont. The booklet describes and illustrates alternating current, generators and motors; alternating and direct current motors; alternating current turbine generators; Westinghouse rotary converters; transformers; lighting protection; Westinghouse direct current railway motors; Westinghouse motor controllers; single phase railway system; catenary line system; unit switch system of multiple control; Westinghouse-Baldwin electric locomotives, etc. The booklet is printed on toned paper, with a cover in colors showing an Indian bearing a torch, symbolic of the past, and a figure bearing an electric light, symbolic of the light of the present.

The Canadian Westinghouse Co. had a neat and attractive exhibit at the recent meeting of the Canadian Electrical Association. The headquarters were in room 4 of the Hotel Windsor, Montreal. Distributed at various places in the hotel were reproductions of the company's trade mark formed by electric light combinations. The company had on exhibition a line of its induction motors, direct current motors, OD transformers, series and multiple AC arc lamps, lightning arresters, fuse blocks, portable testing instruments, etc. Distribution was made of a complete line of the company's literature illustrating and describing its products. A striking souvenir folder, prepared for the occasion, was given out to those attending the Convention. The following officials and representatives of the company were at the Convention:—P. J. Myler, General Manager; N. S. Braden, General Sales Manager; H. D. Bayne, Manager Montreal offices; T. F. Dryden, Manager Toronto office; R. J. Dunlop, Attache Toronto office; Wm. Bradshaw, Engineer, from Westinghouse Electric and Manufacturing Co., East Pittsburg, Pa

RAILWAY DEVELOPMENT.

Projected Lines, Surveys, Construction, Betterments, Etc.

Alaska Central Ry.—Reports from Seward, Alaska, state that 80 miles of grading is being gone on with during the current season, but work is being somewhat delayed owing to the difficulty of getting men. The work in this section is heavy. (Mar., pg. 91).

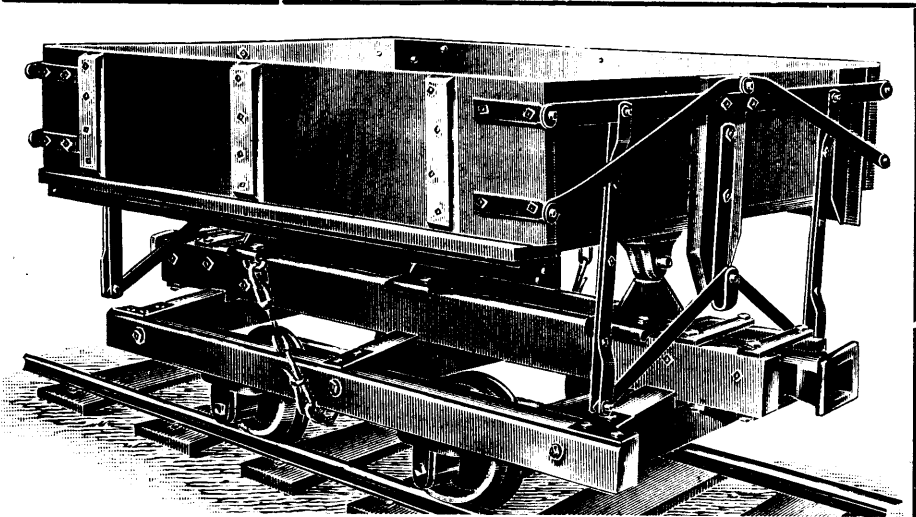
Alberta Ry. and Irrigation Co.—The railway lines taken over by this company include the Alberta Ry. and Coal Co.'s line from Lethbridge to Coutts, Alta., 66 miles, and the St. Mary's River Ry. which starts at Stirling, 19 miles from Lethbridge, and extends to Cardston, 46.77 miles. It was opened for traffic from Stirling for 30 miles, May, 1902, and to Cardston at a later date. Under the charter of the St. Mary's River Ry. the company has power to construct lines to any point in range 1, west of the 5th meridian; from any point between Spring Coulee and Mountain View, westerly to the C.P.R. between range 2 west of the 5th meridian, and range 27 west of the 4th meridian; from Sterling easterly to range 4 west of the 4th meridian between the C.P.R. and the International boundary. The mileage of these extensions is undetermined as they are branch lines not exceeding 15 miles in length in any one case. An extension of 16 miles from Raley Junction to Kimball, and thence to the International boundary, seven miles, has been authorized. The St. Mary's River Ry. was constructed as a narrow gauge railway, but a third rail was laid down about three years ago from Sterling to Raymond, to accommodate the standard gauge traffic to the beet sugar factory there. The entire line is now being made standard gauge. (Mar., pg. 91).

Canada Atlantic Ry.—The G.T.R. is reported to be securing lands adjoining the Central Station, Ottawa, with a view of yard extension as soon as the line passes under its control. Plans have been approved for the strengthening and reconstruction of a number of bridges on the line and the work is being proceeded with. (July, pg. 281).

Cape Breton Coal, Iron and Ry. Co.—Press reports state that the company has completed the laying of rails from Homeville Junction, on the Sydney and Louisburg Ry., to its collieries at Broughton, N.S. (May, pg. 182).

Central Ry.—This company was originally chartered as the Ottawa River Ry. to construct a railway from Montreal to Ottawa. It proposed to construct an electric line, and while some surveys were made no actual construction was undertaken. It subsequently obtained Dominion and Provincial charters to extend to Georgian Bay, and during the current year it was given power to change its name to the Central Ry. Co. It was authorized last session of the Ontario Legislature, under the title of the Ottawa River Ry., to construct a branch from its Montreal-Georgian Bay line at Orillia, to Port Stanley. At a recent meeting of the directors held at Montreal, Senator Domville was elected President succeeding the late Col. McMullen. J. S. Shanley has been appointed Chief Engineer; and instructions were given for the completion of the location of the line along the south shore of the Ottawa River to Bickland. It was stated that arrangements would be made for the immediate starting of construction of the line between Montreal and St. Andrews, Que. A meeting of shareholders was held July 10, when authority was given to issue mortgage bonds on account of construction, and to increase the capital stock of the company. (Feb., pg. 51, and Sept., 1904, pg. 315).

Esquimalt and Nanaimo Ry.—Under the C.P.R. control it is likely there will be considerable development of this line. J. S.

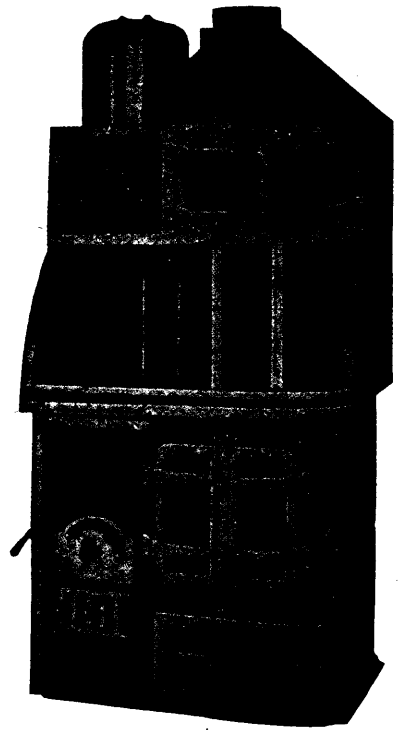


DUMP CARS from 1 yard to 10 yards capacity. Strongly built. Best chilled wheels. Bronze bearings. Will stay on track better than any others.

SEND FOR CATALOGUE SHOWING OUR FULL LINE OF

WHEEL AND DRAG SCRAPERS PLOUGHS WHEELBARROWS
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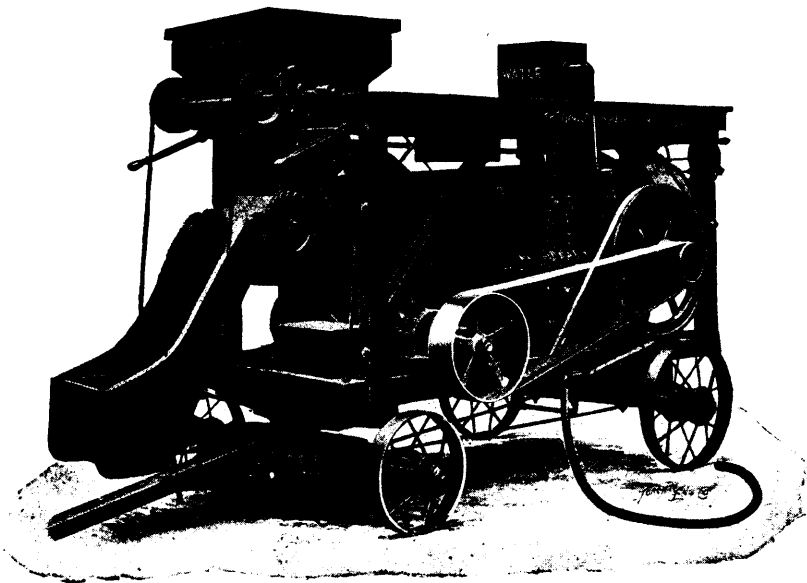


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Dennis, the C.P.R. Land Commissioner for B.C., who is a Vice-President of the E. and N. Ry., in an interview, is reported to have said the first object of the company would be to ascertain the quality and extent of the agricultural land in the company's grant, and for that purpose four exploration parties had been organized to work from Victoria, Nanaimo, Alberni and Comox. A fifth party, under the charge of a railway engineer, had also been organized to go north to examine feasible routes for the extension of the line and for such lines as might be necessary to open up the interior of the island. (May, pg. 143).

Georgian Bay Seaboard Ry.—W. D. Matthews, H. C. Hammond, L. A. Hamilton, H. Beatty and F. G. Osler, were incorporated last session of the Dominion Parliament with this title to construct a railway from Georgian Bay between Port Severn and Penetanguishene, south-easterly through Simcoe, Ontario, Victoria, Peterborough, Hastings, Lennox and Addington, and Lanark, or any of them to the Ontario and Quebec Ry. During its passage through Parliament it was admitted that this was a C.P.R. measure, and it is understood that the line intended to be constructed under it will extend from Victoria Harbor on Georgian Bay to Sharbot Lake, at which point the Ontario and Quebec Ry. (one of the lines making up the C.P.R. system), is crossed by the Kingston and Pembroke Ry. (another of the C.P.R. acquired lines), or connection may be made at Maherly, Ont. We were advised July 10, that while no actual surveys had been made between these points, engineers were in the field making a reconnaissance of the same. The survey is in charge of H. M. Killaly.

Great Northern Ry. of Canada.—The proposed connection of the line with the Quebec Bridge, Quebec papers state, calls for the construction of a line 7½ miles in length. The route will be from the bridge through St. Foy parish to a point about three miles from the city, where connection will be made with the company's independent line from Shawanegan Junction, surveys for which have been made. It is also stated that a contract for the construction of this 7½ miles of line has been let to J. T. Schel, and that work will be started as soon as the line is approved.

We were advised July 6 that nothing had been settled in regard to the construction work to be undertaken upon this line in the immediate future. A number of important matters have been under consideration, but what will be done this season has not been settled. (July, pg. 286).

Guelph and Goderich Ry.—We are advised that it is expected to have the grading on this line from Guelph to Goderich, Ont., completed by Oct. 1, and that it is hoped to begin track laying at the Guelph end Aug. 15. (July, pg. 281).

Intercolonial Ry.—The supplementary estimates passed at the recent session of the Dominion Parliament provide for the following works:—

Strengthening bridges	\$150,000
Double tracking parts of line	50,000
Additional and spur lines	26,000
Increasing water supply	32,000
Semaphores at stations	2,050
Improving telegraph service	21,500
Improving facilities and accommodation along the line	80,000
Engine house, Chaudiere Jct., Que.	12,000
Engine house, etc., Riviere du Loup, Que.	45,500
To put accommodation at Amherst, Que.	9,000
To put railway between Indian town and Blackville N.B., into condition for operation	25,000
Increased accommodation at Sackville, N.B.	10,000
Increased accommodation at Moncton, N.B.	50,000
Increased accommodation at St. John, N.B.	50,000
Increased accommodation at Truro, N.S.	50,000
Increased accommodation at Amherst, N.S.	25,000
Increased accommodation at Pictou, N.S.	42,500
Increased accommodation at Halifax, N.S.	50,000

James Bay Ry.—The grading on this line has been practically completed from six miles north of Parry Sound, southerly to four miles

south of the Severn River, 55 miles in all, and it has been about half graded between Beaver-ton and Toronto, 63 miles. Tracklaying is in progress south from Parry Sound, and on July 10 had reached to near Lake Joseph. The steel superstructure is being erected over the Seguin River at Parry Sound, and the steel superstructures for the bridges at Wallace Cut, Jeannette's Narrows, Lake Muskoka, are being delivered.

A deputation recently waited on the Dominion Government to obtain consent to the carrying of the line through Orillia instead of the previously located route on the east side of Lake Couchiching. The deviation will add about five miles to the route. (July, pg. 285).

Kingston, Smith's Falls and Ottawa Ry.—The Dominion Government was recently asked by a deputation to revoke the subsidy formerly granted to this projected line between Kingston and Ottawa, Ont. As no railway subsidies were voted at the recent session, it is not likely that any construction will be arranged for this year. (July, pg. 285).

Kootenay Central Ry.—We are officially advised that it is expected to do some of the grading on this projected line from Golden to Fort Steele, B.C., during the present season and that construction will be commenced at the Golden end. C. H. Pollen stated on his return from Montreal, July 4, that the line would be built by the K.C. Ry. Co., and that contracts would be let as soon as plans were approved of. (July, pg. 309).

Nicola, Kamloops and Similkameen Coal and Ry. Co.—The line now under construction will be about 45 miles in length, from Spence's Bridge on the C.P.R. transcontinental line to Nicola Lake. The route will follow the Nicola River closely for its whole length, crossing and recrossing it. For the first 20 miles from Spence's Bridge the rise is rapid, entailing grades of 1% for a large proportion of the way, with heavy work, most of it in rock, and one tunnel in gravel 400 ft. long. The valley for that distance is so narrow that it may be said to flow through a canyon. South of that, however, the valley widens out and for the remaining 25 miles to Nicola Lake the work is light, as also are the gradients. There are 10 crossings of the Nicola River, each of which will require a span of 125 or 150 ft. It is expected that the roadbed will be completed during the spring of 1906, and track laid during the summer of the same year.

The contractors are Loss and Macdonell, C. E. Loss making his headquarters at Vancouver, and Jas. Macdonell being in charge of construction at Spence's Bridge. Sub-contractors have been let as follows, starting from Spence's Bridge, Foss and Sutherland, Fernie, B.C.; J. G. McLean, New Westminster, B.C.; Ironsides, Rannie & Campbell, Vancouver, B.C.; W. P. Tierney, Nelson, B.C.; D. McBeath, Nelson, B.C.; J. B. Bright, Macleod, Alta. Other sub-contractors are J. Autonelle and E. O. Foss. The work is being pushed, the contractors having a large number of men and quantities of plant and material on the ground. H. J. Cambie is Chief Engineer; C. S. Gzowski and L. M. Rice, contractors' engineers; Jas. Macdonell, Manager of Construction, and A. Muir, Paymaster. A press report states that the contractors find that the location posts placed some time ago have been removed and that some delay will be occasioned to the work owing to the line having to be remarked. (July, pg. 285).

The New Brunswick Coal and Ry. Co.'s line which is at present being operated by a commission appointed by the New Brunswick Government extends 58 miles from Norton on the Intercolonial Ry. to Minto, and it is intended later on to construct an extension to Gibson, on the St. John River near Fredericton. The New Brunswick Legislature at its last session voted \$250,000 for necessary improvements and repairs on the line. G. Brown,

C.E., made the surveys for the commissioners upon which the works are to be carried out, and the plans for the rebuilding of certain bridges and trestles and the improvement of the permanent way, for which tenders have been asked, are to be seen at the office of the Provincial Engineer, Fredericton. (July, pg. 285.)

New Brunswick Southern Ry.—We are advised that it is intended to change the location of the line so that it will serve New River Beach, and that a survey is being made of the route to New River Beach. Surveying parties are also working on the main line with a view to relocating at some points. It is proposed to reballast the line and make it part of a through system, viz., the Maine Central Rd. (June, pg. 285).

Nova Scotia Eastern Ry.—At a meeting of shareholders held in Toronto, July 11, authority was given J. M. Grier, Vice President, and T. P. Coffee, Secretary, then in London, Eng., to act for the company in the negotiations for the sale of the company's bonds, which the President, J. R. Stratton, of Peterboro, Ont., stated, were practically completed. The lines to be constructed will run from Dartmouth to the Strait of Canso, and from New Glasgow to Country Harbor, N.S., altogether about 225 miles. While it is stated that construction had been started on the line, it is understood that it is a formal start in order to comply with the terms of the act. It is also understood that there will be some changes in the organization of the company when the sale of bonds is completed, and that the construction will be placed under the charge of an English engineer.

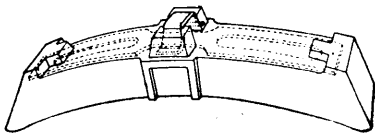
Prince Edward Island Ry.—We were recently advised that the survey of the proposed branch from O'Leary to West Cape, about 12 miles, was expected to be started about the end of July. The survey made from Kensington to Stanley Bridge, was in the nature of a reconnaissance, but no report has been made of it. (July, pg. 285).

Quebec Bridge and Ry. Co.—The approaches to the bridge on the south side of the St. Lawrence, with the exception of filling in and embankment work, were completed early in July, and trains of materials are run from Chaudiere, on the G.T.R. to the bridge site. (July, pg. 285).

Saskatchewan Bridge Co.—An Act incorporating a company with this title was passed by the Dominion Parliament in 1904, for the purpose of constructing a railway bridge across the Saskatchewan River at Edmonton, Alta. The organization meeting was held in Montreal, June 30, when directors were elected. Following are the officers and directors for the current year:—President, C. M. Hays; Vice-President, F. W. Morse; Secretary, H. Phillips; other directors: W. Wainwright, H. A. Allan, Jos. Hobson, W. H. Biggar, K.C., H. A. Woods; Treasurer, F. Scott.

Standard Coal and Ry. Co.—A press report states that surveys are being made for the construction of a railway between Truro and Parrsboro, and Parrsboro and Maccan, N.S., the party having started from Truro, where a junction is proposed to be made with the Intercolonial Ry. The company is developing coal mines at Newville. The S.C. and R. Co. was incorporated by the Nova Scotia Legislature, L., H. and E. Gillespie, W. H. Magee and C. P. Harris being the provisional directors. The capital of the company is fixed at \$200,000 and power is given to issue bonds. It is authorized to construct a railway between the points named, and branches therefrom.

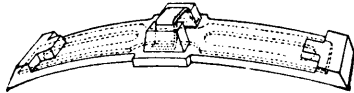
Temiskaming and Northern Ontario Ry.—It is understood that the Commissioners have received reports upon the proposal to operate the 112 miles of line between North Bay and New Liskeard, Ont., by electricity, and that the same are being considered by the Ontario Government. In connection with the further



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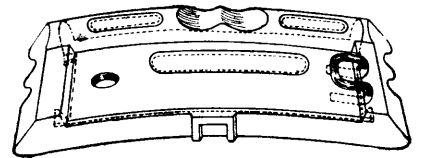
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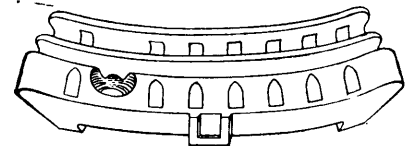
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extension of the line, a survey party has been sent out to look over the country between Lake Abitibi, to which point construction is now being pushed, and James Bay. This party will report as to the practicability and advisability of extending the line to salt water at or near Moose Factory. (July, pg. 287).

Tillsonburg, Lake Erie and Pacific Ry.—Work has been started on the extension of this line from Ingersoll, to the point of intersection with the C.P.R. near Embro, Ont. Surveys are in progress for a route from this point to St. Mary's and Stratford. A contract for this extension had not been let to July 18. (May, pg. 185).

Vancouver, Victoria and Eastern Ry.—After several protracted fights before the Railway Committee of the House of Commons the company's bill for an extension of time for the construction of its line, and for power to make connections with lines south of the International boundary, where the conformation of the country rendered such a connection advisable, was approved. The bill was subsequently passed and is now law. (July, pg. 287).

The Wellington Colliery Co., belonging to the Dunsmuir Estate, operated at June 30, 1904, 15.75 miles of railway, connecting its collieries with the Esquimalt and Nanaimo Ry., and from the E. and N. Ry. to the wharf at Ladysmith. A new short line has been constructed to connect Ladysmith and

Railway Equipment Notes.

We were advised June 26 that the G.T.R. had decided not to place orders for further new equipment at present.

The C.P.R. proposes placing an order for 10 switching locomotives at its Angus, Montreal, shops, at an early date.

The James Bay Ry. has received 75 flat cars, 60,000 lbs. capacity, from the Crossen Car Manufacturing Co., Cobourg, Ont.

The G.T.R. between June 3 and July 1, added to its equipment 28 cabooses which were constructed at its Montreal shops.

The C.P.R. has placed an order for four 25-ton pull rapid unloaders for ballast cars, of a similar type to 15 now in use on its lines.

The Canadian Northern Ry. has added to its equipment ten 10-wheel locomotives from the Locomotive and Machine Co., of Montreal; 150 box cars, 60 000 lbs. capacity, from Rhodes Curry & Co., Amherst, N.S.

We are advised that no orders have been placed for the locomotives, ballast cars, snow ploughs and flangers for the Intercolonial Ry., under the appropriations passed by the Dominion Parliament last session.

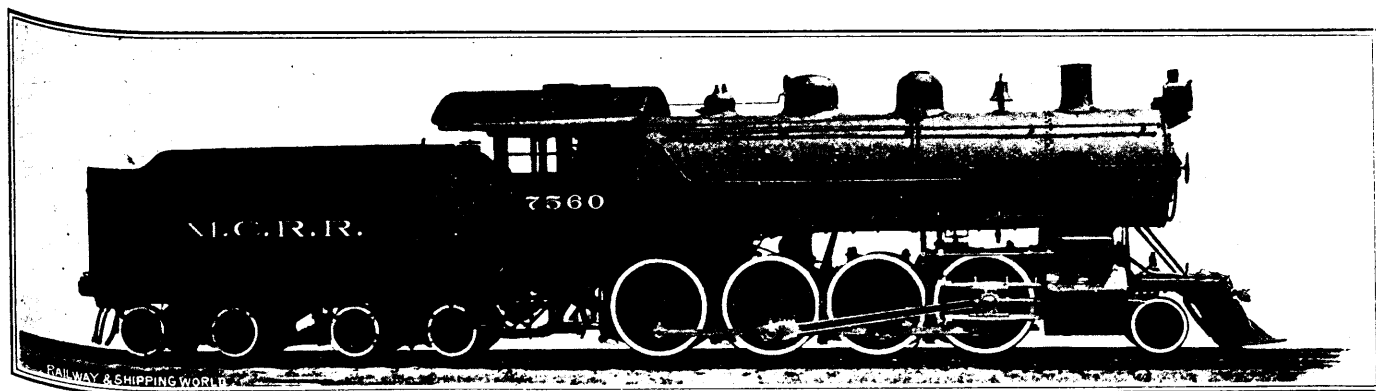
The Temiskaming and Northern Ontario Ry. has placed an order for three second-class coaches with the Crossen Car Manufacturing Co., Cobourg, Ont. The Commission-

cars will be furnished inside in birch, and outside in mahogany. They will have a seating capacity of 82 passengers.

The Locomotive and Machine Co., of Montreal, is building a number of locomotives for the Michigan Central Rd. The locomotives are duplicates of those recently completed at the Schenectady shops of the American Locomotive Co. An illustration of one of the locomotives completed at Montreal is given on this page. They are of the 2-8-0c type, having the following dimensions:—Cylinders, 23 and 35 in. diameter by 32 in. stroke; 8 drivers, 63 in. diameter; driving wheel base, 17 ft.; total 25 ft. 9 in.; weight on drivers, 174,000 lbs.; total, 198,500 lbs.; tank capacity, 14 tons of coal and 6,000 U.S. gals. of water. Weight of tender loaded, 128,000 lbs.

Canadian Freight Association.

The regular summer meeting was held at Hotel Champlain, Bluff Point, N.Y., July 12. Among the members and guests present being the following:—President, W. R. MacInnes, Freight Traffic Manager, C.P.R.; Second Vice-President, F. J. Watson, Division Freight Agent, G. T.R., Montreal; Mrs. Watson and Mrs. Dickson Cottingham, Montreal; Secretary Treasurer, J. Earls, and E. J. Earls; F. F. Backus, G.F. & P.A., Toronto, Hamilton and Buffalo Ry.; E. E. Belcourt, Superintendent



CONSOLIDATION LOCOMOTIVE BUILT FOR THE MICHIGAN CENTRAL RD., BY THE LOCOMOTIVE AND MACHINE CO. OF MONTREAL.

Extension mine, and was opened for traffic July 1. This short line will remove all the colliery traffic from the E. and N. Ry. which has been taken over by the C.P.R.

The Elements of Railway Economics.—There has been recently published from the Clarendon Press, Oxford, Eng., a book of 159 pages, by W. M. Acworth, M.A., with this title. Railway economics is a pretty big subject, and one about which a great deal is written, but upon which there is not as yet a standard authority. Railway conditions vary in every country, and problems that have to be dealt with in one country do not trouble the railway managers at all in another, but there are a number of principles upon which the sound and successful management of railways in all countries must be based. For nine years Mr. Acworth has been lecturing at the London School of Economics upon this subject, and the want of a suitable text-book for students led him to undertake the preparation of this book. Though dealing mainly with British lines and their growth, and using throughout British names, the book will be of interest and value to students of railway economics in Canada. The work is an instalment of a larger volume which is in preparation. Mr. Acworth delivered a number of lectures to railway men in the U.S., in 1904, which were highly spoken of by the technical press there.

ers are in the market for one or more first-class passenger cars, and two second-hand locomotives.

We were advised July 17 that no serious consideration had been given by the Lake Superior Corporation to the question of the re-opening of its car building shops at Sault Ste. Marie, Ont. Press reports recently stated that the shops were to be restarted immediately.

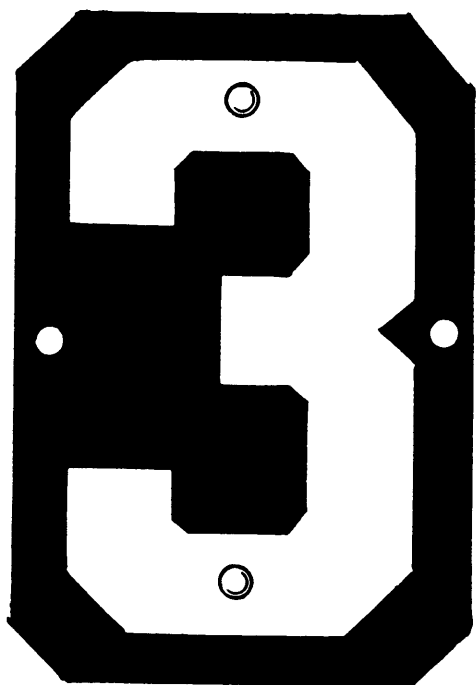
Among the supplementary estimates passed at the recent session of the Dominion Parliament was one for \$850,000 for rolling stock for the Intercolonial Ry. The Minister of Railways stated that it was proposed to buy 14 locomotives, 360 box cars, 25 refrigerator cars, an observation car, and a number of other cars.

The C.P.R. received the following rolling stock between June 15 and July 15: one switching and two passenger and freight locomotives, five sleeping cars, 10 colonist cars and 411 box cars from its Angus, Montreal, shops; two freight locomotives from the Canadian Locomotive Co., and 28 vans from its Farnham, Que., shops.

The five suburban cars under construction for the C.P.R. at its Angus shops, Montreal, will be 72 ft. long by 9 ft. 10 1/2 in. over frame. They will have six wheel trucks and open steel platforms. They will be lighted by acetylene gas and will have Westinghouse air and independent hand brakes. The

Shedden Co., Montreal; J. H. Black, G.S., Temiskaming and Northern Ontario Ry.; E. T. Boland, Dominion Line S.S., Toronto; M. H. Brown, General Freight Agent, C.P.R., Toronto, Mrs. Brown; W. B. Bulling, Assistant Freight Traffic Manager, C.P.R., Toronto, Mrs. Bulling, the Misses A. M. and F. Bulling; G. S. Cantlie, Superintendent Car Service, C.P.R. F. Conway, G.F. & P.A., Kingston and Pembroke Ry., the Misses Conway; D. D' E. Cooper, C.F.A., Lehigh Valley Rd., Mrs. Cooper; C. E. Dewey, Division Freight Agent, G.T.R., Toronto, Mrs. Dewey; J. E. Hawkins, C.F.A., Delaware & Hudson Co.; C. A. Hayes, Asst. Genl. Fr't Agent, G.T.R., Chicago; T. Henry, T.M., Richelieu and Ontario Navigation Co., Mrs. and Miss Edith Henry; W. P. Hinton, G.F. & P.A., Canada Atlantic Ry., Mrs. Hinton; S. P. Howard, General Freight Agent, C.P.R., Montreal; C. Howe, A.G.F.A., Michigan Central Rd, Buffalo, N.Y.; A. Lalonde, C.F. & P.A., Boston and Maine Rd.; R. W. Long, Division Freight Agent, G.T.R., Stratford, Ont., Mrs. Long; J. W. Loud, Freight Traffic Manager, G.T.R., the Misses Loud, and Miss Lovell, Montreal; A. C. Lytle, G. S., Orford Mountain Ry., Mrs. Lytle; L. Macdonald, Division Freight Agent, G.T.R., Hamilton, Ont., Mrs. Macdonald; H. C. McCullough, G.E.F.A., Delaware & Hudson Co., Mrs. McCullough; M. MacGregor, G.C.A., Erie Rd., Toronto, Mrs. MacGregor; E. D. Mackenzie, C.F.A., Pennsylvania Rd., Toronto, Mrs. Mackenzie; J. B. Morford, A.E.G.M.,

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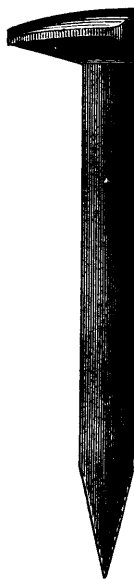
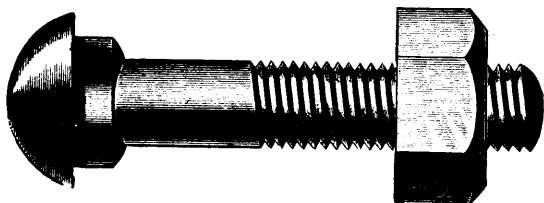
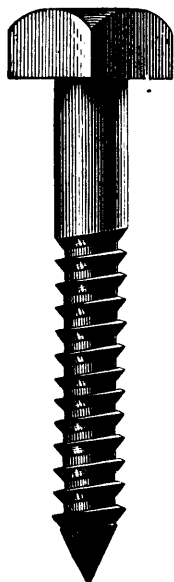
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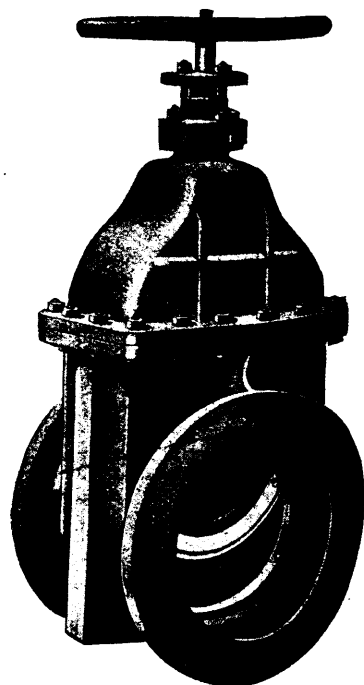
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The morning of July 12 was devoted to meetings of the freight inspection, car service, classification and executive committees, the general meeting of the Association being held in the afternoon. A resolution was adopted expressing the thanks of the Association to the managements of the Delaware and Hudson Co., and of the Hotel Champlain, and appreciation of the kindness and many acts of courtesy extended to the members and their guests. Special mention was made of Messrs. Wadsworth, Rolfe and McCullough, of the D. & H. Co., and of E. L. Brown, Manager of the hotel, and the assurance was given that the members would ever cherish pleasant recollections of the beauties of Bluff Point and its surroundings. A telegram was sent to Paul Wadsworth, conveying the greetings of the members and expressing their best wishes for his speedy convalescence.

While the general meeting was in progress in the afternoon, the ladies of the party, under the guidance of Messrs. Rolfe and McCullough, went on a trip to Burlington, Vt., as the guests of the Champlain Transportation Co. The steamer Chateaugay was taken from the hotel wharf, stops being made at Valcourt and Port Kent. At Burlington the party transferred to the steamer Vermont for the return journey. The day was a most delightful one and the trip was much enjoyed. On the Wednesday the party dispersed. A number stayed on at the hotel, some enjoying a drive on the sward of the beautiful green drive around the hotel grounds, some visiting the golf links, some resting quietly on the spacious verandahs and viewing the magnificent scenery of Lake Champlain on one side, or of the Adirondacks on the other, and everyone exploring the mysteries of the grotto, with its refreshing effects. The evening train was taken for Montreal. A small party visited Ausable Chasm, some 12 miles from the hotel, and returned delighted with its natural wonders. A considerable number took the early boat and went down Lake Champlain to Fort Ticonderoga, being entertained at dinner by the D. & H. Co. From Fort Ticonderoga most of them returned by train to Montreal, others going home by way of Albany, N.Y., and enjoying the trip on Lake George.

Very much regret was felt at the absence of Paul Wadsworth, Freight Traffic Manager of the Delaware & Hudson Co., owing to illness, especially as the meeting was held at Lake Champlain on his invitation. In his absence the honors of the occasion were very agreeably performed by C. E. Rolfe, General Freight Agent, and H. C. McCullough, General Eastern Freight Agent.

F. J. Watson, Division Freight Agent, G.T.R., Montreal, received a hearty welcome and congratulations on his recovery from his recent illness.

Much sympathy was expressed for J. B. Morford, Assistant to the General Manager, Michigan Central Rd., who, a few hours after

arriving at Bluff Point, received a telegram summoning him to the death-bed of his sister at Brooklyn, N.Y.

The party were much indebted, for many courtesies during their stay, to A. Lichtenhein, of the Galena-Signal Oil Co., who with his family is occupying one of the Hotel Champlain cottages and enjoying his favorite recreation, golf.

Dominion Railway Subsidy Contracts.

Since Jan. 1, the Department of Railways has entered into contracts with seven companies for the construction of 395 miles of line, under the terms and conditions of the acts passed to aid certain railways therein named. The lines aided, with mileage and dates of contract, follow:—

Atlantic, Quebec and Western Ry.—From Paspebiac to Gaspe, Que., not exceeding 102 miles. (Feb. 25).

Bruce Mines and Algoma Ry.—From Bruce Mines Junction to the town of Bruce Mines, Ont., not exceeding 3 miles. (Jan. 28).

International Ry. of New Brunswick.—From western 10 miles towards the St. John River between Grand Falls and Edmundston, N.B., not exceeding 100 miles. (May 13).

Klondike Mines Ry.—From Dawson to Stewart River, Yukon Territory, not exceeding 84 miles. (Feb. 1).

Mabou and Gulf Ry.—From Mabou Coal Mines to near Glendyer, thence to Orangedale, N.S., on the Intercolonial Ry., not exceeding 34 miles. (July 5).

Nicola, Kamloops and Similkameen Coal and Ry. Co.—From Spence's Bridge on the C.P.R., to Nicola Lake, B.C., not exceeding 45 miles. (April 27).

Orford Mountain Ry.—From Eastman to the townline between township of Bolton, Eastport, and township of Potton, Que., not exceeding 12 miles. (Mar. 9). From Kingsbury to Windsor Mills, Que., not exceeding 10 miles. (June 12). From the main line between Lawrenceville and Eastman to Lake Bonella, Que., not exceeding 5 miles. (June 23).

The St. Maurice Valley Ry. Co. was incorporated by the Dominion Parliament in 1904, with power to construct a railway from Three Rivers, Que., crossing the C.P.R. tracks there to Shawenagan Falls, Grand Mere, St. Jean des Piles, and thence via the Mattawin River valley, to the Eastern Division of the G.T. Pacific Ry. At the recent session an act was passed extending the time for construction of the line and permitting its operation by electricity. A survey of the line between Three Rivers and Shawenagan Falls, has been made by H. Carre, and it is probable that construction will be started this year. It has not been decided whether the line will be operated by steam or electricity. It is said that on completion the line will be leased to the C.P.R.

D. A. Starr, General Manager Clyde Valley Electrical Power Co., Glasgow, Scotland, writes:—"I have received the last copy of THE RAILWAY AND SHIPPING WORLD, and have just had the pleasure of reading it. I do not know when I have enjoyed so much home news."

Members of the House of Commons have been supplied with cards to enable them to travel free by rail. The cards, which bear the Royal Arms, a number and the year, read as follows:—"Mr. ——— is a member of the House of Commons of Canada, and is entitled by law to free transportation with his baggage upon all railway trains in Canada. Attest, Thos. B. Flint, Clerk of the House of Commons." The cards are to be signed by the members.

MAINLY ABOUT PEOPLE.

Jas. Mills, Railway Commissioner, who has been seriously ill, is resting at Dorset, Lake of Bays, Ont.

Miss M. V. Lalonde, sister of A. E. Lalonde, C.P.R. City Passenger Agent, Montreal, died there, June 29.

A. C. Killam, K.C., Chief Railway Commissioner, is spending some time at Winnipeg with his family.

W. B. Bulling, Assistant Freight Traffic Manager, C.P.R., and Mrs. Bulling, are visiting friends at Keewatin, Ont.

W. R. MacInnes, Freight Traffic Manager C.P.R., and Mrs. MacInnes, returned to Montreal on July 8, from England.

T. Ahern, Ottawa, was presented with a gold locket recently, on the occasion of the celebration of his 50th birthday.

A. R. Creelman, K.C., Chief Solicitor C.P.R., and family sailed from Montreal July 5, on the Lake Manitoba, for a trip to Great Britain.

Hon. A. G. Blair, formerly Minister of Railways and Canals, together with Mrs. and Miss Blair, are spending some time in Muskoka, Ont.

D. D. Mann, of Mackenzie, Mann & Co., is reported to have purchased the St. Leon Springs Hotel property, St. Leon Springs, Que.

M. Starrs, formerly an ex-Alderman of Ottawa, died there recently, aged 72. He was a contractor on the construction of the C.P.R. short line.

W. Downie, General Superintendent Atlantic Division C.P.R., has returned to St. John, N.B., after a two months' trip to his native country, Ireland.

P. W. Wetmore, General Passenger Agent New Brunswick Southern Ry., was recently presented with a meerscham pipe and smokers' outfit by the employes.

J. G. Laven, who died in Hamilton, Ont., July 23, was for about 25 years Canadian Passenger Agent for the Michigan Central Ry., but retired about 1899.

C. M. Hays, Second Vice-President and General Manager G.T.R., has been appointed a member of the Permanent Commission of the International Railway Congress.

W. Whyte, Second Vice-President C.P.R., and J. A. M. Aikens, C.P.R. local solicitor at Winnipeg, Man., have been appointed local directors of the Imperial Bank.

A. Lichtenhein, of the Galena Signal Oil Co., and his family, are spending the summer at Bluff Point, N.Y., where they are occupying one of the Hotel Champlain cottages.

J. E. Price, General Superintendent Intercolonial Ry., is reported seriously ill at Moncton, N.B., from diabetes, and it is said little hope is held out for his recovery.

Geo. Ham, of the C.P.R. head office staff, Montreal, was operated on in Montreal, July 25, for appendicitis. Mrs. Ham is very ill and her recovery is thought to be doubtful.

M. D. Almond, an engineer, and W. White, transitman, on one of the Transcontinental Ry. survey parties, working near Lake Abitibi, were drowned in the lake at the end of June.

W. H. Moore, Assistant to the President Toronto Ry., and Secretary Canadian Northern Ry., was elected a member of the Delta Chi Fraternity Convention recently held in Toronto.

E. A. Rhodes, son of N. A. Rhodes, Vice-President of Rhodes, Curry & Co., Amherst, N.S., was married there July 12, to Miss G. Pipes, daughter of the Commissioner of Mines for Nova Scotia.

John Cunningham, of the G.T.R. General Freight Department, Montreal, has been on

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a trip to Great Britain, spending most of the time in Ireland, where he visited his birth-place at Bally Bay.

D. Murphy, of the Temiskaming and Northern Ontario Ry. Commission, was a member of the party representing the Canadian Manufacturers' Association, which recently visited Great Britain.

D. W. Campbell, who has been appointed Superintendent of the Oregon Division of the Oregon Rd. and Navigation Co., Portland, Ore., is a native of Ontario, who has been in U.S. railway service for some years.

Paul Wadsworth, Freight Traffic Manager, Delaware and Hudson Co., who has been suffering from inflammatory rheumatism for some three months, most of which time he spent at Sharon Springs, N. Y., is convalescing.

R. H. Shaw, Great Northern Ry. agent at Silvana, Wash., who died there recently, was a brother to J. J. Shaw, C.P.R. train dispatcher, Vancouver, B.C., and of T. W. Shaw, also of the C.P.R. service at Field, B.C.

W. Newman was presented with an address and purse of money by his fellow-employees on the C.P.R., on leaving Revelstoke, B.C., to become roadmaster of the Esquimalt and Nanaimo Ry., at Victoria, the latest C.P.R. acquired line.

The late Hon. J. Sutherland, M.P., Minister of Public Works, held at the time of his death, the following among other securities:—Canadian Northern Ry. bonds, \$50,000; Grand Valley Ry. bonds, \$2,000; C.P.R. stock, \$30,500.

B. W. Folger, of Kingston, Ont., was boarding a street car in Toronto, July 4, when the car started; he was jerked forward and dragged for about a block before the car was stopped and he regained his feet. He escaped without injury.

J. B. Morford, Assistant to the General Manager of the New York Central Rd., and Mrs. Morford, have been at Sparta, Wis., and are now spending a little time at Grand Forks, N.D. They expect to return to St. Thomas, Ont., about Aug. 15.

E. M. Smith, formerly representative of Fairbanks, Morse & Co., Chicago, has been appointed Manager of the Canadian Fairbanks Co.'s railway supply department which includes railway goods manufactured by Fairbanks, Morse & Co.

J. S. Hendry, President Vancouver, Westminster and Yukon Ry., who accompanied the Canadian Manufacturers' Association, of which he is Vice-President for British Columbia, to England, slipped on the deck of the Victorian, while on the voyage to England, and broke his thigh.

G. B. Johnson, who has been appointed assistant Engineer of the Shanghai-Nanking Ry., China, is a son of ex-Mayor Johnson, of Belleville, Ont., who after passing through the Royal Military College, Kingston, Ont., was given a commission in the Royal Engineers. This he has resigned to take up his new duties.

Among those present at the Dominion Day dinner of the Canadian Club in London, Eng., July 1, were Archer Baker, H. D. Annable of the C.P.R. London offices; J. Smithers, Vice-President, and H. H. Norman, Secretary, G.T.R.; and F. Grundy, Vice-President and General Manager Quebec Central Ry., Sherbrooke, Que.

W. M. Brown, who died at Richibucto, N.B., recently, aged 57, was a civil engineer and contractor. He and his brothers were engaged in construction work on several railways in New Brunswick, Nova Scotia and Maine, and the deceased was for 14 years lessee and General Manager of the Kent Northern Ry.

An organization has been formed in Nova Scotia for the purpose of providing suitable

memorials to distinguished Nova Scotians. Among the first of the distinguished sons of the Province to be remembered is Sir Saml. Cunard, the founder of the Cunard Line of steamers, now running between New York and Liverpool, Eng.

D. W. Craddock, chief assistant to D. E. Brown, C.P.R. General Agent at Hong Kong, is spending six months' leave of absence in Great Britain. He spent some days in Toronto and Montreal prior to leaving for Liverpool, and will return to Hong Kong through Canada. He is accompanied by Mrs. Craddock and two children.

H. W. Weller, Associate Member Institute of Civil Engineers, England, and Member of the Canadian Society of Civil Engineers, heretofore in charge of the sales department of Babcock and Wilcox, Montreal, has been appointed General Manager for Canada. He recently returned to Montreal from a trip to England.

A. J. McGee, General Accountant, Temiskaming and Northern Ontario Ry., was born at Lachine, Que., Jan. 24, 1876, and entered railway service in the city ticket office of the Canada Atlantic Ry., Ottawa, Sept., 1892. He was transferred to the audit office, June, 1893, remaining there until the date of his present appointment, May 1, 1905.

G. C. Farish, who has been appointed acting Superintendent, Halifax and South-Western Ry., at Yarmouth, N.S., was auditor of the Halifax and Yarmouth Ry. at the time of its being taken over as the Yarmouth Division of the H. and S.W. Ry. In referring to his appointment in our last issue he was described as chief clerk in the Superintendent's office.

C. B. Smith, Chairman and Consulting Engineer of the Temiskaming and Northern Ontario Railway Commission, has been appointed Engineer of the Hydro-Electric Commission recently appointed by the Ontario Government. He has also been appointed Consulting Engineer by a number of companies developing electric power in Manitoba.

The medals awarded by the Royal Humane Society to the men who risked their lives to rescue the men overcome by gas in the Sarnia tunnel, Oct., 1904, were presented at a town council meeting July 6. The recipients were J. Hamilton, A. Forbes, W. Cameron, J. Arbaugh, F. W. Foster, W. Hawn, C. Fisher, A. McDonald, F. J. McKee, J. Blake.

Miss N. D. Piers, daughter of A. Piers, Manager C.P.R. steamships, was married recently to Capt. H. C. Pritchard, formerly of the 1st Yorkshire Regt., at the Abbey Church, Sherborne, Dorset, Eng., which town was celebrating the thousandth anniversary of its incorporation at the same time with an elaborate series of reproductions of historical events associated with its history.

J. C. Buntzen, who has recently been appointed Managing Director British Columbia Electric Ry., will in future reside in London, Eng. On July 4, the officials and employees of the company met at New Westminster, and presented him with an address, a group photograph of the entire staff and a tea service of solid silver. An address was also presented to Mr. Buntzen on behalf of the New Westminster City Council.

Mrs. C. A. Fletcher, a sister of J. B. Morford, Assistant to the General Manager of the New York Central Rd., died at Brooklyn, N.Y., July 11, aged 67, and was buried in the Morford lot in Laurel Grove Cemetery, Port Jervis, N.Y. J. B. Morford, who had gone from Bluff Point, N.Y., to be at her deathbed, being among the mourners. She was married in 1886 at the residence of J. B. Morford, who then lived at Port Jervis.

It is said that when the Canada Atlantic Ry is taken over by the G.T.R., on Sept. 1

or thereabouts, E. J. Chamberlin, General Manager, will retire to go into contracting business; that M. Donaldson, now General Superintendent of the C.A.R., will remain as Superintendent of the Canada Atlantic Division of the G.T.R., and that W. P. Hinton, General Freight and Passenger Agent of the C.A.R. will go into the G.T.R. service at Montreal.

Thos. Ridout, civil engineer, and for many years connected with the Department of Railways and Canals, died at Ottawa, July 3, aged 75. He was the oldest native born Torontonian, and was educated at the Upper Canada College, and in London, Eng. He was engaged in engineering work on the Hamilton and Toronto Ry., the Port Hope, Beaverton and Lindsay Ry., the Wellington, Grey and Bruce Ry., and the Prince Edward Island Ry.

G. L. Courtney, who has been appointed District Freight and Passenger Agent, C.P.R., Victoria, B.C., was born at Chatham, Ont., Oct., 1868. He entered railway service in 1885, since which he has been consecutively to 1890, clerk G.T.R.; Aug., 1890, to Aug., 1898, with C.P.R., successively as clerk, travelling passenger agent, contracting freight agent and agent at Victoria, B.C.; Aug., 1898, to June 30, 1905, Traffic Manager Esquimalt and Nanaimo Ry., now owned by the C.P.R.

J. F. Stevens, who has been appointed Chief Engineer of the Panama Canal, by the U.S. Government, was assistant and Division Engineer on the C.P.R. between 1882 and 1886, and in that capacity was engaged on location and construction work west of Winnipeg, Man., mainly in the Rocky Mountains. From 1887 to 1889 he was principal assistant engineer on the Duluth, South Shore and Atlantic Ry., and then became connected with the Great Northern Ry., U.S.

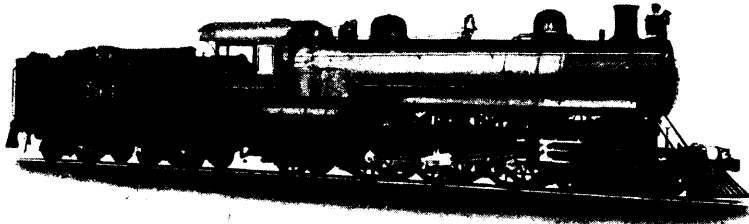
A. Onderdonk, General Manager of the New York Tunnel Co., which is constructing the tunnel under the East River at South Ferry, New York, died at Oscawana, N.Y., recently. Between 1880 and 1885 he had contracts covering about 400 miles of the C.P.R., mainly in British Columbia. Among other contracts in which he was engaged in Canada were the following: the Victoria bridge, Montreal; the Toronto, Hamilton and Buffalo tunnel at Hamilton, Ont.; the Soulanges canal, and the Trent Valley canal.

John Bell, K.C., first solicitor, and for the past few months Chief Consulting Counsel of the G.T.R., died at Belleville, Ont., July 5, aged 84. Born at Strabane, Tyrone county, Ireland, July 10, 1822, he came to Canada with his parents when ten years of age. He was educated at Victoria University, studied law in Toronto, and commenced practising at Belleville in 1849. He was appointed solicitor to the G.T.R. in 1852, and retained the position until a few months ago, when he was made Chief Consulting Counsel. Mrs. Bell died a couple of months ago.

The Illinois Central Rd.'s management has made several changes in its traffic department. T. J. Hudson, heretofore Traffic Manager, has been appointed General Traffic Manager, the office of Traffic Manager being abolished. F. B. Bowes, heretofore Assistant Traffic Manager, has been appointed Freight Traffic Manager, the office of Assistant Traffic Manager being abolished. A. H. Hanson, heretofore General Passenger Agent, has been appointed Passenger Traffic Manager. S. G. Hatch, heretofore Assistant General Passenger Agent, has been appointed General Passenger Agent.

A. C. Lytle, General Superintendent Orford Mountain Ry., accompanied by his son, was driving along the extension of the line between Kingsbury and Windsor Mills, Que., July 18, carrying with them about \$14,000 to pay out

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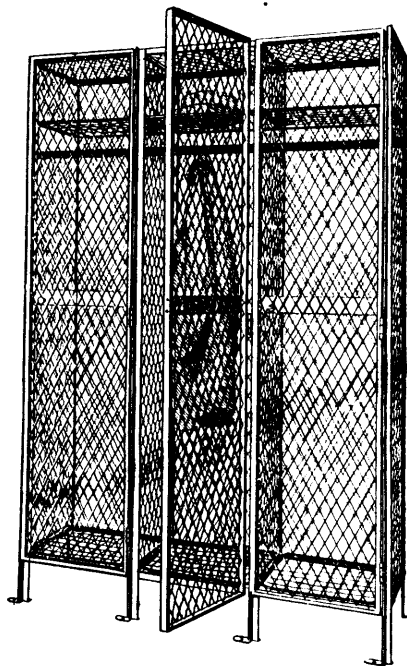
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Lv. Montreal	*9.00 a.m.,	*7.45 p.m.
Arr. Lowell	*7.29 p.m.,	*6.37 a.m.
" Worcester	*9.04	*9.19
" Boston	*8.15	*7.30

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

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

VIA G.T.RY., WEST SHORE & ROTTERDAM

Lv. Toronto	*4.10 p.m.
" Niagara Falls	*6.15
" Buffalo	*4.30 a.m., *7.20
Arr. North Adams	*1.05 p.m., *5.08 a.m.
" Worcester	*4.55 *8.59
" Boston	*5.20 *9.50

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Arr. Portland	*7.45 p.m.,	*8.05 a.m.
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to the construction gangs, when they were attacked by highwaymen with shot guns. The horse was shot dead, and Mr. Lytle and his son jumped from the vehicle with the money bags and ran to the bush. Several shots were fired after them, Mr. Lytle receiving wounds in his arms, back and legs, and shots also struck the money bag he was carrying. The firing attracted attention, and by the time some men from a construction gang reached the place the would-be robbers had got away. Mr. Lytle was subsequently attended to at Richmond, Que., hospital, and later at Montreal.

The Canadian American, Chicago, Ill., recently published the following:—"T. B. Hawson, who several years ago was auditor of the G.T.R., and who recently moved from Chicago to New York, was a few days ago taken to Bellevue Hospital, apparently suffering with some form of dementia. A few days ago he went to the Broadway Pressrooms and had struck off 20,000 advertisements which stated that meals would be served at 225 W. 66th Street, at 147 meals for \$1. Later he stated that as his place at 225 W. 66th Street was not ready, meals would be served at 165 W. 66th Street, which happened to be the store of a butcher. A mob surrounded the place, and it took a strong effort on the part of the police to subdue it. Finally, by dint of questioning, the reason for the clamorous mob's existence was traced to its source, and Policeman Rehan made a call upon Mr. Hawson at his residence, and strolled with him to the West Side Court."

B. B. Kelliher, who has been appointed Chief Engineer of the Grand Trunk Pacific Ry., is a native of Ireland, and was educated at Trinity College, Dublin. After practicing as a civil engineer for a year in Ireland, he went to the United States in 1887, since which, to Jan., 1904, he was engaged in railway work there, with the exception of three months spent in Mexico. Among the positions he filled was that of Resident Engineer on a division of the Northern Pacific Ry., during the time J. R. Stephens, who afterwards had charge of the G. T. Pacific Ry. surveys, was Principal Assistant Engineer, and prior to coming to Canada he was engaged on the Denver, Northwestern Pacific Ry. He was engaged in Canada as Division Engineer for the G. T. Pacific Ry., at Winnipeg. In the evidence given by him before the Royal Commission June 9, 1904, he stated that he had not taken out naturalization papers in the U. S., and that he had not found it necessary to do so.

Major V. Sankey, in charge of a party on the Transcontinental Ry. surveys from Kenora, Ont., with two members of his staff were drowned in Manitou Lake, Ont., owing to the upsetting of their canoe July 10. Only one member of the party reached land, viz., Temple, of Brandon, Man., who paddled the canoe back to camp, five miles, with the branch of a tree. The canoe in which the party was crossing the lake was overturned by the heavy wind, and the four occupants succeeded in holding on for about two hours, when first one and then another dropped off, Major Sankey being the last to succumb when 200 yards from the shore and after having been in the water for about three hours. Temple, the survivor, reached camp at eleven o'clock at night with the details of the disaster. The bodies were subsequently recovered, and that of Major Sankey forwarded to Toronto. The funeral with full military honors took place July 20. Prior to his appointment Major Sankey had been for fifteen years city surveyor of Toronto.

Archer Baker, whose portrait appears on the first page of this issue, was born June 21, 1845, at York, Eng., and entered railway service Sept. 24, 1869, since which he has been consecutively to Nov., 1870, clerk to President, Missouri Valley Rd.; Nov., 1870,

to March, 1871, Superintendent's clerk, Brockville and Ottawa Ry.; March, 1871, to July, 1873, Accountant same road and Canada Central Ry.; July, 1873, to Dec., 1876, Secretary and Treasurer same companies; Dec., 1876, to April, 1878, Secretary and Treasurer Brockville and Ottawa Ry.; April to July, 1878, Assistant General Manager same road and Canada Central Ry.; July, 1878, to June, 1881, General Manager Canada Central Ry.; June, 1881, to May, 1885, General Superintendent C.P.R. Eastern Div.; May, 1885, to Aug., 1904, European Traffic Agent, London, Eng., same road; Aug., 1904, to July, 1905, European Traffic Manager; July 1, 1905, European Manager. He is brother to W. R. Baker, Assistant to the President, C.P.R., Montreal.

John Earls, who has retired from the position of Secretary-Treasurer of the Canadian Freight Association, was born in Ireland, Oct. 30, 1838. He entered railway service in 1862 with the G.T.R., since which he has been consecutively to 1863, corresponding clerk at Toronto; 1863 to 1866, clerk at Sarnia, Ont.; 1866 to 1868, corresponding clerk at Portland, Me.; 1868 to 1871, cashier and accountant freight and steamship department, same place; 1871 to 1872, chief clerk General Freight Agent's office, at Toronto; 1872 to 1875, chief clerk General Freight Agent's office, at Montreal; 1875 to 1877, Assistant General Freight Agent Eastern Division; 1877 to 1884, Assistant General Freight Agent Western Division; 1884 to 1892, District Freight Agent Northern and Northwestern Districts; 1892 to 1896, District Freight Agent Western Division, at Hamilton, Ont., entire service with the G.T.R. In 1896 he was appointed Secretary and Treasurer Canadian Freight Association, and was subsequently also chairman of its committees and Manager of its car service department.

D. MacPherson, who has been appointed Assistant Chief Engineer to the Commissioners of the Transcontinental Ry., was born at Bath, Ont., Feb. 2, 1858. He entered the employ of the Canada Central Ry. in Nov., 1880, as a rodman on the surveys of the extension west of Pembroke. In Feb., 1881, on the incorporation of the C.P.R., the Canada Central Ry. was taken over by the former company, and he continued on its staff. In May, 1881, he was sent to Mattawa, Ont., as a rodman on revision of location and construction. Between that time and Aug., 1882, he went through the grades of rodman, leveller, transitman and engineer in charge of section of final location and construction. In Aug., 1882, he became Assistant Engineer of about 400 miles of line, then constituting the Eastern Division. In 1886 or thereabouts he was appointed Division Engineer in charge of maintenance of way, track, bridges, buildings, etc., Eastern Division, and construction of branch lines, which he remained in charge of until his present appointment. From the time he took charge of the Eastern Division until the present time, the Division has grown from 400 to 1,500 miles. He graduated from the Royal Military College, Kingston, Ont., in 1880, being first in the class of engineering, and was a graduate of the first class that came out of this College.

W. Jessop died July 4, at his country estate, Thornsett Lodge, Bradfield, Eng., after a long illness. He was born in Oct., 1856, and was educated at Repton, Germany, and at Cambridge. At the time of his death, and since 1887, he was Chairman of William Jessop & Sons, Ltd., steel manufacturers, of Sheffield, and was the head of the fourth generation of the Jessop family in control of the firm—the business having been established in 1774. He was also President of the Jessop Steel Co., of Washington, Pa., President of the Jessop Hospital for Women, an institution founded by his father, the late Thos. Jessop,

to which he contributed over \$200,000, and which was zealously and liberally supported by his son. He was also a trustee of the Sheffield Royal Infirmary, and a member of the Bradfield Game Association, controlling shooting rights over a large area of moors in the Bradfield district, and was formerly a Director in the Sheffield & Rotherham Bank and the Yorkshire Engine Co. He was a large land owner, and worked an estate of 4,000 acres at Huggat, in the northeast of England, and also an estate at Fosdick, and was keenly interested in agricultural pursuits and an ardent sportsman. He was noted for his kindness and generosity to his tenants, and those in need, and made an excellent landlord, and was greatly esteemed by all. He visited Australia, Japan, Canada and the United States in 1903.

M. J. Butler, who has been appointed Deputy Minister of Railways and Canals, was born at Deseronto, Ont., Nov. 19, 1856, and was educated at the De La Salle Institute, and University College, Toronto, and entered railway service in 1879 as transitman on location of the Renfrew extension Kingston and Pembroke Ry., and was engaged in various capacities to 1882, since which his record has been: 1882 to 1883, engineer in charge of construction Thousand Islands Ry.; 1883 to 1886, Chief Engineer Napanee, Tamworth and Quebec Ry.; 1887 to 1889, Assistant Engineer Acheson, Topeka and Santa Fe Ry., on building and water service in Colorado and Kansas; 1889 to 1891, Chief Engineer and Superintendent Temiscouata Wood Pulp Factory; 1891 to 1900, Chief Engineer Bay of Quinte Ry., Thousand Islands Ry., and Oshawa Ry. During his connection with the Rathbun Company's lines he designed and constructed the cement works, water-works and sewerage system at Deseronto; he was subsequently engineer in charge of the construction of the bridge over the Hillsboro River at Charlettetown, P.E.I., and latterly designed and supervised the erection of the works of the Locomotive and Machine Co., of Montreal, of which he was Chief Engineer to Sept., 1904, when he was appointed Assistant Chief Engineer of the Transcontinental Railway Commission, which he relinquished to take up his present position. He is an LL.B., and an attorney-at-law of the State of Illinois.

Car Service Bureau.—The car inspection service, which for a number of years has been carried on by the Canadian Freight Association, will in the near future be placed under the control of the operating departments of the various railways, and a committee comprised of G. S. Cantlie, Supt. Car Service G.T.R.; M. C. Sturtevant, Car Service Agent G.T.R., and J. B. Morford, Asst. to the General Manager, Michigan Central Rd., have made the preliminary arrangements. At the time of writing (July 25) we understand that a meeting will be held in Montreal, July 27, to consider the report of this committee, to appoint an executive committee for the management of the new bureau, and to formulate a code of car service rules in accordance with the requirements of the Railway Commission. It is understood that J. E. Duval, Chief Inspector of the Board of Railway Commissioners, will resign that position and that he will be appointed Manager of the new bureau.

The Canadian Fairbanks Co., Ltd., has been authorized to increase its capital stock from \$500,000 to \$650,000.

The session of the Dominion Parliament closed July 20, an unusual feature being that no railway subsidies were asked for by the Government.

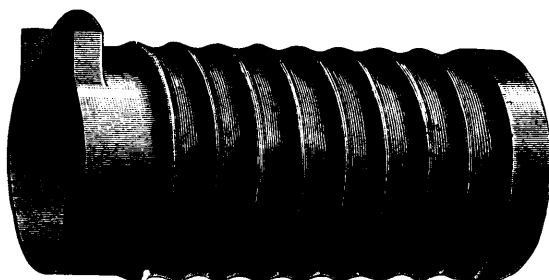
The Minister of Railways stated in the House of Commons July 13, that a bill to provide for the granting of pensions to employes of the Intercolonial Ry., would probably be brought before Parliament next session.

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HALIFAX and the SYDNEYS

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TRANSPORTATION APPOINTMENTS.

Canadian Pacific Ry.—Archer Baker, heretofore European Traffic Manager, has been appointed European Manager with general supervision of the company's business affairs (other than financial negotiations) in Great Britain and on the Continent under the direction of the President and Vice-President. With reference to all matters of a strictly departmental character, officers in the territory of the European Manager will report to their respective chiefs as heretofore, but they will frequently consult with the European Manager and keep him fully informed about everything affecting the territory in his charge.

Harry Moody, Deputy Secretary in London, retired from active service on July 1, after 22 years of most faithful and intelligent attention to the affairs of the company that came within his province. The directors regret that owing to the state of his health he has found it necessary to relinquish the more onerous duties of Deputy Secretary, and it has been arranged that he shall remain connected with the company unofficially so that his services will be available if and when required.

R. D. Morrison, heretofore in the office of the Deputy Secretary, has been appointed Deputy Secretary of the company in London, Eng.

E. F. Tremayne, heretofore in the office of the Deputy Secretary, has been appointed Registrar of the company in London, Eng.

The offices of the European Manager, Deputy Secretary and Registrar are in the C.P.R. building, 62-65 Charing Cross, London, S.W., Eng.

D. MacPherson, Division Engineer, Eastern Division, Montreal, has resigned on his appointment as Assistant Chief Engineer, Transcontinental Ry. Commission.

H. B. Lake is reported to have been appointed Water Analyst of the C.P.R. Western lines, succeeding the late E. B. Kenrick. Office, Winnipeg.

C. E. Blaney, City Passenger Agent at Vancouver, B.C., was for a time acting as train ticket exchanger there, during which period his other duties were discharged by —Scarlett. Mr. Blaney having resumed his duties, —Scarlett has been transferred to the office of H. B. Dunn, C.P.R. agent at Skagway, Alaska.

G. L. Courtney, heretofore Traffic Manager of the Esquimalt and Nanaimo Ry., which has been acquired by the C.P.R., has been appointed District Freight and Passenger Agent for the C.P.R. at Victoria, B.C. He will report to the Assistant General Passenger Agent and to the General Freight Agent, Vancouver.

Department of Railways and Canals.—It is semi-officially announced at Ottawa, that Collingwood Schreiber, C.M.G., who has been Deputy Minister of Railways and Canals since 1892, will be appointed Consulting Engineer to the Department, and it is stated that he will take up his new duties Aug 1, when M. J. Butler, C.E., will be appointed Deputy Minister. These appointments had not been gazetted up to the time of writing. (July 26.) It is said that Mr. Schreiber will be especially consulted by the Minister in regard to the choice of terminals and location of the G. T. Pacific Ry.

Esquimalt and Nanaimo Ry.—Jos. Hunter, heretofore Chief Engineer and General Superintendent; J. E. Lindsay, heretofore Auditor, and J. Fowler, heretofore Master Mechanic, of the E. and N. Ry., which has been transferred to the C.P.R., will remain with the Dunsmuir interests, and have entered the service of the Wellington Colliery Co., of which Jas. Dunsmuir is President.

H. K. Prior, heretofore Purchasing Agent, and I. S. Floyd, heretofore Accountant, E.

and N. Ry., have left the service and will engage in private business.

The line will be operated as a sub-division of District 2, Pacific Division, C.P.R., as soon as some formalities in connection with the transfer are completed. In the meantime it is being operated as a separate branch line with the following officials:—

H. E. Beasley, heretofore Superintendent, C.P.R., Vancouver, has also been appointed Superintendent E. and N. Ry., his office remaining at Vancouver.

Jno. Goodfellow, heretofore Trainmaster and Chief Dispatcher, C.P.R., at Vancouver, has been appointed Assistant Superintendent E. and N. Ry., with office at Victoria.

All employees in the service of the E. and N. Ry. will report to and take instructions from the Assistant Superintendent, except those engaged on steamboats and barges, who will report to and take instructions from Capt. J. W. Troup, General Superintendent B.C. Coast Service, Victoria.

G. L. Courtney, heretofore Traffic Manager, has been appointed District Freight and Passenger Agent at Victoria. (See also C.P.R. appointments).

S. Phipps, Master Mechanic Pacific Division, C.P.R., at Revelstoke, B.C., has had his jurisdiction extended over the E. and N. Ry.

R. Bowman, C.P.R. Storekeeper, Vancouver, B.C., has also been appointed Storekeeper E. and N. Ry., his office remaining at Vancouver.

W. Newman, heretofore C.P.R. Roadmaster at Revelstoke, B.C., has been appointed Roadmaster E. and N. Ry., at Victoria.

F. Brown is the Train Dispatcher E. and N. Ry.

Grand Trunk Ry.—G. Barnes, soliciting freight agent at Toronto, has resigned to become travelling freight agent for the Wisconsin Central Rd., for Ontario and Michigan, with headquarters at Detroit, Mich.

Grand Trunk Pacific Ry.—A press report that D. O'Brien, of the G.T.R. mechanical department at Montreal, had been appointed assistant to the Vice-President and General Manager, is said to be without foundation. The report stated that the new official would have his headquarters at Winnipeg, and would have charge of the construction of the new line in the West, and maintain a general supervision over the affairs of the company in that part of Canada.

B. B. Kelliher, heretofore Division Engineer at Winnipeg, has been appointed Chief Engineer. Office, Montreal.

H. A. Woods, who was acting for the company in the preparation of the specifications for the Eastern Division by the Transcontinental Ry. Commissioners, has been appointed Assistant Chief Engineer. Office, Montreal.

E. R. McNeill, heretofore District Engineer at Edmonton, Alta., has been appointed Division Engineer at Winnipeg, succeeding B. B. Kelliher, promoted.

W. E. Mann, heretofore Assistant Engineer has been appointed District Engineer at Winnipeg.

Jno. Armstrong, heretofore Assistant Engineer at Edmonton, Alta., has been appointed District Engineer there, succeeding E. R. McNeill, promoted.

Intercolonial Ry.—F. H. Moore is reported to have been appointed Locomotive Inspector. Office, Moncton, N.B.

Michigan Central Rd.—G. H. Webb, heretofore Assistant Chief Engineer, has been appointed Chief Engineer, succeeding W. S. Kinnear, who resigned that portion of his duties to devote his entire time to the position of Assistant General Manager, with charge of the work of tunnel construction under the Detroit River. R. D. Starbuck has been appointed Assistant Chief Engineer.

The Pere Marquette Rd.—The following rearrangement of superintendents' territory has

been made: Chicago terminals, H. O. Halsted, Superintendent Chicago, Ill., Chicago to Porter.

Grand Rapids District, P. N. Place, Superintendent, Grand Rapids, Mich., Chicago Division and branches, LaCrosse division, Muskegon division, Petoskey division and branches, Big Rapids division; D. E. McVean, Train Master, Grand Rapids, Mich.; B. Gavet, Train Master, Traverse City, Mich.

Saginaw District, A. R. Merrick, Superintendent, Saginaw, Mich., Toledo division and branches, Bay City division; Saginaw belt and terminals, and S.T. & H.R.R. division; J. L. Hayes, Train Master, Saginaw, Mich. Ludington division and branches, Port Huron division, Port Austin divisions and branches; J. A. Anderson, Train Master, Saginaw, Mich. Saginaw division, Ionia division, north of Ionia, and branches; M. J. Griffin, Train Master, Ionia, Mich.

Detroit District, J. S. Pyeatt, Superintendent, Detroit, Mich., Grand Rapids division, Grand Rapids to Detroit, Ionia division, Grand Ledge to Ionia; E. E. Cain, Train Master, Detroit, Mich., Buffalo division, J. R. Gilhula, Train Master, St. Thomas, Ont. It will be observed that the headquarters of Messrs. Pyeatt and Cain are headed from St. Thomas, Ont., to Detroit, Mich. J. R. Gilhula was formerly Chief Dispatcher at St. Thomas.

G. W. Groom, heretofore train dispatcher at St. Thomas, Ont., has been appointed Chief Train Dispatcher, Buffalo Division, vice J. R. Gilhula, promoted.

Transcontinental Ry. Commission.—S. N. Parent, ex-Premier of Quebec, has been appointed Chairman of the Commission, to succeed the late F. B. Wade. In an interview in Montreal he stated that after taking a short holiday he would go to Montreal and take up his duties, and that he would resign as Mayor of Quebec and as a member of the Quebec Legislative Assembly.

It is also announced that C. F. McIsaac, M.P. for Antigonish, N.S., has been appointed a Commissioner. Press reports stated that A. Brunet, one of the commissioners was about to resign to make way for Mr. Parent, but his resignation has not been announced.

D. MacPherson, heretofore Division Engineer, C.P.R. Eastern division, Montreal, has been appointed Assistant Chief Engineer, succeeding M. J. Butler, who becomes Deputy Minister of Railways and Canals.

In the article on Railway Employees' Claims for Accidents, on pgs. 291-293 of our last issue, it was stated that the judgment of the Supreme Court upheld the competency of Parliament to pass Sec. 1, Chap. 31, of the Statutes of 1904, and declared it to be ultra vires. It should have read *intra vires*.

PROFESSIONAL CARDS.

THE RAILWAY AND SHIPPING WORLD is especially adapted for the publication of professional cards of engineers, inspectors, analysts, electrical experts, naval, grain elevator and other architects, solicitors, etc., who desire to bring themselves under the notice of the managements and officials of the various steam and electric railway, steamship, grain elevator, telegraph, telephone and power companies throughout Canada, as well as the locomotive, car and ship builders, contractors and promoters of railway enterprises. THE RAILWAY AND SHIPPING WORLD is the only one medium through which all these important classes can be reached.

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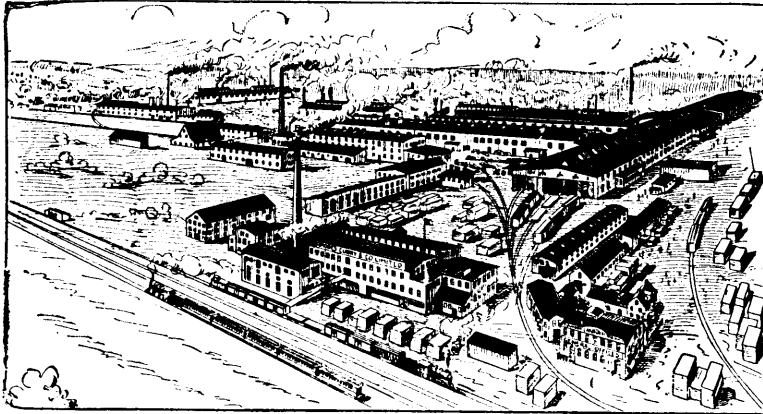
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IMPROVED FARMS in all districts of the province can be purchased at from \$10 to \$40 per acre. These prices are advancing every year.

A FEW POINTERS

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

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

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

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

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

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

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

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

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

Point St. Charles Shops.—The negotiations respecting the fixing of taxation on the company's property at this point, has been practically agreed to on a basis of \$1,000,000 for a period of 20 years. The company is arranging for extensive improvements and additions to the shops, and desired to

so that if an excessive load were placed upon any one portion the same would be distributed over the adjoining panels. Anchors for carrying steam pipes and controlling individual smoke stacks over locomotives were placed in the concrete while the same was green. The machine shop roof is constructed similarly to the round house, using a series of beams about 12 ft. o.c., spanned with a 4 in. concrete slab. These are also reinforced with Kahn trussed bars. The illustrations on this page show the method of construction.



SHOWING G.T.R. ROUND HOUSE AT MIMICO, ONT., IN PROCESS OF CONSTRUCTION.

have the assessment fixed before the work was commenced.

Mimico Round House, etc.—The round house and machine shop recently built at Mimico, near Toronto, contains 30 stalls, each 13 ft. wide at the inner circle, and 26 ft. at the outer circle. Each stall is 82 ft. long, divided into three sections, and carried on four columns. The entire structure is built of concrete, reinforced with Kahn trussed bars. The interior columns are 14 in. square, and contain each four 1/2 x 1 1/2 in. trussed bars. The diagonals of these steel members are bent horizontal in order to obtain the effect of hooping. Angle guards were placed in all corners in order to prevent chipping. The columns in the outer circle are T shape, forming a pilaster on the outside, and at the same time supplying recesses for keeping the curtain walls between columns. The joints at these points allow for expansion and contraction. In designing the columns in the interior circle, it was feared that locomotives striking the outside doors would break the concrete columns which carried the doors. For this reason these columns were made of three channels filled with concrete, and anchored to same. This construction was decided upon, as it is contended that such a column would not break, but would merely shift off its foundation if struck by a locomotive. Doors were fastened directly to these channels. On the side not containing a channel, were placed 1/2 x 1 1/2 in. trussed bars as a reinforcement. Radial lines of reinforced concrete girders were placed between columns at a height of about 20 ft. 5 in. from top at the outer circle, and 24 ft. 2 in. at the inner circle. Seven longitudinal rows of reinforced concrete beams were spanned between the girders and columns. Both beams and girders were reinforced with Kahn trussed bars in the bottom, and over the supports they were invariably made continuous with inverted bars. Each beam contains in the bottom at least two bars full length and one bar about two-thirds the length at the bottom in the centre and raised at the ends. Between the beams and girders is spanned a 4 in. concrete slab, which is reinforced in both directions, and made continuous over the entire area. Especial attention was paid towards obtaining an absolute monolithic character in the entire structure,

for station extension purposes. The formal order has not been issued, but the decision is causing considerable comment in the city. It is said to be likely that a joint station will be built for the use of the G.T.R. and the C.P.R.

Paris Station.—Negotiations are in progress with the Town Council for the erection of a new station at Paris, Ont., at a point nearer the town than the present one.

Brantford Station and Improvements.—The new station was completed and occupied early in July, and the removal of the old building was expected to be completed by the end of the month.

After further discussion a new agreement has been made between the Brantford, Ont., City Council, and the G.T.R., respecting improvements at that point. The new agreement was reached July 11, and the necessary papers are being prepared. Under the agreement the company will construct subways under Niagara and Albion streets, an overhead crossing of the Paris road, lay a switch to Holmedale district if a right of way can be secured, and a spur line is to be constructed from the company's Tillsonburg line to the factory district.

Battle Creek to Jackson.—We were advised July 15 that there was no truth in the press reports that the G. T. R. was about to extend its line from Battle Creek to Jackson, Mich.

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

St. John to Montreal.—Surveys are being made with a view of reducing gradients on the Eastern and Atlantic Divisions between St. John, N.B., and Montreal.

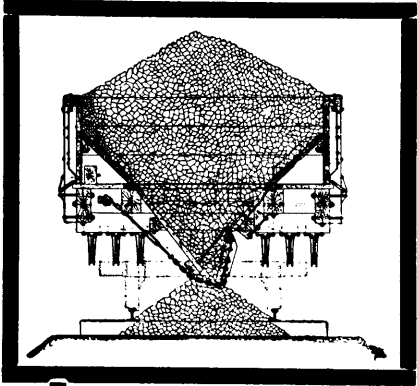
Toronto-Sudbury Line.—The contract for the construction of the portions of the Toronto-Sudbury branch between Bolton and Coldwater, and between Severn Bridge and Parry Sound has been let to G. S. Deeks & Co., of Toronto, and the section between Coldwater and the Severn River, 12 miles, to Battle, Conlon and Armstrong, of Thorold, Ont. The total distance covered by these contracts is 128 miles. It is expected that the line between Bolton and the Severn River will be in operation by Dec. 1, and the rest of the line into Parry Sound, next summer. It was expected to have the grading between Romford and Byng Inlet completed by the end of July, but it had not been decided July 10 when track-laying would be commenced. No contracts have been let for the portion of the line between Parry Sound and Byng Inlet, but it is intended to let contracts for this to enable work to be proceeded with in the fall. (July, pg. 307).

Wahnapiatae Improvements.—The rail level of the line in the vicinity of Wahnapiatae, Ont., is being raised several feet in connection with the gradient improvement along the line in this division. The station and platform has been raised about 6 ft. to conform to the new level.

Fort William to Winnipeg Second Track.—The company has decided to proceed at once with the construction of a second track from Fort William to Winnipeg, about 426 miles. Some years ago the work of lengthening sidings and adding new ones was taken in hand, and most of these latter were so constructed that they could be worked in with a second track when such became necessary. Later on some preliminary rock work, etc., in the vicinity of Kenora (Rat Portage), Ont., was taken in hand, the contractors being Foley Bros., Larson & Co., which firm has now secured the contract for the second track construction. A good deal of the work, such as widening existing embankments and train work will be done by the C.P.R. itself, but such work as the widening of existing cuts and the construction of new line where better alignment and easier gradients can be obtained, will be done by the contractors. The heaviest work will be the 60 miles east and the 40 miles west of Kenora. The new



INTERIOR OF G.T.R. ROUND HOUSE AT MIMICO, ONT.



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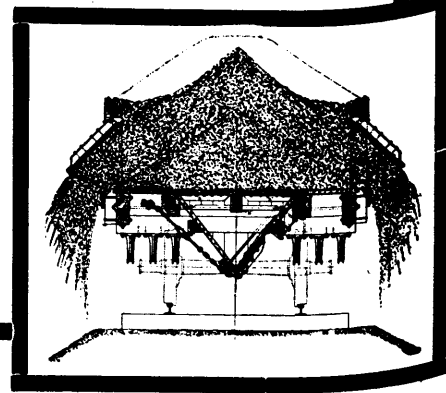
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work will include a cut-off from Molson to the Red River bridge at Winnipeg, which will effect a shortening of the line by about nine miles. The contract calls for the completion of the work within three years. Work, it is said, will be started east and west of Kenora as soon as outfits can be placed on the ground. It is expected to do a good deal of the heavy rock work during next winter. F. F. Busted, Assistant Chief Engineer, Winnipeg, will have general charge of the work on behalf of the company. (July, pg. 307).

Winnipeg Freight Sheds.—A contract has been let for the erection of freight sheds at Winnipeg to replace those destroyed by fire some months ago. J. and J. Macdiarmid, of Winnipeg, have the contract.

Winnipeg Beach Line.—A contract is reported to have been let to J. D. McArthur, Winnipeg, for the extension of the Winnipeg Beach line towards Gimli, Man. It is also likely that the Teulon branch will be extended to Icelandic River.

Niagara Navigation Company.

At a special meeting in Toronto, July 21, the shareholders approved of a by-law authorizing the issue of bonds or debentures, as a mortgage on the real and personal property, for not exceeding \$275,000, and at not more than 5% interest. The present debenture debt is \$111,000, out of an authorized issue of \$115,000, bearing interest at 4½%, which is to be retired out of the proceeds of the new issue, the balance to be used in part payment for the steamboat which the company has ordered to be built by the Canadian Shipbuilding Co.

The directors had previously also passed a by-law to increase the capital stock issued from \$605,000 to \$705,800, out of an authorized issue of \$1,000,000. This will be done by the issue of 1,008 shares of \$100 each, which will be allotted at par to shareholders of record on Aug. 1, in the proportion of one new share for each six old shares held. Twenty per cent. is to be paid at the time of sub-

Recent Dominion Legislation.

The following acts affecting transportation interests were passed at the recent session of the Dominion Parliament, in addition to those mentioned on pg. 289 of our July issue:

- Respecting the Algoma Central Ry.
- Respecting the Brandon, Saskatchewan and Hudson's Bay Ry.
- Respecting the Canada Central Ry.
- Respecting the Canadian Northern Ry.
- Respecting the Dominion Atlantic Ry.
- Respecting the Edmonton, Yukon and Pacific Ry.
- Incorporating the Fessenden Wireless Telegraph Co. of Canada.
- Respecting the Grand Trunk Pacific Ry.
- Amending the act respecting the arbitration between the King and the G.T.R.
- Amending the Government Railways Act.
- Respecting the Great Northern Ry. of Canada.
- Incorporating the International Bridge and Terminal Co.



CANADIAN PACIFIC RAILWAY CO.'S HOTEL AT VICTORIA B.C.

Now being erected. This view shows the west elevation, facing the sea wall. For description see our June issue, page 241.

Pheasant Hills Branch.—Announcement has been made that the extension of this branch from Lipton to Strassburg, Assa., will be put in operation Aug. 15. The branch in all is 202 miles long, and starts from Kirkella, Man. The present extension is 55 miles in length, the contractors being Foley Bros., Larson & Co. (June, pg. 255).

Moose Jaw Roundhouse.—A 10-stall roundhouse is under construction at Moose Jaw, Assa., as an addition to the existing one.

Car Shop at Calgary.—The C.P.R. has under construction a car shop at Calgary, Alta., to take care of car repair work on the lines in that part of the country. This is necessitated by the growth of that line of work in the West.

Electricity for the Boundary District.—Press reports state that the C.P.R. has under consideration the advisability of adopting electrical power for the movement of trains in the Boundary district of British Columbia. We understand that at present it is only an idea, and may not be at all feasible.

scription, and the balance in eight monthly payments of 10% each.

In answer to questions by shareholders, the President, E. B. Osler, stated that the new steamboat would cost about \$275,000. The directors had given very careful attention to the question of turbine propulsion, and has sent the Manager, B. W. Folger, to Great Britain to look into it and other matters, and they had come to the conclusion that it had not been proved to be a commercial success, nor could they get a builder to give the desired guarantee. They had, therefore, decided on a twin-screw steamer, with a guaranteed speed of 22½ miles an hour.

The Dominion Bridge Co., Montreal, is reported to have decided to erect a plant at Winnipeg, and to be negotiating for a site.

A syndicate, of which E. B. Osler, M.P., C. R. Hosmer, and W. D. Matthews, directors of the C.P.R., are members, recently purchased the Gooderham-Blackstock interests in the War Eagle, Central Star, and St. Eugene mines near Rossland, B.C.

Respecting the Interprovincial and James Bay Ry.

Respecting the James Bay Ry.

Respecting the Joliette and Lake Manuan Colonization Ry.

Respecting the Kaslo and Lardo-Duncan Ry.

Respecting the Manitoulin and North Shore Ry.

Respecting the powers of the Harbor Commissioners of Montreal.

Respecting the Northwest Coal and Coke Ry. Co., and changing its name to the Great West Ry. Co.

Incorporating the Northwest Telephone and Telegraph Co.

Respecting the Ontario, Hudson's Bay and Western Ry.

Respecting the Ottawa and New York Ry.

Respecting the Ottawa Electric Co.

Respecting Quebec port and pilotage district.

Respecting the South Shore Ry. and the Quebec Southern Ry.

Respecting the St. Maurice Valley Ry.

Amending the Seamen's Act.

NIAGARA RIVER LINE

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Toronto, from same wharf, with R. & O. N. Co.'s steamers for Thousand Islands, Montreal, etc., and the Canadian Pacific and Grand Trunk Railroads for all points in Canada.

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To all Points on
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Lake Superior
and North-West

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

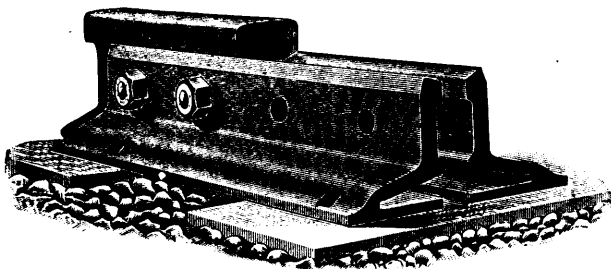
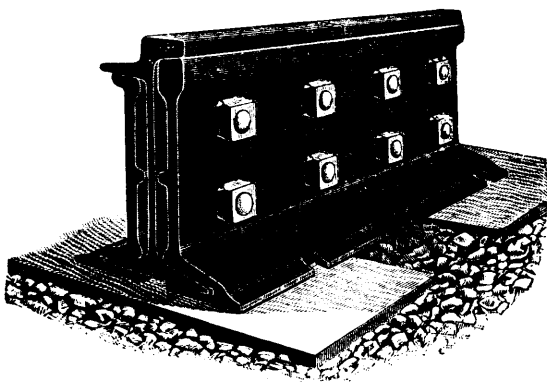
For Parry Sound, Byng Inlet and French River Steamers leave Collingwood Mondays and Fridays at 10.30 p.m.

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

Through tickets and freight rates at all Railway Agents.

H. H. GILDERSLEEVE - Manager
Collingwood
C. H. NICHOLSON - Traffic Mgr.
Sarnia

Railroad Essentials.



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

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

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

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

Look The Illinois Central map over and consult

G. B. WYLLIE,
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210 ELLICOTT SQUARE, BUFFALO, N.Y.

The Victoria Rolling Stock Co. of Ontario, Limited

NOTICE is hereby given that a dividend of six per cent. on the paid up capital stock of the company for the half year ended May 31st, 1905, has been declared payable June 1st, 1905, to shareholders on record as of the 31st of May, 1904.

By order of the Board.

R. A. SMITH,
Secretary.

Toronto, May 18th, 1905.

Incorporating the Electric Ry. Co. of Trois Rivieres, St. Maurice, Maskinonge and Champlain.

Respecting the Vancouver and Coast-Koot-enay Ry.

Respecting the Vancouver, Victoria and Eastern Ry. and Navigation Co.

Providing for the regulation of wireless telegraphy in Canada.

Respecting the Yukon Western Ry.

Wellington, Grey and Bruce Ry.—An announcement made in London, Eng., is to the effect that the estimated earnings of the railway for the half-year to June 30, applicable to meet interest on the bonds, will admit of the payment of £2 8s. 11d. per £100 bond, and that this payment will be applied as follows:—£1 17s. 2d. in final discharge of coupon 46, due July 1, 1893, and 11s. 9d. on account of coupon 47, due Jan. 1, 1904.

We were advised July 19, that no decision had been reached by the Department of Railways and Canals respecting the construction of a railway siding to connect with the elevator, for which the foundations are already being put in, at Port Colborne, Ont.

The hull of the burned str. City of Collingwood was sold by the underwriters to F. W. Doty, Goderich, Ont.; J. R. Sinclair, Toronto, and another party, for \$3,500. The steamer was insured for \$80,000 through Prindeville & Co., underwriters, Chicago.

The Bridgeburg, Ont., village council has raised the G.T.R. assessment from \$495,125 to \$1,275,856. The principal increase is on the International Bridge which has been raised from \$175,000 to \$650,000. The G.T.R. has appealed against the assessment.

The Dominion Express Co. has opened a route on the Esquimalt and Nanaimo Ry., between Victoria and Wellington, B.C., and has closed its route on the Vancouver and Lulu Island Ry., leased to the British Columbia Electric Ry., and operated as an electric line.

The Winnipeg Transfer Co., which was recently organized at Winnipeg, was formed for the purpose of taking over the running of busses to and from all hotels, and of handling all baggage to and from the C.P.R. station there. A. M. Nanton controls the company.

Prince Edward Islanders are carrying on a regular campaign for the construction of a tunnel between the island and the mainland. The latest is a stamp for affixing to envelopes showing the island and a tunnel connection with New Brunswick, surrounded by a horse-

shoe in red, with the legend "We must have it," and a scroll with "Good Luck." On the top and bottom of the stamp are the words "Every true islander will work for it."

Secretary de la Hooke is making arrangements for the annual meeting, etc., of the Canadian Ticket Agents' Association. The party will rendezvous in Montreal, leaving there by special train on the morning of Saturday, Oct. 7, for Portland Me., where the annual meeting and dinner will be held on Oct. 9. On the return trip Portland will be left on the morning of Thursday, Oct. 12. The going trip will probably be via G.T.R., returning by the Maine Central, Boston and Maine, and C.P.R.

The plans for the new steamer for the C.P.R. Pacific coast service have not been completed, but the general lines and capacity have been fixed. She will be of wood, 240 ft. over all, 38 ft. beam, 17 ft. depth of hold. She will be propelled by a single screw, driven by engines indicating 1,600 horse power. The cabin accommodation will be arranged in two tiers and will be fitted up with all modern comforts and conveniences. Berth accommodation will be provided for 150 passengers, and the vessel will have room for 1,000 tons of cargo. She will be built on the Pacific coast.

The Dominion Express Co. has opened offices at the following points:—Bankhead, Bellevue, Dubhil, Mitford, Ozada, Sandstone, Stobart (formerly Mewasin), and Temple, Alta.; Beverly (formerly Leven), Cotton, Northcote, Timms, Verdi, Wirth, Assa.; Bayard, Cassidy's, Chemainus, Cobble Hill, Cowichan, Duncans, Esquimalt, Goldstream, Koenigs, Koksilah, Ladysmith, McInnes, Northfield, Shawnigan Lake, Silica (formerly Williams), Somenos, South Wellington, Wardrop, Welch, Wellington, Westholme, Winlaw, B.C.; Airdale, Dooley, Gunton, Lynch, Penmount, Ward, Man.; Magaguadaire, N.B.; Kaminstikwia, Melancthon, Nestleton, Ont.; Gould, Masouche (formerly South Masouche), South Breton, Que.

An important judgment was recently given by a board of judges at Guelph, upon an appeal of the G.T.R. and the C.P.R. under the new Assessment Act of Ontario, in regard to the assessment of their lines in the townships of Puslinch, Nichol, Pilkington, Guelph and Eramosa, in Wellington county. The townships assessed the ties, rails and superstructures of the railways at \$10,000 a mile. The judges held that the superstructures were not assessable when used in crossing highways, although it was provided in the act that they were assessable when they occupied the high-

way lengthways. The effect of the judgment reduces the assessment by \$482,000. This is the first case decided by a board of judges as provided for by the new act.

The question of the taxation of the C.P.R. land grants in the Northwest Territories, which have been formed into the two Provinces of Alberta and Saskatchewan, was raised upon the third reading of the bill in the House of Commons. The clause exempting the unpatented C.P.R. lands from taxation is 23, and an attempt was made to add to it a provision that nothing contained in it should prejudice the right of Parliament to obtain by expropriation or otherwise the relinquishment of the company's rights under Section 16 of the contract between the Government and the C.P.R. The Premier in referring to the matter said the Liberal party had done all it could do to prevent granting that exemption, but Parliament had seen fit to act differently, and that being the case, Parliament had to abide loyally by the contract made. The contract could not be broken except by mutual agreement, or by the exercise by Parliament of its power of eminent domain and expropriating the C.P.R. privileges and property. The Dominion were partners with the new Provinces in this matter, and would have to protect themselves as well as the new Provinces. The present situation could not be continued forever, and the time must come when Parliament must address itself to remedy the grievance.

Canadian Freight Association.

The Executive Committee has selected T. Marshall, Division Freight Agent of the Pere Marquette Rd., at London, Ont., as Secretary-Treasurer of the Association, to succeed J. Earls, who has resigned, after nine years' service. The Association, which was started in 1883, has become a very important organization, embracing practically all the railways and nearly all the freight carrying steamship lines in Canada. Since the establishment of the Association, the conditions have undergone a radical change, and from time to time the organization has been changed to adapt it to modern requirements. There are now many more transportation companies than when the Association was started, and consequently more members, more intense competition for freight, and a very considerable growth in the commercial and industrial interests of the country, requiring the closest attention in the framing of uniform rules,

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and Power Purposes.

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regulations, classifications and tariffs, in order that the various commercial centres and all industries may be treated equitably and that the requirements of the recent Railway Act may be carried out. The freight officials of the transportation companies have their own individual duties, which usually are heavy enough to require their entire time, and the executive officer of the Association can be of material relief to them and at the same time of great service to the public, in ascertaining and presenting to the Association in a thorough manner the needs of the public as far as the Association can deal with them.

Mr. Earls has also been Manager of the Association's car service department, which is about to be abolished, its work being transferred to the Car Service Bureau, reference to which is made on page 359.

Transcontinental Railway Surveys.

A number of press reports are current in regard to the route and as to the time when work will be started. One report has it that the route from Winnipeg has been laid out, and was to be approved by the Government at the end of July. According to the act, as stated in the commissioners' report, no provision is made for the Government's approval of the route. The reference of the plans to the Minister of Railways, mentioned in the report, was a courtesy one only, and his approval is apparently an unnecessary formality. From the state of the surveys at the end of Feb., it is difficult to imagine that the surveys for the whole route between Moncton and Winnipeg are in such a condition as to say that all the preliminary surveys had been completed, reports made thereon, and a route decided upon. Another reason why it is unlikely that the commissioners have adopted any particular route is, that no successor has been appointed to the chairman, the late F. B. Wade, K.C., and while any two of the commissioners in town are competent to transact business, they would hesitate before deciding on such an important matter, while there was a vacancy on the commission.

Another report declares that the whole eastern section will be abandoned as it has been found that the cost of construction in many parts will be so high that its construction is altogether out of the question. Other reports state that contracts will be asked for within a few weeks, and that construction will be begun in the fall. It is more than doubtful, however, if anything in the way of asking for tenders will be done until the fall, or early

winter, and it is not at all likely that any construction will be undertaken in this year.

The commission is having built at Nepigon, Ont., a residence and office building for the District Engineer and his staff. The probable cost of the building will be between \$2,000 and \$3,000.

Grand Trunk Pacific Railway.

F. W. Morse, Vice-President and General Manager, spent some time at the end of June and early in July at Fort William, Ont., and Winnipeg, in connection with the business of the company. He stated, on his return to Montreal, July 4, that work would be commenced on the Lake Superior branch at Fort William, about a month thereafter.

The route of this branch as filed with the Department of Railways by the G.T.P.R. Co., provides for a line about 220 miles long. The surveyed route runs westerly from the terminals at Fort William to Kakabeka Station on the C.P.R., thence parallel with the C.P.R. for 41.3 miles to Linko (formerly Linkoping) station. From this point the route is north-westerly, passing immediately south of Mattawa Lake, and north of Minnetakie Lake to the terminus on the east boundary of Lac Seul Indian Reserve, north of Lost Lake, where connection will be made with the main line of the Transcontinental Ry.

A Winnipeg press despatch of July 13 stated that construction on the western division would be commenced in about a month. The route, it stated, had been definitely located westward to the intersection with the Regina and Prince Albert branch of the C.P.R. (Qu'Appelle, Long Lake and Saskatchewan Ry.), and provisionally to Edmonton. It was further stated that construction would be started in the vicinity of Portage La Prairie, Man., and that the first contracts let would cover 400 miles of grading.

ELECTRIC RAILWAYS.

Projects, Construction and Betterments.

British Columbia Electric Ry.—The electrification of the Vancouver and Lulu Island Ry., under agreement with the C.P.R., was completed by the end of June, and an official trip made over the line June 27. The line was opened for public traffic as an electric railway July 11. (July, pg. 313.)

Edmonton Street Ry.—We have been advised from Edmonton, Alta., that no actual construction work has been done in connec-

tion with the proposed electric railway. A few loads of gravel have been dumped on one of the streets by the company. "There is no visible sign," says our informant, "of the franchise being carried out up to the present time." One of the promoters states that the machinery, material, etc., has been ordered.

Hamilton, Ancaster and Brantford Ry.—A statement was made by Senator Kennedy, one of the United States promoters of the company, July 11, that he expected to be in a position to let contracts in about a month. (July, pg. 315).

Hamilton, Caledonia and Lake Erie Ry.—Hamilton, Ont., papers stated July 1 that the company had commenced active operations on Hannah St. The work, however, is said to be only a formal start in order to hold the charter.

Hamilton, Grimsby and Beamsville Electric Ry.—A special meeting of shareholders was held July 31, for the purpose of considering the reports of Engineer Pierson and Superintendent Waller on the subject of abandoning the Vineland extension, and to confirm a resolution of the directors abandoning the company's line from a point east of Beamsville, being the westerly side of the township line, adjacent to the easterly limit of the Village of Beamsville to Vineland, Ont., and to take up the rails and ties and restore the roadway to its former condition.

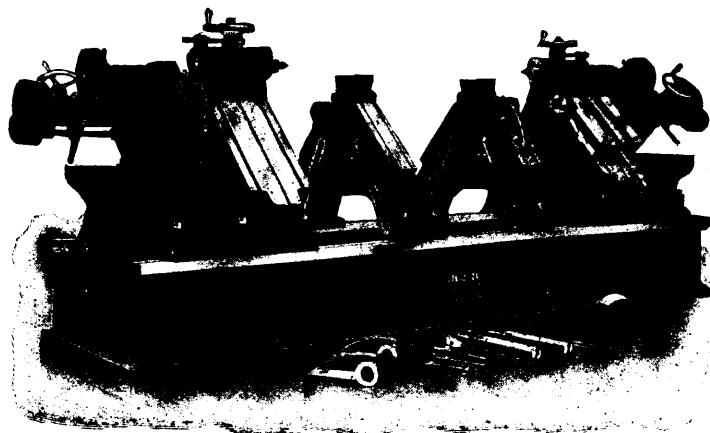
Hamilton Radial Ry.—Some difficulties have arisen between the company and the Wentworth County Council respecting the proposed extension to Bartonville, Ont. (July, pg. 315).

London Street Ry.—A contract has been let for the erection of general offices for the company on the site of the old town hall, Dundas St., East London, Ont. The building will be a two-storey one, of brick. On the ground floor there will be the general offices, including offices for the Cashier, Superintendent and Mechanical Engineer. On the first floor there will be accommodation for the General Manager, Secretary and Treasurer, stenographers, and a board room. Large vault accommodation will be provided on both floors.

Work is progressing on the extensions on the Hamilton and Wortley roads, and it is expected to have them both completed in the fall. (July, pg. 315).

Montreal and Southern Counties Ry.—The charter for the construction of this projected electric railway was originally granted by

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

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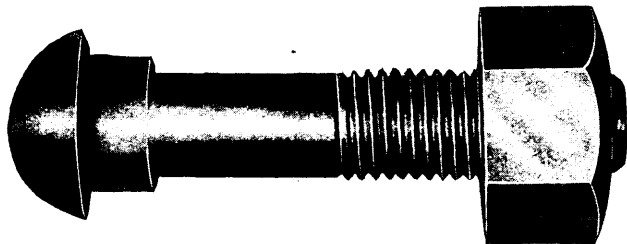
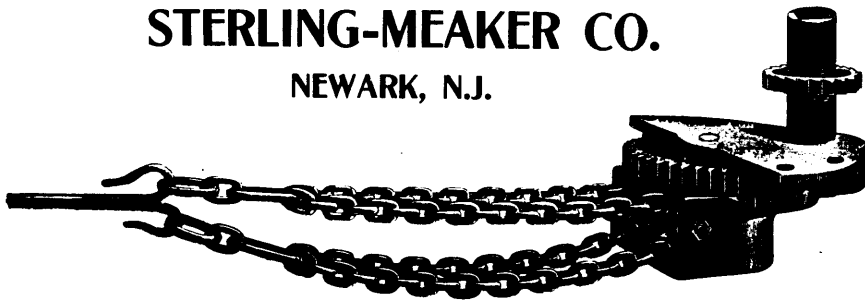
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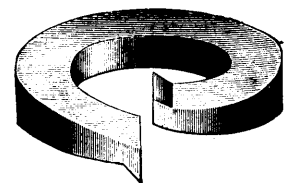
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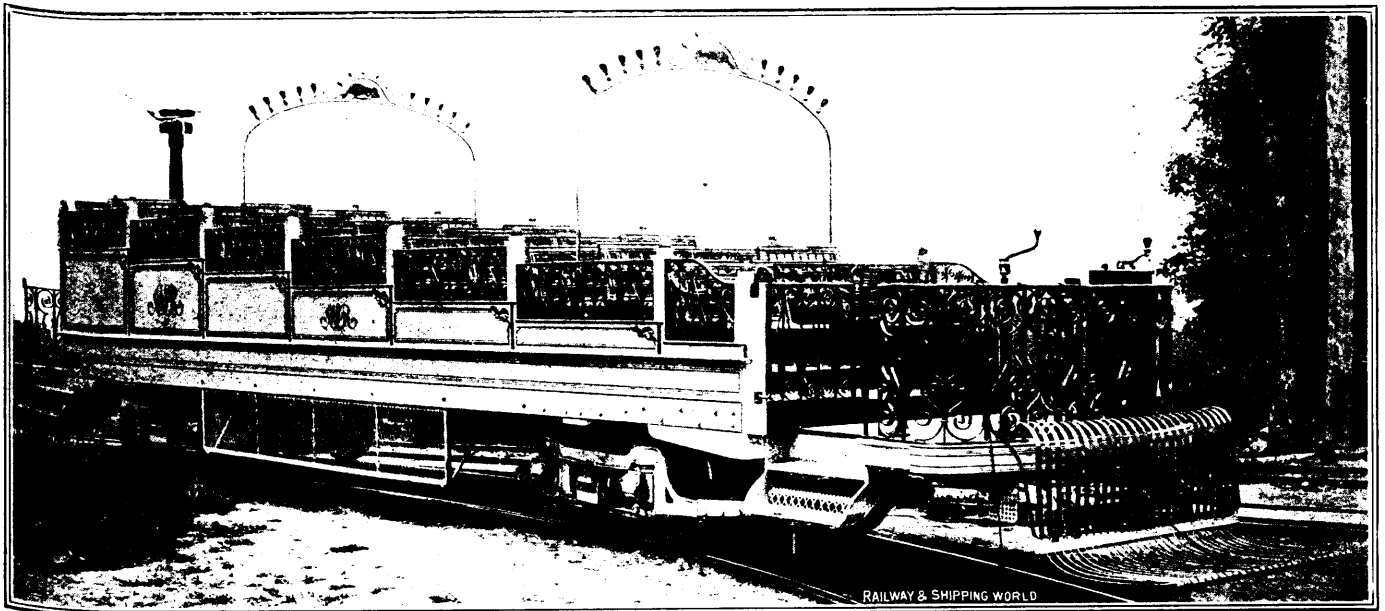
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the Dominion Parliament in 1897, and an amending act was passed in 1898. At the recent session of the Dominion Parliament an act was passed extending the time for the completion of the lines authorized.

Montreal Terminal Ry.—The company is laying out a park at Tetreauville, about three miles below Maisonneuve, and one mile east from Longue Pointe village, and has built a branch of a mile from its main line northerly to give access to the park. The cars will make the run from City Hall Avenue, Montreal, to the park, nine miles, in about 45 minutes, and the return fare will be 15c.

The roadways committee of the Montreal City Council has recommended the council to grant the M.T. Ry. a revision of its contract so that it may be on the same basis as that of the Montreal Street Ry. The recommendation will come before the council early in August. (July, pg. 315).

Niagara, St. Catharines and Toronto Ry.—In connection with the recent purchase of the line by interests allied with the Electrical Development Co. of Ontario, it is stated that it is intended to operate the line in conjunction with the Toronto and Ham-

ilton Ry., which is to be constructed over the E.D. Co.'s right of way from Niagara to Toronto.

In connection with the proposed extension to Welland, Ont., the line will probably start from the main line at the crossing of the Welland canal, a short distance west of St. Catharines, and will run via Fonthill to Welland, a distance of about 12 miles. A survey along this route is being made by A. H. N. Bruce, under the direction of W. T. Jennings, chief engineer Toronto and Hamilton Ry., Toronto. A survey of another route from Thorold, via Allanburg and Port Robinson, to Welland, 11 miles, is also being made. The result of the present surveys will decide the route to be followed. It is likely to be by Fonthill on account of the local business there, but the route is more difficult from a construction point of view than that by Port Robinson. It is likely that construction will be started this year. The western extension surveys from St. Catharines to Hamilton are also being checked over, but it is not probable that any construction will be gone on with on it during the current year.

The company intends to do away with the

restle work between Merritton and Thorold and to replace it by steel and some filling. Some of the filling may be gone on with this year. (May, pg. 205.)

Port Credit to Collingwood.—A proposition has been made to several municipalities in connection with a proposal to construct an electric railway from Port Credit to Collingwood, Ont. The proposition is made in connection with a power development plant on the Credit River near Erindale. Jos. Barrett, who is General Manager of the company developing the power, has had interviews with Brampton, Ont., and other municipalities in respect of the electric railway.

Quebec and Saguenay Ry.—A revision survey of the line previously located between St. Joachim and Murray Bay, in 1895, by E. A. Hoare, Quebec, is being made by J. M. Shanley, C.E. J. M. McCarthy, of the Jacques Cartier Water, Light and Power Co., has been appointed consulting engineer. A director recently stated that tenders may be asked for in Aug. (July, pg. 315.)

Schomberg and Aurora Ry.—A station building has been erected at the junction

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TEMAGAMI

(300 Miles North of Toronto, Ont.)

One of the best fishing and hunting districts in America.

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Magnificent scenery and attractive canoe trips.

The district is situated 1,000 ft. above the level of the sea. Handsome illustrated descriptive matter, giving all particulars, routes, maps, etc., sent free on application to

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-

TORONTO, ONT.

with the Metropolitan Division of the Toronto and York Radial Ry., on Yonge St., near Bond Lake, Ont., and arrangements have been made for a connection with the G.T.R. at King station, for dealing with through freight.

Southwestern Traction Co.—The by-law confirming the agreement between St. Thomas, Ont., and the company respecting the use of the city's street railway, was carried by a vote of 453 to 22. Construction between St. Thomas and Port Stanley, Ont., will now be pushed. (July, pg. 315).

Toronto and York Radial Ry.—The Metropolitan Division is being extended northward from the present terminus at Newmarket, through Queensville, Sutton and Roach's Point to Jackson's Point on Lake Simcoe, about 25 miles. Ewen Mackenzie is the contractor, the company supplying all materials, such as steel, ties, etc. The rails are T pattern, 60 lbs. to the yard, and were purchased in England. It is expected to have the track laid this season. A station building has been completed at the junction of the line with the Schomberg and Aurora Ry., near Bond Lake, and additional plant is being installed in the power house at Bond Lake. The question of double-tracking the line for some distance north of the C.P.R. tracks on Yonge St., is being discussed with the municipal authorities. (July, pg. 315).

Toronto Ry.—The City Council is asking for the construction of some additional lines, and for the arrangement of additional routes.

Winnipeg Electric Street Ry.—Work is being steadily progressed with on the company's power development plant at Lac du

Bonnet, Man., and it is expected to have power delivered in Winnipeg in Oct. The plant will develop 30,000 horse-power. At the beginning of July 35 of the 65 miles of power transmission line had been completed.

Electric Ry. Finance, Meetings, Etc.

British Columbia Electric Ry.—Railway earnings for May—Vancouver, \$22,219; Victoria, \$12,065; Westminster, \$11,662; total, \$45,946, against \$40,452 for May, 1904. Gross earnings, railway and lighting, \$72,090, against \$64,170 for May, 1904. Working expenses, \$39,953; renewal funds, \$6,695; net income, \$24,442, against \$26,780 working expenses, \$5,988 renewal funds, and \$20,792 net income for May, 1904. Net earnings for 11 months ended May 31, \$302,842, against \$263,553 for same period 1903-04.

Halifax Electric Tramway Co.—Railway earnings for June, \$12,795.75, against \$14,050.58 for June, 1904.

Hull Electric Co.—At the annual meeting of the shareholders of this company which owns the Hull Electric Ry., the retiring directors were re-elected. The officers and directors for the current year are: President, A. R. Creelman, K.C.; Vice-President and General Manager, C. W. Spencer; other directors, W. R. Baker, D. McNicoll, I. G. Ogden, J. Osborne, all of the C.P.R., and E. Hanson.

Kingston, Portsmouth and Cataraqui Electric Ry.—An agreement has been reached between the city corporation and the bondholders of the company as to the concessions

to be given to a new company to take over the line. The summarized concessions are as follows: Power at 1.66c a kilowatt hour; the right to double track any portion or portions of the line; the right to cut out the Williamsville branch; reduced service from Sept. 15 to June 15; exemption from taxation for 25 years; relief from paying part of cost of removing snow from streets and from keeping roads between tracks graded. It is understood that the bonds have been turned over to the new company for \$70,000, and that an additional \$8,000 or \$10,000 will be expended upon improvements. The principal people in the new company are W. F. and H. C. Nickle; G. and H. W. Richardson. The car service was resumed July 11.

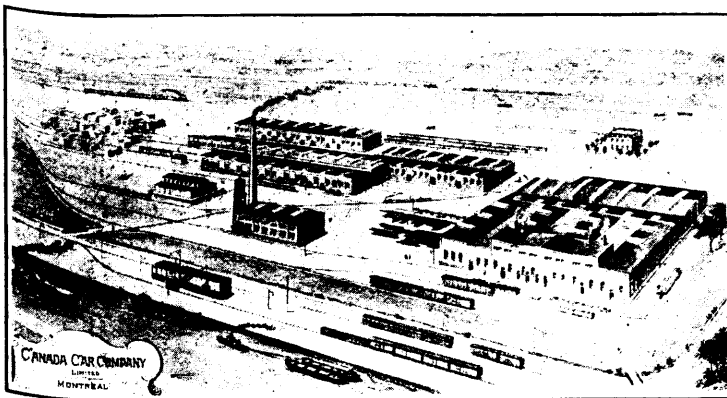
Levis County Ry.—At the sheriff's sale recently the line was sold for \$50,000 to J. Foreman, Montreal, who acted on behalf of the re-organization committee. The sequestrator, A. E. Scott, will shortly be discharged.

Montreal Street Ry.—Passenger earnings for June, \$244,435.79; total earnings \$248,200.46, against \$229,564.83 and \$232,610.40 for June, 1904, working expenses \$137,593.87; fixed charges \$29,510.06; surplus \$81,092.53, against \$131,588.68 working expenses; \$26,295.09 fixed charges, and \$74,726.63 surplus for June 1904. Net earnings for nine months ended June 30, \$665,471.18; fixed charges \$199,167.93; surplus \$466,303.25 against \$611,980.59, net earnings; \$175,371.01 fixed charges; and \$436,609.58 surplus for same period, 1903-04. Interest on Montreal Park and Island Ry. Co.'s bonds held not included.

Toronto Ry.—Car earnings \$231,140.13, against \$207,482.35.

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Electric Railway Notes.

The General Manager of the Toronto Ry. told the city council recently that 70 new double truck cars were under construction at the shops for the city lines.

The Chatham, Wallaceburg and Lake Erie Ry. has placed an order for four cars for fall delivery, and it is expected that a further order will be placed for four more cars for winter delivery.

The Ontario Appeal Court has decided that the Hamilton Street Ry. must provide limited tickets to anyone applying for the same, and must also pay a percentage of its entire receipts to the city.

The conductors and motormen of the Cornwall Street Ry. struck on June 28 for an advance of wages. They first asked 17c. an hour, then offered to accept 15c., and finally went back to work July 4, at the old rate of 13c.

It has been reported that the two new cars recently put on by the Montreal Street Ry., on which passengers have to pay their fares on entering the cars, show an increase of 10% in earnings per car mile, over the cars on which the old system of collecting fares is in use.

The Niagara, St. Catharines and Toronto Ry. has added three 50 ft. double-truck motor cars to its equipment. The car bodies and trucks were purchased in the U.S., and the motors were supplied by the Canadian General Electric Co., Toronto, the cars being put together by the company at St. Catharines, Ont.

The Sydney, N.S., police magistrate recently fined the Cape Breton Electric Co., owning the street railway there, \$200 for having employed its General Manager, A. J. Bemis, at Boston, Mass., and importing him to Canada, in contravention of the Alien Labor Law. One of the company's ferry steamers was seized under a distress warrant, July 5, on account of the non-payment of the fine.

The Montreal Street Ry. has placed in service on its line a new type of observation car, for which a patent has been applied for. The car is quite open, being without a top, and is provided with six rows of seats, that in front being the lowest, and the others each somewhat higher, so that all passengers can have a full view of the street ahead. The entrance is at the front platform, and a broad aisle runs down the middle of the car. Electric lights are displayed on brass rails, arranged in the form of arches over the car. An illustration of the car appears on pg. 371.

Freight Development by Interurban Roads.

By E. F. Seixas, General Manager Niagara, St. Catharines and Toronto Railway and Navigation Co.

The transportation service performed by the railways includes the movement of freight, the carriage of passengers and the transmission of mail and express matter. Each of these services merits careful consideration. Whether viewed from the standpoint of public benefit or considered with regard to the volume of business done and profits received by the company, the transportation of freight is the most important service performed by the railway. The income from the passenger business is about one-fifth of the total income and earnings of the railroads in the United States, while the receipts from freight amount to seventenths. Moreover, the social welfare is more dependent upon cheap and unfettered movement of commodities than upon inexpensive and speedy means of travel. However important it may be that the relatively few people who may at any one time desire to take a journey should be able to reach their destination promptly and comfortably, it is of incalculably greater consequence that pro-

ducers should be able to dispose of the commodities upon the sale of which their livelihood depends, and that consumers should have the power of drawing upon distant, as well as near, sources of supply for the satisfaction of their wants and the gratification of their desires.

The volume of freight transported increases rapidly with the progress of civilization and the diversification of men's wants. The freight business is carried on to enable men to secure what they want, and the more complex their demands, the more goods will be produced and transported. The growing demand for the freight service has furnished a most powerful stimulus to inventors and engineers to lessen the obstacles to the movement of commodities by improving tracks, cars and locomotives, and making other changes in the railway mechanism whereby the costs of transportation have been reduced to their present small amount. Whether the endeavor of railway companies to increase the speed of their passenger trains or their efforts to lessen the cost of freight movement have been the more potent incentive to mechanical improvements, it would be impossible to say, but the results accruing to society from these improvements have come more largely from the greater facilities for the shipment of goods. So writes Professor E. R. Johnson, in his very excellent review of American Railway Transportation, and with this summary we may for the present dismiss our friends, the steam roads. The conditions that have caused such signal success in the passenger business on interurban lines that depend on electric energy for their motive power are to a great extent responsible for the hearty greeting with which the average shipper, be he merchant or farmer, hails the advent of the trolley, and for the great complaisance with which he views the humming, whizzing cars that frighten his team of colts and send clouds of dust into his wife's otherwise immaculate parlor.

The first condition that tells in favor of the interurban line is the frequent service and the frequent stopping places. The second is that the interurban line is more or less of a local affair, and for that reason is more intimately cognizant of local necessities. In the battle between the piston rod and the trolley pole, passenger rates have suffered to a more or less extent, while freight rates have pretty generally remained where they were. The interurban lines have not found it necessary to inaugurate a rate war to get freight business from the steam roads, for they receive and are justly entitled to their proportion of the business on account of the increased facilities.

The present Niagara, St. Catharines and Toronto Ry. was originally a steam road, constructed in 1886, and changed to electricity in 1899 and 1900, the first electric car running July 19, 1900, from Niagara Falls, Ont., to St. Catharines. Prior to the change in 1900 the road had, through poor management and consequent poor patronage, fallen into the hands of a receiver, and was sold by the courts under the hammer, afterwards converted into an electric line, extended to Port Dalhousie, and communication established with Toronto by steamers, which are also owned and operated by the company. A track connection had by the original company been arranged with the Michigan Central Rd. at Niagara Falls, Ont., which has been since maintained, and which affords free interchange of cars to and from all points in Canada and the United States, thus forming a line in competition with the G.T.R. in the territory covered by the electric line and its steamers, for which purpose the road was intended. The gross annual freight earnings of the line prior to 1900, or during the operation by steam, were less than \$10,000, and the freight handled was confined to low classes of carloads, such as coal, this being in fact the principal traffic handled. Very little

attention was paid to the higher class traffic, such as package merchandise, and it was not until 1901 that any marked increase was shown. This upward tendency was caused by an energetic and persistent endeavor on the part of the management to increase the development of the facilities which were practically dormant, in taking care of higher class traffic and leaving the low class to itself. The methods of handling had to be improved, a system organized, and particular attention paid to the despatch of business taken hold of. There was no attempt made to reduce rates, the traffic being carried on exactly the same conditions as steam lines under all circumstances. It was found that accommodation to patrons had a great deal more effect than any benefits derived from useless rate-cutting. Cars are placed at convenient points for shippers to load, and they are picked up at convenient hours, and shipping receipts are given at the counters of the business firms by a responsible man who has the freight train in charge, thus saving the customer the trouble and time of going to the railway station to make shipments. All this tended to increase popularity, and consequently, by increased shipments, revenue, until for the year ending December 31, 1904, we are able to show an earning of 460% greater than in 1900, and an operating expense of 55% as against a previous loss. The package freight must stay with the electric roads, as their methods will, if properly organized, hold it against steam roads, unless congestion is allowed, when the great advantage of quick handling will be lost. The handling of low class freight involves the expense of terminal facilities which in large cities is practically prohibitory, and unless there is assured enough freight to keep a regular competitive service against steam fully alive, it is better that electric roads confine their business to the higher classes of merchandise. With us it is found also that switching service is a source of revenue, which, if facilities are available, is remunerative. We have arrangements to switch loaded cars to and from the G.T.R., our competitor, and for industries located on our tracks. This service is easily performed and at a very little expense, the distance usually being short and the cargo quickly handled, and it pays because ordinary power is employed at times when we can afford it without detriment to our other interests. There is, in our opinion, ample revenue in the development of freight service for interurban lines, provided, as has been done in our experience, that low class traffic is not sought after too closely and only taken care of when it involves the higher classes. No freight can be handled at a profit that pays less than 1c. per ton per mile, and even at that figure there is not enough revenue to warrant short-haul lines seeking it. To sum up, all that is necessary to make electric lines a factor in freight traffic is to seek high class freight, handle it quickly, and attend promptly to customers' requests.

We have found that working arrangements cannot well be based upon a mileage rate unless constructive mileage is allowed the smaller line, and it is not practicable to do this in our case (although conditions with other lines may be different and groupings may be obtained from connecting lines), because ours is a lake and rail line, peculiarly situated and breaking bulk, and our connections do not, therefore, favor percentage arrangements. We have worked out almost our entire traffic on an arbitrary basis receiving as our proportion on classes one to six under the official freight classification the following figure, viz.:

Class	1.	2.	3.	4.	5.	6.
Cents	8.	7.	6.	5.	4.	2½

per 100 lbs. for our haul, whether long or short, and not participating in any reductions made by connections due to competition from various causes. I therefore submit that interurban lines are in a better position

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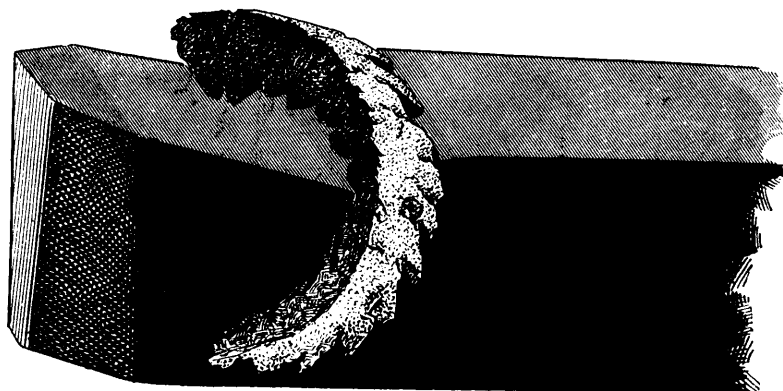
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on an arbitrary basis than on a percentage arrangement, although the disadvantage of having no voice in rate making without consent is apparent by reason of non-participation in the reduction of rate asked, but this is only a matter of correspondence, we find, and is generally acceded to readily by connections upon representations of facts. The classes shown do not cover the low class or commodity traffic which I have alluded to in the first part of this paper, which are carried only by special arrangement between lines interested and generally calls on the short lines to reduce their earnings to merely what it cost to handle, hence the assertion that it is better to leave it alone except where it may carry other higher traffic with it, when it cannot profitably be turned down, because the manufactured product might be lost, and as this is high class it is profitable. We unfortunately had to take hold of an existing line, with its rates and obligations fixed, and we were unable to alter the existing divisions of rates, although we have from time to time endeavored to do so. Initial errors are costly, and upon interchange being arranged, care should be taken to have all traffic arrangements thoroughly arranged by competent men, fully conversant with such subjects. The earnings per ton per mile should be fixed as high as possible, and never allowed to be less than what steam lines earn. Short mileage allows fair revenue such as our earnings, being not less than 25 per cent. minimum of through rates, and upon extension of line minimums could be increased correspondingly. Conditions of traf-

fic in Canada differ, however, from the United States in many respects. For instance we have in large centres cartage to perform, which is forced upon us by an old existing arrangement made by the G.T.R., when it was practically the only line in Canada. It was inaugurated by that line to take care of friends. This is a burden, because the expense is not covered by extra charge made above freight rates, part being absorbed in the rate. Another factor of expense in handling is the freight car equipment, which costs interurban lines per diem rate of 20c. for every calendar day if foreign lines permit the use of cars. No line should be dependent upon equipment belonging to others, nor should they undertake to do more than deliver on cars at convenient points, unless the circumstances are very exceptional, as every transfer or movement necessarily costs money and increases the operating expenses materially. Rates should be maintained, and although steam roads are liable to cut with a view of forcing the business from electric roads, the public soon find that the real object is to force the electric road out of the business and enable the steam line again to put up its rates with all the old disadvantages of slow time and poor service. Another commending advantage to interurban lines is that their business is done on main roads in a number of cases, where there are no terminal expenses, unless they endeavor to enter into active competition with steam lines, when terminals must be provided. The handling of fruit is an important item in our season's business, Toronto being the

central market. To handle our heavy freight traffic with the quickest despatch at a minimum cost has brought us to a point of efficiency whereby we find it necessary to allow our boats only 30 minutes at terminal points to load and unload from five to seven carloads of freight. To meet the requirements of our traffic we built a number of four-wheeled platform trucks, the platform of which is similar to express trucks seen on steam lines and capable of carrying two tons. On these we load all merchandise and package freight, ready to run aboard the boat on her arrival. The incoming freight is received from the forward gangway, and the outgoing freight is run on board over the after gangway. To handle our fruit traffic with despatch we have erected at points along the line fruit platforms, on which we keep a supply of these trucks. The farmer drives to this platform, loads his fruit on the trucks, and this is picked up by our freight train, which consists of flat cars the same height as the platform, and run to make connections with each boat. This train carries three men, who run the loaded trucks from the platform on the cars. At Port Dalhousie they are run directly from the cars on to the boat. This prevents handling, which is very damaging to the fruit, and also permits the fruit grower to use a cheaper grade of baskets, thereby effecting a great saving for him. On the whole, therefore, freight business of interurban lines will pay if confined to the higher class of traffic, and if particular attention is paid to despatch and accommodation to the public.

LIST OF STEAMSHIPS REGISTERED IN CANADA FROM JUNE 1 TO JUNE 30.

Name.	No.	When and Where Built.	Engines, etc.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Albatross	116,929	London, Eng.,	Screw 22 N.H.P.	96.5	12.1	6.5	38	26	Victoria, B.C.	E. Quennell, Nanaimo, B.C.
Annie	116,238	Camden, Me., 1886.	" 1 "	36.0	9.5	4.0	7	4	Digby, N.S.	S. L. Dakin, Beaver Harbor, N.B.
Eleanor	117,080	Parry Sound, Ont., 1905.	" 13 "	71.0	14.1	6.6	84	57	Toronto, Ont.	Mrs. C. E. Pratt, Parry Sound, Ont.
Frank L.	117,079	Parry Sound, Ont., 1905.	" 10 "	68.7	14.0	6.6	46	31	Toronto, Ont.	W. H. Oldfield, Parry Sound, Ont.
Jessie Mac.	117,115	Vancouver, B.C., 1905.	" 9 "	61.5	16.0	7.5	57	39	Vancouver, B.C.	J. McDawen, Vancouver, B.C.
Laura A.	116,989	Fort Frances, Ont., 1905.	" 4 "	44.5	9.5	4.0	26	17	Kenora, Ont.	G. C. Allan, Fort Frances, Ont.
Le Roi	117,112	Vancouver, B.C., 1905.	" 51 "	108.3	21.6	12.0	196	133	Vancouver, B.C.	T. J. Kickham, Vancouver, B.C.
McCulloch	117,117	Vancouver, B.C., 1905.	" 13 "	64.0	14.7	6.7	39	27	Vancouver, B.C.	J. C. Fulton, Vancouver, B.C.
Northern Belle	117,105	Sturgeon Falls, Ont., 1905.	" 40 "	104.0	21.6	7.6	221	168	Ottawa, Ont.	French River and Nipissing Navigation Co., Sturgeon Falls, Ont.
Reliance	117,114	Vancouver, B.C., 1905.	" 1 "	26.8	8.6	3.9	10	7	Vancouver, B.C.	D. S. Gray, Vancouver, B.C.
Sea Lion	117,116	Vancouver, B.C., 1905.	" 52 "	114.0	22.0	19.5	218	148	Vancouver, B.C.	G. H. French, Vancouver, B.C.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA FROM JUNE 1 TO JUNE 30.

Name.	No.	When and Where Built.	Rtg.	Length	B'dth.	Depth.	Gross tons.	Reg. tons.	Home Port.	Owners.
Arabia	121,652	Tusket Wedge, N.S., 1904.	Sloop	33.0	10.6	6.0	10	10	Yarmouth, N.S.	E. J. Le Blanc, Tusket Wedge, N.S.
Blanche	116,855	Sable River, N.S., 1905.	Schr.	37.1	13.5	4.9	12	12	Shelburne, N.S.	J. Matthews, Blanche Point, N.S.
Charles E.	121,654	Shag Harbor, N.S., 1904.	Schr.	35.5	12.5	6.0	13	13	Yarmouth, N.S.	E. Larkin, Shag Harbor, N.S.
Dundonald	121,657	Sturgeon Falls, Ont., 1905.	Barge	64.0	18.0	7.0	64	64	Ottawa, Ont.	French River and Nipissing Nav. Co., Sturgeon Falls, Ont.
Ella G.	116,928	Victoria, B.C., 1905.	Schr.	49.4	13.6	6.6	20	16	Victoria, B.C.	W. H. Porter, Victoria, B.C.
Emily C.	121,657	Meteghan, N.S., 1905.	Sloop	33.0	10.4	6.0	11	11	Yarmouth, N.S.	N. Coureau, Meteghan, N.S.
Eric	116,913	Liverpool, N.S., 1905.	Schr.	78.6	21.3	7.2	61	61	Liverpool, N.S.	G. R. Moulton, English Harbor, N.S.
Florence B. W.	116,531	Mahone Bay, N.S., 1905.	Schr.	46.2	15.6	7.0	24	24	Lunenburg, N.S.	S. W. Westhaven, West Point, N.S.
Fusama	117,135	Cape Island, N.S., 1905.	Sloop	33.0	11.9	6.0	12	12	Yarmouth, N.S.	H. T. Hines, Argyle, N.S.
Genevieve	117,041	Shag Harbor, N.S., 1905.	Sloop	32.5	12.0	6.0	11	11	Barrington, N.S.	C. H. Goreham, Woods Harbor, N.S.
Georgian II.	117,113	Vancouver, B.C., 1905.	Barge	187.0	39.0	9.8	649	649	Vancouver, B.C.	Mackenzie Bros. (Ltd.), Vancouver, B.C.
Giorgiana	117,137	Tusket Wedge, N.S., 1905.	Sloop	34.0	11.0	6.0	10	10	Yarmouth, N.S.	A. Boudreau, Tusket Wedge, N.S.
G. M. Cochrane	116,902	Fox River, N.S., 1905.	Schr.	113.2	30.0	10.6	257	220	Parrsboro, N.S.	S. J. Soley, et al., Fox River, N.S.
Hazel Maud	117,091	Liscomb, N.S., 1905.	Schr.	35.0	11.3	5.6	10	10	Arichat, N.S.	J. Hartling, Liscomb, N.S.
Indiana	121,655	Yarmouth, N.S., 1904.	Sloop	34.0	11.3	6.0	10	10	Yarmouth, N.S.	M. D. Boudreau, Tusket Wedge, N.S.
Laura E.	117,114	Cape Island, N.S., 1905.	Sloop	31.0	11.0	6.0	10	10	Yarmouth, N.S.	A. E. Nickerson, Cape Island, N.S.
Madona	117,114	Magdalen Is., Que., 1905.	Schr.	41.5	14.8	6.2	10	10	Quebec	A. C. Arseneault, Magdalen Islands.
Maple Leaf	85,403	Westport, N.S., 1905.	Sloop	33.6	11.3	5.6	10	10	Digby, N.S.	H. P. Denton, Westport, N.S.
Mersey	116,237	Liverpool, N.S., 1905.	Schr.	117.4	28.5	10.9	221	191	Liverpool, N.S.	A. W. Hendry, Liverpool, N.S.
Mollie	116,914	Shelburne, N.S., 1905.	Schr.	82.0	21.8	8.3	85	85	Shelburne, N.S.	J. T. Thomson, Halifax, N.S.
Ora Nickerson	121,658	Tusket Wedge, N.S., 1905.	Sloop	35.0	11.0	6.0	12	12	Yarmouth, N.S.	W. H. Nickerson, Tusket Wedge, N.S.
Pelley	160,930	White Horse, Y.T., 1905.	Barge	106.0	34.3	5.5	169	169	Victoria, B.C.	British Yukon Nav. Co., Vancouver, B.C.
Royal	121,653	Tusket Wedge, N.S., 1904.	Sloop	33.4	10.6	6.0	10	10	Yarmouth, N.S.	G. Boudreau, Tusket Wedge, N.S.
Shinyci Maru	117,118	Bowin Island, B.C., 1905.	Schr.	66.0	16.5	6.0	45	45	Vancouver, B.C.	Hisakichi Oura, Steveston, B.C.
St. Donat	117,138	Ste. Croix, Que., 1905.	Schr.	82.6	21.8	6.8	75	75	Quebec	L. Lafleur, Ste. Croix, Que.
Thalia D.	121,660	Cape Island, N.S., 1905.	Sloop	33.0	11.4	6.0	10	10	Yarmouth, N.S.	A. L. Doucette, Tusket Wedge, N.S.
Togo	117,139	Cape Island, N.S., 1905.	Sloop	31.0	11.0	6.0	10	10	Yarmouth, N.S.	A. Duncan, Cape Island, N.S.
Two Brothers	117,138	Tanook Island, N.S., 1905.	Schr.	43.2	11.0	6.2	14	14	Lunenburg, N.S.	A. H. Stevens, Tanook Island, N.S.
Valentia	121,651	Pinkney's Point, N.S., 1905.	Sloop	34.0	11.3	6.0	10	10	Yarmouth, N.S.	J. L. Surette, Pinkney's Point, N.S.
Valkyria	117,142	Tusket Wedge, N.S., 1905.	Sloop	32.0	10.6	6.0	10	10	Yarmouth, N.S.	S. Le Blanc, Tusket Wedge, N.S.
Viola	121,659	Indian Harbor, N.S., 1905.	Schr.	42.0	11.6	6.2	13	13	Halifax, N.S.	H. Covey, Indian Harbor, N.S.
White Eagle	117,042	Tusket Wedge, N.S., 1904.	Sloop	33.0	11.0	6.2	10	10	Yarmouth, N.S.	J. Le Blanc, Tusket Wedge, N.S.
Zelpha	121,656	Clark's Harbor, N.S., 1901.	Sloop	32.0	11.2	6.2	10	10	Barrington, N.S.	L. Nickerson, Cape Island, N.S.
		Clark's Harbor, N.S., 1904.	Sloop	32.0	11.4	6.0	10	10	Yarmouth, N.S.	M. Penney, Clark's Harbor, N.S.

Grain Elevator Notes.

The elevators at Elm Creek and Starbuck, Man., on the C.P.R., and at Sperling, Man., on the Canadian Northern Ry., were recently offered for sale by tender.

R. D. Martin, who died at Montreal, June 28, resided in Manitoba from 1882 until about 1900, when he moved to Montreal. He was

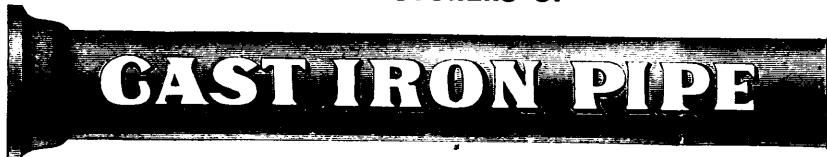
engaged in the grain trade, and was one of the largest shareholders in the Northern Elevator Co., Winnipeg.

The Calgary Colonization Co. is reported to have let contracts for the construction of 10 elevators of 30,000 bush. capacity each, at points between Edmonton and McLeod, Alta. It also proposes to erect a flour mill at Calgary, Alta.

JAMES THOMSON, Pres. and Mang. Director. J. G. ALLAN, Vice-President. JAMES A. THOMSON, Secretary. ALEX. L. GARTSHORE, Treasurer.

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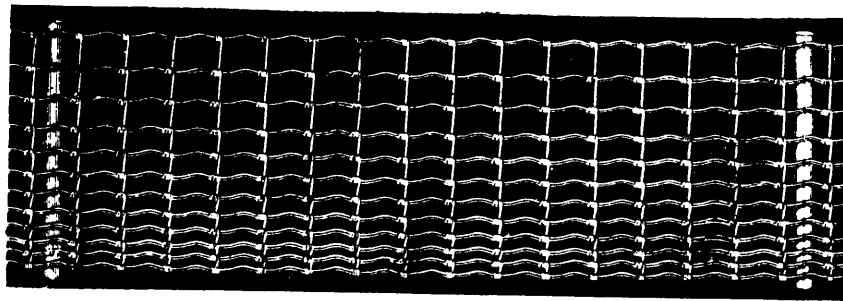
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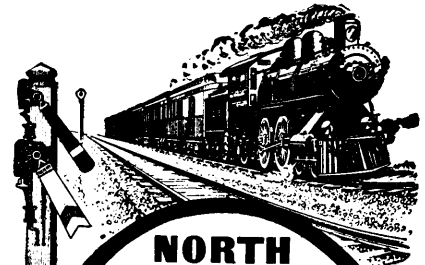
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International Waterways Commission.

The members of the International Waterways Commission spent some time on the eastern portions of Canada during the early part of July. On July 7 they met in Ottawa, and had interviews with the Premier, the Minister of Marine, and other members of the Government, collecting information. The Commission consists of six members and two secretaries, three members and a secretary being appointed by Canada, and a similar number by the United States. By agreement the duties of the commissioners are limited to an investigation into the condition of the international waterways discharging into the ocean through the St. Lawrence River. The commissioners meet either jointly or separately as occasion may require. The Canadian commissioners are J. P. Mabee, K.C., Toronto (Chairman); W. F. King, Dominion Astronomer, and L. Coste, C.E.; the U.S. commissioners being Col. Ernest Washington (Chairman); G. Clinton, Buffalo, N.Y., and G. Y. Wiseman, Detroit, Mich.

On July 8 the commissioners visited Montreal, and went on a trip of inspection on the Richelieu and Ontario Navigation Co.'s str. Montreal round the harbor, and subsequently visited Quebec. On July 11, the commissioners held a sitting at Montreal for the purpose of meeting the various public bodies and hearing what they had to say. The interests represented were the city of Montreal, the Board of Trade, the Harbor Commissioners, the Chamber of Commerce, the Shipping Federation, and the Dominion Marine Association. Representatives of the Dominion and Ontario Governments, the Queen Victoria Niagara Falls Park Commission, and a number of the power companies having charters to develop power at Niagara Falls, were also present. The principal matter discussed was the proposed construction of a dam at the Lake Erie outlet, and the general opinion expressed was that nothing should be done which would tend to lower the waters of the St. Lawrence River and Lake Ontario. The construction of a dam at the Lake Erie outlet would largely benefit U.S. ports; some Canadian ports would be benefited, but it might prejudicially affect Lake Ontario and the St. Lawrence River.

The views of the Dominion Marine Association on the proposal are set forth in the following memorial which was presented to the commission at Montreal:—

"Your memorialists include in their membership roll the leading vessel interests of the inland waters of Canada, and represent most of the tonnage interested in the navigation of the Lakes and Upper St. Lawrence, over 112,000 net registered tons of vessel property being enrolled. Your memorialists have considered the proposal to erect a dam at the lower end of Lake Erie, and having regard to the fact that the St. Lawrence route is the natural passage from the Great Lakes to the sea, and is now used by a large and constantly increasing number of vessels, many of them of full canal size and heavy tonnage; and having regard also to the narrow margin of safety in the navigation of certain parts of the harbors, channels and canals on this route and the necessity for maintaining the levels at least at their present standard, in order to accommodate the present traffic, and in particular having regard to the fact that a channel of only 14 ft. of water is provided in the Upper St. Lawrence, and that this depth has only been attained at the expense of much time and labor and large sums of money; your memorialists believe that any lowering of the water in this route would not only be exceedingly detrimental to the trade interests directly involved, but would also sacrifice the rights of the much larger number who enjoy indirectly as well as directly the benefits of this great

water highway; your memorialists therefore respectfully present a most emphatic protest against any action which could possibly in any way endanger or interfere with the maintenance of the present levels in the waterway between Niagara and the sea. Your memorialists understand that it is your intention to obtain full and satisfactory expert evidence regarding the effect of the proposed dam upon the waterways below it, and your memorialists' urgent desire is that if such evidence casts doubt upon the maintenance of the levels in question the proposed work should be reported against and condemned as improper."

The commissioners left Montreal on the Dominion cruiser Frontenac and reached Kingston, Ont., July 13, and a public session was held there July 14. The City Council, the Dominion Marine Association and the Kingston Board of Trade were represented at the sitting. The members of the deputations gave the commissioners a good deal of interesting information in regard to the river and lake. Col. Ernest expressed the opinion that if shippers on Lake Erie would be helped without hurting those below it would be to the advantage of all, but to do anything in Lake Erie that would hurt the St. Lawrence would be a crime against humanity, and he would never agree to it.

The commissioners decided to adjourn until Sept., and fixed the following dates for further joint sittings:—Sept. 11 and 12, Buffalo, N.Y.; Sept. 13 and 14, Niagara Falls; Sept. 15, Toronto; Sept. 16, Hamilton, Ont.

Beeson's Marine Directory of the Northwestern Lakes for 1905, has been issued by H. C. Beeson, Chicago, Ill. This is its 19th year of publication, and the publisher says in his introduction that six months have been expended in its reconstruction and recompilation, with the object of making the list of vessels, etc., more complete and up-to-date than has heretofore been possible. The illustrations and special letter-press, which have always been a feature of this publication, deal with the development of the Sault Ste. Marie canals during the past 50 years. The illustrations show the original lock, built by the Hudson's Bay Co., and destroyed by the U.S. forces in the war of 1812, as it has been reconstructed on the original site. The historical facts, the statistics given as to the growth of traffic through these canals, and the illustrations will make the present volume of special interest in connection with the celebration of the 50th anniversary of the opening of the U.S. Canal, which takes place during the current month.

Montreal merchants are making efforts to induce the Dominion Government to grant a subsidy for a second mail service to Great Britain, to supplement that given by the Allan Line. The suggestion is that the subsidy be given to the Dominion Line, which now has the Ottawa (formerly the White Star liner Germanic) and the Canada on the route, and which is in a position to add the White Star liners Majestic and Teutonic, now on the Liverpool-New York route.

In consequence of a proposal that Sydney, N.S., be made the point for the landing of mails from Great Britain instead of Rimouski, Que., a test was made in connection with the Allan liner Virginian, leaving Liverpool, Eng., July 6. The cruiser Canada was directed to watch for the vessel and to land the mails at Sydney. Fog delayed the Virginian, and the two vessels failed to communicate by wireless telegraphy. However, they managed to connect, and the mails were landed at Sydney, whence they were conveyed to their destination by a special train. So far as Nova Scotia and New Brunswick points are concerned the mails were delivered considerably earlier than would otherwise have been the case, but the Allan Line officers state that no time was saved so far as Montreal and western points are concerned.

The elevator, which is to be erected by E. R. Bacon, of Chicago, Ill., near Midland, Ont., by arrangement with the G.T.R., will be of steel and will have a capacity of 1,000,000 bush. The point at which the new elevator is to be constructed is at Dollartown, which name it is proposed to discard, and to name the station which is to be built there, Tiffin, after W. R. Tiffin, superintendent of the Northern Division of the G.T.R.

The elevator of the Goderich Elevator and Transit Co., Goderich, Ont., was totally destroyed by fire, July 3. The fire broke out about noon, spontaneous combustion being the assigned cause, and spread so rapidly that it was impossible to do anything to save the building or its contents. The power house adjoining was slightly damaged. At the time of the fire there were about 300,000 bush. of grain in the elevator. The elevator was valued at \$130,000 and was insured for about \$88,000, and there was about \$127,000 of insurance on the grain. The elevator was constructed about seven years ago, to replace the burned G.T.R. elevator. Towards the cost of its construction the G.T.R. contributed the amount of the insurance received on the old elevator. The town voted \$50,000; N. and A. Dymont took \$10,000 in stock in part payment of their account for lumber, and considerable additional capital was subscribed locally.

The St. Boniface, Man., taxpayers have passed a by-law exempting from taxation the proposed new flour mill and elevator of the Western Canada Flour Mills Co. The company proposes to build a 4,000 barrel flour mill, a 500,000 bush. storage elevator, and a 70,000 bush. storage warehouse. The elevator will be of the tank type, and will be constructed of concrete, with fireproof roof. Tenders for the construction of the mill, elevator and warehouse have been asked for. The officers are: President, A. Kelly, Brandon, Man.; Vice-President and General Manager, S. A. McGaw; Secretary, A. Hillis; Treasurer, A. Barclay. The executive committee consists of the President, Vice-President and L. Lukes, Toronto. In addition to the buildings at St. Boniface, the company proposes to erect a number of elevators at different points, probably duplicating the 50 at present controlled by it. A Battleford despatch states that the company has secured sites for elevators at the following points on the Canadian Northern Ry.'s main line: Veregin, Quill Lake, Mikado, Canora, Invermay, Wadena, Englefeld, and Muenster, and that application has been made for similar privileges at Aberdeen, Clarkboro, Warman, Elbow, Goodrich, and North Battleford.

The report of the Department of Trade and Commerce for the year ended June 30, 1904, recently issued, contains some information respecting the number of grain elevators in operation in the Western Grain Inspection district of Canada. There were on that date the following:—

	No.	Cap. Bush.
Public country elevators.....	912	27,214,000
Warehouses.....	64	
Terminal elevators.....	6	13,972,000
Total.....	982	41,186,000
Total for 1903.....	822	30,356,400

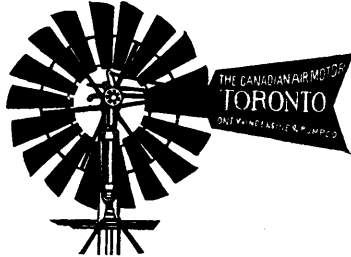
With reasonable railway transportation the report states these are estimated to take care of 100,000,000 bush. of wheat. The Canadian Northern elevator at Port Arthur, Ont., is the largest, having a capacity of 3,350,000 bush. There are but few 3,000 bush. warehouses in operation at present, although there are 60 under 10,000 bush. The average capacity for all elevators and warehouses, exclusive of the six terminal ones, is about 28,000 bush. There are 20 elevators at 13 points east of Lake Superior, having a total capacity of 11,710,000 bush., the largest being at Midland, Ont., 1,250,000 bush., and the smallest at Sarnia, Ont., 100,000 bush. Five of these elevators are at Montreal, the total capacity being 3,000,000 bush.

The St. Lawrence Canals.

The new regulations relating to the method of vessels being passed through the locks of the Cornwall Canal continue to be a cause of complaint by steamer captains and owners. Complaints are reported to be constantly made as to delays, etc., caused by the new system, but neither these nor the representations of the Dominion Marine Association

have brought about the restoration of the old plan. In referring to the matter the Montreal Gazette in a recent issue says:—"Instead of the steamer desiring to lock through the Cornwall Canal approaching the locks and getting in under its own power, a personally conducted plan which involves the use of much electricity has been adopted. At every lock an electrical winch has been provided, Attached to the winch is a long cable. When a vessel ap-

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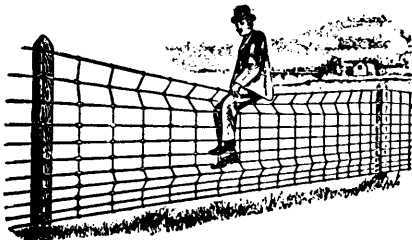
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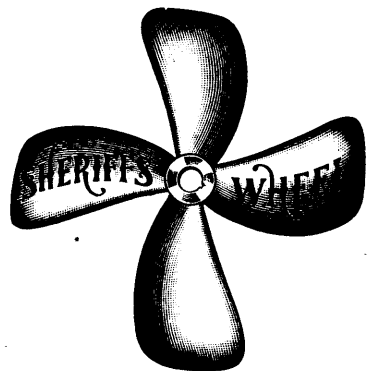
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proaches the lock it is supposed to come to a dead stop, land a couple of men, who proceed to the winch and bring from it to the vessel the cable. The cable is attached to the side of the steamer. It cannot be attached to the bows of the vessel, for the pull is not a straight one. Even when it is attached to the side the assistance of the steamer's engines is required in order to place the vessel in a proper position for entering the lock. When the steamer finally is thus hauled and self-propelled into the lock the ordinary process is gone through with. Then the electrical winch and the cable again come into use, and the steamer is laboriously hauled out of the lock and is free to proceed to the next, at which the same operation is gone through with."

Capt. Hickley, of the Richelieu and Ontario Navigation Co.'s str. Brockville, in giving his experience of the new method says he is compelled to carry two additional men to do, or attempt to do, what vessels are required to do unassisted at all the other canals.

The proposal of the Dominion Marine Association that the Carillon and Grenville Canal should be lighted by electricity will not be acted upon this season. Tenders were called for but nothing has been done and no reason has been given for the failure to take action.

Notices to Mariners.

The Department of Marine has issued the following notices to mariners:—

- No. 44. June 10.—New Brunswick—110. St. John River, Grand Lake, Cox point, change in character of light. 111. St. John River, Grand Lake, Robertson Point, change in character of light. 112. St. John River, Grand Lake, Fanjoy Point, change in character of light. 113. North-east coast, Chaleur bay, Belloni Point, light improved.
- No. 45. June 12.—New Brunswick—114. Bay of Fundy, Garnet rock, temporary light.
- No. 46. June 13.—Ontario—115. Lake Huron, Goderich, construction of breakwater, temporary lights.
- No. 47. June 13.—Quebec—116. River St. Lawrence, below Quebec, Father Point, gas buoy established.
- No. 48. June 20.—Quebec—117. River St. Lawrence, ship channel between Quebec and Montreal, Champlain upper range, new range towers. 118. River St. Lawrence, Lake St. Peter, Pointe du Lac range, light-house foundation placed.
- No. 49. June 22.—New Brunswick—119. Northumberland Strait, Richibucto harbor entrance, south beach, changes in bar range lights. 120. Northumberland Strait, Richibucto harbor entrance, bell buoy established.
- No. 50. June 26.—Nova Scotia—122. South coast, La Have River, Oxners rock, buoy established. 123. South coast, Mahone Bay, Gull ledges, south-west ledge, buoy established. 124. South coast, off Whitehead Island, south-west Bull, bell buoy established. Prince Edward Island—125. South coast, Hillsborough Bay, position of Fitzroy rock, bell buoy. 126. South coast, Hillsborough Bay, off St. Peters Island, buoy established. 127. South coast, Bedeque Harbor, Indian spit, change in character of buoy.
- No. 51. June 27.—Nova Scotia—129. Madame Island, Little Arichat, off Crichton Head, change in character of buoy. 130. Cape Breton Island, Great Bras d'Or, change in character of buoys.
- No. 52. June 28.—British Columbia—131. Pender Island Canal, buoys established. 132. Strait of Georgia, off Tumbo Island, Rosenfelt reef, change in character of buoy. 133. Strait of Georgia, Burrard Inlet, off Grey Point, bell buoy established. Alaska—134. Tongass Narrows, Peninsula point, beacon established, Rosa reef beacon replaced by a new structure.

53. July 3.—British Columbia—135. At Boundary bay, Mud bay, beacons. 136. Strait channel, off Thetis Island, uncharted rock. 137. Pylades channel, uncharted rock. 138. Strait of Georgia, Gabriola reefs and pass, uncharted rocks.

No. 54. July 6.—Quebec—139. River St. Lawrence, Lake St. Peter, Louisville range, lighthouse foundation placed.

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

No. 26. July 1.—St. Marys River—953. Mud Lake, Pilot Island range light station, new range lights. Lake Erie—956. Conneaut harbor, hydrographic information.

No. 28. July 15.—Lake Erie—1019. Bass Islands, shoals discovered. 1020. Pelee passage, wreck, buoy placed.

Maritime Provinces and Newfoundland.

The name of the schooner L. P. Churchill, no. 61,578, of Sackville, N.B., has been changed to the Minnie T.

The Pickford and Black Co. has chartered the Quebec Steamship Co.'s str. Caribbee to run from Halifax, N.S., to West Indian ports, in place of the Dahome.

The Deer Island and Campobello Steamship Co. has decided to build a steamer to replace the Viking. A new boiler will be placed in the Viking at the close of the season.

The str. Restigouche ran on the rocks off Cape Freels, Nfld., recently, but was got off after some hours. On reaching St. John's, Nfld., she was put in dry dock for repairs, and was put on her run again from Montreal to St. John's, July 19.

Troop and Sons (Ltd.) has been incorporated under the New Brunswick Companies' Act, with a capital of \$50,000 and offices at Rothesay, N.B., for the purpose of carrying on a shipping and brokerage business, and to acquire, own and manage vessels. The provisional directors are: H. D., J. V., and C. McL. Troop, J. E. Irvine, Mrs. L. C. McLauchin, of St. John, N.B.

The Dominion Government is having 25 submarine bell stations erected along the Atlantic and St. Lawrence gulf coasts. The sites for the last of the stations were been selected off Scattarie Island and off Louisburg, N.S., July 6. A press report states that a number of the trans-Atlantic steamers will not be equipped with receiving apparatus in connection with these bells.

Thos. McConkey has been appointed ship's husband of the Department of Marine and Fisheries, with headquarters at Halifax, N.S. His duties consist of reporting upon and attending to necessary repairs to the hulls, anchors, cables, boats, spars, sails, etc., of all Government ships. He is under the orders of Commander Spain, the officer commanding the Marine Service of Canada.

The latest proposal in connection with the project to erect a dry dock at St. John, N.B., is that the Dominion Government should guarantee the bonds of the company, taking in return the subsidies granted, viz.: \$5,000 a year for 40 years, voted by the province; \$2,500 and a free site, voted by the city, and a surrender of the subsidy of 3% on the cost up to \$1,000,000 for 20 years, provided for by the Dominion act relating to the construction of dry docks.

The Sydney, N.S., city council discussed at considerable length, July 7, the report of a sub-committee which has been considering the proposal for establishing a shipbuilding yard there. The committee stated that the suggestion was that a large British shipyard, which had a branch in India, would establish a yard in Canada. The report proceeded that those promoting the shipyard considered

"the point on the harbor fronting Victoria Park grounds as in every respect suitable if it were placed at their disposal free of cost; and the committee, from all the information gathered from these gentlemen, consider it of the greatest importance to the best interests of Sydney and of Canada generally that the council do take every means to procure from the Dominion Government the right to transfer said grounds to this company to establish so mammoth an industry thereon, and therefore would recommend that the city will enter into an undertaking to favorably consider the surrender of Victoria Park for the purpose of establishing thereon a shipbuilding plant or other industry of a like important nature whenever it shall be satisfactorily demonstrated that the gentlemen interested in the company are in a position to carry out the project successfully and are prepared to enter into satisfactory guarantee as to amount of money to be expended and number of men employed." The report was adopted.

Province of Quebec Shipping.

The Quebec and Levis Ferry Co. is making extensive improvements to its property on both sides of the river.

H. Menier, of Anticosti, has brought out two iron lighthouses from France, to be placed at Ellis Bay, Anticosti Island.

Hon. L. Pelletier recently purchased the steam yacht Crescent in New York, and is having her thoroughly overhauled at Levis, Que.

The name of the tug Adriatic, of Quebec, official no. 111,482, has been changed to William Hackett, by order-in-council dated June 28.

The Montreal Harbor Commission is building a wharf at the works of the Locomotive and Machine Co., Longue Pointe, Que. The company contemplates erecting a coal handling plant on the wharf next year.

The Richelieu and Ontario Navigation Co.'s str. Chateauguay broke her rudder chain while passing through the Lachine Rapids, with a party of 300 excursionists on board, July 1, but was got through in safety.

The proposal to abolish the Montreal Harbor Commission as at present constituted, and to replace it by a paid commission appointed by the Government, did not come before the House of Commons last session, but will probably be introduced early in the session of 1906.

The promoters of the new steamship line between Quebec and Great Britain have had a number of interviews with the Quebec Harbor Commissioners, relative to the proposal. The Commissioners are in favor of granting a number of privileges to the company, but at the last meeting, held July 14, nothing definite was decided.

The St. Lawrence Floating and Wrecking Co., Montreal, has purchased the str. Marie Josephine from A. Gagnon, Quebec. The Marie Josephine was built at Riviere du Loup, Que., 1891. Her dimensions are: length, 88.4 ft.; breadth, 22.8 ft.; depth, 8.2 ft.; tonnage—gross, 117 tons; register, 80 tons. She is a screw steamer having engines of 20 nominal h.p.

The Quebec Harbor Commissioners have let a contract to M. P. Davis & Co., for the work of strengthening the walls of Louise dock, the embankment and other works of improvement there. The work is very extensive and will involve an expenditure of about \$500,000. The whole of the embankment facing the two basins and the wall running parallel with the St. Charles River, together with the cross wall beginning to give way at the north end, will have to be buttressed and a new strong wooden facade constructed.

In introducing the bill respecting the port and pilotage district of Quebec, the Minister of Marine stated in the House of Commons, recently, that the abolition of the present pilotage authority was asked by the shipping interests and was agreeable to the pilots. It was an extension of the principle of the law applying to the pilots between Montreal and Quebec which had been found satisfactory. The act provides for the inclusion of the Saguenay River in the pilotage district of Quebec, and then provides that "The Harbor Commissioners of Quebec shall cease to be the pilotage authority of the pilotage district of Quebec, and all the powers vested in the said

commissioners as such pilotage authority, either under the Pilotage Act and the acts amending it, or under the Quebec Harbor Commissioners Act, 1899, shall be vested in the Minister of Marine and Fisheries: Provided that nothing in this act shall authorize the Minister to sit as a tribunal for the trial of offences of which pilots may be accused before the pilotage authority; but the Minister may, in any case not provided for by the Shipping Casualties Act, 1901, and amendments thereto, designate a tribunal or officer to try any such offence." The bill has passed through the House of Commons.

Ontario and the Great Lakes.

Capt. H. C. Rothwell, a former steamship owner and master mariner of Kingston, Ont., died there recently, aged 70.

The Dominion Government has let a contract for dredging the harbor at Port Burwell, Ont., at 14½c. a cubic yard.

The Crawford Tug Co., of Warton, Ont., has purchased the wreck of the str. Pease, and will convert it into a barge.

Capt. R. H. Gilbertson, for many years engaged as a master mariner on the Upper Lakes, died at Beaverton, Ont., recently.

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The name of the str. *China*, of Toronto, official no. 117,073, has been changed to *City of Montreal*, by order-in-council dated July 3.

The keel for the *Niagara Navigation Co.'s* new steamer was laid at the Toronto yard of the *Canadian Shipbuilding Co.*, early in July.

A contract has been let by the Dominion Government to Haney and Miller for the construction of a breakwater at Port Stanley, Ont., to cost about \$100,000.

G. N. Matheson has been appointed a measuring surveyor of shipping at Sarnia, Ont., and W. H. Farr has been given a similar appointment at Port Stanley, Ont.

The Ontario Government has ordered the purchase of a small steamer for use on Lake Temagami, as an aid in enforcing the fish and game regulations, and the work of the fire rangers.

C. H. Harvey, of Toronto, the engineer who built the first lock at Sault Ste. Marie, Mich., will be present at the celebration of the 50th anniversary of the opening of the same, to be held during August.

The *Montreal Transportation Co.'s* str. *Quebec* has been undergoing repairs in the Government dry dock at Kingston, having recently been ashore below Quebec, and breaking away from a tow near Morrisburg, Ont.

During June the canals at Sault Ste. Marie carried 6,057,491 tons of freight, of which 1,011,412 passed through the Canadian canal. Up to June 30 of the present season there had passed through the canals 11,833,278 tons, of which 2,100,372 went through the Canadian canal.

The *Northern Navigation Co.'s* str. *Germanic* has been withdrawn from the Toledo-Sault Ste. Marie run, and has been placed on the route from Collingwood, Ont., to replace the burned str. *City of Collingwood*. The hull of the burned steamer has been offered for sale by the underwriters.

The *Hamilton Steamboat Co.* is seeking to obtain an injunction restraining R. O. and A. B. Mackay from obstructing the passage way or slip by which its steamers reach the wharf at Hamilton, Ont. The increased size of the steamers landing at the Mackay wharf is stated to be largely the cause of all the trouble.

The Toronto Board of Control has reached a basis of agreement with the *Toronto Ferry Co.*, whereby the service to the Island, and the dock accommodation will be largely improved. The *Ferry Co.* will take a five year lease of the new wharf at the foot of Bay St., and will provide two new ferry steamers, at a cost of \$100,000.

Since the explosion of the acetylene gas buoy at Kingston, Ont., the buoys have been charged to only five atmospheres pressure, instead of 12 as formerly. This necessitates the recharging of the buoys more frequently, and recently complaints have been made that several of the buoy lights were almost out, owing to the low pressure.

Capt. Baker, of the str. *Hamilton*, sighted recently what he believes to be the wreck of the dredge *Sir Wilfrid*, which foundered off Port Hope, Ont., about three years ago, while being towed from the *Polson Iron Works*, Toronto, where she was built, to Montreal. The dredge has since been finally located and steps will be taken to raise it.

The str. *Lincoln*, which was burned at Sandwich, Ont., has been sold to Capt. F. W. Doty, and towed to *Goderich*, Ont., where she will be rebuilt. The work is expected to be completed by the end of August, when she will be placed on a run between *Peelee Island* and the mainland. The *Lincoln* was originally the *Greyhound* and was well known in Toronto

The Department of Railways and Canals has appointed a number of the former collectors of canal dues to collect statistics of traffic passing through the canals. The points at which these collectors are stationed are Sault Ste. Marie, Port Colborne, Port Dalhousie, Williamsburg, Carillon, Grenville, Galops, Cornwall, Ont.; Soulanges, Lachine, Chambly, Que.; and St. Peters, N.S.

H. B. Whitton, one of the directors of the *Hamilton Steamboat Co.*, has been in Great Britain recently obtaining information in view of the company's intention to build another steamer. It is likely that the new steamer will be built in Canada, and not on the Clyde, as were the *Macassa* and *Modjeska*, and it is stated that she will be a side-wheeler with very large passenger accommodation.

Instructions have been given to Collectors of Customs that U. S. launches are not to be allowed to carry passengers to or from Canadian ports unless they have undergone inspection in Canada. It is claimed that large numbers of launches carry passengers to and from Canadian ports, and it is stated that some of them do a regular ferry business between Clayton, N.Y.; Kingston, Ont., and other points.

An order-in-council has been passed defining the limits of the port of Port Arthur, Ont., as follows:—"All the waters of Thunder Bay north of a line drawn due east astronomically from the point where the boundary line between the municipalities of Port William and Port Arthur cuts the shore of Thunder Bay, and west of a line drawn due south astronomically, from the extremity of *Barre* (Barass) Point."

The Ontario Government some years ago constructed several dams in the Trent valley with a view of maintaining a navigable depth of water in the waterways there. In connection with the carrying out of the construction of the Trent valley canal by the Dominion Government, it has been found advisable to transfer these dams from the Province to the Dominion, and a conference was recently held by representatives of the two governments as to the conditions of the transfer.

The *Union Steamship Co.* has been incorporated under the Ontario Companies' Act, with a capital of \$100,000 and offices at Hamilton, Ont., for the purpose of carrying on a general navigation and transportation business. The provisional directors are R. O. and A. B. Mackay, W. G. Walton, W. Southam and W. Magee, all of Hamilton, Ont. The steamer which the company will operate is under construction at Dundee, Scotland, and is expected to reach Hamilton in the fall. She will be named the *Glenellah*.

A collision occurring between two United States vessels, in the harbor of Sandusky, Ohio, formed the subject of a case in the Canadian Admiralty Court, at Toronto, recently. Justice Hodgins decided that the court had jurisdiction to try the case and award damages, it having been shown among other things that the *D. C. Whitney* was libelled in Canadian waters by the owners of the schooner *Monguagon*. The matter was referred to the local registrar at Windsor, Ont., to fix damages. An appeal will probably be taken to the Supreme Court.

R. O. and A. B. Mackay, of Hamilton, Ont., have purchased the str. *Osceola*, of Chicago, Ill., and when she is overhauled and altered, she will be given a Canadian registry under the name of *Golspie*. The *Osceola* is a screw steamer, built of wood, at Bay City, Mich., 1882, and having the following general dimensions: length, 183 ft.; breadth, 34 ft.; depth, 13 ft.; tonnage—gross, 980 tons; register, 787 tons. She is fitted with fore and aft compound engine, cylinders 20 and 40 ins. diameter by 36 ins. stroke, steam being supplied by one fire-box boiler, 10½ by 12 ft., con-

structed at Detroit, Mich. The *Osceola* was formerly owned by the *Lake Michigan and Lake Superior Transportation Co.*, Chicago. She is reported to have been chartered to the Dominion Government for three years for service as a lighthouse tender.

The str. *City of Montreal*, operated by the *Montreal and Lake Erie Steamship Co.*, made her first trip between Montreal and Detroit, Mich., early in July. She makes the round trip in two weeks, calling at Kingston, Toronto, Cleveland and Toledo, Ohio en route. A party of business men was entertained at a trial trip from Toronto, July 1, the owners being represented by Jas. Carruthers, President, and C. A. Jaques, Managing Director. The steamer was formerly known as the *China*, and ran in the *Anchor Line Co.'s* routes on the Upper Lakes from Buffalo. She was overhauled and re-engined at Toronto before being put on the Montreal-Detroit route by her new owners. The *City of Montreal* will carry 1,200 tons on a 14 ft. draught, and has accommodation for 150 passengers. She is equipped with a fore and aft compound engine, of 128 h.p., steam being supplied by two Scotch boilers 11 by 12 ft., at a working pressure of 140 lbs.

Our Winnipeg correspondent wrote on July 15:—"The vessel interests continue to find the grain trade dull but with all interests making extensive preparations for handling the greatest crop that the West has ever grown and in this connection the recent loss of the *Goderich* elevator by fire will prove a great misfortune to all interests, as under ordinary circumstances the elevator accommodation at the eastern end of the lake route has proved unequal to handling the fall movement of wheat without serious delay to vessels, and fear is now expressed that Buffalo will secure a very large share of the coming Northwest Canadian crop. The coal and ore business still continues exceptionally good so far as Canadian boats are concerned, as does also the steel rail movement, and if this trade should continue into the fall months there will be a very serious shortage of tonnage for the grain trade, and as the U.S. vessels are about in the same condition, the prospects are for a high range of rates during the latter part of the season. Package freight conditions remain about the same as the past month, with all lines getting into shape to handle the largest business on record. There is no change in the rate situation on any of the commodities mentioned."

The *Kingston, Ont.*, schooner *Acacia* was in Charlotte, N.Y., July 4, and the captain hoisted the *Union Jack*, under what circumstances does not appear to be quite clear, but the flag was ordered down, it is alleged, by the Collector of Customs, on pain of the schooner being refused clearance papers. The matter has been brought to the notice of the Dominion Government, and representations will probably be made through the proper channels to the U.S. Government at Washington. A vessel has the right to fly the flag of the country to which it belongs, in whatever port it may be, and a captain should see that it is always displayed in its proper position. In this case the captain apparently had not any flag flying, and on being spoken about his vessel not being decorated in honor of the U.S. national holiday, he immediately had the *Union Jack* hauled up. Nothing was done to warrant the refusal by the Collector of the clearance papers, as is alleged, but on the other hand the circumstances attending the hoisting of the British flag were such as to suggest the "Who'll tread on the tail of my coat" episode of *Donnybrook fair*. Canadian captains do not fly the British flag as they ought to do at all times when entering a foreign port, and the sooner they learn to do so, the sooner will an end be put to such incidents as occurred at Charlotte, July 4.

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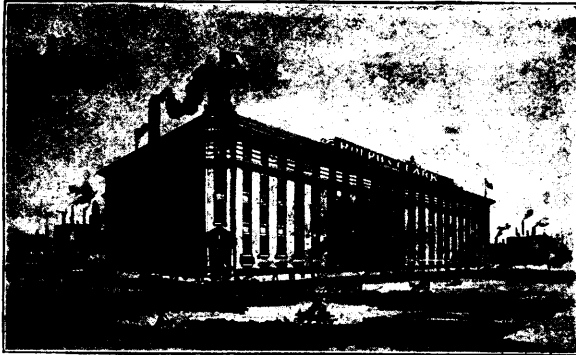
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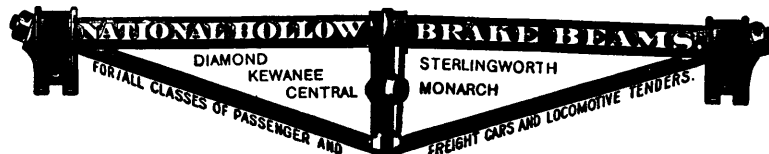
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Manitoba and the Northwest Territories.

Pettypiece and McIntosh, Battleford, Sask., have purchased a gasoline launch for passenger and light freight trade on the Saskatchewan River.

Prince Albert, Sask., has been constituted a port of registry for shipping, and Capt. A. Deacon has been appointed a measuring surveyor of shipping there.

The Dominion Government has chartered the sealing str. Neptune to take a further cargo of supplies to the str. Arctic, now on duty as a patrol vessel in Hudson Bay and adjacent waters.

A new steamer named the Midnight Sun started trading from Athabasca Landing, Alta., to Grand Rapids, Artha., making the round trip in a week, at the opening of navigation. Bredin and Cornwall, of Lesser Slave Lake, are interested in the venture.

The Hudson Bay Co.'s str. Strathcona, which arrived recently at Edmonton, Alta., from Prince Albert, Sask., made the trip in 10 days. She reported that navigation was impeded by the bridge at Battleford, and by the ferry cables at different points.

A proposal has been made in Winnipeg to construct a new channel for the Red River, so as to throw St. Boniface into Winnipeg. The suggestion is to cut a straight channel from the converging point of St. Mary's road and St. Anne's road, St. Boniface, almost opposite the north end of River Park, to a point near the Ogilvie mills.

For the use of the Mounted Police and the officers of the Department of Indian affairs, the Government has purchased a 120 ton launch for service on Lake Winnipeg. The steamer is to be used for patrol purposes, and as a link in a new line of communication which it is intended to open up between Winnipeg and Hudson Bay. It is also proposed to secure a somewhat similar boat for Hudson Bay.

The Pioneer Navigation and Land Co. is building a steamer on the Red River at Winnipeg, to replace the Gertie H., burned last year. The dimensions of the new steamer are: length, 142 ft.; breadth, 21 ft.; she will have a carrying capacity of 300 passengers, and 200 tons of cargo. The J. M. Smith will be the name of the steamer, which will be used this year entirely for freighting purposes.

B.C. and Pacific Coast Shipping.

A 20 h.p. launch has been completed at Victoria, B.C., for Jas. Dunsmuir.

The C.P.R. engineers have been making surveys at Kelowna, B.C., with the object of improving the wharfage accommodation there.

A gasoline launch, 22 ft. long with a beam of 5 ft., and equipped with engines of 5 h.p., has been completed on James Bay, Victoria, B.C.

The Hazel Dollar, recently completed at Glasgow, Scotland, for the Dollar Line, has arrived at San Francisco, Cal., with a cargo of steel rails. Most of the company's steamers are registered at Victoria, B.C., but are operated from San Francisco.

A fine 30 h.p. gasoline motor launch has been completed at Vancouver, B.C., for the British Columbia Electric Ry. Co., for the use of its officers travelling between Vancouver and the company's water power works at Lake Beautiful. The launch is 38 ft. long.

The snag boat built at Victoria, B.C., last year for the Dominion Government, for service on the Fraser River, has been laid up for repairs, which it is estimated will cost \$4,000.

A New Westminster paper states that a good deal of the money has to be spent to remedy faults of design, and imperfect specifications.

Capt. Gore, Superintendent of C.P.R. steamers in the Kootenay country, is quoted as having given some details regarding the new steamer to be built on the lake for the Nelson-Kootenay Landing run. It is said that the new steamer will be a stern-wheeler, larger than the Rosslund, now running between West Robson and Arrowhead, and will have a speed of 18 miles an hour, that she will have berth accommodation for 75 first-class passengers, and that she will be built at Nelson, under Capt. Gore's charge.

In connection with the taking over of the hydrographic survey of the Pacific coast from the Imperial Admiralty, the Secretary of State recently said in the House of Commons that the Dominion Government had under consideration the desirability of inviting the co-operation of the United States to complete the surveys in the water adjacent to its territory of Alaska, while the Dominion Government was completing the surveys of the waters on the northern coast of British Columbia. It was stated that the navigation in the districts mentioned was the most intricate in the Dominion, and that there was a very large trade there.

The Union Steamship Co.'s new str. Camosun, built at Paisley, Scotland, arrived recently at Vancouver, B.C., from the builder's yard. Her dimensions are: length, 192 ft.; breadth, 35½ ft. She has a gross tonnage of 1,369 tons, and has accommodation for 100 passengers. She is equipped with triple expansion engine, capable of developing 1,600 h.p.; cylinders, 18½, 30 and 50 ins. diameter, by 36 ins. stroke. Her guaranteed speed is 14 knots an hour. She is lighted throughout by electricity, and is well equipped for the speedy loading and unloading of freight as well as for the comfort and convenience of passengers. The Camosun has been placed on the northern B.C. run.

Among the Express Companies.

The Western Ex. Co. has opened an office at Manfred, N.D.

J. W. Hutt, Vice-President and General Manager, National Ex. Co., died at New York City, June 25.

The Western Ex. Co. has given notice that automobiles or motor cycles, with tanks containing gasoline, must be refused.

The Sydney and Glace Bay Ry. is operating an express service on its electric line between these two Nova Scotian towns.

F. L. Stone, son of J. R. Stone, agent Canadian Ex. Co., St. John, N.B., is the inventor of a mechanical method of measuring the slip in induction motors.

The Toronto and York Radial Ry. states that the express business on its Metropolitan Division, between Toronto and Newmarket, Ont., has more than doubled during the last twelve months.

A law has been passed by the State of Washington, declaring it to be unlawful to carry shipments originating at and destined to a point within the State free. The law does not apply to shipments originating in the State for outside points, or to shipments delivered in the State from outside points.

The Canadian Ex. Co. has opened offices at Bedford, P.E.I.; Norton, Upper Blackville, N.B.; Caldwell, Ont.; and a new summer season office at Elgin House, Muskoka, Ont. Its offices at Amigari, Eden, Mount Elgin, Port Burwell, Salford, Strathfordville, Tillsonburg, Vienna, Ont.; Nash's Creek, N.B., and Westchester, N.S., have been closed.

Telegraph and Cable Matters.

The Western Union Telegraph Co. has laid a new cable from Port Angeles, Wash., to Victoria, B.C., seven miles, to replace the old cable which became disabled during the past winter.

The Western Union Telegraph Co. is about to extend its lines from Halifax to the Government Marconi wireless station at Camperdown, and from Glace Bay to the Marconi Wireless Telegraph Co.'s new station there.

The Dominion Parliament has passed an act for the regulation of wireless telegraphy in Canada. The act is in the same terms as the Imperial statute, and provides that no wireless station shall be established in Canada without a license from the Governor-in-Council.

Recent reports from Yukon Territory state that forest fires have been raging for some time in northern British Columbia, Yukon and Alaska, and that many miles of the Government telegraph line from Ashcroft, B.C., to Dawson, Yukon, have been destroyed.

F. D. Matthews, of Montreal, was recently at St. John's, Nfld., in negotiation with the Colonial government respecting the establishment of Marconi wireless telegraph stations to connect the island with Nova Scotia. The result of the negotiations have not been announced.

A St. John's, Nfld., press report states that the Newfoundland government has completed arrangements to lay a cable from Basque to Canso, N.S., a distance of about 200 miles. The new cable, it is stated, will be laid by the Commercial Cable Co., which has the terminal of its trans-Atlantic cables at Canso.

The cable str. Cambria is engaged taking soundings from 190 miles west of Waterville, Kerry, Ireland, across the Atlantic, for the purpose of selecting a route for the new trans-Atlantic cable of the Commercial Cable Co. The Cambria has already laid the shore end from Waterville, and the main cable will be laid by the Colonia, a new steamer, from Canso, N.S., working eastward.

The Toronto Globe of July 5, 1855, said: "The Grand Trunk line of telegraph was offered yesterday by auction at Wakefield's. There were several large capitalists present. Bidding was rather slack and as it did not reach anything approaching the estimated value, the trustees bid the property in at £11,500. It will be again offered at the same place on Aug. 2, to be sold then without reserve."

The Dominion steamer Lady Laurier has been equipped with Marconi wireless telegraph apparatus. Wireless telegraph stations on the same system are being constructed at Cape Sable, N.S., and St. John, N.B., and are expected to be completed by August 31. The station at Sable Island has been completed and is in regular communication with the station at Camperdown, Halifax, N.S.

Hon. A. McKay, manager for Newfoundland of the Anglo-American Cable Co., recently stated that it was not improbable that four or five of the cables now landed on the Newfoundland coast would be shifted so that they would land in Nova Scotia, as a result of the tax which the Newfoundland government had decided to levy. The change would mean a saving of about \$150,000 a year to the Anglo-American Cable Co.

The first sitting of the Pacific cable conference was held in London, Eng., recently, Sir Wm. Mulock representing Canada; Lord Jersey, the Australian Commonwealth, and Sir Sandford Fleming, New Zealand. The agreements between certain of the Australian

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J. R. Booth Elevator, Depot Harbor, Ontario		1,000,000 "
Southern Pacific Terminal Co.'s Elevator, Galveston, Texas		1,000,000 "
Erie R. R. Transfer & Clipping House, Chicago, Ill.		100 cars in 10 hrs.
Manchester Ship Canal Co.'s Elevator, Manchester, Eng.		1,500,000 "
Burlington Elevator Co., Peoria, Ill.		500,000 "
Canada Atlantic Railway Elevator, Coteau Landing, Que.		500,000 "
Northern Grain Co., Manitowoc, Wis.		1,350,000 "
Union Elevator, East St. Louis, Ill.		1,100,000 "
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States and the Eastern Extension Telegraph Co. were discussed, and various working and financial questions connected with the Pacific cable were also dealt with.

The Dominion Parliament has voted \$125,000 to meet the probable losses on the working of the all-British trans-Pacific cable. The net earnings of the cable for the last year were £78,824, and the expenses £167,869. In the expenses there is included £77,000 to be paid annually for extinguishing the cost of laying the cable. The deficit was £89,045. According to the agreement Great Britain and Canada each pay 5-18ths of the cost of maintenance, Australia, 6-18ths, and New Zealand, 2-18ths.

Dominion Telegraph Co.'s Report.

At the annual meeting in Toronto, July 12, the following financial statement was presented for the year ended June 30:—

ASSETS.	
Capital expenditure.....	\$1,281,819.47
Toronto, Grey & Bruce Ry. Co. 1983 bonds, and interest thereon.....	1,596.24
Suspense.....	2.87
Cash in bank and on hand.....	29,153.79
	\$1,312,572.37
LIABILITIES.	
Capital stock paid up.....	\$1,000,000.00
Dividends unclaimed.....	1,081.05
Dividend payable July 15.....	15,000.00
	\$1,016,081.05
Balance at credit of profit and loss account.....	296,491.32
	\$1,312,572.37

The directors reported the regular payment, quarterly in advance, for the past 26 years, of the guaranteed interest at the rate of 6% per annum on the capital stock of the company, by the lessees, the Western Union Telegraph Co., up to and including June 30, which interest has been duly distributed quarterly to the shareholders of the Dominion Co., the lease being for 99 years, from July 1, 1879.

The following were elected directors for the ensuing year: Belvidere Brooks, T. F. Clark, R. C. Clowry, Æ. Jarvis, C. O'Reilly, M.D., H. Pellatt, A. G. Ramsay, T. Swinyard and T. R. Wood. At a meeting of the newly elected board, T. Swinyard was re-appointed President; T. R. Wood, Vice-President, and R. Roper, Secretary and Treasurer.

General Telephone Matters.

The Bell Telephone Co. has opened a toll office at Hohnfield, Man.

The Bell Telephone Co. is constructing a rural party line from Lakefield to Buckhorn, Ont.

The Temiskaming Telephone Co. has opened call stations at Hanbury, Uno Park and Milberta, Ont.

The Bell Telephone Co. has extended its long distance lines to Eastman's Springs, Ont.; St. Prosper and Papineauville, Que.

The Bell Telephone Co. is extending its lines along the Gatineau River valley as far as North Wakefield, Que. It is proposed to operate rural lines.

The Nova Scotia Telephone Co.'s building at Halifax, N.S., had a narrow escape from destruction by fire, July 8. The fire was on the second floor, but was extinguished before any serious damage was done.

The British Columbia Telephone Co. is constructing a new line through the Boundary country from near Cascade to Greenwood, B.C., via Phoenix. The work is being done under the charge of G. C. Hodge, the company's Superintendent, at Nelson, B.C.

The Melita-Arthur Telephone Co., Ltd., has been incorporated under the Manitoba Companies' Act, with a capital of \$10,000 and offices at Melita, Man., to carry on a general

telephone business. The provisional directors are: D. Day, Arthur; L. W. Hunt, Lyleton; W. J. S. Atkinson, Melita.

The British Columbia Telephone Co. recently started the laying of underground wires in Vancouver, B.C. The city authorities objected to the company's operations and force was used to prevent further work. H. W. Kent, the company's Superintendent, together with several workmen, were arrested, but proceedings against them have not been followed up. The city applied to a court for an injunction to prevent the company from proceeding with construction, but Justice Morrison declined to grant it, on the grounds that the company had done only what the law authorized it to do, and that it had not been shown that there had been any invasion of the rights of the corporation. The company resumed work July 5, in laying its wires underground in lanes and streets along a route approved by the City Engineer.

Port Arthur and Fort William Telephones.

The Board of Railway Commissioners has given judgment upon the application for compensation arising out of the cancellation of the Bell Telephone Co.'s exclusive right to enter the stations of the C.P.R. at Port Arthur and Fort William, Ont. Chief Commissioner Killam in giving judgment said it was clear, he thought, that compensation should be made to the railway company for the use of its stations by the towns for the purposes of their telephone system, and the interference with the railway company incident to establishing the instruments and connection therein. It was also clear that compensation should be made to the Bell Telephone Co. for the loss of exclusive privilege of telephone connection with the stations of the railway company in the two towns respectively. If the municipal system of these towns be installed under the authority of the statute, and the order of the Board, it will, he thought, be lawfully established, and the C.P.R. will not be liable for violation of the provision of the contract granting the exclusive privilege. For the loss of that right of action the Bell Telephone Co. should certainly be compensated. It had been argued that the establishment of the municipal telephone system in the stations of these two towns, or either of them, under an order of the Board, would be to void the contract between the railway company and the Bell Telephone Co.; that the contract was of considerable value to both companies, and that compensation should be paid in respect of it. Mr. Killam did not agree with the construction put upon the language of Mr. Blair, formerly Chief Commissioner, that the installation of the municipal system in the stations of Port Arthur and Fort William voided the contract ipso facto, but was of opinion that quite the opposite was intended. Correspondence took place between the Bell Telephone Co. and the C.P.R. in respect of the matter, and the Chief Commissioner expressed the opinion that no compensation should be given to the Bell Telephone Co. except for the damages which it will sustain through the loss of exclusive privileges in the towns of Port Arthur and Fort William, respectively. The position of the railway company is different. If the installation of the municipal system in one of the railway stations should result in the loss to the railway company of this contract it should receive compensation therefor. As to the basis of compensation the Chief Commissioner suggested that the rate of \$5 an instrument a year, which was estimated by an officer of the Bell Telephone Co. as the value of the exclusive right, be taken, and that the parties should arrive at the exact number of instruments furnished in each town respectively

for remuneration. As for the C.P.R. it should be stated on behalf of the towns that they desired a connection and that they should name some annual payment to be made to the railway company by either town for connection with the station in that town. If such offer be not accepted the best course would be to have the amount fixed by arbitration. If the municipality desired to contest the question of the effect of the installation of the municipal system, as giving to the Bell Telephone Co. a right of recession, a case could be stated to the Supreme Court. As to the possible loss to the railway company through recession of the contract by the telephone company, the Chief Commissioner finally concludes, "I think that the towns should only be required at the present time to give security for the making of such compensation as the Board shall herewith order. I would suggest that the joint and several bonds of the town for \$85,000, should be accepted as such security. If they are not willing to give the security, and wish first to have the decision of the Supreme Court upon the points raised, no order should go until this is given."

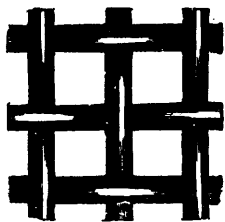
Prince Edward Island Telephones.

The Telephone Co. of Prince Edward Island, Ltd., has been in operation since 1885, and carries on business throughout the island province. It has a capital stock issue of \$56,700, and has no bonded indebtedness. Its head office is at Charlottetown, and W. A. Winfield is its General Manager. The population served is 103,259, which were supplied, on Mar. 1 of the current year, by 530 telephones, of which 420 were direct lines, having one instrument. There were 205 business and 130 residence telephones in Charlottetown; 32 business and 6 residence telephones at Summerside; 40 business and 5 residence telephones at other points. In addition there were about 100 toll offices throughout the island. The subscribers' circuits in Charlottetown and Summerside are part metallic, but largely common return; in smaller places all are single grounded circuits. The rates in force are: Charlottetown—separate lines, \$45 a year, business and residence; two party lines: business, \$30, residence, \$20. Summerside—business, \$20; residence, \$15. Other places, business or residence, \$12, with special rates for party lines, larger subscribers, etc. The company has the following long distance plant:—434½ miles of posts and 547½ miles of wire, all circuits being single grounded. The rates on these lines are: 10 miles, 15c; over 10 miles, 25c., for five minutes' conversation, or 20 words message; subscribers being entitled to 20% discount. The company pays a dividend of 6% and sets aside 10% for depreciation; it has no surplus except its unexpended depreciation and accident fund. The system was changed in Charlottetown a few years ago from grounded to common return, and a beginning had been made to put in a metallic circuit. It is expected in the near future to put in a central energy switchboard. The company's lines serve the following points, exchanges and switching stations being at Charlottetown, Brush Wharf, Mount Stewart, Morell, St. Peter's Bay, Cardigan, Georgetown, Dundee, Souris, Montague, Murray River, Covehead, Hunter River, Rustico, Emerald, Malpeque, Summerside, Tyne Valley, Conway Station, O'Learys, Tignish, Crapaud, Tryon, Cape Bedeque; and toll stations at Southport, McKenzie's Corners, Pownall, Mount Albion, Vernon River, Vernon River Bridge, Orwell, Eldon, Pinnette, Flat River, Belle Creek, Wood Islands, Tracadie Cross, Fort Augustus, Webster's Corners, Lot 40; Peake's Station, New Perth, Lower Montague, Valleyfield, Little Sands, Murray Harbor North, Murray Harbor South, Cape Bear, Bridgetown, Annandale, Rollo Bay, Little York, Stanhope, St. Daivey, Tracadie,

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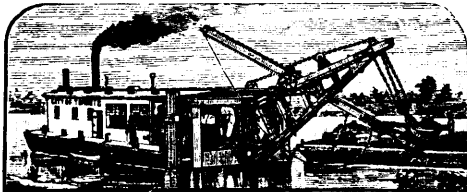
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(Continued from third page of cover.)

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(Continued on page 391.)

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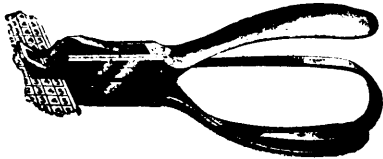
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(Continued from page 389.)

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 Canada Foundry Co.....Toronto.
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 Canadian Locomotive Co.....Kingston, Ont.
 F. H. Hicks & Co.....Chicago, Ill.
 F. H. Hopkins & Co.....Montreal.
 The W. H. Kelson Co.....Montreal.
 Lima Locomotive and Machine Co.. Lima, Ohio.
 Locomotive and Machine Co. of Montreal.

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

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

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

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

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

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

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

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

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

Mats and Matting
 The Canadian Rubber Co. of Montreal.

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

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

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

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

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

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

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

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

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

Numbers
 Acton Burrows Co.....Toronto.
 John Morrow Machine Screw Co.....Ingersoll.

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

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

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

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

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

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

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

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

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

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

Packing, Piston
 The Canadian Rubber Co. of Montreal.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 Montreal Steel Works.....Montreal.

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 F. H. Hopkins & Co.....Montreal.
 J. J. Gartshore.....Toronto.

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

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

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

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

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

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

Reamers
 W. Abbott.....Montreal.

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

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

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

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

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

Roof Trusses
 Canada Foundry Co.....Toronto.
 Canadian Bridge Co.....Walkerville, Ont.
 Dominion Bridge Co.....Montreal.

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

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

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

Roofs, Car
 American Asphaltum & Rubber Co.. Chicago, Ill.

Rope
 The Hudson's Bay Co.....

Rotary Snow Ploughs
 Crossen Car Mfg. Co.....Cobourg, Ont.

Rubber Tiling, Interlocking
 The Canadian Rubber Co. of Montreal.

Sand, White
 Garden City Sand Co.....Chicago, Ill.

Saw Steel
 Montreal Steel Works.....Montreal.

Scrapers (Wheel and Drag)
 W. H. C. Mussen & Co.....Montreal.
 Toronto Pressed Steel Co.....Toronto.

Screws, Coach and Lag
 Montreal Rolling Mills Co.....Montreal.
 Toronto Bolt and Forging Co.....Toronto.

Semaphore Arms
 Acton Burrows Co.....Toronto.

Semaphores
 The N. L. Piper Railway Supply Co.....Toronto.

Sewer Pipe (Cast Iron)
 Gartshore-Thompson Pipe & F'dry Co.. Hamilton.

Shaking Grates
 Babcock & Wilcox (Ltd.).....Montreal.

Shaping Machines
 The John Bertram Sons Co.....Dundas, Ont.

Ship Lamps
 The N. L. Piper Railway Supply Co.....Toronto.

Ships
 Canadian Shipbuilding Co.....Toronto.
 Polson Iron Works.....Toronto.

Shovels
 F. H. Hopkins & Co.....Montreal.
 The Hudson's Bay Co.....

Side Bearings
 Simplex Railway Appliance Co.....Montreal.

Signal House Numbers
 Acton Burrows Co.....Toronto.

Signals
 General Railway Signal Co.....Buffalo, N.Y.
 N. L. Piper Railway Supply Co.....Toronto.

Signs
 Acton Burrows Co.....Toronto.

Slack Adjusters
 Chicago Railway Equipment Co.....Chicago, Ill.

Slotting Machines
 The John Bertram Sons Co.....Dundas, Ont.

Snow Ploughs
 Crossen Mfg. Co.....Cobourg, Ont.
 Rhodes, Curry & Co.....Amherst, N.S.

Specialties in Brass and Iron Wire
 The G. B. Meadows Wire, etc., Co.....Toronto.

Speedicut High Speed Steel
 Montreal Steel Works.....Montreal.

Spikes, Railway, Ship or Pressed
 Montreal Rolling Mills Co.....Montreal.
 Toronto Bolt and Forging Co.....Toronto.

Springs
 Montreal Steel Works.....Montreal.
 Standard Steel Works.....Philadelphia, Pa.

Station and Tower Heaters
 W. C. Baker.....New York.

Stationery
 Rolph & Clark (Ltd.).....Toronto.

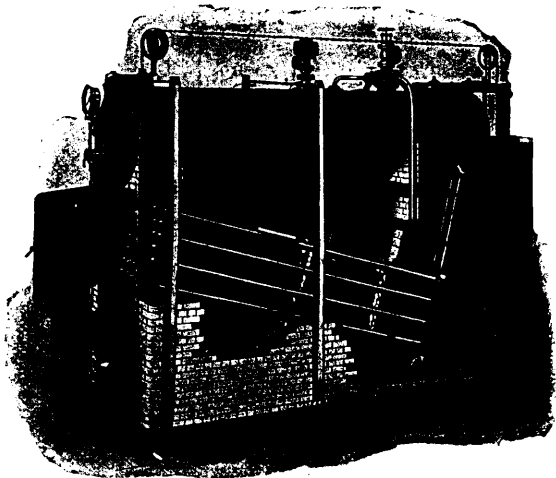
Station Name Signs
 Acton Burrows Co.....Toronto.

Steam Attachments for Car Heating
 W. C. Baker.....New York.

Steam Couplers
 Safety Car Heating and Lighting Co.. New York.

Steam Hammers
 The John Bertram Sons Co.....Dundas, Ont.

- Steam Shovels**
M. Beatty & Sons.....Welland, Ont.
F. H. Hopkins & Co.....Montreal.
W. H. C. Mussen & Co.....Montreal.
- Steamship Supplies**
The W. H. Kelson Co.....Montreal.
- Steamships**
Canadian Shipbuilding Co.....Toronto.
Polson Iron Works.....Toronto.
- Steamship Signs**
Acton Burrows Co.....Toronto.
- Steam Steering Engines for Tugs**
Sheriffs Mfg. Co.....Milwaukee, Wis.
- Steel**
W. Abbott.....Montreal.
F. H. Hopkins & Co.....Montreal.
Wm. Jessop & Sons.....Sheffield, Eng.
Williams & Wilson.....Montreal.
- Steel Buildings**
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
- Steel for Springs**
James Hutton & Co.....Montreal.
- Steel Plate**
Jas. W. Pyke & Co.....Montreal.
- Steel, Nickel for Nickel**
The Orford Copper Co.....New York.
- Steel Rolling Doors**
W. H. C. Mussen & Co.....Montreal.
- Steel Tyres**
James Hutton & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
- Structural Metal Work**
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
Locomotive and Machine Co. of Montreal.
Jas. W. Pyke & Co.....Montreal.
- Superheaters**
Babcock & Wilcox (Ltd.).....Montreal.
- Switches**
Montreal Steel Works.....Montreal.
- Switch Lamps**
The N. L. Piper Railway Supply Co.....Toronto.
- Switch Ropes**
The B. Greening Co.....Hamilton, Ont.
- Switch Targets**
Acton Burrows Co.....Toronto.
- Tanks and Tank Fixtures**
Canada Foundry Co.....Toronto.
Goold, Shapley & Muir Co.....Brantford, Ont.
Ontario Wind Engine and Pump Co.....Toronto.
- Telegraph and Telephone Office Signs**
Acton Burrows Co.....Toronto.
- Tests**
R. W. Hunt & Co.....Montreal.
H. Jarvis & Co.....Chicago, Ill.
Standard Inspection Bureau.....Toronto.
- Ticket Punches**
F. J. Myers Mfg. Co.....Hamilton, Ohio.
- Ticket Wickets**
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- Tie Plates**
Montreal Rolling Mills Co.....Montreal.
- Time Table Racks**
The G. B. Meadows Wire, etc., Co.....Toronto.
- Tires**
Standard Steel Works.....Philadelphia, Pa.
- Tool Steel**
W. Jessop & Sons.....Sheffield, Eng.
Montreal Steel Works.....Montreal.
- Towers**
Goold, Shapley & Muir Co.....Brantford, Ont.
- Track Jacks**
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
A. O. Norton.....Coaticook, Que.
- Track Tools**
F. H. Hopkins & Co.....Montreal.
Montreal Steel Works.....Montreal.
W. H. C. Mussen & Co.....Montreal.
- Tracklaying Lorries**
Crossen Car Mfg. Co.....Cobourg, Ont.
- Tramway Equipment**
J. J. Gartshore.....Toronto.
- Trucks (Electric Car)**
Baldwin Locomotive Works.....Philadelphia, Pa.
Canada Foundry Co.....Toronto.
Montreal Steel Works.....Montreal.
- Trucks (Railroad and Warehouse)**
Toronto Pressed Steel Co.....Toronto.
- Turbine Waterwheels**
W. Kennedy & Sons (Ltd.).....Owen Sound, Ont.
- Turnbuckles**
Montreal Steel Works.....Montreal.
- Turntables**
Canada Foundry Co.....Toronto.
Canadian Bridge Co.....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
- Typewriters**
United Typewriter Co.....Toronto.
- Typewriter Repairs**
United Typewriter Co.....Toronto.
- Typewriter Supplies**
United Typewriter Co.....Toronto.
- Underwriters**
Dale & Co.....Montreal.
- Valves, Brass Gate**
Kerr Engine Co.....Walkerville, Ont.
- Valves, Brass Globe**
Kerr Engine Co.....Walkerville, Ont.
- Valves, Iron and Brass**
Canada Foundry Co.....Toronto.
- Valves, Iron Gate**
Kerr Engine Co.....Walkerville, Ont.
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The Canadian Rubber Co. of Montreal.
- Varnishes**
McCaskill, Dougall & Co.....Montreal.
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- Washers**
Montreal Rolling Mills Co.....Montreal.
- Waste**
N. L. Piper Railway Supply Co.....Toronto.
- Water Filters**
Geo. R. Prowse.....Montreal.
- Water Pipe (Cast Iron)**
Gartshore-Thompson Pipe & F'dry Co., Hamilton.
- Water Softeners**
Babcock & Wilcox (Ltd.).....Montreal.
- Wheelbarrows**
F. H. Hopkins & Co.....Montreal.
Toronto Pressed Steel Co.....Toronto.
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John McDougall & Co.....Montreal.
Jas. W. Pyke & Co.....Montreal.
Rhodes, Curry & Co.....Amherst, N.S.
Standard Steel Works.....Philadelphia, Pa.
- Wheels, Locomotive**
John McDougall & Co.....Montreal.
- Wheels, rolled, solid forged**
Standard Steel Works.....Philadelphia, Pa.
- Wheels, steel tired**
Standard Steel Works.....Philadelphia, Pa.
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Ontario Wind Engine and Pump Co.....Toronto.
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Dominion Wire Rope Co.....Montreal.
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W. H. C. Mussen & Co.....Montreal.
The Wire and Cable Co.....Montreal.
- Wire Cloth**
The B. Greening Co.....Hamilton, Ont.
F. J. Myers Mfg. Co.....Hamilton, Ohio.
- Wire, Copper**
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.
- Wire, Electric**
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.
- Wire, Insulated Copper**
Canadian General Electric Co.....Toronto.
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.
- Wire Lockers (Employees)**
The G. B. Meadows Wire, etc., Co.....Toronto.
- Wire, Telegraph and Telephone**
E. F. Phillips Electrical Works, Ltd.....Montreal.
The Wire and Cable Co.....Montreal.
- Wire, Transmission and Trolley**
The Wire and Cable Co.....Montreal.
- Woodworking Machinery**
H. W. Petrie.....Toronto.
- Wrecking Cranes**
W. H. C. Mussen & Co.....Toronto.
- Wrought Steel Piping**
Babcock & Wilcox (Ltd.).....Montreal.
Canada Foundry Co.....Toronto.
- Yachts**
Polson Iron Works.....Toronto.



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 Williams & Wilson Montreal.
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- Belting, Rubber**
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 General Railway Signal Co. Buffalo, N.Y.
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 Mica Boiler Covering Co. Montreal.
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 Robb Engineering Co. Amherst, N.S.
 Williams & Wilson Montreal.
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 H. W. Petrie Toronto.
 Robb Engineering Co. Amherst, N.S.
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 Canada Foundry Co. Toronto.
 H. W. Petrie Toronto.
 Robb Engineering Co. Amherst, N.S.
- Boilers, Steam**
 Erie Heating Co. Chicago, Ill.
 H. W. Petrie Toronto.
- Boilers, Water Tube**
 Erie Heating Co. Chicago, Ill.
- Boiler Tubes**
 Jas. W. Pyke & Co. Montreal.
- Bolsters**
 Simplex Railway Appliance Co. Montreal.
- Bolts, Bridge**
 Canada Foundry Co. Toronto.
 Montreal Rolling Mills Co. Montreal.
 Toronto Bolt and Forging Co. Toronto.
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 Safety Car Heating and Lighting Co., New York.
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(Continued on page 389.)

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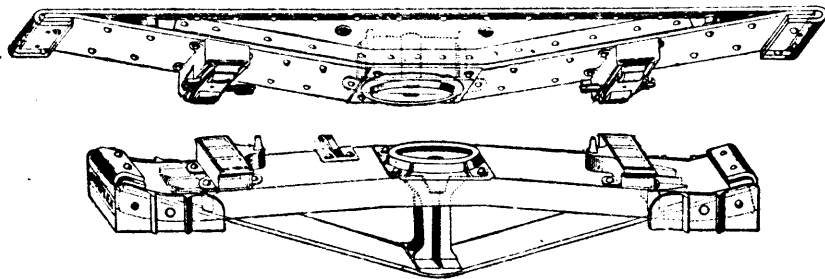
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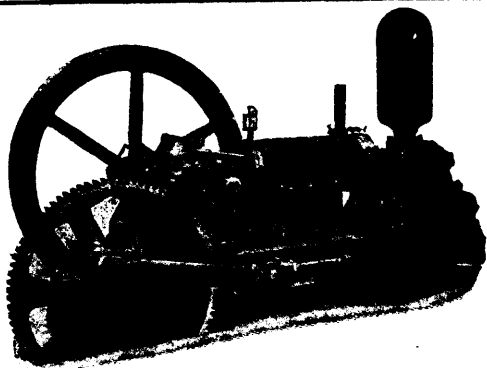


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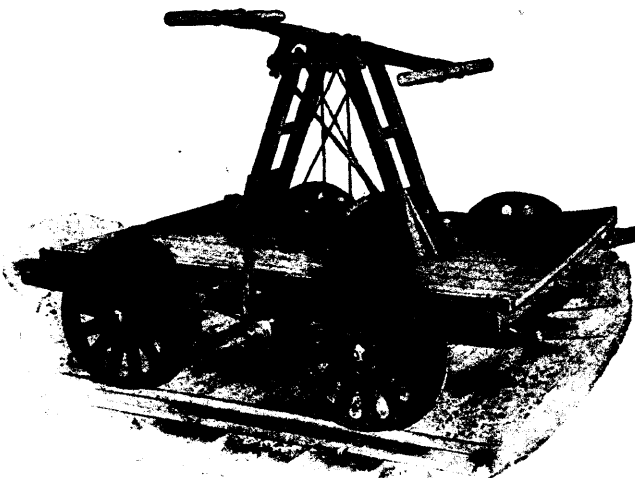
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