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A Review of the Past and Present Locomotive Boiler, with Suggestions.

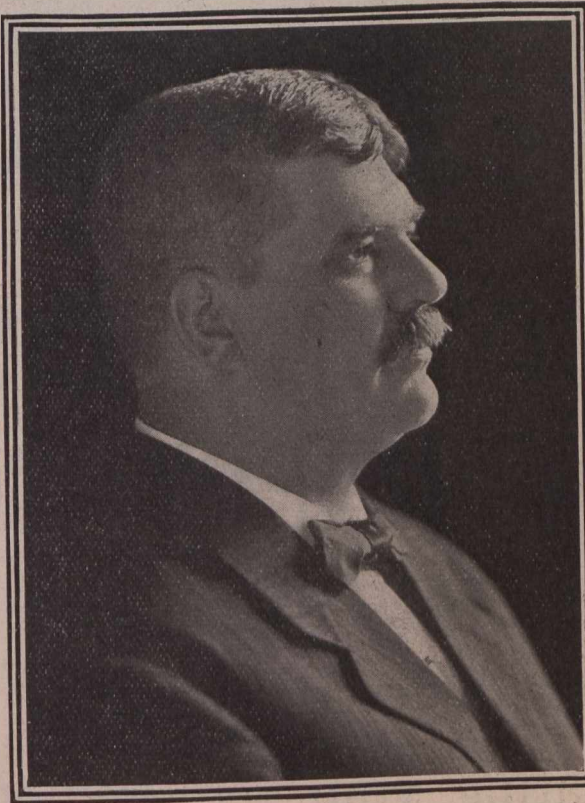
By T. W. Lowe, General Boiler Inspector
C. P. R. Western Lines.

It is not my intention in this paper to attempt to give a complete description of the design, construction and maintenance of locomotive boilers between 1874 and 1910, but rather to refer to them in a general way, and explain the necessity for the many changes in design during the past 36 years. Further on in the paper I will refer to the "Maintenance and care of the modern locomotive boiler," make some remarks on round house practice, and conclude with special reference to feeding the boiler with water, and carrying a sufficient quantity to avoid damage to the crown sheet of the inside firebox, due to the absence of water. When I refer to the boiler, I am speaking about plates under tensile stress, and when speaking about the inside firebox, I refer to plates under compression.

The types of locomotive boilers which have been, and still are, in general use on locomotives on the North American Continent are commonly titled under the following names: Straight, figure 1; wagon top, figure 2; extended wagon top with Belpaire firebox, figure 3, and extended wagon top round top firebox, figure 4, together with many other designs under experiment in the U.S., and which derive their names from the patentee. The only material difference in their construction compared to any I have already quoted is to be found in the design of the inside and outside firebox. The straight boiler, figure 1, derives its name because the barrel plates and outside firebox are parallel on the top, and steam dome being usually located ahead of the firebox. The wagon top boiler, figure 2, consists of a firebox elevated above the barrel courses, with a tapered section joining them, having its dome located over the firebox or taper course, dependent entirely upon the style of staying adopted to support the crown sheet of the inside firebox. The extended wagon top with Belpaire firebox, figure 3, carries the designer's name, the most noticeable difference in construction is at the firebox, here the top is flat and tapered, otherwise the general shape ahead of it conforms to that of the extended wagon top design. The extended wagon top round top firebox, figure 4, has one or more courses ahead of the firebox corresponding in diameter to that of the firebox, with the dome usually located on the course next the firebox and a taper course further forward.

Locomotive boilers consist of the following main parts: smoke box, front

tube sheet, tubes, barrel, steam dome, outside firebox, and inside firebox, the latter two being separated at the bottom legs by a foundation ring secured in place by suitable rivetting, all of the inside firebox being supported by threaded stay bolts, excepting a portion of the crown on some designs, which have crown bars and sling stays. Other staying in general use are face plate staying, barrel stays to back tube sheet, front tube sheet staying, dome stays, lateral stays, and flexible stay bolt, all of which when properly designed, marked off, assembled, rivetted, caulked and tubed,



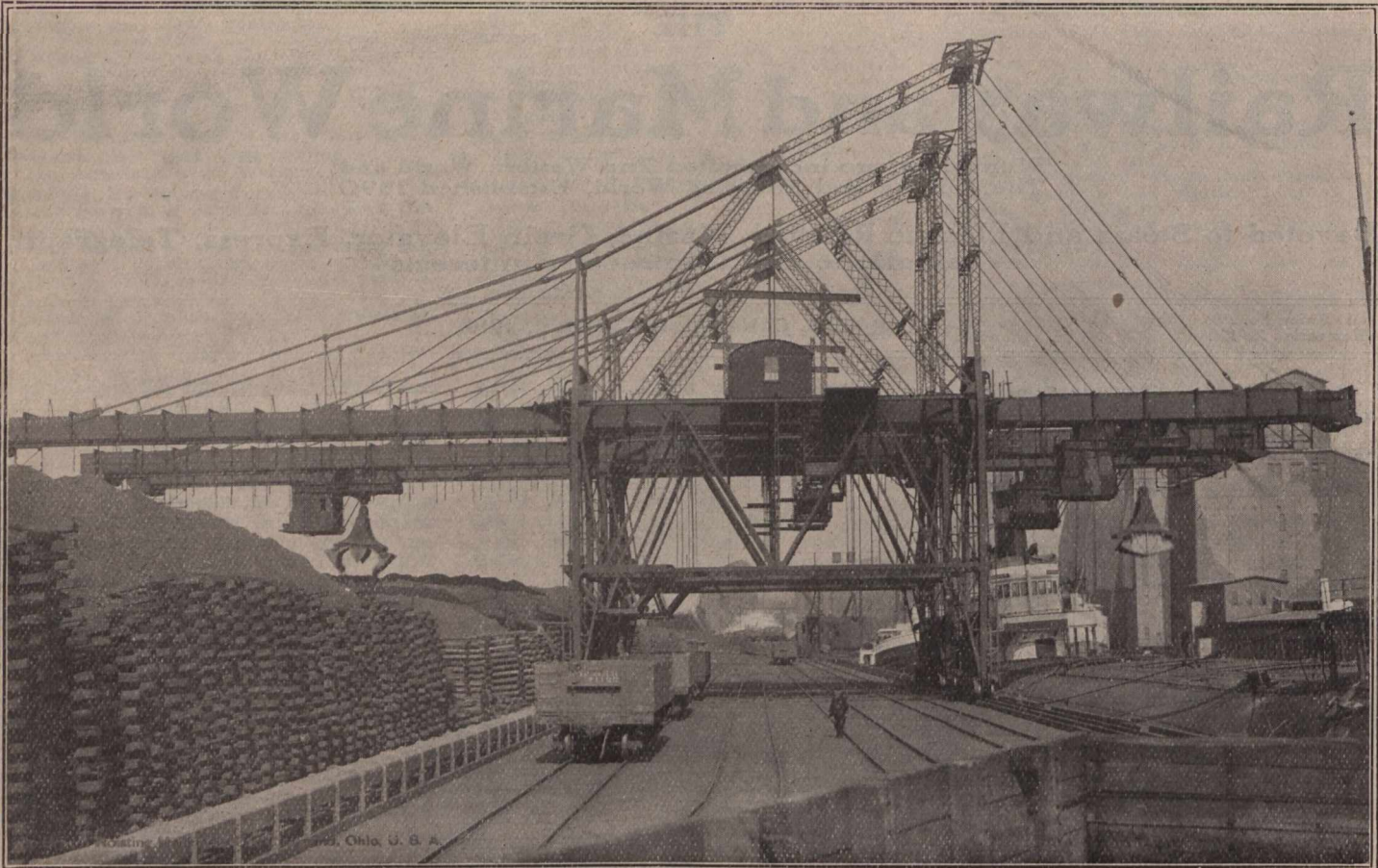
W. G. Brownlee
General Transportation Manager Grand Trunk Railway.

entitle the boiler to receive a proof water and steam test, when, if satisfactory, it is ready to be applied to the engine.

Let us now look into the construction of the straight boiler, figure 1, which in the early days were built with the longitudinal barrel seams lap-jointed, and double rivetted, with very little consideration given to whether the rivet and plate section were proportionately strong, and when of the best construction and workmanship did not figure to have more than 56% of the strength of the original plate, with the factor of safety frequently as low as three, yet we find from our experience that not

one of the many of this old construction could ever have failed in service had the practical man and supervisor used common sense, and taken reasonable precaution to repair defects brought to their notice because of leakage. This longitudinal seam construction has been abandoned in the modern boiler and we can now have seams designed which all afford the same strength or more than the original plate, with that much more security. Several of the straight boilers which I met with in my early practice had the longitudinal seams welded throughout and at the time of scrapping they were probably 25 years or more old, and had not caused any inconvenience working under the customary 140 lbs. pressure per square inch. The Countess of Dufferin, now in the Wm. Whyte park at Winnipeg, is a relic of this design. The steam domes on the Dubb boilers all came to the C.P.R. with welded vertical seams, and although some of these boilers are still in existence working under 150 lbs. pressure, not one of these welded seams were ever known to fail or leak. If asked why the practice of welding seams has been abandoned, I will have to take refuge under the plea that it is expected to be restored again, probably with more success than before because of the thicker material now in general use. The flanging of the old straight boilers had a very sharp radius in contrast to the present designs, and this resulted in frequent cracking in their root, as well as serious leakage at the bottom corners of the firebox.

Although the design of the straight boiler has not been abandoned altogether, the wagon top boiler, fig. 2, was introduced because of the necessity for more steam room. A much improved longitudinal and circumferential seam joint for the boiler came into practice with this design, yet the application of the steam dome on top of the firebox, and the necessity of partly supporting the inside firebox crown sheet with sling stays attached to the dome and crown bars, together with sling stays from the crown bars secured to the wagon top, set up breathing stresses throughout the wagon top, which were constantly being recorded by defects developing with the dome stays, sling stays, dome and wagon top itself, which necessitates frequent inspection and expense to maintain, and because of this it was not long before the extended wagon top with Belpaire firebox, fig. 3, came into favor, and although straight boilers are being built and operated, principally in good water, I would never expect the wagon top boiler to regain its popularity. The extended wagon top boiler with Belpaire firebox, fig. 3, was a radical departure from any previous design in construction, because the top of the firebox is



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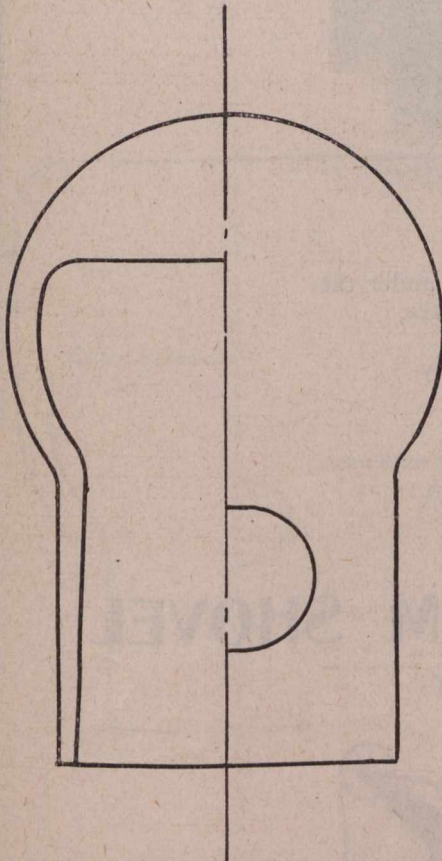
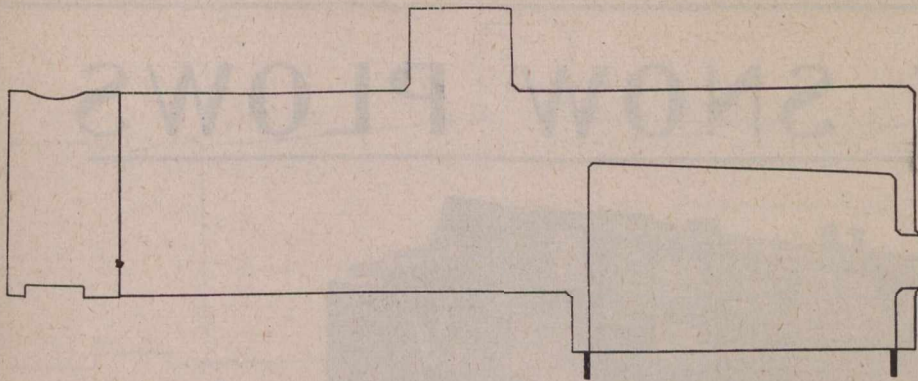


Fig. 1. Straight Locomotive Boiler.

flat and tapered horizontally, which necessitates a throat connection between the firebox and barrel to correspond with the different shapes of each. This design was in service under a year when the top of the throat connections developed cracks which necessitated reinforcements at once, and although the actual cause for this failure has not been assigned, it is satisfactory to know that the reinforcements applied have been entirely satisfactory as regards preventing further trouble. It is apparent to me that if this flat connection is independently stayed free from the influence of the inside firebox that this connection can be maintained as integral as any other part of the boiler. Experiences with this design recommends it for the following main reasons, non-priming, foamless, breaks less stay bolts and is generally more economical in boiler repairs compared to other designs. These are results attributable to better circulation. The staybolting of the fireboxes is accomplished under the soundest principles of good boiler-making, and I am firmly convinced that its many points of superiority over other designs more than compensate for the extra initial cost of manufacture compared to the extended wagon top round firebox.

The introduction of the extended wagon top boiler with a round top firebox, fig. 4, has prevented the failures which were common to the wagon top and Belpaire designs with plates under tensile stress, although in curing these, the disease has been transferred to the top flange of the back tube sheet of the inside firebox, and it would appear from discussions at annual mechanical conventions, that there is not a railway on the North American continent to-day but what is striving by a variety of methods (too numerous to mention) to prevent the back tube sheet cracking upwards over the top tube holes, and circumferentially round the root of the flange. A greater depth of material between the root of the top flange and tube holes has not overcome the former, and many experiments are under trial to relieve this effect, with only partial success. The circumferential cracking has ceased with the advent of an increased radius in the flange. I will not devote much time to experimental boilers on American railways, because many of the advantages claimed by the designers are disputed.

The Jacob Shupert boiler, fig. 5, dispenses with stay bolts to support the side sheets and crown sheet, and substitutes a number of plate sections which compose the inside and outside firebox respectively. The inside firebox sections are built with the back of the U facing the fire, with the rivetting and caulking in the water, and a caulking strip between, the strip also faces the fire and extends to the outside firebox U sections, where it is similarly joined, as at the inside firebox, excepting that the U plates are reversed, thus exposing the rivetting and caulking for repairs. The integrity of the inside and outside firebox depends on the plate which retains the U plates in position and on which superior workmanship under construction is a necessity, as the vital section through the rivet holes is hidden from service inspection.

The Wood corrugated inside firebox boiler, fig. 6, is another design which the patentee claims is desirable to prevent cracking of fireboxes. Its construc-

tion is such that the staybolts are on the high side next the fire, and on the low side next the water. It is my opinion that if their position was reversed, and it was possible to keep the corrugations free from scale formation, the firebox would have greater usefulness.

The combustion chamber firebox boiler, fig. 7, is on trial on some roads. The C.P.R. Western Lines experimented with two of this design about 18 years ago, with which we had little trouble due to tube leakage, yet there were other stresses set up which created cracking of the sheets, and resulted in numerous stay bolt breakages which stopped further trials, as they were deservedly unpopular.

The Wooten boiler, fig. 8, is designed specially at the firebox end with a view of getting a large grate area, and has a shallow firebox to burn anthracite coal.

The barrel of the boiler in some of the Mallet engine boilers, fig. 9 C.P.R., and fig. 10, U.S., is built in two sections, separated by an intermediate chamber, each section having its own complement

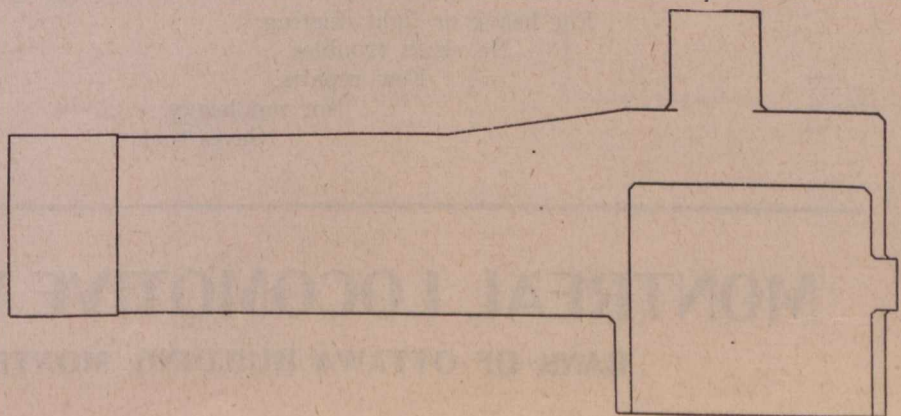
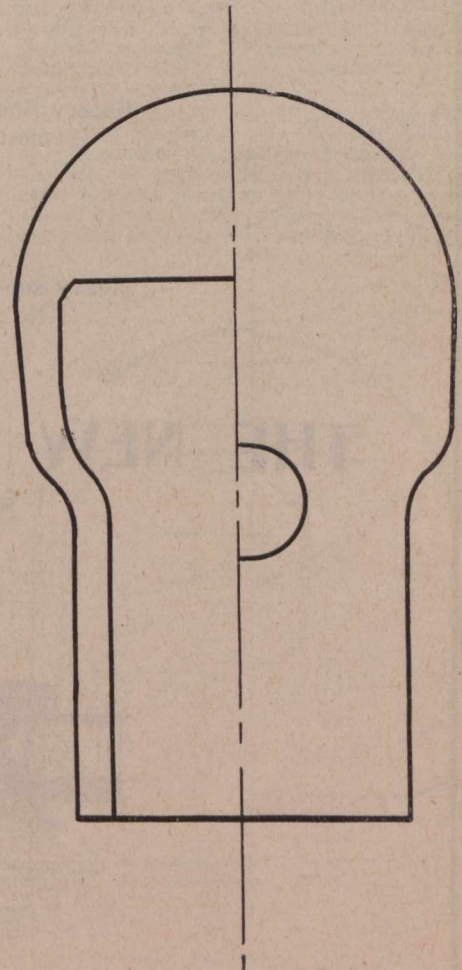
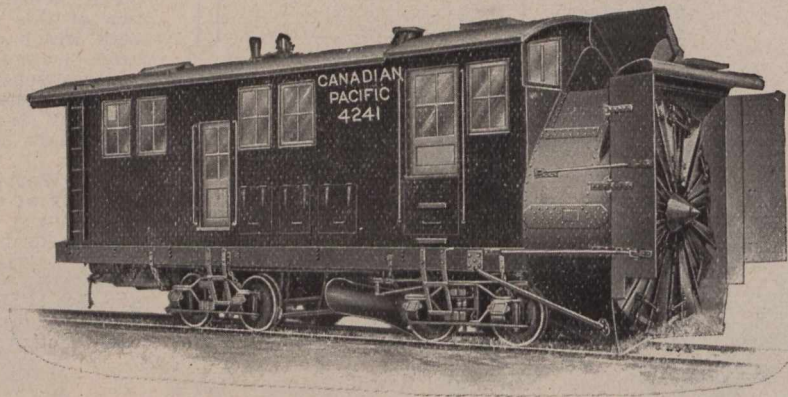


Fig. 2. Wagon Top Locomotive Boiler.

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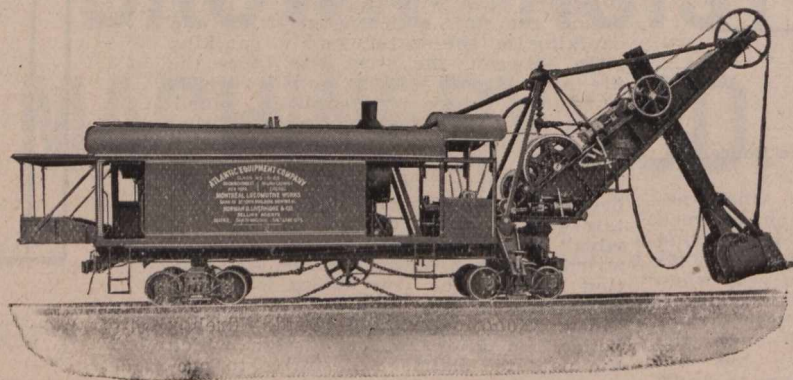
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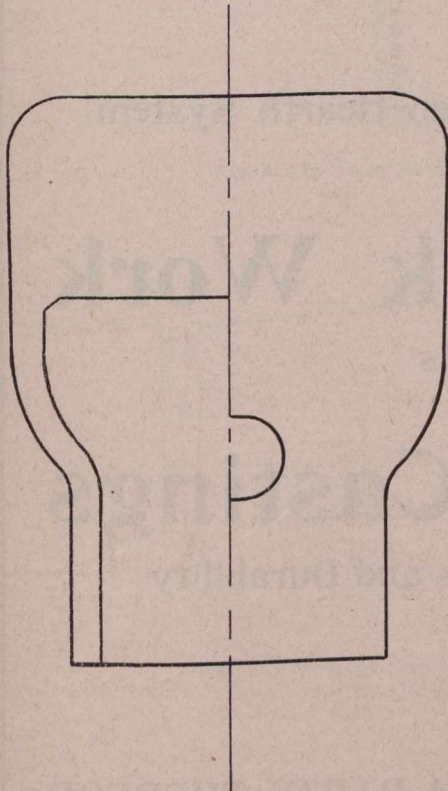
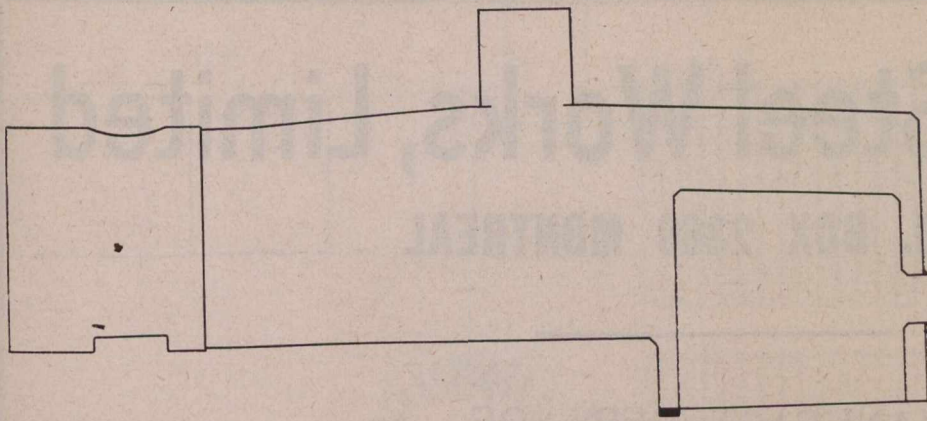


Fig. 3. Extended Wagon Top Locomotive Boiler, with Belpaire Firebox.

of tubes, the forward section being practically a water heater for the main boiler and firebox at the rear, they are connected with circulating pipes.

There are many other designs which I will pass by and close this part of the paper by alluding to the comparison of the general dimensions of locomotive boilers in use in 1874 with those of some obtaining today. In 1874 the diameter was about 40 ins., material iron, 45,000 lbs. tensile stress per sq. in., $\frac{3}{8}$ in. thick, whereas in 1910 the diameter has increased to 86 ins. material steel, 60,000 lbs. tensile stress per sq. in., $\frac{7}{8}$ in. thick, and the boiler pressure has increased from 140 lbs. to 200 lbs. and over, per square inch. The grate area has increased from about 18 sq. ft. in 1874 to 68 sq. ft. in 1910. The inside fireboxes in 1874 were about 72 ins. long, 35 ins. wide, compared to many to-day 126 ins. long 78 ins. wide. There were about 140 tubes 2 ins. diameter 11 ft. long in 1874, whereas a number to-day have 448 tubes $2\frac{1}{4}$ ins. diameter 21 ft. long.

The most prolific source of annoyance to railway officials is to have a leaky boiler on a train, or a failure because of leaks, as it generally presents itself by the following from the Engineer "Tubes leaking" or "Tubes burst," and it is unusual to have any other class of boiler failure, I am pleased to say

that the frequency of such on the road I am connected with, has almost vanished, because of the care taken in handling the engines on the part of the engineers and shop staff, together with the help afforded due to grade revisions, and an improved water supply. H. B. Lake, the C.P.R. Western Lines Chemist, is fulfilling the practical part of his paper presented earlier in the year (and published in the Railway and Marine World for September), by endeavoring to have a "Lake" at every local water supply which should afford further relief.

There is still another improvement which is reducing firebox repairs and preventing many tube failures, viz.: the feeding of the water into the boiler from the top and near the front, thereby lessening the scale formation around the firebox plates, and assisting in preserving a more uniform temperature throughout.

With the growth of the boiler, mechanics have been kept busy in another direction, that of keeping pace with the demand for improved tools. The march of progress in this respect, has been side by side with the growth of the boilers, which is a good indication of the great hand of harmony prevailing in the mechanical world to-day, and the shops and roundhouses which have not modern facilities to compare with their rolling stock, are those which are commonly called "not railroading." During the past 36 years there has been practically no change in the form of the tools used to set tubes in the sheets, except that they are power driven, and welded principally by machines, on the roller principle.

Several railways are experimenting by welding tubes into the firebox tube sheet, the success of which has not been fully demonstrated. My own views in this respect are, that few men are sufficiently familiar with the cost of this method, neither have they experimented with it long enough to determine the percentage of failures, that might be expected, compared to the present method, and

therefore it is too soon to say that it will succeed the old method.

Corrosion is another enemy to boiler plates, particularly noticeable on the pressure side of the inside and outside firebox close to the foundation ring, as well as throughout the back tube sheet, tubes and the bottom of the barrel of the boiler, from the pressure side. This is discovered by vigilant inspection and repaired by authorized boiler practices, for which regulations are issued by the heads of the mechanical department to the foremen (on well governed railways) to guide them in directing a standard method of performance. Corrosion is in a degree preventible by neutralizing the action with zinc slabs suspended inside the boiler, it requires renewal frequently and is best suited for marine boiler practice because of their accessibility. Little experimenting has been conducted with locomotive boilers to prevent corrosion, principally because they are inaccessible, except at general repairs, and with the tubes removed. It is my opinion that treatment to combat corrosion will become a very live question in the future and there is the whole truth in the old proverb: "Prevention is better than cure"—and more especially so if shown to be profitable.

Incrustation is one of the chief promoters of trouble to the locomotive boiler. It enters the boiler as impure water and the incrusting solids are precipitated around the stay bolts in the water space, adhere to the firebox plates, causing them to bulge and crack, and gradu-

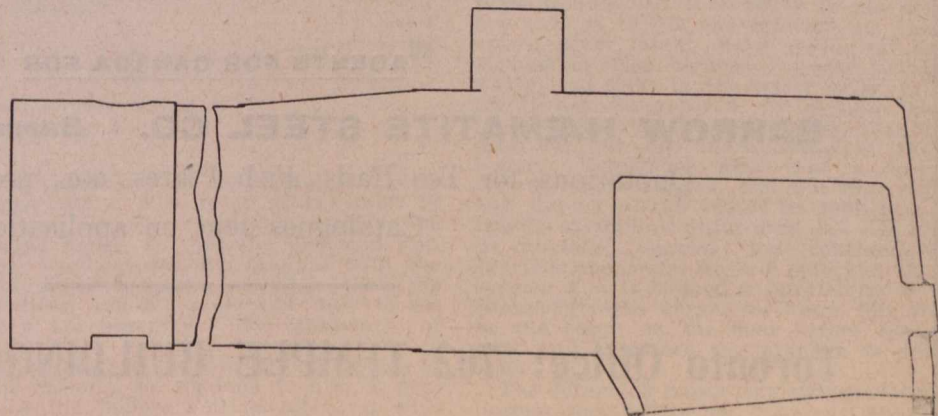
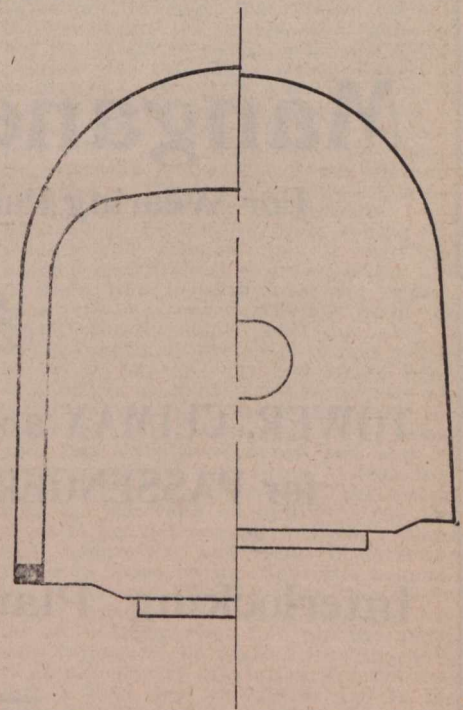


Fig.4. Extended Wagon Top Locomotive Boiler, with Round Top Firebox..

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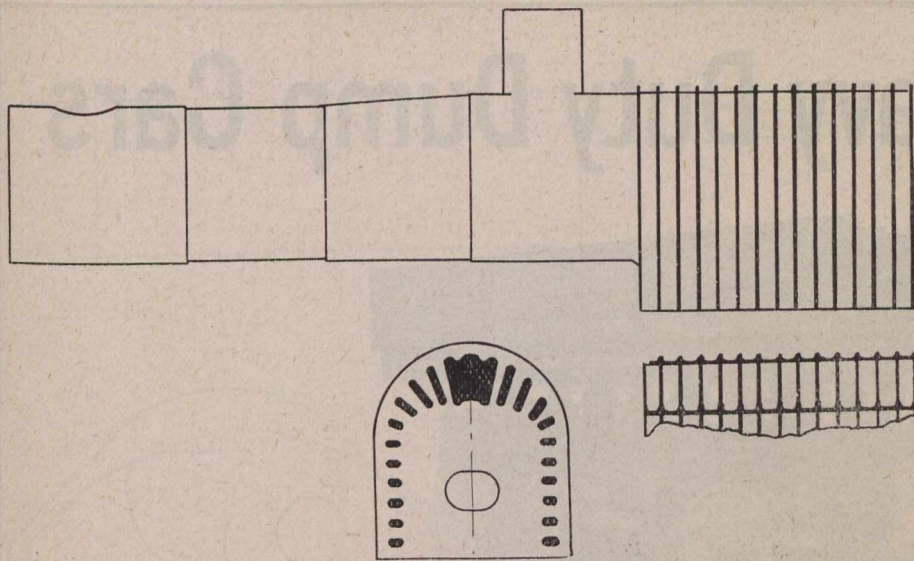


Fig. 5. The Jacob Shupert Locomotive Boiler.

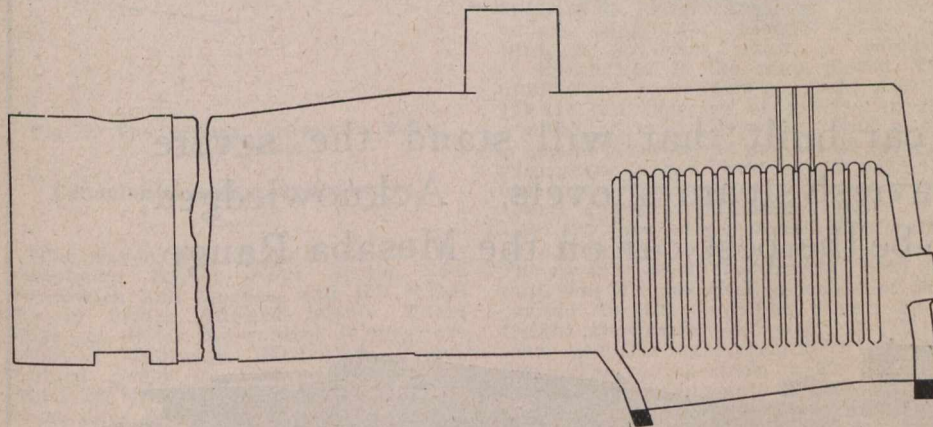


Fig. 6. The Wood Corrugated Inside Firebox Boiler. For End Elevation See Fig. 4.

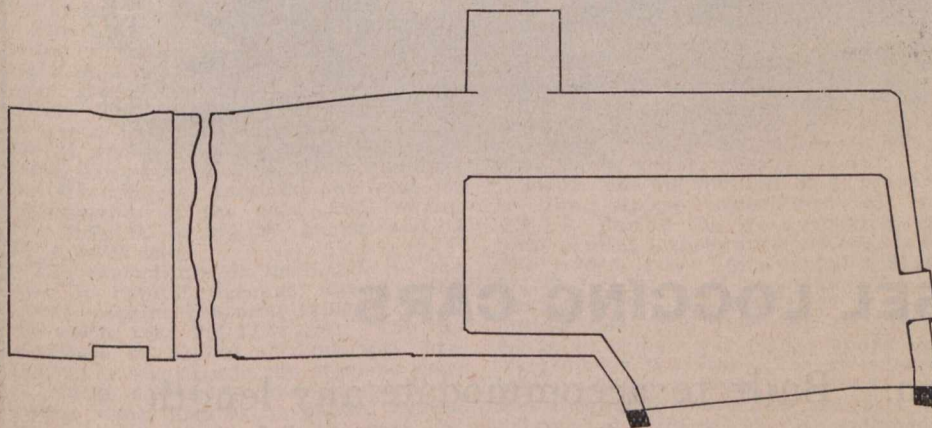


Fig. 7. Combustion Chamber Firebox Boiler. For End Elevation See Fig. 4.

can be more conveniently removed by water purification before entering the boiler.

I will now refer to a part of the engineer and fireman's duty, that of feeding and preventing an injury to plates which would be affected by an absence of water. The most desirable regulations for feeding is to constantly supply the quantity of water evaporating, thereby keeping a uniform level in the boiler. In stationary practice, this is automatically accomplished with a steam pump, float, and regulating valves, but I am not familiar with any design suitable to be attached to a locomotive. Uniform feeding is desirable because it reduces fuel consumption and boiler work and prolongs the life of fireboxes and maintains even temperature.

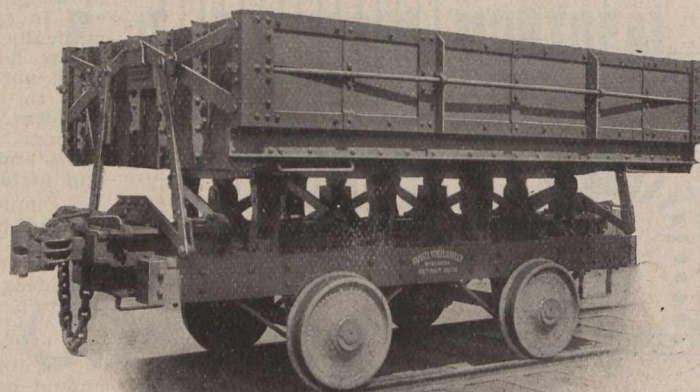
So much has been written and expressed by many prominent mechanical men and others about crown sheet separations, that I hope to be excused for venturing to make some remarks on a question which concerns engineers, firemen and the railway companies alike, and I will feel fully repaid for the trouble of touching upon this question, if it should only have the effect of preventing one failure of this kind. We have all read of the experiments conducted in which water was injected into boilers when the sheets were red hot. I want to say that if the sheets were red hot before the water was turned on to them, the plate would not have been there to receive it, and the men who conducted the experiment (if they were close enough to it) would not likely have lived to tell the tale. The reason for this is that before the crown sheet gets red hot the factor of safety will have disappeared and the plate would likely be weakened as to almost separate from its staying. Steel plates rapidly decline in value after reaching 400 deg. temperature and at about 1,000 deg. temperature they possess about 1-5 of the strength they had at 400 deg. and yet steel is not red hot at 1,000 deg. temperature. I see no good to be derived from telling engineers and firemen that it will not harm a crown sheet to inject water into it when hot, because my own experience tells me that it will not undo the harm already done, and the plan I would suggest as proper to pursue would be to get the fire out and steam pressure off as soon as possible, as any assumption you have as to how long the water is absent from the sheet, when such has actually occurred, can only be guess work, and by waiting to take further chances of recovering the water, may be just long enough to allow the sheet to get hot enough to cause a complete separation, and result in fatal injuries to those on or about the locomotive. I do not take the view that crown sheets separate, because of injecting water on to them when hot, but the water may frequently be feeding into the boiler at the time of separation, for the reasons I have just explained, and if the same trouble had been taken to get the fire out, as to get the injector on, the crown sheet might have been saved. Remember that because you can bring water into sight in the water glass, after it has disappeared, by closing the top mounting of the water glass, that it does not put any more water in the boiler. Remember also that a new crown sheet, flanged, hot, but not red hot, can be curved out of its good position by sprinkling water over one side of its surface, because the contraction shortens the metal on one side and the reverse side is obliged to stretch to accommodate the curve, we know this to be the result on the floor before erection, and therefore the practice is not good.

The foregoing paper was prepared for presentation before the Western Canada Railway Club.

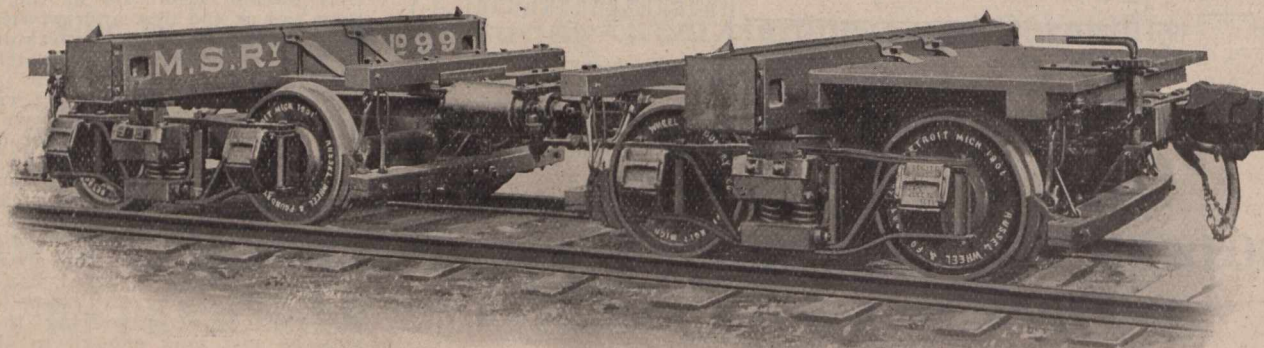
ally develop a stocking of scale surrounding the tube, which necessitates their frequent renewal. The water containing excessive salts in suspension does not develop as much injury to a boiler as that which contains a much less quantity of salts in solution, for the reason that the former can be almost all washed out at intervals, to prevent injury, whereas most of the latter has to be chiselled away because of its hardness. Washing out the boilers is a most important part in the care of boilers.

Our practice is to have printed regulations and a blue print of the tools in general use, conveniently placed in the round house, so that the new and regular staff can become familiar with the authorized methods, and it is then the foreman and other officials' duty to see they are observed. The treatment of water is a chemical question, and on most railways it is in direct charge of the chemist, so, we look to him to prevent the boilers getting filled up with incrusting solids, which we appreciate

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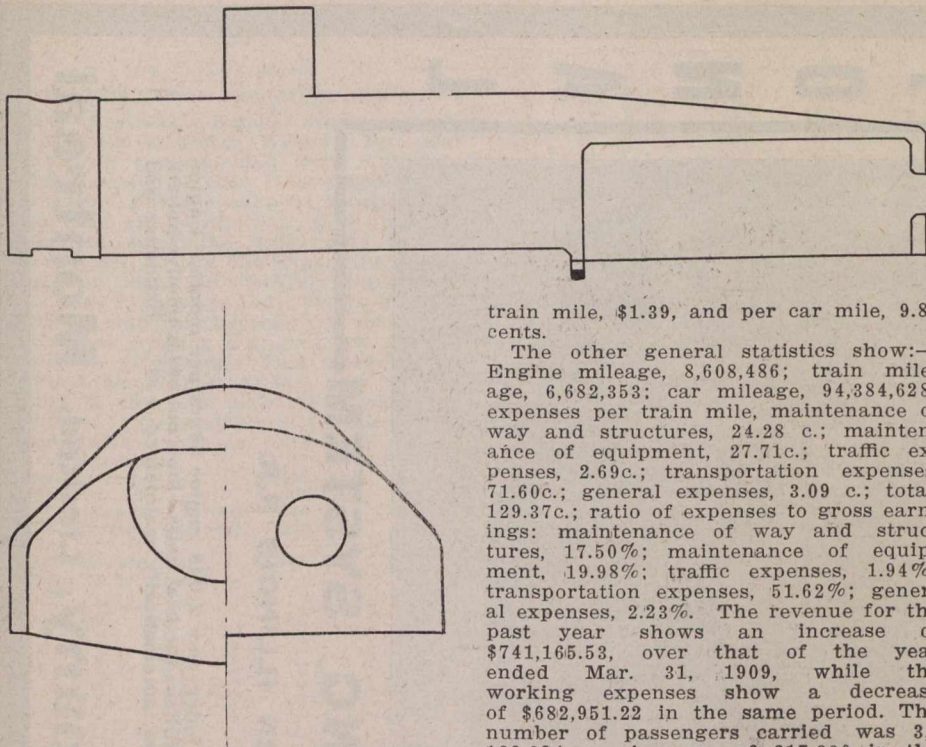


Fig. 8. The Wooten Locomotive Boiler. See Page 993.

Canadian Government Railways.

The Government railways are the Intercolonial Ry. in Nova Scotia, New Brunswick and Quebec, and the P.E.I. Ry. in Prince Edward Island. These lines are under the control of the Government Railways Managing Board, formed under an order-in-council of April 20, 1909. The gross earnings of these lines for the year ended Mar. 31, were \$9,647,963.71, and the working expenses \$9,095,903.96, showing a profit of \$552,059.75. The profit on the I.C.R. was \$623,164.66, and on the Windsor branch \$37,104.08. There was a deficit of \$108,208.99 on the P.E.I.R.

The I.C.R. has a length of 1,447.13 miles, of which 23.13 miles is double track, and the aggregate length of spur lines, sidings and yard tracks is 383.71 miles. The Windsor branch, 32 miles, is leased to the Dominion Atlantic Ry. for 21 years from Dec. 13, 1892, at a rental of one-third of the gross earnings, the Government assuming all cost of maintenance of the road and works. The P.E.I.R. is 3½ ft. gauge, and is 267.5 miles long.

The expenditure on the I.C.R. for the year on capital account was \$1,273,409.45, making the total expenditure on the whole road \$92,273,073.51. The expenditure on capital account was \$2,588,822.71 less than in the previous year, of which \$1,353,646 was expended on rolling stock, against no capital expenditure under this head in the year under review. The main heads of expenditure on revenue account were:—Maintenance of way and structures, \$1,629,254.81, less credit of \$6,975.06 for maintenance of joint tracks, yards, etc.; maintenance of equipment, \$1,851,792.68; traffic expenses, \$179,882.61; transportation expenses, \$4,870,874.65, less credit of \$86,206.89 for operating joint yards and terminals; general expenses, \$206,447.53. The gross earnings for the year were derived as follows:—Passengers, \$2,765,884.66; freight, \$6,048,884.18; mail and express, \$408,847.66; miscellaneous, \$44,618.49. The gross earnings per mile of railway were \$6,404.56; per engine mile, \$1.08; per

train mile, \$1.39, and per car mile, 9.82 cents.

The other general statistics show:—Engine mileage, 8,608,486; train mileage, 6,682,353; car mileage, 94,384,628; expenses per train mile, maintenance of way and structures, 24.28 c.; maintenance of equipment, 27.71c.; traffic expenses, 2.69c.; transportation expenses, 71.60c.; general expenses, 3.09 c.; total, 129.37c.; ratio of expenses to gross earnings: maintenance of way and structures, 17.50%; maintenance of equipment, 19.98%; traffic expenses, 1.94%; transportation expenses, 51.62%; general expenses, 2.23%. The revenue for the past year shows an increase of \$741,165.53, over that of the year ended Mar. 31, 1909, while the working expenses show a decrease of \$682,951.22 in the same period. The number of passengers carried was 3,122,324, an increase of 217,330 in the number of local passengers, and a decrease of 2,243 in the number of through passengers, a net increase of 215,087 passengers over the previous year. The actual quantity of freight carried was 4,071,692 tons, of which 144,452 consisted of supplies carried for the railway. The revenue producing freight, 3,927,240 tons, was 353,268 tons in excess of that carried in the previous year. Local freight showed an increase of 216,188 tons, and through freight of 137,080 tons. The rolling stock on Mar. 31 consisted of 414 locomotives, 452 passenger, mail and express and baggage cars, four steam motor cars, and 12,514 freight cars of all types, auxiliary cars, snow plows, work cars, etc. Other traffic statistics are:—Average freight tonnage per train, 260.02; average passengers per train, 58-99; average tons per loaded car, 17.23; average passengers per car, 9.62; average distance per ton of freight carried, 271.69 miles; average distance per passenger carried, 48.73 miles; train mileage, 2,578,885 miles; freight, 4,103,468; loaded car mileage, 61,916,687; empty car mileage, 12,843,789; steam motor mileage, 16,563.

There was an addition of \$206,396.97 to the capital expenditure on the P.E.I.R. during the year, making the total capital expenditure \$8,465,364.91. The added expenditure included \$156,531.57 for increased accommodation at Charlottetown, and \$49,829.25 for the branch line from Harmony to Elmira, 9.9 miles, which was placed under contract during the year. The gross earnings for the year were \$319,074.74, and the working expenses \$427,283.73, a deficiency of \$108,208.99. As compared

with the year ended Mar. 31, 1909, there was an increase of \$7,751.11 in the gross earnings, and an increase of \$16,953.32 in the working expenses. The earnings were:—Passengers, \$140,076.83; freight, \$153,373.11; mails and sundries, \$25,624.80. The expenditures were:—Maintenance of way and structures, \$121,046.70; maintenance of equipment, \$79,258.26; traffic expenses, \$968.97; transportation expenses, \$211,004.76; general expenses, \$15,005.04. The general statistics show:—Passengers carried, 351,038; freight carried, 105,741 tons; engine mileage, 444,837; train mileage, 323,522; car mileage, 2,051,034; gross earnings per mile of railway, \$1,195.03; per engine mile, 71.73 cents; per train mile, 98.63 cents; per car mile, 15.56 cents; working expenses, per mile of railway, \$1,600.31; per train mile, 132.07 cents. The rolling stock on Mar. 31 consisted of 31 locomotives, 61 passenger cars, 506 freight cars of all types, 10 snow plows, and nine flangers.

Railway Lands Patented.—Letters patent were issued, during Sept., covering Dominion lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows:—

	Acres.
Calgary and Edmonton Ry.	160.00
Canadian Northern Ry.	3,471.08
Canadian Pacific Ry. grants	6.48
Canadian Pacific Ry. roadbed and station grounds	175.89
Grand Trunk Pacific Ry.	368.27
Manitoba and Southeastern Ry.	160.00
Total	4,341.72

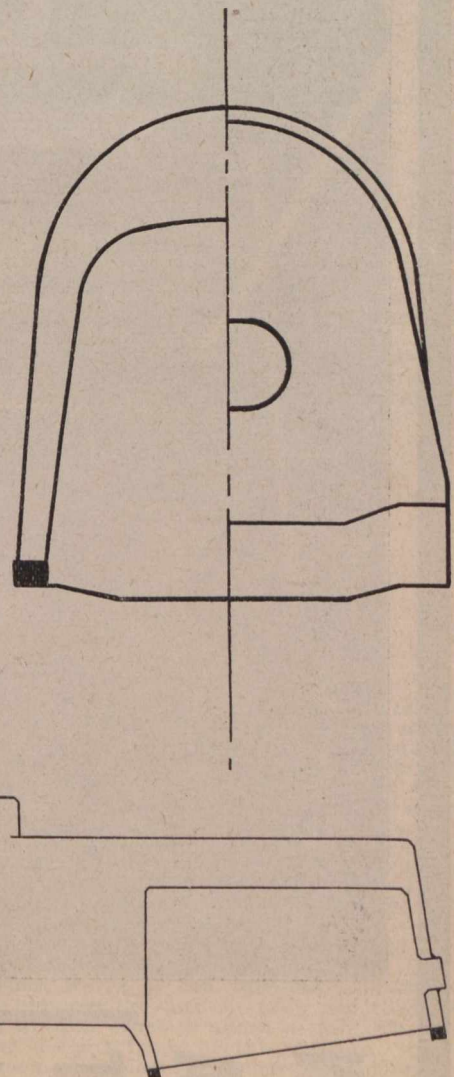
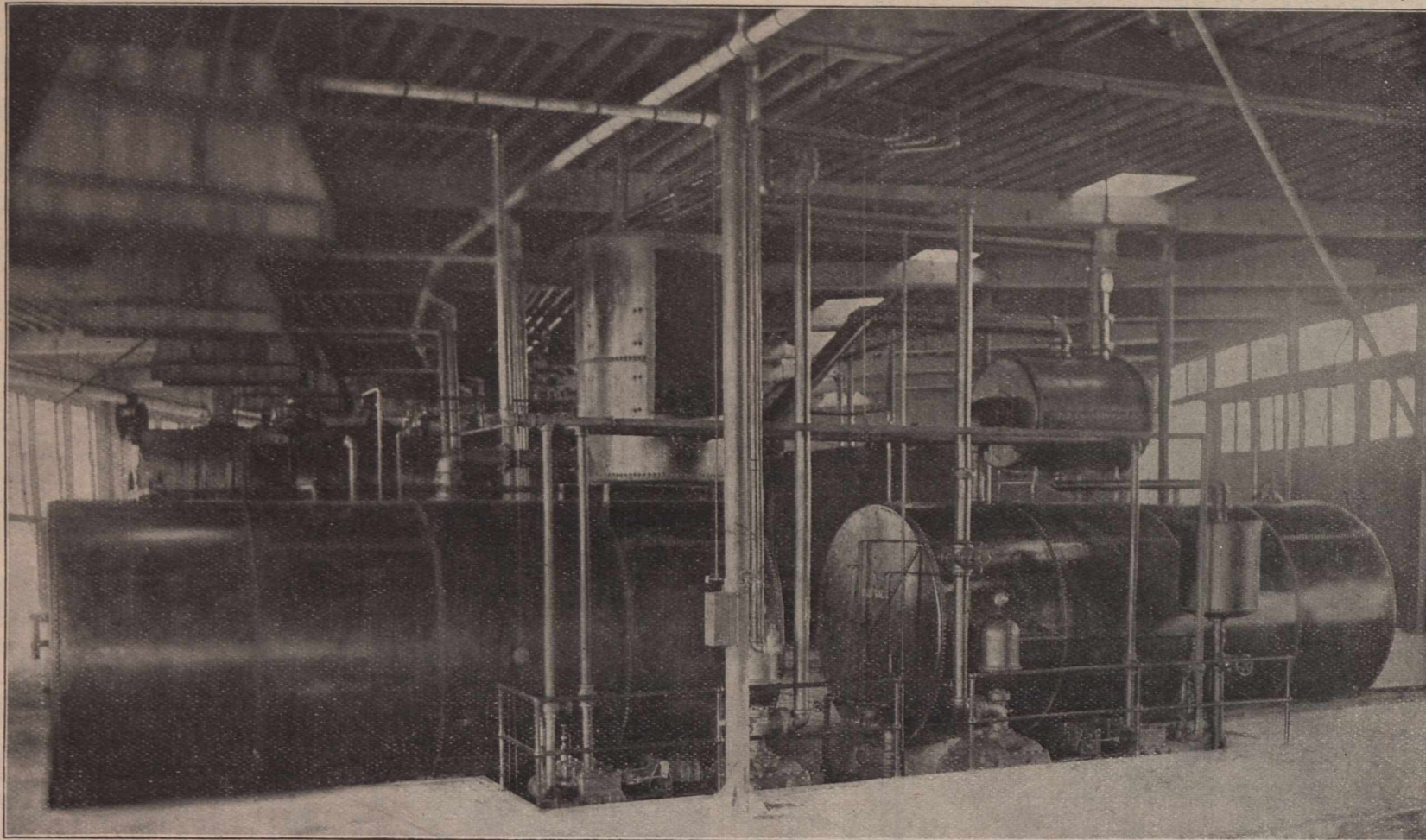


Fig. 9. Canadian Pacific Ry. Mallet Locomotive Boiler. See Page 993.

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The National Boiler Washing Company, Limited, Montreal

Railway Signaling.

By C. L. Hackett.

(CONTINUED FROM NOVEMBER ISSUE.)

Mr. Peabody, Signal Engineer of the Chicago & North Western Ry., after having experimented with different trains, concluded that it averaged 45c. per train. For the sake of illustration, if we take 45c. as the cost, it is an easy matter to determine how many trains per day will justify the expenditure necessary to install interlocking at a crossing. Fig. 1, on page 1001, shows in diagram the signaling necessary to protect a single track crossing a single track. There would be 16 levers. This sized plant installed would cost \$4,800, and would require a day and night towerman to operate it. The yearly cost for the plant would stand about as follows:—

Cost of interlocking	\$4,800 00
Interest on cost, 4%	\$ 192 00
Depreciation, 7%	336 00
Cost of maintenance per year	240 00
Cost of operation per year	1,200 00

Total cost per year ... \$1,968 00
 Saving to be effected:—

Trains per day.	Cost per year acct. stopping	Total yearly cost of interlocking	Net saving per year.	Cost of Interlocking.	Time required to pay for installation from saving.
14	\$1,971	\$1,968	\$3	\$4,800	
20	2,817	1,968	849	4,800	5½ years
25	3,521	1,968	1,553	4,800	3 years

It is apparent then that 14 trains a day over this plant would justify its installation, aside altogether from the saving due to increased safety.

Interlocking is based on the following principles. First, that a failure in any part of the apparatus will prevent a clear signal being displayed. Second, that the normal position of all signals is "stop." Third, that a signal cannot be cleared for a train to move across the interlocking until all the switches in the route are properly set, and locked. Third, that a signal cleared locks all the switches, and that no switch or lock can be moved while the signal is clear. Fifth, that the signal cleared guarantees to the engineman the route, with no possibility of a move being made by any other train that could in any way foul the route given. In Canada the first three of these have been always conformed to, but the fourth (fully as essential as the other three) has not. Fig. 2, on pg. 1001, is a sketch of a plant in operation which does not. A train moving from B to C having received a clear signal no. 1 is not protected from a possible movement by a train from Q which could cause a serious side swipe at the frog A. I have seen several other plans which also have this serious loop hole, and it has been my experience that if a loop hole is left in any signaling installation it is only a question of time when some train will run into it.

In order to prevent a train running by a signal at a crossing the law requires the use of a derailing switch operating in connection with the signals. The signal can only be cleared after the derailing switch has been closed and locked. The closing of the derailing switch on one side locks the derails on the crossing line open, the idea being that if signals alone were used, it would be possible to have a train on the crossing run into by a train on the other line, should the engineer disobey the signal. Each individual interlocking plant is a problem in itself, different conditions either in track lay out or operation in itself, different treatment in the location of the signals, and this is the province of the signal engineer. The signal engineer of a large road is one of the most important officials. His knowledge and experience must be large and varied. He should be a civil engineer, and also thor-

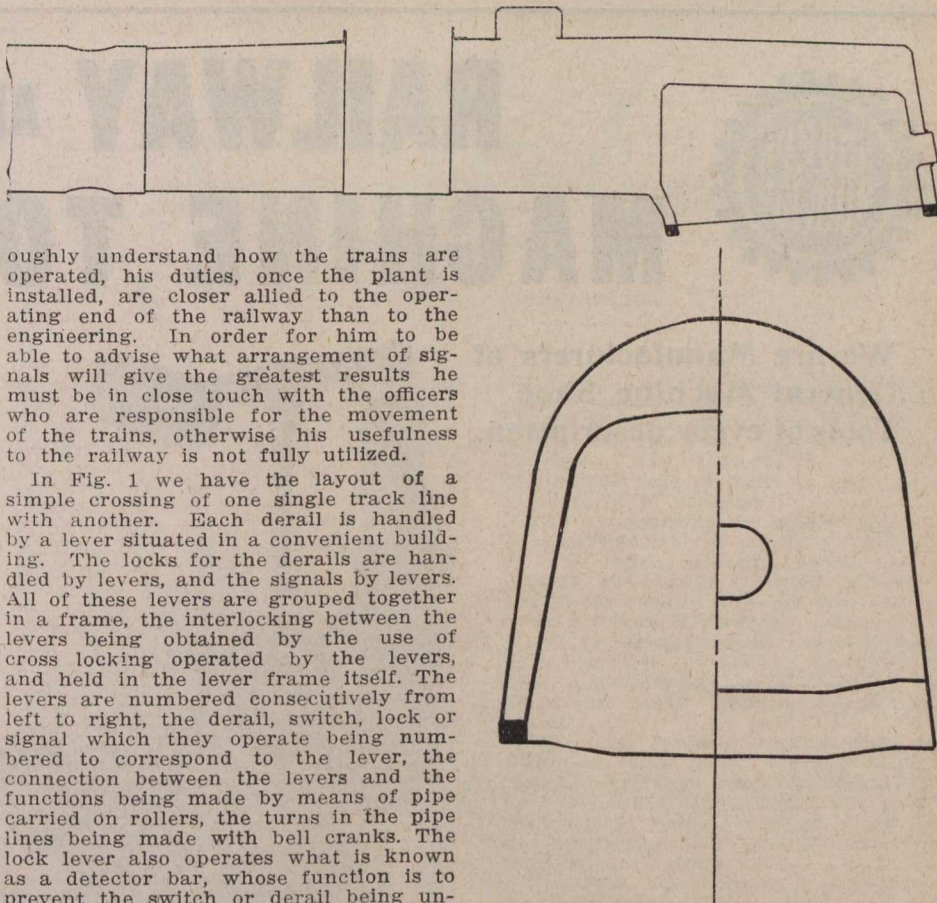


Fig. 10. United States Mallet Locomotive Boiler. See Previous Pages. See pg. 995.

oughly understand how the trains are operated, his duties, once the plant is installed, are closer allied to the operating end of the railway than to the engineering. In order for him to be able to advise what arrangement of signals will give the greatest results he must be in close touch with the officers who are responsible for the movement of the trains, otherwise his usefulness to the railway is not fully utilized.

In Fig. 1 we have the layout of a simple crossing of one single track line with another. Each derail is handled by a lever situated in a convenient building. The locks for the derails are handled by levers, and the signals by levers. All of these levers are grouped together in a frame, the interlocking between the levers being obtained by the use of cross locking operated by the levers, and held in the lever frame itself. The levers are numbered consecutively from left to right, the derail, switch, lock or signal which they operate being numbered to correspond to the lever, the connection between the levers and the functions being made by means of pipe carried on rollers, the turns in the pipe lines being made with bell cranks. The lock lever also operates what is known as a detector bar, whose function is to prevent the switch or derail being unlocked if there is a train on the track. This detector bar consists of a long bar of steel supported on a number of links pivoted to a casting attached to the base of the rail, free to move in a plane parallel to the track and inclined slightly toward the centre. When the bar is moved the links raise it above the tread of the rail. If, however, a wheel is on the rail the bar cannot be moved, as it will be held down by the wheel tread which projects beyond the rail head. This prevents the lock plunger from being withdrawn while there is a car on the track. In the figure the interlocking between the levers would be:—

Reverse lever no. 1	lock lever no. 2	reversed
Reverse lever no. 2	lock lever no. 5	reversed 10 reversed, 13 normal.
Reverse lever no. 3	lock lever no. 4	reversed
Reverse lever no. 4	lock lever no. 7	reversed 12 reversed, 15 normal
Reverse lever no. 5	lock lever no. 6	reversed
Reverse lever no. 6	lock lever no. 8	normal 11 normal.
Reverse lever no. 7	lock lever no. 8	reversed
Reverse lever no. 8	lock lever no. 6	normal 9 normal.
Reverse lever no. 9	lock lever no. 8	normal 11 normal.
Reverse lever no. 10	lock lever no. 9	reversed
Reverse lever no. 11	lock lever no. 9	normal 6 normal.
Reverse lever no. 12	lock lever no. 11	reversed
Reverse lever no. 13	lock lever no. 10	reversed 5 reversed, 2 normal.
Reverse lever no. 14	lock lever no. 13	reversed
Reverse lever no. 15	lock lever no. 12	reversed 7 reversed, 4 normal.
Reverse lever no. 16	lock lever no. 15	reversed

Thus the first lever to be moved would be the derails, then their locks, then the home signal and last the distant signal, in returning the track to its former position, the order of moving the levers is just the opposite.

Block signals differ from interlocking signals only in this respect. Interlocking signals indicate a condition of the track and switches, block signals on the other hand indicate the presence or absence of a train in or from a specific length of track. They may indicate the condition of the switches also, but their function is to show whether a train can be admitted to a block system, or whether it is already occupied. The block system is a means of moving trains by means of signals, as opposed to moving trains by time table and train orders. The principle on which it is based is that two trains must not occupy the same

piece of track at the same time. The line is divided into sections, the limits of which are marked by a signal, and trains are only admitted to one of these sections by means of the signal governing that block. The length of these sections will depend on the number of trains run, their speed, and maximum length.

There are several different methods of block signaling in use. In the telegraph block system the signals are operated

manually, upon information by telegraph. This is simply a make shift and is a combination of the block system and the Standard Code and dispatching system, a combination that cannot be made if the basic principle of block signal operation is maintained. In the controlled manual block system the signals are operated manually and so constructed as to require the co-operation of the signalman at both ends of the block to display a clear signal. That is in this system the signal at the entrance end of the block is so interlocked with the signal levers at the outgoing, and that it requires the men at each end to co-operate in order to admit a train. There are several types of this system, "the block and block" ordinarily used on a double track where head on movements are not ordinarily made, and the staff system used on single track, where head

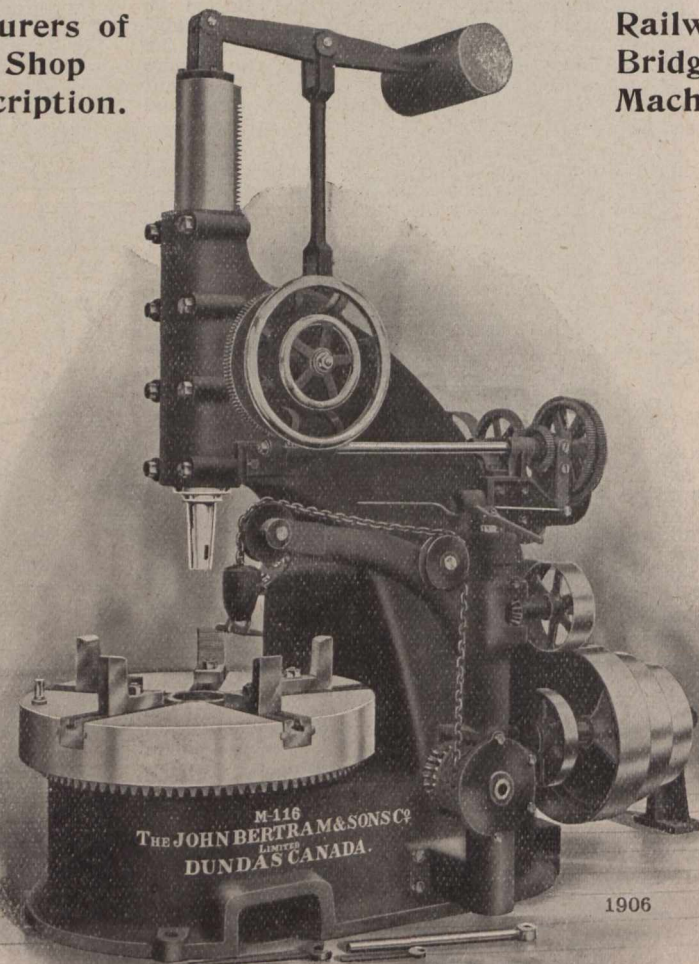


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on movements must be protected. In the automatic block system the signals are operated by electric, pneumatic or other agency actuated by a train, or by a certain condition affecting the use of a block. This system does not supersede the train order system of dispatching, and is not absolute, that is from its nature it is necessary where automatics are used to insert the rule, that an engineer finding a block signal indicating stop, must bring his train to a stop at the signal and then proceed, under caution. If this rule is not used the train men would have to flag through the block; the introduction of this rule makes the automatic a permissive signal.

Miscellaneous signals comprise train order signals, used at stations to indicate to the runner whether he is to stop for orders or not. Station signals, used to protect trains standing at stations where no block system is in use. Outlying switch signals used to indicate to a runner, whether or not the main line switch is properly set for him to proceed. Highway crossing signals, used to warn the public at a highway of the approach of a train. In the case of station signals, it is futile to simply put up a home signal of 1,500 or 2,000 ft. from a station, and expect that this will protect the station. It will not. If a train is running at 45 or 50 miles an hour, as pointed out above, it would be impossible for the driver to stop at the signal, and if the signal does not mark the point beyond which he must not go, what does mark this? In order for a station signal to be effective it must have a distant signal working in conjunction with it. I have in mind a condition which I saw some time ago at a station, where a freight train had stopped. The caboose was perhaps some 50 ft. inside of the station signal, which was indicating "stop." Approaching the signal at this point there is a sharp curve, a following freight came round the curve and did not have time to stop before it ran into the caboose of the standing train. A distant signal would have given the proper preliminary information. The fundamental principle that must be kept ever in mind in signaling is that a failure in any of the parts must produce the stop indication. Thus when we put up a signal at a highway crossing to protect the public using that crossing, it is here just as necessary to keep this principle in view as it is at an interlocking plant. The crossing signal should be so constructed that if any thing fails, the signal should give a positive stop indication to the highway. Most of the highway crossing signals simply consist of a bell. When the bell rings the public understand that a train is approaching the crossing, when the bell is silent it is

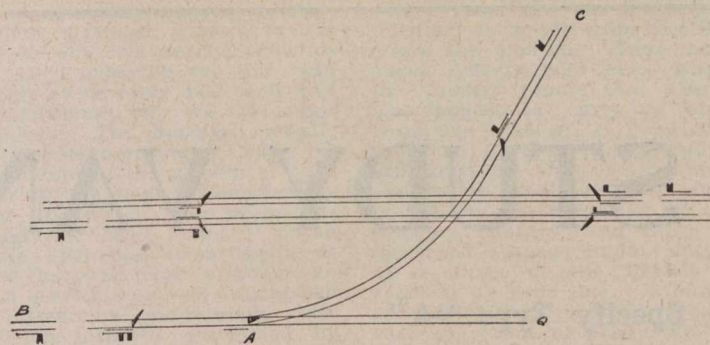


FIG. 2

perfectly safe for them to cross the tracks. This is evidently wrong, a broken wire, a discharged battery or one of several things may happen to prevent the bell ringing, yet the non-ringing of the bell is an indication in the proceed position, nor does the addition of a light in connection with the bell improve matters. The light is run usually by the same source of power as the bell; anything that will cause the bell to fail will also cause the light to do likewise. A crossing signal to be dependable must be built on the same principle as a signal. It should have a visible stop indication that will show "stop" should any break occur. The bell is a good adjunct to such a signal, but the visible indication which will take up the stop position by gravity is essential.

The foregoing paper was read before the Central Railway and Engineering Club, recently.

Railway and Canal Expenditure.

For the year ended Mar. 31 the total expenditure on the Government railways, railway subsidies, etc., was \$32,862,094.46, of which \$21,505,975.91 was charged to capital, \$2,260,214.59 to income, and \$9,095,903.96 to revenue. The expenditure on capital account included \$19,968,126.86 for the Eastern Division of the National Transcontinental Ry., and \$53,042.63 for surveys for a railway to Hudson Bay. The expenditure on income included a total of \$2,048,097.05 paid as subsidies to railways other than the Government lines; \$112,465.04 for the Board of Railway Commissioners, \$17,644.66 for inspection of the Grand Trunk Pacific Ry., and \$111,788.02 for preparing plans, etc., for the reconstruction of the Quebec Bridge. The expenditure on the Intercolonial Ry. was \$9,923,479.78, viz., on capital account, \$1,278,409.45, and on revenue account, \$8,-

645,070.33. On the maintenance of the I.C.R. Windsor branch, the expenditure, \$23,549.90, was charged to revenue account. On the P.E.I. Ry. the total expenditure was \$633,688.70, of which \$206,396.97 was charged to capital and \$427,283.73 to revenue.

The expenditure on canals aggregated \$3,259,097.18, of which \$1,650,706.64 was on capital account, \$489,256.68 on income, \$604,899.26 for staff, and \$514,234.60 for repairs, the last two amounts being charged to revenue. Added to the above for miscellaneous expenditures in both branches the sum of \$4,706.79, the total expenditures for the year on railways and canals amounted to \$36,125,898.43.

The total revenue derived from railway and canal work was \$9,841,347.99, of which railways produced \$9,647,963.71 and the canals \$193,384.28, the sum of \$168,893.63 being received from hydraulic rents. The canals have been free of tolls since 1905.

The total Government expenditure on railways prior to and since Confederation amounts, on capital account, to \$236,654,665.29, including \$25,000,000 granted to the C.P.R. for its main line, and \$660,683.09 expended on the Annapolis and Digby line. In addition there has been expended from the consolidated fund a total of \$202,532,757.03, making a total of \$439,187,422.32. Of this amount \$13,881,460.65 was expended prior to Confederation, on the construction of portions of what is now the I.C.R. system.

The Government expenditure on canals prior to and since Confederation amounts on capital account to \$96,982,449.37, of which \$20,593,866.13 was expended prior to Confederation, and from the consolidated fund \$29,346,507.21, making a total of \$126,328,956.58.

The total expenditures on railways and canals therefore amounts to \$565,516,378.90, adding to which for general expenditures embracing both, \$810,358.32, the grand total expenditure is \$566,326,737.22. This amount does not include payments to the province of Quebec in respect to the building of the Ottawa and Quebec Ry., which is dealt with by the Finance Department.

Filing Railway Location Plans.—The Board of Railway Commissioners has given notice that hereafter, with every application by a railway for approval of a location, or deviation of a location, there shall be filed with the Board an affidavit by a competent engineer that the proposed location or deviation is not at any point more than one mile from the route approved by the Minister of Railways.

Senator Beique has been given a verdict of \$300 damages in an action for libel brought against La Nationaliste, a Montreal Sunday newspaper, on account of some comments made on the sale of the South Shore Ry., which Senator Beique purchased at a receiver's sale, on behalf of its present owners the Delaware and Hudson Co.

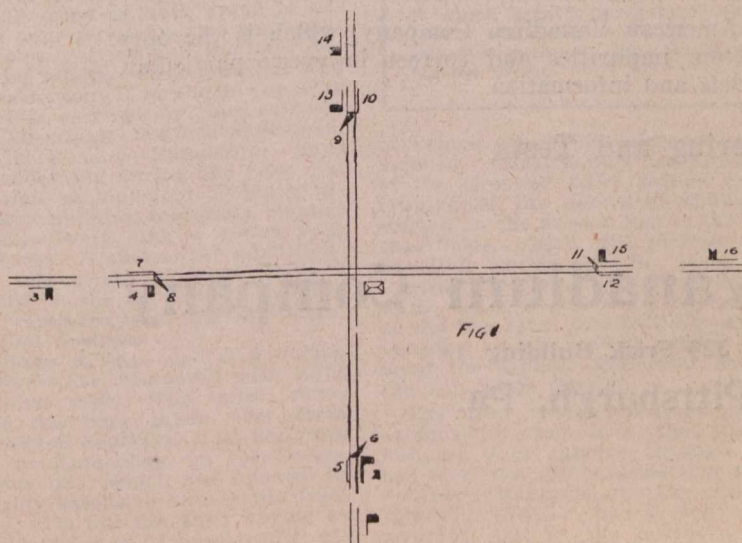


FIG. 1

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For cutting tools, rotary rock cutters, saw blades, forging and stamping dies, etc. Tempers accurately and evenly; although hard, is extremely tough. Retains edge more than twice as long as carbon steel.

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Canadian Northern Railway Report.

The following directors' report, over the signature of W. Mackenzie, President, was submitted at the annual meeting in Toronto recently:—

The result of operations for the year ended June 30, is as follows:—

Gross earnings—	
Passenger traffic	\$2,415,440.39
Freight traffic	10,102,510.36
Express, mail, telegraph, dining and sleeping cars, interest and profits from elevators and other subsidiary companies	1,315,110.83
	\$13,833,061.63
Working expenses, including taxes, etc.	9,488,671.60
Net earnings	\$4,344,390.03
Fixed charges	3,313,632.58
Surplus	\$1,030,757.45

The gross earnings show an increase of \$3,251,293.70, or 30.7%, and net earnings, \$778,027.86, or 21.82% over the preceding year. The working expenses, including all taxes, were 74.01% of gross earnings of the railway proper and 68.59% of gross earnings from all sources, compared with 72.55% and 66.30% respectively last year. An examination of the gross earnings shows that the development of the territory tributary to your railway is proceeding with great rapidity. In passenger receipts the increase is \$486,754.04, or 25.24% over last year, and to keep pace with the demand for train service considerable new passenger equipment is now on order. The receipts from freight traffic also show a substantial increase over last year, the figures being \$2,621,184.42, or 35.04%. In this connection your attention is directed to the statement of freight carried, from which it will be seen that in the movement of grain, live stock, immigrants' effects, lumber and building materials generally, your company shows a very substantial increase over the previous year. It is gratifying to your directors that Government figures of grain reported at Winnipeg show that not only has your railway increased its business but that the proportion of the total crop carried by your railway increases year by year. The returns for the crop of 1909 show that your company carried 31% of the total shipments from Manitoba, Saskatchewan and Alberta. This your directors submit is a very satisfactory showing, having regard to the comparatively short time which your railway has been in existence, and also especially in view of the fact that the company has operated but a few years in Saskatchewan, and more recently still in Alberta. The remarkable increase in immigrants' effects of 1,939 cars, or 62% over the previous year, and 12,211 cars, or 128% over 1909 of coarse building materials, is gratifying proof of both kinds of expansion in your territory, viz., the opening up of new districts and the improvement in the quality of commercial and domestic construction in the towns. The larger centres reached by your railway, such as Winnipeg, Regina, Saskatoon, Prince Albert and Edmonton, have grown considerably during the year, but the expansion, as indicated by the haulage of heavy building materials, applies to practically every district which your railway serves. Commercial conditions generally throughout Western Canada are reflected in the substantial increase in freight revenues from the movement of westbound business.

The average mileage operated during the year was 3,179, compared with 3,013 the preceding year. The most noteworthy of the lines taken over from the construction department is that from Zealandia to Kindersley, on the Saskatoon-Calgary line, which has opened up a remarkably extensive and fertile tract of country. During the early spring as many as 40 carloads of immigrants' ef-

fects were daily being hauled to Kindersley, which, although a town of less than one year old, has nearly 1,000 inhabitants. It is expected the line will reach Calgary at an early date, and give that most important city its first competitive railway. The mileage actually brought into operation does not fully represent the extent of the growth of your railway during the year. Considerable stretches of line which have been constructed had not been formally taken over by the operating department at the close of the fiscal year, although an immigration service was being furnished by the construction department into several districts hitherto unreached by railways. The expansion of lines already in hand assures considerable development in the immediate future. The

Removal of Offices.

The Railway and Marine World offices have been removed to 70 Bond Street, Toronto. This has been rendered necessary by the expansion of business and consequent increase of staff, and by the necessity for securing more room for records, data, maps, plans, charts, reference library, etc., all of which are being continually added to. No more space being available at 157 Bay Street, it became necessary to look for new quarters.

In deciding to secure enlarged accommodation, the question of the best natural light available, by windows facing north, was the first consideration. It was some time before this could be found in a satisfactory locality, but it was ultimately secured in a new building at 70 Bond Street. In our new location we are installing the latest equipment and appliances for carrying on business to the greatest possible advantage. Added to the splendid natural light secured, a most up to date system of electric lighting has been put in. The offices are being equipped with the latest devices for filing correspondence, data, card indexes, etc., with ample provision for the systematic storage of and ready reference to maps, plans, charts, etc., of which we have a large and valuable collection, and for a reference library thoroughly covering the transportation and allied fields. Intercommunicating telephones will connect every desk and effect a large saving of time.

For some time past we were considerably inconvenienced by lack of sufficient space in our old offices, which were, however, most satisfactory in other respects. In our new quarters the work will be carried on to much greater advantage, and the result will be seen in still further improvements in the Railway and Marine World.

of Prince Albert, has already been commenced. Construction has already been of the Crooked Lake region, northwest tapping of the enormous timber limits started on the branch line to the Brazeau coal fields, which will furnish an inexhaustible supply of the finest fuel to Central Alberta and Western Saskatchewan. It is hoped with the completion of the line from Morinville to Athabasca Landing to bring much nearer development the asphalt and other deposits in the Athabasca district.

The crop results have proved more conclusively than ever the wisdom of building your railway through diversified territory. It happens this year that Southern Manitoba and the country adjacent to the U.S. has a crop below the average, but in the northern districts,

where your line has immense territory tributary to it, the crops are, if anything, above the average. Your more experienced officers who have been through the country report that your company may expect to carry as much grain from the crop of 1910 as it did from the crop of 1909, the satisfactory conditions of the crop of 1910 being due to the better weather conditions prevailing in the northern half of the wheat-growing country, and there being an increased acreage under cultivation in all sections of the Prairie Provinces reached by your line. It may be taken as established, therefore, that with so vast an extent of producing country as is covered by your line a general crop failure is practically impossible. For the further development of the resources of the country served by your railway there is needed only a continuance of immigration to meet the demand for labor, which is as great today as it has ever been in Canada, and in that connection arrangements have been completed for a more extended campaign in Great Britain, as your directors most earnestly desire to see the best class of men from home settled along the company's line.

The land sales during the year were 246,996 acres, for \$2,561,072.52—an average of \$10.36 an acre, compared with 116,662 acres for \$1,091,722.37—an average of \$9.36 an acre last year. Among the sales is one to a colonization company which purposes to establish settlers of the very best class in the districts east of Prince Albert, which is especially suitable for mixed farming, and which, by reason of its wooded character, appeals strongly to settlers from Great Britain. Since the close of the fiscal year a number of other sales have been made at higher values per acre, and others are pending. The result to date in respect to land sales has been very gratifying to your directors. In Feb., 1899, an issue of \$2,000,000 of land grant bonds was authorized, secured by certain lands. A reference to the general balance sheet shows that after providing for the retirement of the total issue, there is a surplus of \$2,733,378.67 in the hands of the trust company belonging to your company, in addition to which there is a balance of deferred payments still to collect of \$597,671.97. In June, 1909, a further issue of £1,027,400, or \$5,000,013.32, of land grant bonds was authorized, secured by specific lands. Sales to the amount of \$2,260,810.13 under this mortgage have been made on the deferred payment plan and with the collections your directors have retired \$53,000, or \$257,933.32 of the bonds, thus reducing the amount of bonds outstanding at the close of the fiscal year to \$974,400, or \$4,742,080. The general position in regard to land sales is as follows:—

Cash held by National Trust Co.	\$4,733,378.67
Deferred payments due C.N.R. on sales	8,231,249.09
	\$12,964,627.76
Less land grant bond issue, Feb., 1899	\$2,000,000
Less land grant bond issue, June, 1909	4,742,080
	6,742,080.00

Surplus belonging to C.N.R. Co. . . \$6,222,547.76

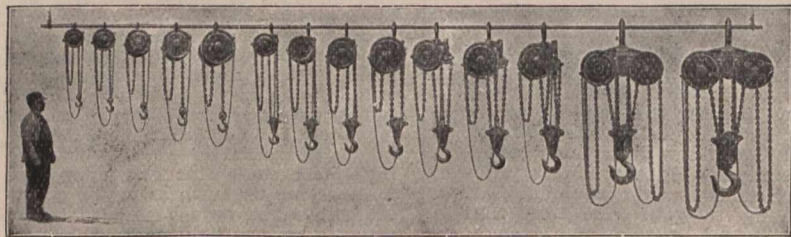
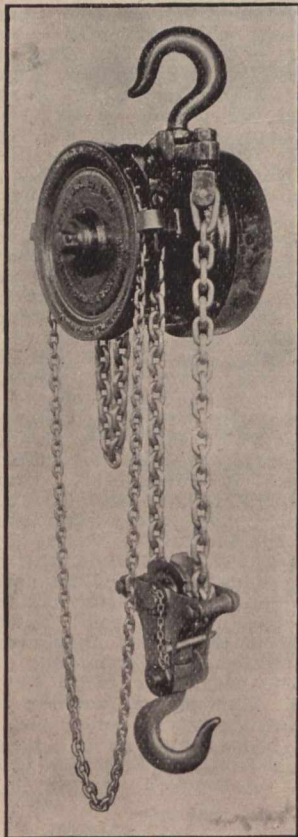
In addition to which the C.N.R. has still 1,151,017 acres of land to dispose of, having a value, on the basis of present prices, of not less than \$14,000,000.

Your directors are glad to report that two more important steps have been taken during the year towards making the C.N.R. a transcontinental line, with its own trans-oceanic connections. A contract has been entered into between the Canadian Northern Pacific Ry. Co. (which was separately incorporated on account of necessary arrangements in connection with the proposed issue of securities guaranteed by British Columbia) and the B.C. Government for the

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construction of the line from Alberta to the Pacific coast, approximately 500 miles. The contract calls for the completion of the work within four years, and your directors have not only every reason to anticipate that it will be finished within the stipulated time, but that when it is completed and in operation it will prove of tremendous traffic advantage to the C.N.R. system as a whole.

Through a subsidiary company, the Canadian Northern Steamships Ltd., your directors now operate the two fastest steamers in the British-Canadian service, the Royal Edward and Royal George. These steamers are triple turbine vessels of over 12,000 tons each, with a speed exceeding 20 knots. They furnish a fortnightly service between Bristol, Quebec and Montreal, and carry mails. Bristol was chosen as the British port because of its contiguity to Canada, its admirable dock facilities and the opportunity it affords of securing freight and passenger business from the Midlands, the West of England, and South Wales. The service was inaugurated in May, and the result of the season's work so far is quite as satisfactory as your directors anticipated.

During the year various issues of securities were made on account of the construction of additional lines. In respect to the two issues, each of £600,000 4% first mortgage debenture stock guaranteed as to principal and interest by Saskatchewan and Alberta, respectively, on certain branch lines to be constructed, your directors desire to say that whilst the progress of construction has been quite satisfactory, none of the lines were completed before the close of the fiscal year. The payments authorized by the respective governments have been charged to "advances to lines under construction," and the balance unexpended appears on the general balance sheet to the credit of both governments. The interest paid on these securities is not a charge on the current year's business. Near the close of the fiscal year an issue was made of £950,000 Duluth, Winnipeg & Pacific Ry. 4% first mortgage debenture stock, which your company, with the approval of the Dominion Government, agreed to guarantee as to principal and interest. The Duluth Company owns the entire capital stock of the Duluth, Rainy Lake & Winnipeg Ry., which operates a line from Fort Frances, on your company's main line, southerly to Virginia, Minn., and is now constructing a continuation of about 78 miles to Duluth, where it has already acquired very valuable terminal properties. The importance of this connection to your company cannot be overestimated, because of the ever-increasing movement of passenger and freight traffic passing through the Duluth gateway to and from the U.S. and Western Canada. In addition to this the Duluth Company has obtained an exclusive contract with the Virginia & Rainy Lake Lumber Co. (having an annual capacity of 250,000,000 ft.) for the haulage of all its logs and lumber. The railway also has tributary to it the immense iron ore mines of the Missabe Range, and shipments must be carried by rail to the Great Lakes for furtherance by water carriers to destination. The operation, too, of one of the largest pulp and paper mills in the U.S. at International Falls, near Fort Frances, will contribute largely to the gross revenue of the Duluth line, it being estimated that when the complete plant is in operation it will represent the haulage of over 1,000,000 tons of raw or finished products annually, the greater tonnage of which will be handled by the Duluth Company. Instead, therefore, of being called upon to make any payments under the guarantee, it is expected that the arrangement will add

materially to the gross revenue of your company.

In keeping with the policy of the company your directors continue to incur large expenditures in betterments of the property. During the year additional car trust obligations were created to the amount of \$3,000,000, and \$1,650,000 repaid in respect to previous obligations, thus making a net increase on the account of \$1,350,000. Considerable mileage has been relaid with heavy steel. New stations and freight houses have been built and existing buildings extended at many points. Industrial tracks have been built or extensions made to existing sidings and generally an intelligent regard has been had to the pressing necessities of a development which can only be characterized as remarkable in its growth.

Toward the close of the financial year your directors arranged for an issue of 5% 20-year income charge convertible debenture stock, secured by a general charge on properties of the company, subject to prior charges. The total amount of this stock at any time outstanding is not to exceed an amount equal to \$10,000 a mile of the company's lines. During 1916, 1917 and 1918 holders of the stock have the right to exchange their holdings for an equal amount of fully paid ordinary shares in the capital stock of the company. The interest on the stock, at a rate not exceeding 5% per annum, is payable only out of the net earnings. In and after 1920 the company is entitled to redeem the stock at par. Since the close of the financial year \$5,000,000 of this stock has been disposed of upon satisfactory terms and, as you will see by the figures given in the annual statements, and by its present earnings, the company will be in a position to meet the full interest during the coming year.

The accounts and statistical tables appended, were submitted by D. B. Hanna, Third Vice President, as follows:—

GENERAL BALANCE SHEET.

ASSETS.	
Cost of railway and equipment.....	\$133,782,348.08
Acquired securities (cost).....	5,725,060.21
Advances to other companies.....	1,819,227.32
Advances to lines under construction and terminals at Winnipeg.....	7,864,010.89
Value of material and supplies on hand.....	\$1,412,162.18
Due from agents, station balances, etc.....	612,650.72
	2,024,812.90
Deferred payments on land sales.....	\$,231,249.09
Cash with National Trust Co., account of land sales.....	4,733,378.67
	12,964,627.76
Cash Account—	
With Dominion Government.....	975,751.94
Province of Manitoba.....	1,710,199.20
Province of Saskatchewan.....	2,076,478.83
Province of Alberta.....	3,314,306.12
Cash on hand.....	1,796,968.10
	9,873,704.19
	\$174,053,791.35
In addition to the above assets the company owns 1,151,017 acres of land in Manitoba and Saskatchewan.	
LIABILITIES.	
Capital stock.....	\$55,000,000.00
Bonds and stock (guaranteed by Government.....)	44,490,210.02
4% perpetual consolidated debenture stock.....	33,058,049.97
Land grant bonds, 1899.....	\$2,000,000.00
1909.....	4,742,080.00
	6,742,080.00
Car trust obligations.....	11,121,862.87
Current liabilities—	
Unpaid pay rolls.....	736,267.37
Unpaid audited vouchers.....	944,104.10
Due other companies (net).....	2,538,280.49
	4,218,651.96
Coupon and dividend warrants due July 1 (since paid).....	1,642,225.89
Accrued interest on bonds and equipment securities.....	224,562.92
	1,866,788.81
Equipment replacement fund.....	108,258.31
Gross land sales.....	14,497,029.42
Less land grant bonds (issue 1899), as above, money to redeem which	

is in hands of National Trust Co.....	2,000,000.00
Surplus—	
Land grant account.....	12,497,029.42
Railway account.....	4,950,859.99
	17,447,889.41
	\$174,053,791.35

ACQUIRED SECURITIES.	
Minnesota and Ontario Bridge Co.	
4½% first mortgage debenture bonds.....	\$180,000.00
Capital stock.....	100,000.00
Minnesota and Manitoba Rd.	
5% general mortgage bonds.....	250,000.00
Capital stock.....	400,000.00
Lake Superior Terminals Co.	
5% mortgage gold bonds.....	2,000,000.00
Capital stock.....	500,000.00
Canadian Northern Telegraph Co.	
5% general mortgage bonds.....	800,000.00
Capital stock.....	500,000.00
Winnipeg Land Co.	
5% first mortgage gold bonds.....	300,000.00
Capital stock.....	100,000.00
Canadian Northern Coal & Ore Dock Co.	
5% first mortgage bonds.....	375,000.00
St. Boniface & Western Land Co.	
5% first mortgage bonds.....	750,000.00
Capital stock.....	250,000.00
Edmonton and Slave Lake Ry.	
5% first mortgage bonds.....	420,000.00
Canadian Northern Prairie Lands Co.	
Capital stock.....	483,393.55
	\$7,408,393.55

INCOME ACCOUNT.	
Operating expenses.....	\$9,341,486.41
Taxes, railway.....	96,693.73
Taxes on company's lands.....	50,491.46
Interest on bonds, etc.:	
Consolidated debenture bonds guaranteed by Manitoba.....	\$478,451.67
Ontario Division debenture bonds, guaranteed by Manitoba.....	230,706.77
3% debenture stock, guaranteed by the Dominion.....	280,799.84
Consolidated debenture stock.....	1,150,055.26
Qu'Appelle, Long Lake and Saskatchewan Ry. 4% debenture stock.....	202,055.96
Qu'Appelle, Long Lake and Saskatchewan Ry. 6% bonds.....	1,927.20
Land grant 4% bonds.....	191,532.51
	\$2,535,529.21
Rental of leased lines:	
Northern Pacific & Manitoba Ry.....	210,000.00
Minnesota & Manitoba Rd.....	13,960.00
	223,960.00
Interest on equipment securities.....	554,143.37
Accrued interest to June 30.....	224,562.92
Less accrued interest at June 30, 1909, paid during current year.....	196,147.53
	28,415.39
Balance of income account.....	4,950,859.99
	\$17,781,579.56
Balance of income account at June 30, 1909.....	\$3,948,517.93
Gross earnings:	
Passenger earnings.....	\$2,415,440.39
Freight earnings.....	10,102,510.36
Express, mail and miscellaneous earnings.....	1,315,110.88
	13,833,061.63
	\$17,781,579.56

GROSS EARNINGS.		
Class.	1910.	%
Passenger.....	\$2,415,440.39	17.46
Freight.....	10,102,510.36	73.03
Mails.....	77,599.06	00.56
Express.....	145,904.36	01.06
Miscellaneous.....	1,091,607.46	07.89
Total.....	\$13,833,061.63	100.

OPERATING EXPENSES.		
Class.	1910.	%
Maintenance of way and structures.....	\$2,047,830.97	21.58
Maintenance of equipment.....	1,840,112.42	19.39
Traffic expenses.....	153,512.02	01.62
Transportation expenses.....	4,879,153.36	51.42
General expenses.....	568,062.83	05.99
Total.....	\$9,488,671.60	100.

DESCRIPTION OF FREIGHT CARRIED.			
For year ended June 30,			
	1909-10.	1908-09.	
Flour, sacks, 100 lbs. each.....	1,789,768	1,380,207	
Grain, bushels.....	37,355,010	27,113,077	
Live stock, head.....	123,635	91,546	
Logs and lumber, feet.....	294,647,000	247,452,000	
Firewood, cords.....	189,535	177,231	
Fish, tons.....	5,832	4,547	
Immigrants' effects, cars.....	5,068	3,129	
Building material (lime, stone, brick, sand, etc.), cars.....	21,758	9,547	
Miscellaneous, tons.....	1,266,669	1,073,872	
PASSENGER TRAFFIC.			
	1909-10.	1908-09.	
Passengers carried.....	1,268,296	1,028,787	
Passengers carried one mile.....	106,217,424	78,044,255	
Passengers carried one mile per mile of road.....	33,412	25,902	

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Is pure water white in color; high fire test; low cold test, and splendid gravity.

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CHARLES MILLER,

PRESIDENT

Average distance carried ..	83.75	75.86
Total passenger revenue ..	\$2,320,520.52	1,829,703.25
Average amount received per passenger	1.82.96	1.77.85
Average amount received per passenger per mile02.184	.02.344
Total pass. train earnings, \$2,638,943.81		2,112,845.55
Passenger train earnings per train mile	1.08.115	1.04.453
FREIGHT TRAFFIC		
Revenue tons carried	3,909,856	2,958,802
Revenue tons carried 1 mile.1,356,351.140		1,000,875.386
Revenue tons carried 1 mile per mile of road	426.659	332.185
Av. distance haul of 1 ton ..	356.01	338.27
Total freight revenue.....	\$9,955,289.93	7,370,376.23
Av. amount received for each ton of freight	2.61.303	2.49.100
Av. revenue per ton per mile ..	.00.734	.00.736
Total freight train earnings \$10,102,510.36		7,481,325.94
Freight train earnings per train mile	2.59.086	2.46.189
PASSENGER AND FREIGHT, ETC.		
Gross earnings per mile of road	4,351.39	3,512.04
Operating expenses per mile of road	2,984.80	2,328.38
Net earnings per mile of road ..	1,366.59	1,183.66
Amount required per mile of road to pay fixed charges, including leased lines ..	868.03	809.45
TRAIN MILEAGE.		
Mileage of passenger trains ..	2,440,870	2,022,778
Mileage of freight trains ..	3,899,280	3,038,859
EXPENSES PER TRAFFIC TRAIN MILE.		
Maintenance of way and structures	32.30	27.76
Maintenance of equipment ..	29.02	23.72
Traffic expenses	02.42	02.54
Transportation expenses ..	76.96	76.14
General expenses	08.96	08.44
Total	\$ 1.49.66	1.38.60

SUMMARY OF EQUIPMENT.		
	June 30, 1909.	June 30, 1910.
Locomotives	372	346
Sleeping and dining cars	43	39
Passenger coaches	203	164
Baggage and mail and express cars..	79	72
Business cars	11	7
Freight, refrigerator and stock cars	11,735	9,465
Conductors' vans	184	118
Boarding, tool, auxiliary cars, steam shovels and snow equipment	416	355

The total mileage owned and operated, including leased lines, at June 30, was 3,325, located as follows:—Ontario, 353.7 miles; Manitoba, 1,530.9 miles; Saskatchewan, 1,182.5 miles; Alberta, 214.2 miles; Minnesota, 43.7 miles. The average mileage operated during the year was 3,179.

The report was unanimously adopted, and the directors re-elected, as follows:—W. Mackenzie, President; D. D. Mann, Vice President; Z. A. Lash, K.C., F. Nicholls, Toronto; R. M. Horne-Payne, London, Eng.

The monorail car, running between Bartow and City Island, New York, which met with an accident on the first day of its operation three months ago, has been rebuilt, and the road, which has been carrying passengers experimentally for some weeks, shortly commence regular service under a new franchise. The car is carried on two trucks on a single rail, and is supported by a strong trolley running on a rigid overhead rail supported from standards placed on the side of the track.

The British Board of Trade's report on railway accidents in the United Kingdom during 1909, shows that only one passenger was killed in an accident to a train in which he was travelling, and that this was the first fatality for 20 preceding months. The number of passengers injured while travelling was 390, which is the lowest average for several years past. As 1,264,000,000 passengers were carried during 1909, the death record is certainly remarkably small. By accidents to passengers from other causes—falling between trains and platforms, etc.—directly traceable to personal carelessness and disobedience of orders, 82 persons were killed and 2,148 were injured.

December Birthdays.

Many happy returns of the day to—
 E. Alexander, Assistant Treasurer C.P.R., Montreal, born in Yorkshire, Eng., Dec. 8, 1862.
 J. H. Barber, Engineering Department C.P.R., Montreal, Que., born at Cobourg, Ont., Dec. 20, 1856.
 N. E. Brooks, C.P.R. Division Engineer, Calgary, Alta., born at Sherbrooke, Que., Dec. 25, 1866.
 Harold Browning, Steamship Agent, etc., Windsor, Ont., born at Stamford, Lincolnshire, Eng., Dec. 2, 1864.
 J. C. M. Buntzen, Director British Columbia Electric Ry. Co., Copenhagen, Denmark, born there Dec. 16, 1859.
 T. C. Burpee, Engineer of Maintenance of Way Intercolonial Ry., Moncton, N.B., born at Sheffield, N.B., Dec. 11, 1852.
 W. W. Butler, Vice President Canadian Car and Foundry Co., Ltd., Montreal, born at Danville, Ohio, Dec. 9, 1862.
 M. M. Campbell, C.E., Building Inspector G.T.R., Montreal, born at Bridgeton, N.B., Dec. 17, 1879.
 A. H. Chave, Purchasing Agent and Assistant to First Vice President Canadian Car and Foundry Co., Montreal, born at Williamsbridge, N.Y., Dec. 26, 1872.
 H. P. Dwight, President Great North Western Telegraph Co., Toronto, born at Belville, Jefferson Co., N.Y., Dec. 23, 1828.
 R. Forget, M.P., President Richelieu and Ontario Navigation Co., Montreal, born at Terrebonne, Que., Dec. 10, 1861.
 W. H. Gardiner, City Freight Agent C.P.R., and District Freight Agent Esquimalt and Nanaimo Ry., Victoria, born there, Dec. 6th, 1859.
 H. H. Gildersleeve, Manager Northern Navigation Co. of Ontario, Sarnia, born there, Dec. 10, 1868.
 A. J. Gorrie, ex-General Superintendent Canadian Northern Quebec Ry., now Receiver Quebec and Lake St. John Ry., Quebec, born at Raith, Kirkcaldy, Scotland, Dec. 10, 1868.
 W. H. Grant, Manager of Construction Portland Canal Short Line Ry., Stewart, B.C., born at Acton, Ont., Dec. 8, 1858.
 F. P. Gutelius, General Superintendent Lake Superior Division C.P.R., North Bay, Ont., born at Millinburg, Pa., Dec. 21, 1864.
 D. B. Hanna, President Quebec and Lake St. John Ry., Third Vice President Canadian Northern Ry., Toronto, born at Thornliebank, Scotland, Dec. 20, 1858.
 S. P. Howard, ex-General Freight Agent Eastern and Lake Superior Divisions C.P.R., Montreal, born there Dec. 30, 1865.
 R. Johnson, Locomotive Foreman C.P.R., White River, Ont., born at Quebec, Que., Dec. 24, 1863.
 B. B. Kelliher, Chief Engineer Grand Trunk Pacific Ry., Winnipeg, born in Ireland, Dec. 26, 1862.
 J. T. McGrath, Master Mechanic G.T.R., Battle Creek, Mich., born at Toronto, Dec. 6, 1869.
 A. T. McKean, Soliciting Freight Agent C.P.R., Winnipeg, born at St. John, N.B., Dec. 18, 1886.
 L. Macdonald, Division Freight Agent G.T.R., Toronto, born at Montreal, Dec. 10, 1871.
 J. Niblock, ex-Superintendent C.P.R., Naramata, B.C., born in York County, Ont., Dec. 21, 1849.
 A. Price, General Superintendent Alberta Division C.P.R., Calgary, born at Toronto, Dec. 6, 1861.
 G. D. Robinson, Assistant Export and Import Freight Agent C.P.R., Toronto, born at St. John, N.B., Dec. 7, 1877.
 C. Schreiber, C.M.G., Consulting Engineer Department of Railways and Canals, Ottawa, Ont., born at Bradwell, Essex, Eng., Dec. 14, 1831.

F. P. Smith, Secretary Richelieu and Ontario Navigation Co., Montreal, born there, Dec. 23, 1873.
 C. E. E. Ussher, Passenger Traffic Manager C.P.R., Montreal, born at Niagara Falls, Ont., Dec. 29, 1857.
 H. H. Vaughan, Assistant to Vice President C.P.R., Montreal, born at Forest Hill, Essex, Eng., Dec. 26, 1868.
 R. C. Vaughan, Assistant to Third Vice President Canadian Northern Ry., Toronto, born there Dec. 1, 1883.
 W. Wood, locomotive foreman C.P.R., Megantic, Que., born at Montreal, Dec. 6, 1863.

G. T. R. Subsidiary Companies.

Following are the officers and directors for the current year:—
CHICAGO AND KALAMAZOO TERMINAL RD.—President, A. B. Atwater; Vice President, F. M. Hodge; Secretary-Treasurer, G. W. Alexander; other directors, L. C. Stanley, M. H. Lane, F. B. Lay, C. B. Hays, D. A. Sheppardson, C. Clarage.
CHICAGO, DETROIT AND CANADA GRAND TRUNK Jct. Rd.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, W. H. Biggar, A. B. Atwater; Secretary, G. W. Alexander; Treasurer, F. Scott.
DETROIT, GRAND HAVEN AND MILWAUKEE Ry.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, W. G. Brownlee, Jos. Hobson, A. B. Atwater, F. W. Egan, A. P. Sherrill, J. Pridgeon, jr.; Secretary-Treasurer, G. W. Alexander.
GRAND RAPIDS TERMINAL RD.—President, A. B. Atwater; Secretary-Treasurer, G. W. Alexander; other directors, L. C. Stanley, F. W. Egan, C. Clarke.
GRAND TRUNK JUNCTION RY.—President C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, A. B. Atwater, F. A. Howe; Secretary-Treasurer, G. W. Alexander.
GRAND TRUNK MILWAUKEE CAR FERRY Co.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, W. G. Brownlee, A. B. Atwater, E. H. Botum; Secretary-Treasurer, G. W. Alexander.
GRAND TRUNK WESTERN RY.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, W. G. Brownlee, A. B. Atwater, A. W. Wright, L. R. Skinner; Secretary-Treasurer, G. W. Alexander.
INTERNATIONAL BRIDGE Co.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, W. G. Brownlee, H. G. Kelley, Jos. Hobson, H. W. Sprague; Secretary, G. W. Alexander; Treasurer, F. Scott.
MICHIGAN AIR LINE RY.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, W. H. Biggar, A. B. Atwater; Secretary, G. W. Alexander; Treasurer, F. Scott.
PONTIAC, OXFORD AND NORTHERN RD.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, M. M. Reynolds, J. W. Loud, A. B. Atwater, L. C. Stanley; Secretary-Treasurer, G. W. Alexander.
ST. CLAIR TUNNEL Co.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, W. G. Brownlee, W. H. Biggar, Jos. Hobson, A. B. Atwater; Secretary, G. W. Alexander; Treasurer, F. Scott.
TOLEDO, SAGINAW AND MUSKOGON RY.—President, C. M. Hays; Vice President, E. H. Fitzhugh; other directors, J. W. Loud, A. B. Atwater, A. F. Temple, C. W. Middleton, F. E. Ranney; Secretary-Treasurer, G. W. Alexander.

The Intercolonial Ry. brotherhoods of machinists, boilermakers, blacksmiths, and carmen appointed a committee, Nov. 10, to consider the question of federation on similar lines to that adopted on the C.P.R.

PACKINGS

STEAM

HYDRAULIC

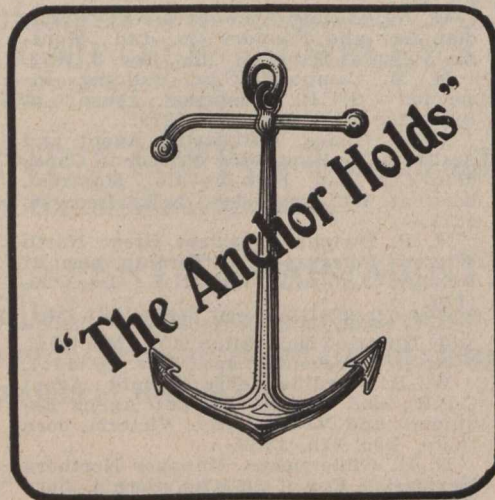
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What We Haven't Got We Hope to Anchor

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Semi-Metallic Valve and Injector Packing
Semi-Metallic Air Pump
Throttle Sets

OTHER SPECIALTIES

"DUPLEX" Expansion Sets for Worn
and Scored Rods
HIGH GRADE PUMP VALVES and
DISCS

OFFICES AND STOCK ROOMS

E. C. ADAMS,
Gen. Sales Mgr.
WALKERVILLE, ONT.

WALLACE H. ROBB,
Eastern Sales Mgr.
404 St. James St.,
MONTREAL, P.Q.

G. T. R. Semi-Annual Meeting.

The semi-annual meeting was held in London, Eng., Oct. 21, when the report for the half year ended June 30 was presented. The following summary shows a comparison of the revenue with that of the corresponding half-year, 1909:—

	1909.	1910.
£2,866,468	Gross receipts	£3,321,636 11 0
	Deduct—	
2,079,196	Working expenses, being at the rate of 73.94%, as compared with 72.54% in 1909.	2,456,065 7 6
787,272	Net traffic receipts	865,571 3 6
Cr. 58,092	Balance of income from rentals, outside operations, and car mileage..	Cr. 58,089 10 2
845,364	Total net revenue	923,660 13 8
	Add—	
16,013	Amount received from International Bridge Co..	16,012 16 7
6,507	Interest on Central Vermont Ry. bonds	6,506 14 3
60,320	Interest on securities of controlled lines and on St. Clair Tunnel bonds acquired by the issue of Grand Trunk 4% debenture stock	62,483 10 10
33,997	Balance of general interest account	38,302 7 0
£962,201	Net revenue receipts	£1,046,966 2 4

Following are the net revenue charges for the half-year, compared with the corresponding period:—

	1909.	1910.
£77,603	Rents (leased lines)	£77,603 0 9
503,481	Interest on debenture stocks and bonds of the company	520,240 17 4
34,332	Interest on debenture stock and bonds of lines consolidated with the company	32,447 17 9
41,103	Can. Atlantic Ry. deficiency	34,965 18 2
25,749	D., G.H. & M. R. deficiency	34,547 16 10
682,268	699,805 10 10
279,933	Leaving a surplus of	347,160 11 6

£962,201 £1,046,966 2 4

Adding the balance of £11,839 11s 6d at credit of net revenue account on Dec. 31, 1909, to the surplus of £347,160 11s 6d, the amount available for dividend is £359,000 3s 0d, from which the directors recommend payment of the following dividends, viz:—

Half-year on 4% guaranteed stock	£197,816 11 8
Half-year on first preference stock	85,420 15 0
Half-year on second preference stock	63,210 0 4

£346,447 7 0

leaving £12,552 16s 0d to be carried forward to next half-year's account.

Following is a table of the receipts for the half-years ended June 30, 1910 and 1909:—

Description.	1910		1909	
	Increase.	Decrease.	Increase.	Decrease.
Passengers	884,274	789,162	4,817,156	4,990,401
Mails and express	146,426	134,853	89,334	42,583
Freight and live stock	2,186,027	1,861,785	7,506,803	8,582,332
Other receipts	104,909	80,698	39,524	59,404
	3,321,636	2,866,468	1,371,018,422	1,589,087,718
			83,49d	75,77d

TRAFFIC STATISTICS

Passengers carried	173,245
Average fare per passenger	8-21d
Tons of freight and live stock	1,325,925
Average rate per ton	214,419,296
Tons carried one mile	7-72
Earnings per train mile

The average rate per ton per mile on the entire freight business was 0.67c., compared with 0.66c. in the corresponding half-year.

The working expenses, excluding taxes, were £2,409,690, or 72.55% of gross receipts, compared with £2,037,014 or 71.06%, an increase of 1.49%.

Revenue expenditure, including taxes, for half-years ended June 30, 1910 and 1909:—

Description.	1910.		1909.	
	Increase	Decrease	Increase	Decrease
Maintenance of way, and structures	£ 93,311	£ 972,176	£ 865,457	£ 972,176
Maintenance of equipment	449,110	449,110	689,586	449,110
Traffic expenses	15,968	91,407	101,375	91,407
Conducting transportation	69,452	1,135,172	1,204,674	1,135,172
General expenses	4,338	89,152	33,908	89,152
Taxes	4,188	42,182	46,375	42,182
Total	£2,409,690	£2,079,197	£2,409,690	£2,079,197
Percentage of gross receipts	72.54	72.54	73.94	72.54
Expenditure per train mile	6-77d.	6-77d.	6-73d.	6-77d.

The train mileage compares with that for the half year ended June 30, 1909, as follows:—

Description of Mileage.	1910.		1909.	
	Increase	Decrease	Increase	Decrease
Passenger	4,138,538	4,086,109	47,429	47,429
Freight	5,141,909	4,752,765	389,144	389,144
Mixed trains	273,592	240,628	32,964	32,964
Total	9,553,039	9,079,502	468,637	468,637

The gross receipts show increase of £455,168, or 15.38%; the working expenses, including taxes, £376,868, or 18.12%, and train mileage 468,637, or 5.16%.

The charges to capital account were £148,821 10s 11d. Of this £110,342 9s 4d was for the acquisition of \$537,000 G.T. Western Ry. first mortgage bonds issued in respect of a similar amount of North-western G.T. bonds, which matured Jan. 1, and were paid off during the half-year; and £27,148 18s 6d for discount and commission on 4% guaranteed stock and additional 4% debenture stock issued in exchange for Midland consolidated bonds, less premium on 4% debenture stock sold.

The expenditure on capital account in respect of new works, double track and land purchased, was as follows:—

New works	£4,153	4s. 5d.
Double track	1,152	9 9
Land purchased	6,024	8 11
	£11,330	3 1

During the half-year, 10 passenger engines and one dining and six first class passenger cars were built in the company's works, and 35 freight engines and 10 baggage cars purchased on revenue account, and £122,117 3s 1d has been charged to revenue in reduction of engine and car renewal suspense account, leaving the balance of that account on June 30 £75,578 3s 4d, of which £26,346 was in respect of engines and £49,232 3s 4d of cars.

CANADA ATLANTIC RAILWAY.

The following summary shows results of the half-year's working, compared with the corresponding period of 1909:—

	1909.	1910.
£168,073	Gross receipts	£192,977
161,482	Working expenses	169,500
6,591	Net traffic receipts	23,477
12,419	Balance of income from rentals, outside operations and car mileage	4,586
£19,010	Total net revenue	£28,063

The interest charges were £63,029, against £60,113, so that there was a net revenue deficiency of £34,966, compared with £41,103 in 1909.

GRAND TRUNK WESTERN RAILWAY.

The following summary shows results of the half-year's working compared with the corresponding period, 1909:—

	1909.	1910.
£553,847	Gross receipts	£643,457
440,093	Working expenses	509,571
113,754	Net traffic receipts	133,886
Dr. 39,996	Balance of income from rentals, outside operations and car mileage	Dr. 55,872
£73,758	Total net revenue	£78,014

The net revenue charges were £92,187, so that there was a net revenue deficiency of £14,173, compared with a deficiency of £13,883 for the corresponding half-year of 1909. Deducting this deficiency from the surplus for the half-year ended Dec. 31, 1909, of £25,789, there remains a surplus for the year to June 30, 1910, of £11,616, and adding to this the balance of £5,650 carried forward on June 30, 1909, the net revenue balance is £17,266, which will admit of payment of full interest on second mortgage income bonds, and leave a balance of £4,937.

DETROIT, GRAND HAVEN AND MILWAUKEE RAILWAY.

The following summary shows results of the half-year's working, compared with the corresponding period, 1909:—

	1909.	1910.
£160,223	Gross receipts	£199,488
136,955	Working expenses	167,654
23,268	Net traffic receipts	31,834
Dr. 12,072	Balance of income from rentals, outside operations, and car mileage	Dr. 29,401
£11,196	Total net revenue	£2,433

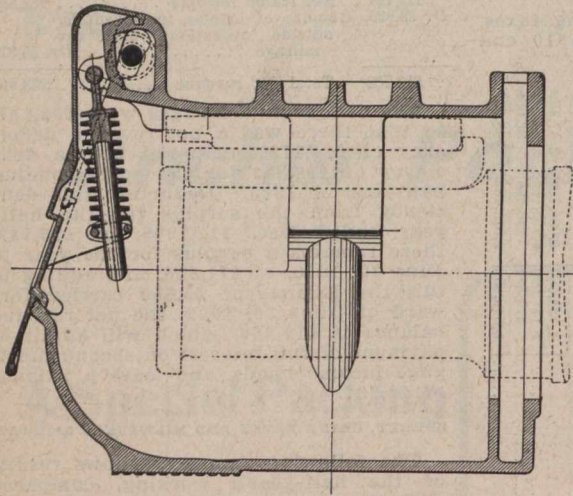
The net revenue charges were £36,981, against £36,946 in 1909, so that there was a net revenue deficiency of £34,548, as compared with £25,749 for the corresponding period of 1909.

GRAND TRUNK PACIFIC RAILWAY.

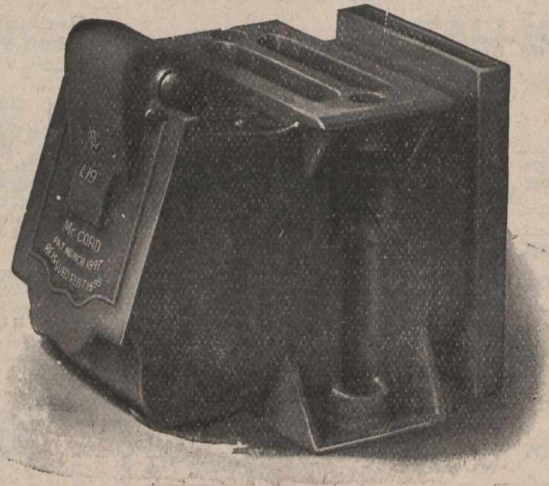
The contractors for the Government have continued to encounter difficulties on the eastern division from Lake Superior Jct. to Winnipeg owing to the sinking of the line caused by the swampy nature of the ground at various points. These difficulties have been practically overcome, and, under special arrangement with the Government, the expectation that this year's grain would be carried over the line from Winnipeg to the Lake will be realized. Pending the official opening, it has been arranged, in order to give the public as soon as possible the convenience of improved communication between Winnipeg and Edmonton over the Prairie section, that a daily passenger and freight train service should be run each way between those points. This service was commenced early in July, and has given great satisfaction, the time saved in the journey being from five to seven hours as compared with any other route. The expenses of operation are charged to construction account, which is also credited with the receipts. From Winnipeg west the track has been laid for 916 miles to Wolfe Creek, the end of the Prairie section, 123 miles west of Edmonton. From Wolf Creek, the beginning of the Mountain section, track has been laid to Edson, and it is expected, will be extended to the Athabasca River, 100 miles, by the end of the season. From Prince Rupert rail has been laid for 80 miles, and grading completed to Copper River, 130 miles. The expectation that the line would reach Tete Jaune Cache from the east and Aldermere from the west this year, is not likely to be fulfilled, owing to the great scarcity of labor. The contractors have made every effort to obtain labor, offering as much as \$3 a day, and making every possible arrangement for the comfort of the men, yet they are at least 5,000 men

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short of their requirements. Continued progress has been made with the building of branch lines from Melville to Regina, Melville to Yorkton and Canora, Sask., and Tofield to Calgary, Alta. The scarcity of labor has, however, also retarded the work on these lines.

REPORTS OF OFFICIALS.

The Chief Engineer, H. G. Kelley, states that the expenditure for maintenance of the property, during the half-year was \$454,116.03 more than during the corresponding period of 1909.

The Superintendent of Motive Power, W. D. Robb, reports expenditure, mileage, etc., as follows:—

Half-year ended	Total expenditure.	Train mileage	Rate of expense per mile.		
			Train	Engine	Car
June, 1910..	\$4,944,322	9,548,039	51.78c	39.68c	3.25c.
" 1909..	4,150,751	9,079,492	45.72c	35.91c	2.83c.

An increase in expenditure of \$793,571, or 19.12%, compared with an increase in train miles of 468,637, or 5.16%.

Passenger. Freight. Mixed.
trains. trains. trains.

The average number of cars moved per train was...	4.6	25.5	7.0
And for the corresponding period	4.5	26.7	6.8

During the half-year three locomotives were scrapped, leaving 26 old light capacity engines set aside to be scrapped. Ten Pacific type passenger locomotives were built at Point St. Charles shops, and 15 compound consolidation freight locomotives and 25 simple mogul freight locomotives were purchased, and put into service.

The actual stock at June 30th, 1910, was 924 locomotives, against the official figure of 803.

The comparative cost of repairs per train, engine and car mile was:—

Half-year ended.	Repairs and renewals of locomotives.		All repairing charges, including shop machinery, tools and marine equipment, etc.		Total cost of repairs and renewals.	Total miles run by cars.			Cost per mile.		
	1910.	1909.	1910.	1909.		Passenger.	Freight.	Total.	Car.	Train	Train
June, 1910	16.99c.	11.37c.	19.00c.	12.98c.	19,599,216	132,637,532	162,296,748	0.883c.	14.08c.	14,08c.	
" 1909	13.02c.	8.94c.	14.56c.	10.19c.	18,817,467	127,871,131	146,688,598	0.705c.	11.39c.	11.39c.	
Car.	1.07c.	0.70c.	1.19c.	0.80c.							

J. Coleman, Superintendent Car Department, reports expenditure, mileage, etc., as follows:

An increase in expenditure of \$310,410, or 30.01%, with an increase in car miles of 5,548,150, or 3.782%.

One dining and six first class cars were built at the company's shops, and 10 baggage cars were purchased, out of revenue.

The income account for the half-year is as follows:—

RECEIPTS	£ s. d.		£ s. d.		£ s. d.	
	1910	1909	1910	1909	1910	1909
Freight	2,279,049	10	93,022	0	2,186,027	10
Less—						
Carriage, &c.	53,250	15				
International Bridge tolls	15,891	10				
St. Clair Tunnel tolls	24,379	14				
Passenger			891,290	8		
Less—						
International Bridge tolls			847	5		
St. Clair Tunnel tolls			6,168	18		
Mail and express					884,273	19
Other revenue from transportation					146,426	9
Revenue from operations other than transportation					67,635	15
					37,972	16
					3,321,636	11

EXPENDITURE.

On account of—		£	
Maintenance of way and structures	11.00%	365,487	8 11
Maintenance of equipment	19.23	638,696	7 6
Traffic expenses	3.23	107,374	13 8
Conducting transportation	36.27	1,204,624	2 3
General expenses	2.82	93,507	14 11
Total operating expenses	72.55	2,409,690	7 8
Taxes	1.39	46,374	19 10
	73.94%	2,456,065	7 6
Net income from rentals	Cr.	71,366	0 2
Dining car service balance	Dr.	2,384,699	7 4
		465	13 7
Hire of equipment balance	Dr.	2,385,165	0 11
		12,810	16 5
		2,397,975	17 4
Balance to net income account		923,680	13 8
		£3,321,636	11 0

A. W. Smithers, Chairman, in proposing the adoption of the report, dealt with the accounts in detail, and also referred to his recent tour of inspection over the system. He reported that the Ottawa station is nearing completion, and stated that the company would have as tenants and part users, the C.P.R., C.N.R. and New York Central Lines. The recently built M.C.R. Detroit River tunnel was also mentioned, and it was announced that the G.T.R. would, doubtless use the tunnel for some of its traffic, on terms, especially during the winter, so that difficulty with ice in the Detroit River would be avoided. The trip over the G.T.P.R. from Fort William to Prince Rupert was also described, and it was stated that it was hoped to have track laid to the Athabasca River this year. Dividends of 2% on the 4% guaranteed stock, 2½% on the first preference stock, and 2½% on the second preference stock were declared. The company is promoting legislation in the Dominion Parliament to sanction the holding of one general meeting each year, instead of two, and to make up its accounts annually instead of semi-annually; to pay dividends semi-annually, to provide a reserve fund for extensions, renewals, maintenance, repairs, etc.; to acquire, hold and sell the stocks and securities of the Montreal and Southern Counties Ry.; to guarantee interest at 4% on an issue of 4% first mortgage bonds of the Grand Trunk Western Ry., to issue additional G.T.R. consolidated debenture stock as may be necessary, and to repeal certain inconsistent provisions of former acts.

Government Railways Provident Fund.

This fund was established April, 1907, by a contribution of 1½% of the monthly salary or wages of each officer or employe, on which 3% is allowed by Government and a sum equal to that contributed by the employes given out of the revenues of the railways. The minimum allowance from the fund is \$20 a month and the maximum is two-thirds of the pay at the time of retirement. The fund is administered by five persons, three of whom are officers of the railway appointed by the Department of Railways and two elected annually by the contributing employes. On April 1, 1909, there had been accumulated a fund of \$225,898.31. The employes' contributions for the year were \$69,949.70, and with the railway contribution, interest, etc., the total fund for the year aggregated \$372,595.09. The total expenditure for the year was \$117,010.01, of which \$103,628.20 was paid out in retiring allowances to employes, leaving a capital balance of \$255,585.08. Since the fund was started 398 employes have been pensioned, of whom 168 were placed on the list during the year under review; 45 pensioners have died, leaving 353 persons now on the list. The total amount paid in pensions since the fund was started has been \$191,608.87.

Reid Newfoundland Co's Works.

A Toronto Globe staff correspondent has been visiting Newfoundland and writing a series of letters. In one from St. John's he says:—"The city's greatest industry is the Reid Newfoundland Co.'s locomotive and car works. These turn out the rolling stock of the road, carry out all repairs, and keep pace with the need of the new lines in supplying equipment. They are now building four locomotives. They also carry out all the work of the dry dock, which is 600 ft. long, 132½ ft. wide in the body, with 85 ft. entrance and 25 ft. depth on the sills. The dock held one of the Empresses. It is available for all purposes, from the patching of a fishing schooner to the repairing of a liner's hull. There are now 250 men employed in the works, but the force is increased to about 400 in the busy season."

Emergency Tools for Cars.

The Board of Railway Commissioners passed the following order: 12206, Nov. 3:—"Every railway company subject to the legislative authority of the Parliament of Canada, operating a railway by steam power, shall cause its sleeping, dining, baggage, mail and express cars and coaches used in passenger service on its railway, to be equipped with emergency tools, consisting of a sledge, axe, and saw; said tools to be kept in a conspicuous place in every such car, so as to be easy and ready of access in case of need, and said cars to be so equipped on or before April 1, 1911. That every such railway company be liable to a penalty of not exceeding \$25 for every failure to comply with the foregoing regulation within the time for its coming into force and thereafter."

The Engineers' Club of Toronto, at a meeting Nov. 10, considered the proposed bylaws of a social club, which it is intended to establish there. The intention is to limit the membership to 500 resident, 200 non-resident, 25 life and 75 associate members. The provisional directors are:—C. M. Canniff, Chairman Engineers' Club of Toronto; A. B. Barry, W. Chipman, J. Galbraith, J. G. Sing, J. B. Tyrrell and A. J. Van Nostrand.

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Alberta Central Ry.—The location plan of the section under construction from Red Deer to Rocky Mountain House shows a line from just south of Red Deer, in tp. 38, range 27, southwesterly to the Red Deer River, where the line turns northwest, and crosses the 5th meridian at Cygnet Lake, passes to the south of Sylvan Lake, crosses the Medicine River south of Eckville, and then proceeds westerly to Rocky Mountain House, through tps. 39, ranges 3, 4, 5, 6 and 7. We are advised that it is expected to complete about 20 miles of grading, and to lay about six miles of track this season. The company had not purchased any rails at the time of our advice, and the six miles of track which it is proposed to lay will be for the purpose of getting in bridge material.

The Board of Railway Commissioners has authorized the A.C.R. to cross the C.P.R.'s Calgary and Edmonton Ry. at Red Deer, by an overhead bridge. The location plans of the line easterly from Red Deer have been approved by the Board of Railway Commissioners to Sounding Creek, in tp. 30, range 5, west of the 4th meridian, and from that point to Moose Jaw, Sask. The line will cross the South Saskatchewan River, between ranges 7 and 8, tp. 21, and will parallel the C.P.R. from Caron into Moose Jaw.

The Board of Railway Commissioners has authorized the building of a branch line at Rocky Mountain House, in tp. 39, range 7, west 5th meridian.

Application is being made to the Dominion Parliament for an act authorizing the building of the following additional lines:—From the present authorized easterly terminus at Saskatoon, northerly and northeasterly to Fort Churchill, on Hudson Bay, with a branch from some point on the line to Port Nelson, also on the Hudson Bay, with power to enter into agreements with the Crown as to the construction, equipment or operation of such a line; from Moose Jaw, Sask., to the International boundary in tp. 1, range 16, west of the second meridian; from the already authorized line between Red Deer River and Cygnet Lake, generally northeasterly to Blackfalds, and Lacombe, Alta.; three branch lines of 30 miles each into the Big Horn Range between the North Saskatchewan and Brazeau Rivers, and two branch lines of 25 miles each, northerly and northeasterly near the crossing of the Brazeau River. An extension of time for the building of the lines already authorized is also asked. (Nov., pg. 909.)

Alberta North Western Ry.—The Alberta Legislature is being asked to amend the act of incorporation of 1906 and the amending acts of 1908 and 1909, in several particulars, and to grant an extension of time for construction. Emery, Newell and Bolton, Edmonton, Alta., are the solicitors. (Aug., 1909, pg. 573.)

Algoma Central and Hudson Bay Ry.—Application is being made to the Dominion Parliament to extend the time for the construction of the projected line from the C.P.R. northward to James Bay, specifically described in chap. 46 of the statutes of 1901, and to authorize the building of a branch from near mile 17 from Michipicoten Harbor northerly for a distance of 9.5 miles.

At a dinner at Sault Ste. Marie, Ont., Oct. 24, to the General Manager of the Lake Superior Corporation, W. C. Franz, he stated the company had provided \$4,000,000 for the completion of the line to C.P.R. main line, and had also determined that it was to be built through to James Bay. The right of way, which was graded to Hawk Lake in 1903, had

been cleaned up, and already six miles of track had been laid on it. Montreal River was to be crossed by a steel viaduct, 1,100 ft. long, the material for which was on order. The subgrade had been cleaned up well on to Hobon, the junction with the C.P.R., and it was hoped to have that section of the line completed next season. (Nov., pg. 909.)

Athabasca Northern Ry.—The Dominion Parliament is being asked to extend the time within which the company may build the lines authorized by chap. 57 of the statutes of 1904-05. Smith, Markey, Skinner, Pugsley and Hyde, Montreal, are the solicitors. (July, 1909, pg. 473.)

British Columbia and White River Ry.—Application is being made to the Dominion Parliament to incorporate a company with this title to build a line from the International boundary between British Columbia and Alaska, near Bear Creek, a tributary of the Chilkat River, northwesterly towards the Aisek River, through the Shakwak Valley to Lake Kluane, and via the Doujek Valley to White River, and if desired, thence to the International boundary between Yukon Territory and Alaska, between the 62nd and 64th parallels of latitude. H. Fisher, Ottawa, is solicitor for applicants.

Burrard Inlet Tunnel and Bridge Co.—The Board of Railway Commissioners has approved the location of this projected line from station 122-57.5 at the west side of Kootenay St., to station 154-86.9 at north side of Burrard Inlet, near Seymour Creek, B.C. This distance consists of the approaches to the proposed bridge across the Narrows; the question of the approval of the other plans filed, which have already been approved by the Minister of Railways, has been held over.

The general plans provide for the building of a bridge across the second narrows of Burrard Inlet, from North Vancouver to near the eastern boundary of Hastings townsite, and a tunnel under the first narrows, from near the mouth of Capilano River to Stanley Park, and either by means of new lines of railway or utilizing some existing lines, connect the bridge and tunnel by a belt line. Some plans have been prepared by Cleveland and Cameron, Vancouver, showing the projected tunnel and connecting lines, and a plan for a bridge at the second narrows has been submitted by Waddell and Harrington. In an interview Nov. 2, J. Y. McNaught, Reeve of North Vancouver, said the line would join the Great Northern Ry. east of False Creek, and on the north side of the inlet it would run west as far as Deep Cove on the North Arm, and eastward as far as Horseshoe Bay on Howe Sound. A diamond drill will be at work shortly finding out the depth required for the foundations of the bridge, which will be located west of the mouth of the Seymour River. (Nov., pg. 909.)

Canadian Western Ry.—See Chicago, Milwaukee & St. Paul Ry.

Chicago, Milwaukee & St. Paul Ry.—A report from Fergus Falls, Minn., Oct. 27, stated that N. J. Kaulman had had a conference with the company's General Passenger Agent with respect to the surveys for a line to Fargo, N.D., and has been assured that these surveys would be extended, as it was the intention of the company to build into Winnipeg, Man.

Engineers representing the Chicago, Milwaukee and Puget Sound Ry., which is the western extension of the Chicago, Milwaukee and St. Paul Ry., are reported to be at work making surveys in the Flathead Valley, and are said to have completed the location of a line from a town in Montana to the International boundary, to connect with the proposed line in Canada. There are several char-

ters in existence covering this line, one or two of which are held by the Canadian Western Ry., which is applying to the Dominion Parliament for some changes in its provisional directors, extending the time for construction, and authorizing it to enter into agreements with other companies. It is said that the C. M. & P.S. Co. is interested in this charter.

Detroit River Tunnel.—Officers of the Michigan Central Rd. state, in reference to the reports current in Windsor, Ont., Nov. 1, that the tunnel between Detroit, Mich., and Windsor, Ont., is altogether too small; that it was designed to admit the use of much larger cars than any now in use on U.S. or Canadian railways. (Nov., pg. 909.)

The Elkhorn Northern Ry. Co. was incorporated last session by the Manitoba Legislature, with power to build a railway from the International boundary in range 27, 28 or 29, north of Antler, N.D., northerly to Elkhorn, and thence to the northern boundary of Manitoba, near Powell. The provisional directors are:—J. H. Miller, J. S. McLeod, G. C. Smith, W. J. Thompson, R. de W. Waller, B. Burke, A. McN. Fraser, H. J. Jones, J. J. Pierce, J. Carse, Elkhorn, Man. (May, 1909, pg. 355.)

Essex Terminal Ry.—The Board of Railway Commissioners has authorized the company to cross with its tracks the Windsor, Essex and Lake Shore Rapid Ry. tracks, at rail level, at Howard Ave., Windsor, Ont. (June, pg. 447.)

Frank, Alta.—At a meeting of the Crow's Nest Pass Improvement League, held at Frank, Alta., Nov. 9, a resolution was passed in favor of increased railway accommodation, and a committee was appointed to obtain from the Alberta Minister of Public Works information as to the charters granted to companies other than the C.P.R. for building railways through the Pass, and to find out what these companies were prepared to do in the way of increasing the railway facilities. At a meeting of the Macleod branch of the League, Nov. 1, a resolution was passed asking the Alberta Government to obtain information from the companies holding charters for building lines through the Pass as to a definite time when they would begin construction.

Hardy Bay to Quatsino Sound.—Application is being made to the British Columbia Legislature to incorporate a company with this title to build a line from Hardy Bay or Port McNeill, or some other convenient place near there, on the eastern shore of Vancouver Island, to Coal Harbor, on the west arm of Quatsino Sound, or to some point on Quatsino Sound, Barnard and Robertson, Victoria, B.C., are solicitors for applicants.

High River and Hudson Bay Ry.—Application is being made to the Alberta Legislature to incorporate a company with this title to build the following lines:—From the western boundary of the province, in tps. 17, 18 or 19, easterly to High River, thence northeasterly to the eastern boundary of the province in tps. 26, 27 or 28; from some point on the last mentioned line near High River northwesterly through Sheep Creek Pass to the western boundary of the province in tp. 19, 20 or 21; from a point near High River southwesterly to the western boundary of the province in tp. 16 or 17. The company is also asking for power to develop water powers and to dispose of electricity for power and lighting purposes. Ballachey and Black, High River, Alta., are solicitors for applicants.

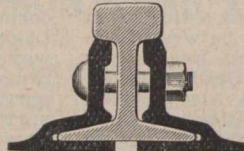
Indian River Ry.—At the recent annual meeting of the Lake Megantic board of trade it was stated that work would be started next spring upon this projected railway; that the line would

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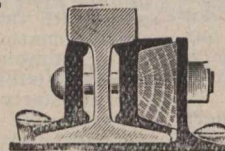
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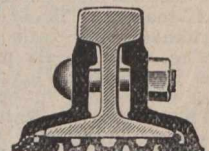
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connect with one in the U.S., and that the surveys for the whole of the line from Rumford Falls, Me., to Megantic, Que., had been completed. (Feb., pg. 109.)

Intercolonial Ry.—F. W. Bowden, Chief Engineer of the Department of Railways, spent some time early in Nov., in inspecting various branch lines in New Brunswick for the purpose of reporting on their physical condition with a view of their being acquired by the Government under the act passed last session.

A building 40 by 40 ft. is being built at Moncton, N.B., as an addition to the gas plant there. This will double the size of the building. The foundations are concrete with brick superstructure.

It is reported that the building of a second track between Moncton and St. John, N.B., will be begun next year. The first section of the work to be done, J. T. Halliday, Superintendent of the Truro-St. John district, is quoted as saying, will be from St. John to Hampton.

The Halifax board of trade was given to understand Nov. 3 that considerable improvements would be made at the deep water terminals as soon as plans were made and approved. The members of the Managing Board inspected the terminals a few days previously, and directed the carrying out of certain temporary improvements, including the doubling of the shed accommodation at pier 4. Work was started Nov. 4. (Nov., pg. 911.)

Kettle Valley Lines.—Application is being made to the Dominion Parliament to authorize the Kettle River Valley Ry., one of the railways operated under this title, to build the following branches:—From Penticton to the International boundary at Osoyoos Lake; from the already authorized line to Allison or Princeton; from the already authorized Coldwater-Fraser River line to Steamboat Mountain mining camp, B.C. Various other powers are asked for, including authority to acquire steam and other vessels, to build docks, etc.; to operate hotels, to carry on an express business, and to issue securities in respect of properties other than its railway lines. The notice is signed by C. B. Gordon, Secretary.

Construction has been started at Greenwood, B.C., by J. B. McLean & Co., on a further section of the line from Midway. A contract has been let to A. Schull for the tracklaying of the 10 miles of grading completed by the old Midway and Vernon Ry., from Midway to Rock Creek. This work will be completed at once. Thirty miles of the extension are now under contract from Rock Creek to Penticton, and a similar mileage from Merrit easterly towards Penticton is also under contract. Track laying has been started at Merrit, 65 lb. rails being used, and it is expected to have the first 10 miles laid towards Penticton by Dec. 31. The divisional headquarters will be at Penticton, the plans for which include a wharf on the lake. A. McCullough, Engineer in charge of Construction, and J. P. Ford, the C.P.R. Resident Engineer at Revelstoke, B.C., were in Penticton, Oct. 28, going over the site of the yards, etc. (Nov., pg. 911.)

Kootenay and Alberta Ry.—C. Fergie, Manager of the Western Coal and Coke Co., Montreal, which is operating the Beaver Creek Coal Mines, is reported to have stated, prior to his going east, Oct. 27, that the line would be built at an early date, and that plans for the laying out of the Beaver Creek, Alta., town-site, the building of miners' cottages, etc., were under consideration by the directors at Montreal. A local report says the staking out of the route of the line is being proceeded with. (Aug., 1909, pg. 573; see also Lethbridge Collieries, Nov., pg. 911.)

Lloydminster and North Western Ry.—The Alberta Legislature is being asked to incorporate a company with this title to build a line from Lloydminster northwesterly to St. Paul de Metis, Alta. J. D. Munro, Lloydminster, is solicitor for applicants.

Manitoba and Keewatin Ry.—The Dominion Parliament is being asked to extend the time within which this projected railway may be built. (Sept., pg. 727.)

Midland Continental Ry.—According to press reports this railway, "now under construction from Winnipeg to the Missouri River," has completed grading "for the first fifty mile division between Jamestown and Edgeley, N.D.," and that following a recent inspection by the company's officials, "it was announced that rails would be laid and trains running by spring." No names are mentioned in connection with the project, but it is said "the builders of the road are principally Chicago and Middle West business men and capitalists." (See American Midland Ry., Sept., 1907, pg. 663.)

The New Brunswick Coal and Ry. Commissioners have accepted the tender of P. Lea & Co., Moncton, N.B., for the erection of a two stall engine house at Minto, N.B., to replace the one recently burned. The work is expected to be completed by Dec. 31. (Nov., pg. 911.)

Ontario, Hudson's Bay and Western Ry.—Application is being made to the Dominion Parliament to extend the time within which the company may build its projected railway. (June, 1909, pg. 442.)

Owen Sound and Meaford Ry.—A conference was held in Owen Sound, Ont., Nov. 12, between the provisional directors of the O.S. & M. Ry., the mayor and chairman of the railway committee of the Owen Sound town council, with respect to this projected railway. It was decided to endeavor to secure the co-operation of the towns across the three counties of Bruce, Grey and Simcoe, and to secure a charter for a line from Southampton, through Owen Sound, Meaford, Thornbury, Collingwood, and on to Orillia, so that the company would have a charter that could be utilized to make connection with any of the three big railways, or to enable the company to avail itself of any bargain that might be made to construct and operate the road. (June, pg. 451.)

Pacific and Peace River Ry.—Application is being made to the Dominion Parliament to incorporate a company with this title to build a railway from near Bella Coola on Burke Channel, B.C., following the Bella Coola River valley for about 20 miles, thence northeasterly, passing east of Teta Chuck, Cheslatta and Fraser Lakes to Fort Fraser, thence northerly, passing east of Stewart Lake to Fort St. James; thence northeasterly to Fort McLeod, and through the Pine Pass to Peace River near Dunvegan, Alta., about 480 miles. Power is also asked to build and operate car ferries, wharves, docks, etc., in connection with the line, and any branches which may be authorized. J. A. Ritchie, Ottawa, is solicitor for applicants.

Peace River Great Western Ry.—The Alberta Legislature is being asked to incorporate a company with this title to build a line from Edmonton northwesterly to the southwesterly end of Lesser Slave Lake, thence northwesterly to and along the Peace River, Hudson, Howell, Ormond and Marlatt, Edmonton, Alta., are solicitors for applicants.

Pincher Creek, Cardston and Montana Ry.—A Pincher Creek, Alta., dispatch of Oct. 31 says no construction has been done, but it is stated that the management is ready to begin at any time. J. A. Taylor has been in Ottawa,

and C. Luber, the President of the company, has had an interview with the Alberta Premier in connection with the project. (Nov., pg. 911.)

Pontiac Central Ry.—An extension of time for the building of this projected railway is being asked from the Dominion Parliament. J. M. Wilson, Montreal, is President. (Dec., 1907, pg. 923.)

Porcupine District, Ontario.—The line to the Porcupine district, for which the Government has entered into an arrangement with a syndicate, of which E. A. Walberg is head, starts from the Temiskaming & Northern Ontario Ry., near mileage 225, and runs east of the lake to Frederickhouse. Several gangs of men were reported, Nov. 14, to be engaged in cutting out the right of way. J. R. Nichols is superintendent in charge of construction. The line will be operated by steam at first, but it is expected to arrange for its operation by electricity later on. The Ontario Government will facilitate the application for a charter of incorporation next session of the Legislature. (Nov., pg. 913.)

Prince Edward Island Ry.—A deputation from Prince Edward Island recently waited on the Dominion Government at Ottawa to urge the building of a railway from New London along the north shore. This branch would start from Emerald or Kensington, on the main line, and pass through Clifton to Stanley Bridge in New London, about 12 miles, but those interested in promoting the building of the line suggest that it should be extended from New London to a junction with the main line between Mount Stewart and Royalty Junction, 23 miles, making the total length of the line about 35 miles. (Oct., pg. 831.)

Quebec Central Ry.—The Chaudiere Valley extension from St. George, Beauce, to St. Justine, Que., 28 miles, was passed for traffic by E. V. Johnson, inspecting engineer of the Department of Railways, Ottawa, Oct. 26. The line runs through a good farming country, and opens up considerable timber areas. The stations on the section now opened for traffic are at Morisset, Ste. Rose, St. Germaine, and St. Justine. At this point the line is only eight miles from the International boundary between Quebec and Maine. Track has been laid beyond St. Justine for about a mile, and it is expected that the line will be completed to St. Sabine road by the end of the year. The extension will ultimately effect a junction with the Temiscouata Ry., at Cabano, Que. (Oct., pg. 831.)

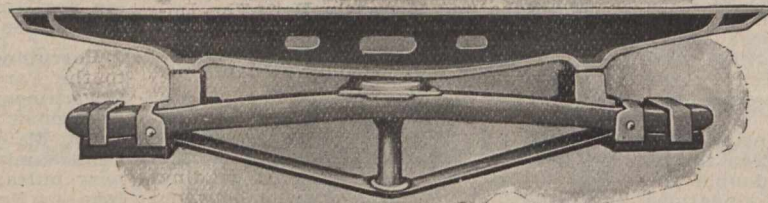
Queen Charlotte Island Ry.—R. C. Brown, one of the provisional directors, returned to Prince Rupert, B.C., recently from Queen Charlotte Island, where he had been inspecting some coal areas on Skidegate Inlet, in which he is interested. The route of the proposed railway is from between Skidegate and Queen Charlotte City to Masset Inlet, through an area in which there are extensive deposits of coal, and adjacent to which there are large areas of timber. (May, pg. 353.)

Reid Newfoundland Ry.—The 700 ft. trestle across Gott's Cove, on the Bonavista branch line, was completed Oct. 25, and tracklaying was proceeded with to Indian Brook, where another trestle was being built. Trestles are also being built at North West Arm, and at Freshwater, and these were expected to be ready by Dec. 1. The grading is completed practically to Bonavista, and it is expected that track will be laid on the entire branch by Dec. 31. (Nov., pg. 911.)

Saskatoon and Hudson Bay Ry.—The Dominion Parliament is being asked to incorporate a company with this title to build a railway from Saskatoon, Sask., northerly to Melfort, and northeasterly to Pas Mission. The notice of applica-

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tion is signed by V. T. Bartram, Secretary, Toronto, and is dated at Ottawa.

St. John Valley Ry.—F. B. Carvell, M.P., Woodstock, N.B., in discussing the prospects of railway construction in the St. John Valley, St. John, N.B., Nov. 12, said he believed a line from Grand Falls to St. John would be under construction within the next two years, and for its accomplishment he looked to one of the big railways. (Nov., pg. 913.)

Temiskaming and Northern Ontario Ry.—Engineers have secured a new location for the line between North Bay and Riddle, Ont., 34 miles, which will reduce gradients, and cut out a number of curves. The new route is easterly of the present line. The Commissioners have, it is said, decided to apply to the Ontario Government for \$1,500,000 to enable them to carry out the plans. A reduction in operating expenses will, it is expected, offset the cost of the new line.

The Ontario Premier said Nov. 12, that the Government was not thinking of, and had not considered the possibility of selling the line to the C.P.R., the G.T.R. or any other company.

Toronto Civic Railway.—Good progress is being made with the grading for this short line along the eastern bank of the Don River, which the Toronto city council is building to connect the several lines entering Toronto with the Ashbridge's Bay industrial district. We are advised that an arrangement has been made with the railway companies for the supply of rails and other materials. (Nov., pg. 913.)

Toronto, Hamilton and Buffalo Ry.—The Board of Railway Commissioners has granted the company's application to build spur lines across Grant Ave., Wentworth St., Sanford Ave. and Sherwood Ave., Hamilton. The application was opposed by the Hamilton city council on the ground that it was the thin end of the wedge to make of the eastern district a large freight yard. (Oct., pg. 831.)

Vancouver North to Grouse Mountain.—It is said that among those who are making application to the British Columbia Legislature for the incorporation of a company to build a railway up Grouse Mountain are Macdonell and Gzowski, engineers and contractors, Vancouver; C. H. Allen, San Francisco, Cal.; G. M. Gibbs, and W. E. Graveley, Vancouver. (Nov., pg. 913.)

Windsor to Chester, N.S.—Local press reports state that a preliminary survey is being made for a line from Windsor to Chester, in Lunenburg county. Windsor is the point where the Dominion Atlantic Ry., the old Midland Ry. of N.S., and the Windsor branch of the Intercolonial Ry. meet, the whole being operated by the D.A. Ry., which has passed under the control of the C.P.R., while Chester is a seaport, and a station on the Halifax and South Western Ry., 51 miles from Halifax.

The Wainwright, Alta., board of trade has received a letter from the Canadian Monorail Corporation, enquiring as to the feasibility of establishing a monorail system of transportation in the district, which, it is claimed, is entirely suitable for such a farming district, if it is sufficiently settled to warrant the venture.

A bench warrant was issued at Montreal, Nov. 13, for the arrest of E. Smith, a C.P.R. sleeping car conductor, who failed to appear after being committed for trial on charges of theft of sleeping car fares and railway tickets. In connection with the case, a C.P.R. official is reported to have said that the traveling public is very much to blame for these thefts, in offering facilities and inducements.

Canadian Northern Ry. Earnings, Etc.

Gross earnings, working expenses and net profits from July 1, 1910, with increases over, or decreases from, those of 1909-10:

	Earnings.	Expenses.	Net Earnings.	Net Increase
July	\$ 1,225,100	\$876,900	\$348,200	\$118,600
Aug.	1,093,000	830,000	263,000	58,600
Sept.	1,279,900	898,700	381,200	69,700
	\$3,598,000	\$2,605,600	\$992,400	\$246,900
Inc.	\$ 870,600	\$ 623,700	\$246,900

Approximate gross earnings for Oct., \$1,627,800, and for two weeks ended Nov. 14, \$737,100, against \$1,364,200 and \$710,100 for same periods 1909.

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

Gross earnings, working expenses, net profits, increases or decreases over 1909-10, from July 1, 1910:

	Earnings.	Expenses.	Net Profits.	Net Increase
July	\$3,869,214.32	5,384,594.73	\$3,484,619.50	1,004,748.86
Aug.	9,255,331.67	5,563,659.34	3,691,672.33	727,614.46
Sept.	9,315,213.07	5,403,614.03	3,911,599.04	479,710.47

\$27,439,759.66 \$16,351,868.10 \$11,087,891.56 \$2,212,073.79
Inc. \$4,549,567.08 \$2,337,493.29 \$2,212,073.79

Approximate gross earnings for Oct., \$5,573,000, and for two weeks ended Nov. 14, \$4,375,000 against \$5,271,000 and \$4,243,000 for same periods 1909.

DULUTH, SOUTH SHORE AND ATLANTIC RY.—Operating revenue for Sept., \$299,154.60; expenses, \$186,608.09; net revenue, \$112,546.51, against \$310,502.20 operating revenue; \$190-159.88 expenses; \$120,342.32 net revenue for Sept., 1909. Aggregate operating revenue for three months ended Sept. 30, \$947,616.60; expenses, \$591,958.63; net revenue, \$355,657.97, against \$904,176.30 aggregate operating revenue; \$591,293.31 expenses; \$312,882.99 net revenue for same period 1909. Approximate gross earnings for Oct., \$156,459 and for two weeks ended Nov. 14, \$127,992, against \$174,498 and \$136,025 for same periods 1909.

MINERAL RANGE RD.—Operating revenue for Sept., \$65,284.45; expenses \$64,137.28; net revenue, \$1,147.17, against \$74,965.51 operating revenue; \$59,397.72 expenses; \$15,567.79 net revenue for Sept., 1909. Aggregate operating revenue for three months ended Sept. 30, \$187,784.78; expenses, \$195,764.83; net expenses, \$7,980.05, against \$224,931.89 operating revenue; \$182-640.50 expenses; \$42,291.39 net revenue for same period 1909. Approximate gross earnings for Oct., \$33,484, and for two weeks ended Nov. 14, \$29,613, against \$40,494 and \$30,382 for same periods 1909.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY.—Operating revenue for Sept., \$1,270,736.62; expenses and taxes, \$751,746.93 operating income, \$518,989.69, against \$1,669,434.05 operating revenue; \$811,404.25 expenses and taxes; \$858,029.80 operating income for Sept., 1909. Aggregate operating revenue for three months ended Sept. 30, \$3,682,800.39; expenses and taxes, \$2,270,710.44; operating income, \$1,412,089.95, against \$4,018,060.04 aggregate operating revenue; \$2,263,062.67 expenses and taxes; \$1,754,997.37 operating income for same period 1909. Approximate gross earnings for Oct., \$1,122,786, and for two weeks ended Nov. 14, \$996,161, against \$1,341,497 and \$1,044,290 for same periods 1909.

CHICAGO DIVISION.—Operating revenue for Sept., \$790,250.13; expenses and taxes, \$570-111.46; operating income, \$220,138.67, against \$732,529.72 operating revenue; \$500,589.31 expenses and taxes; \$231,940.41 operating income for Sept., 1909. Aggregate operating revenue for three months ended Sept. 30, \$2,407,976.36; expenses and taxes, \$1,700,792.37; operating income, \$707,183.99, against \$2,180,808.75 aggregate operating revenue; \$1,427,301.39 expenses and taxes; \$753,507.36 operating income for same period 1909.

Grand Trunk Ry. Earnings, Expenses, Etc.

The following figures show the earnings, expenses, etc., of the G.T.R., C.A.R., G.T. Western Ry., and D.G.H. & M.R. for Sept., 1910, and 1909, respectively:

GRAND TRUNK RAILWAY.			
	1910.	1909.	
Earnings	\$3,217,700	\$3,058,300	
Expenses	2,269,200	2,106,900	
Net earnings	\$948,500	\$951,400	
CANADA ATLANTIC RAILWAY.			
	1910.	1909.	
Earnings	\$175,800	\$189,600	
Expenses	158,700	160,200	
Net earnings	\$17,100	\$29,400	
GRAND TRUNK WESTERN RAILWAY.			
	1910.	1909.	
Earnings	\$529,600	\$521,000	
Expenses	402,100	364,600	
Net earnings	\$127,500	\$156,400	

DETROIT, GRAND HAVEN AND MILWAUKEE RY.

	1910.	1909.
Earnings	\$184,900	\$180,000
Expenses	147,700	125,000

Net earnings \$37,200 \$55,000
Approximate earnings for Oct., \$4 200,039, and for two weeks ended Nov. 14, \$1,802,180, against \$4,043,361 and \$1,826,468 for same periods, 1909.

TRAFFIC RECEIPTS OF THE SYSTEM.

Aggregate from July 1 to Oct. 31:			
	1910.	1909.	
Grand Trunk Ry.	\$2,481,267	\$2,434,609	
Canada Atlantic Ry.	137,289	150,410	
G.T. Western Ry.	403,703	430,389	
D.G.H. & M. Ry.	136,562	141,364	
Totals	\$3,158,821	\$3,156,772	

Railway Commissioners' Traffic Orders.

Summaries of other traffic orders are given on another page under "Orders by Railway Commissioners":—

SAW LOGS FROM RAINY RIVER.

12107. Sept. 22.—Re application of the Rat Portage Lumber Co., Ltd., under secs. 314, 318, 321, and 323 of the Railway Act, for an order directing the Canadian Northern Ry. to reduce its tolls, charges or freight rates for carrying the applicant's saw-logs from the Rainy River and points adjacent thereto, to the applicant's mills, in St. Boniface, Man.; that no switching charge be allowed; that the railway supply cars as required by the applicant, to enable the applicant to carry on its business; that the railway pay to the applicant any damages caused by its neglect and refusal to supply the necessary cars for the removal and haulage of the applicant's logs, and also, any additional monies the applicant was obliged to incur in handling and carrying over its logs. It is ordered that it is the duty of the C.N.R., as successor of the Manitoba & South Eastern Ry., to haul pine and spruce logs upon its lines: (a) for any distance up to 150 miles from Winnipeg; (b) from the point, if any, where the railway touches Rainy River to Winnipeg, at a rate not to exceed \$2.50 per 1,000 ft. b.m., in accordance with the provision of 61 Vic., chap. 43, Manitoba. That the C.N.R. file with the Board, joint tariffs with the Minnesota & Manitoba Ry. showing through rates from Minnesota points to Winnipeg by continuous route provided by the Minnesota & Manitoba Ry. and the C.N. Ry. as successors to the Manitoba & South Eastern Ry., not to exceed \$2.50 per 1,000 ft. b.m. That if, for any reason, the C.N.R. and the Minnesota & Manitoba Ry. are unable to agree upon such joint tariffs, or the division thereof, the C.N. Ry. shall file with the Board tariffs showing rates from the International boundary line between Minnesota and Manitoba, which, added to the local rate upon the Minnesota & Manitoba Ry. from the point of origin to such International boundary line shall not exceed \$2.50 per 1,000 ft. b.m. That the \$2 switching toll charged by the C.N.R. for the switching services rendered is hereby disallowed.

The annual meetings of the Canadian Society of Civil Engineers will be held at Winnipeg, Jan. 24 to 27, 1911.

We are advised that while the G.T.R. management is considering the situation at Turcot, Que., Belleville and North Bay, Ont., to see what interest the employes would take in the establishment of Y.M.C.A., buildings at these points, no definite action has been decided upon.

The Temiskaming and Northern Ontario Ry. Commission has granted a general increase in wages to conductors, brakemen, baggagemen and yardmen, effective from Oct. 1, varying from 10 to 25%. These increases, it is stated, bring the T. & N.O.R. into line with other companies' rates.

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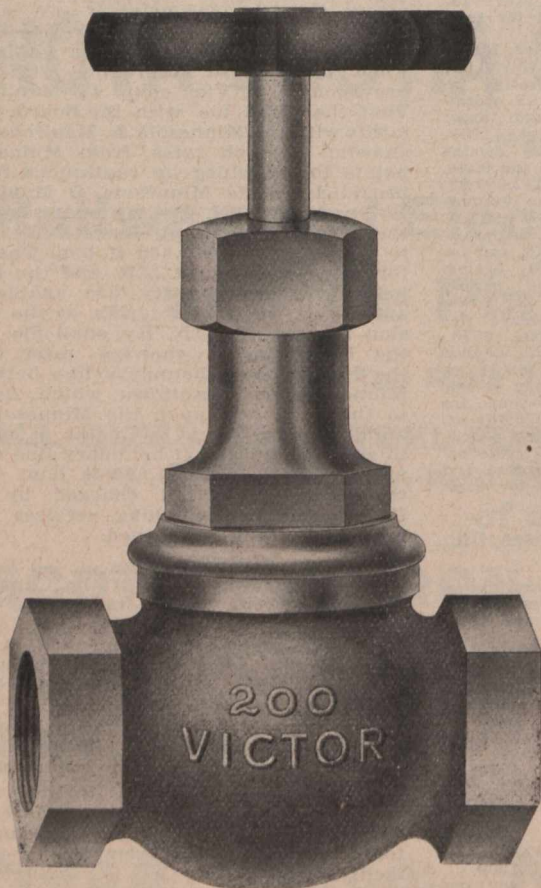
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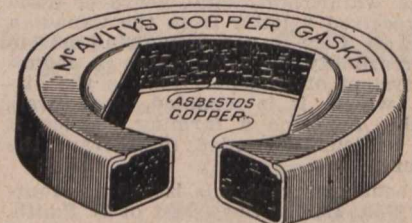
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Orders by the Railway Commissioners.

Beginning with June, 1904, we have published in each issue summaries of orders passed by the Board of Railway Commissioners, so that subscribers who have filed our paper have a continuous record of the Board's proceedings. No other paper has done this.

The dates given of orders, immediately following the numbers, are those on which the hearing took place and not those on which the orders were issued. In many cases orders are not issued for a considerable time after the date assigned to them.

11949. Oct. 14.—Authorizing Detroit River Tunnel Co. to open for traffic its tunnel and railway works between Windsor, Ont., and Detroit Mich.
- 11950, 11951. Oct. 10.—Authorizing C.N.R. to build between lots 85 and 86, and between lots 105 and 91, Cote St. Pierre South, Two Mountains county.
11958. Oct. 15.—Authorizing G.T.R. to build across road between lots 28 and 29, con. B, Brighton tp., Ont.
- 11953 to 11958. Oct. 14-15.—Authorizing city of Vancouver, B.C., to lay sewers and culvert under C.P.R. at six points.
11959. Oct. 14.—Authorizing W. L. Gllson, Dixville, Que., to lay water pipe under G.T.R.
11960. Oct. 14.—Authorizing city of Brantford, Ont., to lay sewers under G.T.R. on South Market St.
- 11961, 11962. Oct. 14.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across G.T.R. at Lake Shore Road, Toronto, and across C.P.R. telegraph wires in Waterloo tp.
- 11963 to 11969. Oct. 14.—Authorizing city of St. Thomas, Ont., to erect electric wires across C.P.R. telegraph wires at three points, and across Bell Telephone Co.'s wires at four points.
11970. Oct. 14.—Authorizing Nipissing Power Co. to erect wires across G.T.R. at Callander, Ont.
11971. Oct. 15.—Ordering G.T.R. within 90 days to install improved electric bell at crossing two miles west of Clinton, Ont.
11972. Oct. 17.—Approving Kettle River Valley Ry. bylaw authorizing O. E. Fisher, G.F. & P.A., to prepare and issue tariffs.
11973. Oct. 15.—Temporarily approving Bell Telephone Co.'s agreement with North American Telegraph Co., and Fenella Rural Telephone Co., July 1, 1909.
11974. Oct. 4.—Dismissing C.N.Q.R. application for order fixing the terms under which mining operations or quarrying may be carried on under its lines crossing lots 647, 648 and 649, Beauport parish.
11975. Oct. 15.—Authorizing G.T.R. to reconstruct bridge over York and Vaughan Road, York tp., Ont.
11976. Oct. 15.—Authorizing C.P.R. to reconstruct bridge over Pincher Creek, on its Alberta Division.
11977. Oct. 17.—Authorizing Mount McKay and Kakabeka Falls Ry. to operate its cars over crossing of G.T.P.R. at Yonge St., Fort William, and authorizing G.T.P.R. Co. to operate its trains over the crossing, not exceeding 10 miles an hour, without being brought to a stop.
11978. Oct. 6.—Authorizing C.N.O.R. to build across roads in lot 20, broken front concession, Thurlow tp., Ont.
11979. Oct. 4.—Authorizing G.T.R. to build branch to Continental Bag and Paper Co.'s premises, Ottawa.
11980. Oct. 14.—Approving location of C.P.R. station at Arthur, Ont.
- 11981, 11982. Oct. 15.—Authorizing G.T.R. to build branches to premises of Niagara Brand Spray Co.'s premises, near Burlington, and Queen City Oil Co., Toronto.
11983. Oct. 17.—Approving change in location of steps to property of Mrs. Merrin and J. Elliott, at subway where Montreal Road crosses G.T.R., Kingston, Ont.
11984. Oct. 12.—Authorizing city of Hamilton, Ont., to carry Cannon St. grade across T. H. & B. Ry.
11985. Oct. 12.—Ordering G.T.R. to install gates at Sherman Ave. and Lottridge St. crossings, Hamilton, Ont., and appoint watchmen to attend between 6.30 a.m. and 6.30 p.m. daily; work to be completed within three months, and authorizing G.T.R. to lay northerly track there, the work to be completed within 12 months.
11986. Oct. 15.—Authorizing C.P.R. to build spur to Dominion Marble Co.'s premises, South Stukly tp., Que.
11987. Oct. 17.—Authorizing C.P.R. to use bridges 12.55 and 34.9, and subways at William and Pine Sts., Woodbridge, Ont.
11988. Oct. 17.—Approving C.N.R. location through tps. 26-23, r. 24, w. 4 m., w. 5 m., Alta., mileage 212.83 to 257.32, from junction with the main line at Vegreville, Alta.
11989. Oct. 13.—Authorizing G.T.R. to remove Sylvester's siding, Victoria Ave., south

of Kent St., Lindsay, Ont., 65 ft. from Kent St.

11990. Oct. 17.—Authorizing C.N.R. to build branch through tps. 24 and 25, r. 15, w. p.m., Man., mileage 0 to 6, from junction with Ochre River branch, and to cross highways within such mileage.

11991. Oct. 13.—Ordering that upon payment of \$30 by H. Pratt, Barrie, Ont., to G.T.R., the latter build farm crossing in west half of lot 6, con. 7, Vespra tp., Ont.

11992. Oct. 18.—Authorizing Essex Terminal Ry. and Lake Erie and Detroit River Ry. to operate trains over joint crossing at Walkerville, Ont.

11993. Oct. 18.—Approving C.P.R. location from international boundary at mileage 0 to 3.54, Mansonville, Que.

11994. Oct. 18.—Authorizing C.P.R. to open for traffic that portion of its line known as the Virden-MacAuley Branch, mileage 0 to 14, Man.

11995. Oct. 17.—Authorizing G.T.R. to build extension of branch authorized by order 11064, July 5, from lot 103, con. 1, to lot 8, con. 2, Gwillimbury tp., Ont.

11996, 11997. Oct. 17.—Authorizing C.P.R. to build spurs for J. Stewart & Co., Westmount, Que., and M. Rumely Co., Regina, Sask.

11998. Oct. 17-18. Authorizing Ontario Hydro-Electric Power Commission to erect wires across Pere Marquette Rd. at two points, and across C.P.R. telegraph wires at one point.

12001. Oct. 8.—Authorizing town of Arnprior, Ont., to lay pipes under C.P.R. at Vancouverland St.

12002. Oct. 18.—Authorizing town of Joliette, Que., to lay sewer under C.N.Q.R. at St. Charles Borromeo St.

12003, 12004. Oct. 18.—Authorizing city of Toronto to lay sewer under C.P.R. at Dovercourt Road and Dufferin St.

12005. Oct. 18.—Authorizing town of Arnprior, Ont., to lay pipe under G.T.R. at Vancouverland St.

12006. Oct. 18.—Approving C.N.O.R. revised location from Deseronto to Shannonville, Tyndinga and Thurlow tps., mileage 0 to 12.61.

12007. Oct. 18.—Authorizing G.T.P.R. to cross highways between secs. 1 and 2, and 1 and 36, tp. 34, r. 1, w. 3 m., Sask.

12008, 12009. Oct. 18.—Authorizing C.N.R. to build across 14 highways in tp. 24, west of principal meridian, and across 33 highways west of fourth meridian.

12010. Oct. 18.—Authorizing C.P.R. to build bridge over North Saskatchewan River, at Edmonton, Alta.

12011. Oct. 18.—Amending order 11435, Aug. 22, which authorized G.T.R. to build branch for National Carbon Mfg. Co., by striking out "National Carbon Manufacturing Co." and substituting "Canadian National Carbon Co."

12012. Sept. 23.—Authorizing C.N.R. to build spur across Mulvey and Fleet Aves. to block 10, Winnipeg.

12013. Oct. 12.—Ordering G.T.R. to erect standard gates at John St. crossing, Aylmer, Ont., to be operated between 7 a.m. and 7 p.m. daily, by a watchman.

12014. Oct. 18.—Approving Esquimalt and Nanaimo Ry. Standard Passenger Tariff, C. R.C. 20, at 4c. a mile on its Wellington-Cameron Lake extension.

12015. Oct. 19.—Dismissing application of T. Brooks, Ottawa, re rate on bark between Low and Chelsea, Que., and Kingston, Ont.

12016. Oct. 19.—Recommending to Governor-in-Council for sanction Montreal Terminal Ry. bylaw.

12017. Oct. 19.—Authorizing J. Thomas to lay water pipe under G.T.R. on lot 6, con. 1, Dover tp., Ont.

12018. Oct. 12.—Ordering G.T.R. to provide protection at Josephine St. crossing, Wingham, Ont., by appointing a watchman to be on duty between 6 a.m. and 7 p.m. daily.

12019. Oct. 19.—Authorizing C.P.R. to open for traffic portion of its Pheasant Hills branch, mileage 430.39 to 561.63, between Wilkie, Sask., and Hardisty, Man., and rescinding order 10217, Apr. 18.

12020. Oct. 20.—Authorizing C.P.R. to build three extensions of its spur across Rose St., Regina, Sask.

12021. Oct. 19.—Approving change in location of C.P.R. main line as now constructed between Elko and Wardner, B.C.

12022. Oct. 12.—Authorizing T. H. & B.R. and G.T.R. to build spur between Wentworth St. South and Victoria Ave. South, Hamilton, Ont., from the respective main lines to and across, and forming a junction with each.

12023. Oct. 18.—Authorizing C.N.R. to build across 73 highways w. 4th m.

12024. Sept. 27.—Authorizing C.N.O.R. to cross G.T.R. overhead, and to build viaduct over Port Hope creek, Hope tp.

12025 to 12027. Oct. 19.—Authorizing C.N.O.

R. to build between lots 194 and 196, con. 1, Chatham tp., and across Mary, Maria, James, John, Pinnacle and Water Sts., Belleville.

12028, 12029. Oct. 20.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across T. H. & B. at Pearl St., Hamilton, and telephone wires across P.M.R. at lot 19, con. 2, Westminster tp.

12030. Oct. 18.—Authorizing Lethbridge Collieries, Ltd., to lay pipe under C.P.R. in s.w. ¼ sec. 21, tp. 9, r. 22, w. 4 m.

12031. Oct. 14.—Authorizing C.P.R. to carry its Mimico cut-off in Etobicoke tp. across Scarlett Rd., Chadwick Ave., Church, Dundas and Montgomery Sts., and two road allowances in con. 5, also to raise grade of Dundas St. and Toronto suburban Ry. on Dundas St.

12032, 12033. Oct. 19.—Authorizing C.N.O. R. to build across Front and Church Sts., Belleville.

12034, 12035. Oct. 18.—Authorizing Kings-ton and Pembroke Ry. to build bridges 87.2 and 79.2.

12036. Oct. 13.—Authorizing C.N.O.R. to build extension of its siding across Muskoka Road, Wasnago.

12037. Oct. 13.—Refusing application Ethel A. Bayly, Toronto, re rate charged by the Bell Telephone Co.

12038. Sept. 24.—Refusing application of J. T. Hall, Yorkton, Sask., for farm crossing over G.T.P.R.

12039. Sept. 23.—Dismissing application of Grain Growers' Association of Kenville, Man., that rate charged by C.N.R. on shipments of grain on its Thunder Hill branch are excessive and discriminatory.

12040. Sept. 6.—Ordering Vancouver, Victoria and Eastern Ry. to widen dump on Oscar St., Abbotsford, B.C., to 20 ft. top and guarded by railings; and to build subway on Montrose Ave. 20 ft. clear in width, and to open said Avenue for traffic, work to be finished by Sept. 1, 1911.

12041. Sept. 1.—Ordering Esquimalt and Nanaimo Ry. to carry Wilson St., Victoria, B.C., across its right of way, the city removing all trees on southwest corner of crossing and undertaking that no obstruction to the view be allowed to be erected on northwest side.

12042, 12043. Sept. 6.—Ordering Vancouver, Victoria and Eastern Ry. to build a wooden bridge where its cutting intersects Woodland Drive, and within six months, to build wooden bridge where it intersects Lake-wood Drive, Vancouver, B.C.

12044. Sept. 21.—Ordering city of Moose Jaw Sask., to build subway under railway at Eleventh St.

1204. Sept. 22.—Rescinding order 11654, Sept. 13, which authorized C.P.R. to build spur from near Roseberry St. to near Tenth St., also four sub-spurs from the last named, in Brandon, Man.

12046. Sept. 22.—Ordering C.N.R. to provide culverts over its right of way in Montcalm municipality, Man., at four points, and to provide approaches to crossing of highway on or adjoining river, lots 251 and 253.

12047. Sept. 22.—Authorizing C.P.R. to cross C.N.R. and G.T.P.R. with its second track, at Portage la Prairie, Man.

12048. Sept. 23.—Rescinding order 8914, Dec. 15, 1909, which approved highway crossing and road diversion by G.T.P.R. between secs. 15 and 22, tp. 33, r. 28, w. 2 m., Sask.

12049. Sept. 22.—Rescinding order 11156, July 11, which authorized connection of G.T.P. Branch Lines Co.'s Yorkton branch with C.N.R. at Canora, Sask.

12050. Oct. 13.—Ordering that C.P.R. crossing of Elizabeth St., Toronto, be protected by building a subway within one year from date.

12051. Oct. 13.—Authorizing Essex Terminal Ry. to cross, at rail level, the Windsor, Essex and Lake Shore Rapid Ry., at Howard Ave., Windsor, Ont.

12052. Oct. 7.—Authorizing Bay of Quinte Ry. to move its tracks from its yards at Napanee, Ont.

12053, 12054. Oct. 21.—Authorizing C.P.R. to use bridges 1.9, 43.3 and 51.3 on its Prescott Branch; 18.2 and 18.39 on its Brockville Branch, and bridge on Smart's siding, Brockville loop, Ont.

12055. Oct. 21.—Authorizing Alberta Central Ry. to cross overhead C.P.R. Calgary & Edmonton branch, at Red Deer, Alta.

12056. Oct. 20.—Authorizing G.T.R. to build passing track upon and across Division and Prince Edward Sts., Brighton, Ont.

12057. Oct. 20.—Authorizing C.N.O.R. to build across Kingston Road, lot 33, con. 1, Sidney tp.

12058. Oct. 20.—Amending order 11288, July 25, approving portions of Alberta Central Ry. by approving two miles east of Red Deer, instead of one mile.

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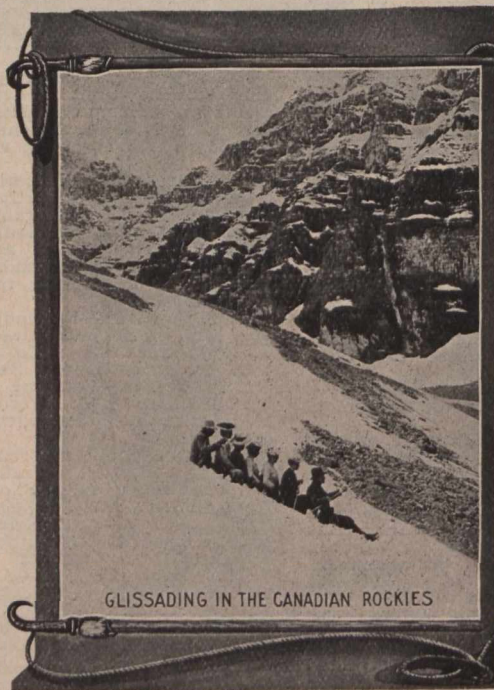
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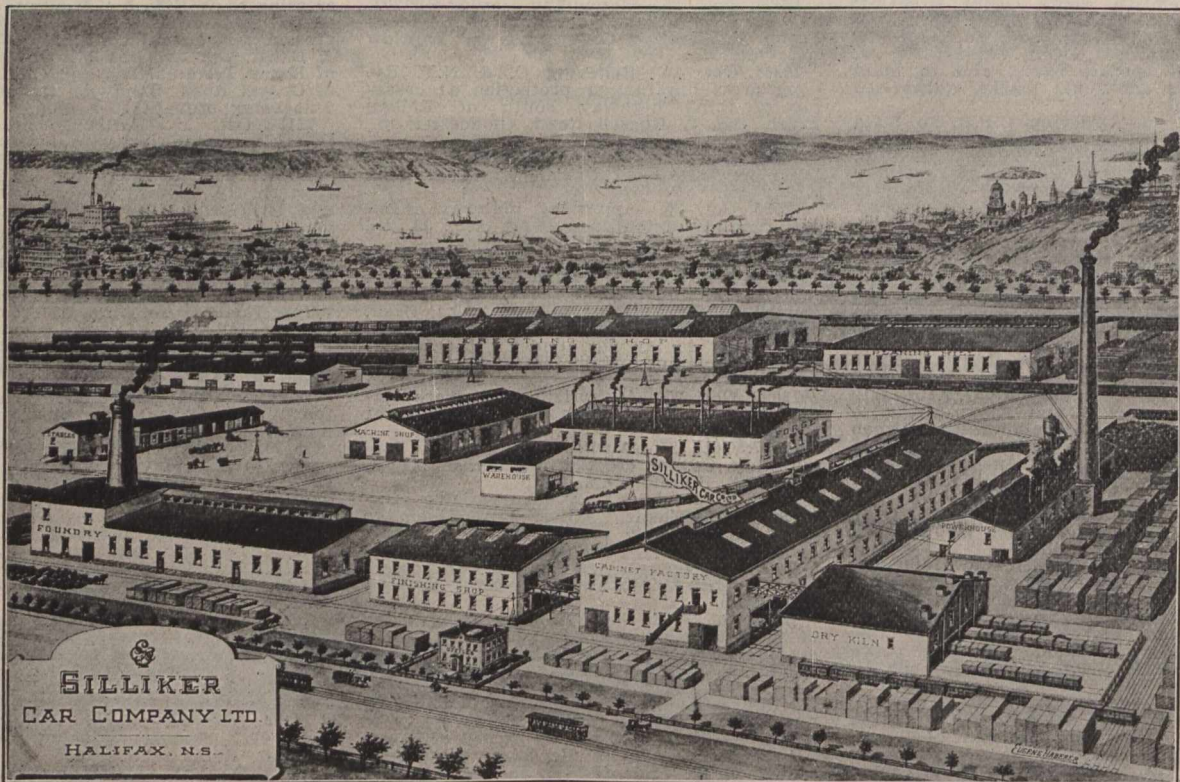
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12059. Oct. 21.—Authorizing town of Buckingham, Que., to lay sewer pipe under C.P.R. at Church St.
12060. Oct. 21.—Authorizing G.T.R. to build branch to Canada Refining and Smelting Co.'s premises, South Orillia tp., Ont.
12061. Oct. 12.—Ordering G.T.R. to install gates at Sherman Ave. and Lottridge St. crossings, Hamilton, Ont., appointing a watchman to operate same, and to build northerly two additional tracks, authorized by order 3370.
12062. Sept. 15.—Ordering C.P.R. to build bridge about 1,200 ft. west of present crossing at mileage 2.6, west of Lethbridge, Alta., and another at mileage 10.6.
12063. Oct. 21.—Authorizing town of Brantford, Ont., to lay sewer pipe under T.H. & B.R. on South Market St.
12064. Oct. 21.—Authorizing town of Meaford, Ont., to lay pipe under G.T.R. at St. Vincent St.
12065. Oct. 22.—Amending order 11822, Sept. 17, which authorized the erection of gates at C.P.R. crossing of Fourth St. west, Calgary, Alta., by providing that 20% of the cost be paid out of the Railway Grade Crossing Fund.
12066. Oct. 22.—Authorizing G.T.P.R. to build between secs. 7 and 12, tp. 44, r. 6, w. 4 m.; to close road allowance between south boundary of its right of way and north boundary of secs. 7 and 12, and divert highway to a crossing 415 ft. east of road allowance.
12067. Oct. 22.—Authorizing C.N.R. to cross C.P.R. Langdon branch at sec. 35, tp. 24, r. 27, w. 4 m., Alta.
12068. Oct. 22.—Relieving C.P.R. from providing further protection at crossing of Brock Road at North Claremont, Ont.
12069. Oct. 21.—Authorizing C.P.R. to open for traffic that portion of its line from mileage 9.56, London section, to a connection with G.T.R. in lot 7, con. 1, Etobicoke tp., Ont., and Y connections.
12070. Oct. 12.—Authorizing T.H. & B.R. to build branches in Hamilton, Ont., from west of Grant Ave. to east side of Wentworth St., and to west of Sherman Ave.
12071. Oct. 21.—Authorizing C.P.R. to cross C.N.R. Maryfield branch in the n.e. ¼ sec. 30, tp. 5, r. 16, w. 2 m., Sask.
12072. Oct. 22.—Ordering C.N.R. by Dec. 1, to erect fences according to provisions of Railway Act, along both sides of its right of way, where it is unfenced, between Maidstone and Paynton, Sask., and to install cattle guards.
12073. Oct. 22.—Authorizing Ottawa Electric Co. to erect wires across C.P.R. at Metcalfe Road.
12074. Oct. 24.—Approving revised location of part of C.N.R. Vegreville-Calgary branch through tps. 25-24, r. 25-27, w. 4 m., mileage 224.49 to 238.82.
12075. Oct. 10.—Authorizing city of Fort William, Ont., cross with its street railway the Fort William Terminal Ry. and Bridge Co.'s spur on Syndicate Ave.
12076. Oct. 22.—Amending order 11750, Sept. 9, which authorized Vancouver, Fraser Valley and Southern Ry. to build across certain highways in Vancouver, B.C.
12077. Sept. 22.—Ordering C.N.R. to build siding connecting its line with Tuxedo Park Co. and Canada Cement Co.'s premises, St. Boniface and St. Charles parishes, Man.
12078. Oct. 24.—Ordering C.N.R. to build highway crossing at easterly limit of lot 8, con. 1, Paipoonge tp., Ont.
12079. Oct. 24.—Dismissing application of A. Denis Co., Edmonton, Alta., for order that C.P.R. be required to carry hay from Eastern Canada at rates charged on grain from west to east.
12080. Oct. 24.—Approving location of Burrard Inlet Tunnel and Bridge Co.'s line from station 122-57.5 at Kootenay St. to station 154-86.9 at Burrard Inlet, near Seymour Creek, B.C.
- 12081, 12082. Oct. 24.—Authorizing city of Edmonton, Alta., to cross at rail level with its street railway, the Edmonton, Yukon and Pacific Ry. on Edward St., at two points, and to erect wires across E.Y. & P.R.
12083. Oct. 24.—Authorizing city of Port Arthur, Ont., to build highway across C.P.R. at Nelson and Clavet Sts.
12084. Oct. 25.—Authorizing Canadian Light and Power Co. to erect wires across Beauharnois Light, Heat and Power Co.'s wires at St. Louis Road, Beauharnois, Que.
12085. Oct. 24.—Authorizing Twin City Oil Co. to build overhead tramway across C.N.R. at Strathcona, Alta.
12086. Oct. 25.—Authorizing city of Brantford, Ont., to cross Brantford & Hamilton Electric Ry. at grade, at Alfred St.
12087. Oct. 25.—Approving location of C.P.R. station at Thessalon, Ont.
12088. Oct. 25.—Authorizing C.P.R. to remove station building at Sault Ste. Marie, Ont., to new location.
12089. Oct. 24.—Authorizing Sandwich East tp., Ont., to build drain along G.T.R. right of way from the Parent outlet between lots 143 and 144, con. 1, westerly to the Little River.
12090. Oct. 25.—Rescinding order 11202, July 21, authorizing crossing of Seymour Power & Electric Co.'s wires in Thurlow tp., Ont.
12091. Oct. 15.—Relieving O. & N.Y. Ry. from providing further protection at crossing of third highway south of Rideau River, con. 2, Russell Road, Gloucester tp., Ont.
12092. Oct. 25.—Authorizing G.T.R. to build new station at Amigari, near Fort Erie, Ont.
12093. Oct. 25.—Approving highway crossing road diversion in n.e. ¼ sec. 35, tp. 28, r. 21, w. 2 m., Sask.
12094. Oct. 26.—Approving location of portion of C.P.R. Regina branch from mileage 199.2 to crossing of C.N.R. spur to East Prince Albert, at mileage 232.4, Sask.
12095. Oct. 26.—Authorizing Shawinigan Cotton Co. to lay pipe under C.N.Q.R. between Shawinigan Falls Jct. and Shawinigan Falls.
12096. Oct. 25.—Authorizing Peterboro Radial Ry. to erect wires across G.T.R. at George St.
12097. Oct. 25.—Authorizing Ontario Distributing Co. to erect wires across G.T.R. at con. 3, Stamford tp., Ont.
- 12098 to 12102. Oct. 25.—Authorizing Ontario Hydro-Electric Power Commission to erect wires at five points.
12103. Oct. 25.—Authorizing C.N.R. and G.T.P.R. to operate trains over joint crossing near Riley, Alta., without being brought to a stop.
- 12104 to 12106. Nov. 25.—Approving plans of proposed culvert to be built under G.T.R. at three points in Lochiel tp., Ont.
12107. Sept. 22.—Ordering C.N.R. to haul pine and spruce logs any distance up to 150 miles from Winnipeg, from point, if any, where its line touches Rainy River to Winnipeg, at a rate not to exceed \$2.50 per 1,000 ft. b.m.; also to file joint tariffs with Minnesota & Manitoba Ry., showing through rates from Minnesota points to Winnipeg, and disallowing \$2 switching toll charged by C.N.R.
12108. Oct. 26.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Galt, Preston and Hespeler Electric Ry. at Joseph St., Preston.
12109. Oct. 26.—Approving C.N.R. revised location through tps. 25-24, r. 26-27, w. 4 m., Alta., mileage 233.39 to 237.62 (revised location) from junction with main line at Vegreville.
12110. Oct. 25.—Authorizing C.P.R. to build spur for Imperial Oil Co. in Moose Jaw, Sask.
12111. Oct. 26.—Authorizing C.P.R. to build spur for E. Patenaude, Outremont, Que.
12112. Oct. 26.—Relieving G.T.R. from providing further protection at crossing ¾ mile east of Tillsonburg, Ont.
- 12113, 12114. Oct. 27.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Tel. Co.'s and G.T.R. wires in Yarmouth tp. and New Hamburg tp. respectively.
12115. Oct. 26.—Authorizing G.T.R. to build branch and spur therefrom to D. J. McLean and Co.'s premises, near Blackwater Jct., Ont.
12116. Oct. 26.—Extending to Dec. 1 time within which White Pass and Yukon Ry. file its tariff of telegraph tolls, for approval, and authorizing it, meantime, to charge tolls previously authorized.
12117. Oct. 26.—Extending to Dec. 1 time within which Canadian Northern Telegraph Co. file its tariff of tolls for approval, and authorizing it, meantime, to charge tolls previously authorized.
12118. Oct. 28.—Relieving C.P.R. from providing further protection at highway crossing in lot 6, con. 1, mileage 39.91, Nassagawega, tp., Ont.
12119. Oct. 27.—Authorizing T.H. & B.R. and G.T.R. to operate trains over crossing of G.T.R. north of Brant St. and east of McKinstry St., Hamilton, Ont.
12120. Oct. 26.—Extending to Dec. 1 time for approval of C.P.R. telegraph tolls between points west of and including Sudbury, Ont., to and from points west of Sudbury, from and to points east thereof, and east of and including Windsor, Ont.
12121. Oct. 26.—Extending to Dec. 1 time for approval of G.T.P. Telegraph Co.'s tariff of tolls between points in Canada, except between its local offices on its Ottawa division, and Quebec, and between them and Swanton, Vt.
12122. Oct. 27.—Approving C.P.R. plan showing location of standard bell to be installed at crossing of King St., Woodstock, N.B., ordering installation of same, and authorizing C.P.R. to operate trains over crossing without first being brought to a stop.
12123. Oct. 27.—Authorizing Essex Terminal Ry., Windsor, Essex and Lake Shore Rapid Ry., and C.P.R. to operate trains over crossing of W.E. & L.S.R.A. and C.P.R., authorized by order 1139, June 5, 1906, and crossing of Essex Terminal Ry. and W.E. & L.S.R. Ry. on Gravel Road, and crossing of Essex Terminal Ry. and C.P.R., just east of Gravel Road, Sandwich tp., Ont., without first being brought to a stop.
12124. Oct. 10.—Refusing application of G.T.P.R. for authority to build sidings adjacent to its main line in Fort William, Ont.
12125. Oct. 28.—Approving James Bay & Eastern Ry. revised location between mileage 14.39 and 14.93, Ashuapmashouan tp., Que.
12126. Oct. 27.—Approving Algoma Central & Hudson Bay Ry. plans of standard frame and pile trestles.
12127. Oct. 28.—Relieving G.T.R. from providing further protection at crossing ¾ mile east of Tillsonburg, Ont.
12128. Oct. 28.—Authorizing city of Vancouver, B.C., to lay sewer under C.P.R. at Front St.
12129. Oct. 28.—Authorizing Waterville Water Works Co., to lay pipe under G.T.R. near Waterville, Que.
12130. Oct. 27.—Authorizing city of Brantford, Ont., to lay sewer under G.T.R. on George St.
12131. Oct. 27.—Authorizing Simcoe Ry. & Power Co. to erect wires across Bell Telephone Co.'s wires between lots 16 and 17, con. 3, Tay tp., Ont.
12132. Oct. 27.—Ordering G.T.P.R. to build shelter for passengers and freight at Reford, Sask.
12133. Oct. 26.—Extending until Dec. 1 time for temporary approval of G.N.W. Telegraph Co.'s tariff of tolls.
- 12134, 12135. Oct. 26-29.—Authorizing city of Vancouver, B.C., to lay sewer under C.P.R. at Park Drive and Salisbury Drive.
12136. Oct. 29.—Approving Hamilton Radial Ry. Standard Tariff of Maximum Freight Rates, C.R.C. 2.
12137. Oct. 29.—Extending until June 30, 1911, time within which spur for Standard White Line Co. at Beachville, Ont., may be completed.
12138. Oct. 28.—Authorizing city of Vancouver, B.C., to lay sewers under C.P.R. at Laurel St.
12139. Nov. 2.—Approving revised location of G.T.P.R. Alberta coal branch, mileage 31.77 to 37; location mileage 37 to 56.04.
12140. Oct. 29.—Authorizing C.P.R. to build spur for Continental Oil Co. in Saskatoon, Sask.
12141. Nov. 2.—Approving G.T.P. Branch Lines Co. plan, Sept. 19 required to be filed by order 11823, Sept. 19.
- 12142 to 12144. Nov. 2.—Authorizing Erindale Power Co. to erect wires across G.T.R. at three points near Toronto.
- 12145, 12146. Nov. 2.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires in Waterloo tp., and across C.P.R. telegraph wires in Hamilton.
12147. Nov. 2.—Authorizing Ottawa Electric Co. to erect wires across C.P.R. Ottawa and Prescott branch at Heron Road.
12148. Nov. 2.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires at lot 4, con. 3, South Easthope tp.
12149. Nov. 2.—Authorizing Canadian Light and Power Co. to erect wires across Bell Telephone Co.'s wires at Woodlands, Que.
12150. Nov. 2.—Authorizing Ottawa Electric Co. to erect wires across C.P.R. at Fairbank Ave.
12151. Nov. 2.—Ordering Brandon, Saskatchewan and Hudson's Bay Ry. to build spur to Brandon Sandstone Brick Co.'s premises, Brandon, Man.
12152. Nov. 3.—Authorizing Canadian Light and Power Co. to erect wires across Bell Telephone Co.'s wires at Beauharnois, Que.
12153. Nov. 3.—Authorizing C.P.R. to use bridge 80.8 on its Windsor section, Ont.
12154. Nov. 2.—Authorizing C.P.R. to build spur for Metal, Limited; Hick-Sehl Hardware Co., and McMahood and Quinn, Lethbridge, Alta.
12155. Nov. 4.—Authorizing C.P.R. to build additional track across Third St. east, Olds, Alta.
12156. Nov. 2.—Authorizing Brantford Gas Co. to lay pipe under G.T.R. at Marlboro St., Brantford, Ont.
12157. Nov. 2.—Authorizing C.P.R. to use bridges 21.9 and 100.7 on its London section, Ontario Division.
12158. Nov. 2.—Authorizing C.P.R. to build bridge over McKellar River, Fort William, Ont.
12159. Nov. 3.—Authorizing town of Galt, Ont., to erect wires across G.T.R. at Kerr St.

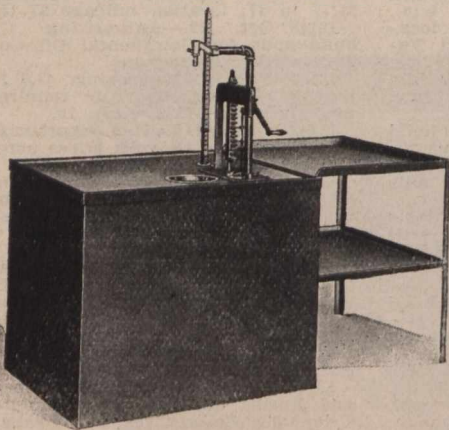
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Bowser Oil Storage Systems

(adopted by nearly 150 railroads)

fill all existing needs in oil storage and handling. The table affords space for the lamps; the stick gauge shows the contents of the tank at all times; the first touch of the crank brings the flow of oil; oil accidentally spilled is quickly drained into a special receptacle. The greatest cleanliness, saving of time and oil, are made possible with this outfit. Write for Booklet No. 18.

S. F. Bowser & Co., Ltd., 66-68 Frazer Ave., Toronto

12160. Nov. 2.—Authorizing city of Quebec to lay pipes under C.P.R. at Carillon St.

12161. Nov. 2.—Authorizing town of Orillia, Ont., to lay pipe under Georgian Bay and Seaboard Ry., in South Orillia tp., Ont.

12162. Nov. 4.—Authorizing C.P.R. to prevent undue delay to its passenger steamers between Owen Sound and Fort William, Ont., to do on the Lord's Day any work necessarily incidental to the loading or unloading of freight and its transfer to C.P.R. cars at Owen Sound and Fort William, and the coaling of its steamers at Owen Sound.

12163. Nov. 4.—Approving C.N.Q.R. station building at L'Assomption.

12164. Nov. 4.—Approving Chatham, Wallaceburg and Lake Erie Ry. Standard Passenger Tariff C.R.C. 7, showing maximum toll of 2½ c. a mile, or fraction thereof.

12165. Nov. 4.—Approving Hamilton Radial Ry. Standard Passenger Tariff C.R.C. 1.

12166. Nov. 4.—Dismissing application of Mutual Transit Co., for leave to unload and tranship freight from its vessels to C.P.R. trains, and do work incidental thereto, on the Lord's Day.

12167. Nov. 4.—Authorizing C.P.R. to build bridges: 123.33 and 23.24 Chapleau section, Lake Superior Division, 8.16 Mimico River, London section, Ontario Division; 84.6, Nicomen Creek, Thompson section, British Columbia Division; 15.9, Michel Creek, Cranbrook section, Alberta Division; 36.6, Coal Creek, Cranbrook section, Alberta Division; 79.1, Nicomen Creek, Cascade section, British Columbia Division.

12168. Nov. 4.—Authorizing C.P.R. to use bridge 27.2 on its Orangeville branch, Ontario Division.

12169 and 12170. Nov. 4.—Authorizing city of Toronto to lay sewer under G.T.R. at two points.

12171. Nov. 4.—Authorizing town of Orillia, Ont., to erect wires across G.T.R. and Bell Telephone Co.'s wires at East St.

12172. Nov. 4.—Authorizing Canadian Light and Power Co. to erect wires across Bell Telephone Co.'s wires at Primeau Road, Caughnawaga, Que.

12173 to 12177. Nov. 4.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across G.N.W. Telegraph Co.'s wires and G.T.R. at Hamilton; across C.P.R. telegraph wires and G.N.W. Telegraph Co.'s wires in North Easthope tp., and across Bell Telephone Co.'s wires in Woodstock.

12178. Nov. 4.—Authorizing C.P.R. to build spur for the Excelsior Coal Mining Co., in s. w. ¼ sec. 30 tp. 1, r. 5, w. 2, m, at mileage 153.46, Portal subdivision.

12179. Nov. 4.—Approving for six months from date C.P.R. Standard Freight Mileage Tariff.

12180. Nov. 4.—Authorizing Esquimalt and Nanaimo Ry. to open for traffic the portion of its line from Wellington to Cameron Lake, B. C., mileage 77.3, to 107.6.

12181. Nov. 5.—Authorizing G.T.P. Branch Lines Co., to divert road in sec. 13, tp. 12, r. 16, w. 2 m, Assinibola District, Sask.

12182. Nov. 5.—Authorizing C.P.R. to divert and change level of Silver Creek, Ont., to build culvert across G.T.R. right of way lands.

12183. Nov. 5.—Authorizing C.P.R. to cross with its Moose Jaw north westerly branch, the C.N.R. located line, in sec. 17, tp. 30, r. 14, w. 3 m., Sask.

12184. Nov. 5.—Amending order 12119, Oct. 27, which authorized T.H. & B.R. and G.T.R. to operate trains over G.T.R. crossing north of Brant street, Hamilton, Ont.

12185. Nov. 7.—Rescinding order 11767, Sept. 23, which authorized C.P.R. to open for traffic portion of its Kipp-Aldersyde Branch, from mileage 0 to 28.2, and limiting speed of trains over same to 30 miles an hour.

12186. Nov. 7.—Authorizing C.P.R. to build bridge 7.4 on its London sub-division, Ontario Division.

12187 to 12189. Nov. 7.—Authorizing C.N.O.R. to build between lots 9 and 10, broken front concession, Thurlow tp.; across road on lot 2, con. 1, Belleville, and across MacDonald St., between lots 7 and 8, broken front concession, Belleville.

12190. Nov. 7.—Authorizing C.N.R. to build across 20 highways west of second meridian.

12191, 12192. Nov. 7.—Authorizing C.N.O.R. to build between lots 291 and 295, and between lots 223 and 218, St. Benoit parish, Two Mountains county, Que.

12193. Nov. 7.—Authorizing Port Colborne village, Ont., to lay water pipe under G.T.R. at St. Arnaud St.

12194. Nov. 7.—Authorizing town of Pembroke, Ont., to lay water pipe under C.P.R. at MacKay St.

12195. Nov. 7.—Authorizing Port Colborne village, Ont., to lay water pipe under G.T.R. at Welland St.

12196. Nov. 7. — Authorizing Interurban

Electric Co. to erect wires across C.P.R. switch extension at Symes Rd., Toronto.

12197, 12198. Nov. 7.—Authorizing Seymour Power and Electric Co. to erect wires across Bell Telephone Co.'s wires at two points in Sidney, tp., Ont.

12199 to 12205. Nov. 7.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across other wires at seven points.

12206. Nov. 3.—The equipment of cars with emergency tools. This order is given in full on another page.

12207. Sept. 19.—Ordering C.P.R. to build and operate extension of Clover Bar Coal Co.'s spur across its lands to Humberstone Coal Co.'s lands, in n. w. ¼ sec. 7, tp. 53, r. 23, w. 4 m.

12208. Nov. 7.—Authorizing G.T.P. Branch Lines Co. to build spur from its Melville-Regina branch to Colmer gravel pit, Yorkton District, Sask.

12209. Nov. 7.—Authorizing C.P.R. to build spur and branch for the Gros Falls Co. at mileage 2.22 from Piles Jet., Que.

12210. Nov. 8.—Authorizing Welland Telephone Co. to erect wires across M.C.R. between second and third crossings west of Stevensville station, Ont.

12211. Nov. 8.—Ordering Atlantic and Lake Superior Ry. within 60 days to build and maintain shelter for freight and passengers at St. Jean de l'Evangeliste, Que.

12212. Nov. 8.—Authorizing C.N.O.R. to build between lot 38, con. 1, Sidney tp., and lot 1, broken front concession, Thurlow tp.

12213. Nov. 8.—Dismissing application of C.N.R. for approval of its location through tps. 38-39, r. 23-24, w. 4 m., mileage 21.38 to 36.49, from junction with Vegreville-Calgary branch.

12214. Nov. 8.—Authorizing G.T.R. to build branch to Chesley Chair Co.'s premises, Chesley, Ont.

12215. Nov. 8.—Approving plan of standard iron fire protection for decks of timber bridges; and authorizing G.N.R. to substitute same for style of protection required under clause 10 of order 11446.

12216. Nov. 3.—Dismissing application of Sandwich East tp., Ont., for order authorizing G.T.R. to allow it to build a drain on its right of way, from between lots 143 and 144, con. 1, westerly to Little River.

12217. Nov. 3.—Authorizing C.N.O.R. to build across road on lot 410, East North River range, St. Andrew's parish.

12218. Nov. 8.—Authorizing city of Peterboro, Ont., to lay sewer under G.T.R. at Smith St.

12219. Nov. 9.—Authorizing Ottawa Electric Co. to erect wires across C.P.R. near Rideau River, Ont.

12220. Nov. 7.—Approving revised location of part of C.P.R. Regina, Saskatoon and North Saskatchewan branch from mileage 26.35 to 28.56, Sask.

12221. Nov. 9.—Approving amended location of G.T.P. Branch Lines Co.'s Regina-Boundary branch from mileage 0 to 10.407, Sask.

12222. Nov. 9.—Authorizing C.N.O.R. Co. to build a bridge over Molra River, Belleville.

12223. Sept. 27.—Authorizing the C.N.O.R. to connect temporarily with G.T.R. Midland branch, at Port Hope.

12224. Nov. 7.—Approving character and specifications of Parrott Drain to be built under P.M.R. in Harwich, tp., Ont.

12225. Rescinding order 5888, in the matter of the Trainmen's Association of Canada and ordering conditions re employment and protection of employees. This order is given in full on another page.

12226. Nov. 9.—Authorizing town of Walkerton, Ont., to lay pipe under Walkerton and Lucknow Ry. at Orange St.

12227.—Nov. 9.—Authorizing J. Auclair, of St. Hilaire, Que., to lay pipe across G.T.R. in lot 130.

12228. Nov. 10.—Authorizing Tilsonburg, Lake Erie and Pacific Ry. to change its branch line as located along Victoria St., Ingersoll, Ont.

12229. Nov. 9.—Authorizing Georgian Bay & Seaboard Ry. to build across five highways in Medonte tp., one highway between Medonte and North Orillia tp., eight highways in North Orillia tp., and six highways in South Orillia tp., Ont.

12230. Nov. 9.—Ordering that C.P.R. comply with terms of order 7969, Sept. 1, 1909, to provide crossings on line dividing r. 1, northeast and r. 1, southwest at mileage 2.9 and 3.5, from Megantic, and build crossing at mileage 3.5, from Megantic, Que., within 30 days.

12231, 12232. Nov. 9.—Reporting to Governor in Council, for sanction, bylaw 24, of Quebec, Montreal and Southern and Napierville Jet. Rys.

12233. Nov. 10.—Authorizing Canadian Light and Power Co. to erect wires across Bell Telephone Co. wires at Chateaugay River crossing Chateaugay, Que.

12234 to 12235.—Nov. 10.—Authorizing E.

con. 4, Dover East tp., to Paincourt, and Albert and D. Sirvois, of St. Hilaire N.B., to lay water pipes under Temiscouata Ry.

12236. Nov. 10.—Authorizing Chatham, Wallaceburg and Lake Erie Ry. to open for traffic portion of its line from main line in con. 4, Dover East tp., to Pain Court, and limiting speed of trains to 18 miles an hour.

12237. Nov. 10.—Authorizing C.P.R. to build spur for Superior Fuel & Coal Co., Winnipeg.

12238. Nov. 11.—Authorizing C.P.R. Co. to build additional track between s.e. ¼ sec. 29, and s.w. ¼ sec. 28, tp. 22, r. 23, w. 4 m. at Stobart, Alta.

12239. Nov. 11.—Authorizing Saskatchewan Government to build highway across C.P.R. in sec. 25, tp. 20, r. 11, w. 2 m.

12240. Nov. 11.—Authorizing Saraguay Electric and Water Co. to erect wires across Montreal Terminal Ry. on Prefontaine St.

12241 to 12248. Nov. 11.—Authorizing town of Maisonneuve, Que., to lay gas and water pipes under C.N.Q.R. at eight points.

12249. Oct. 12.—Authorizing T.H. & B. Ry. to build spurs from west of Grant Ave., on its main line easterly across Grant Ave., Wentworth St., Sanford Ave., and Sherman Ave., to east side of Wentworth St., and south of main line across Sanford Ave. to west of Sherman Ave., and west of Prospect St., Hamilton, Ont.

12250 to 12254. Nov. 11.—Temporarily approving Bell Telephone Co.'s agreements with Brompton Pulp and Paper Co., Tarentorus Telephone Co., J. H. Rogers and J. McLaughlin, Norwich, Ont., Urban and Rural Telephone Co., and Metcalfe Rural Telephone Association.

12255. Nov. 11.—Authorizing C.N.O.R. to build across lines from G.T.R. to Lehigh Valley Cement Works, Thurlow tp.

12256. Nov. 11.—Authorizing C.P.R. to build spur for Perrault, Audy Co., at mileage 8.64 from Place Vigier station, Montreal.

12257. Nov. 11.—Authorizing C.P.R. to build spur across Jarvis St., and block 52, Winnipeg.

12258. Nov. 11.—Authorizing G.T.P. Branch Lines Co., to close road allowance between secs. 24 and 25 and between secs 25 and 30, within right of way limits, tp. 31, r. 24, w. 4, m.

12259. Nov. 11.—Authorizing C.P.R. to build spur for Wilson Box Co., at mileage 2.9 from St. John, N.B.

12260. Nov. 11.—Authorizing C.P.R. to build across Rama Road, in lot 30, con. 11, Mara tp., Ont.

12261. Nov. 11.—Authorizing C.P.R. to build spur for C. I. Kilburn, Saskatoon, Sask.

12262. Nov. 11.—Authorizing C.P.R. to build spur for the Canadian Nursery Co., in lot 40, Pointe Claire parish, Que.

12263. Nov. 11.—Approving location of Georgian Bay and Seaboard Ry. from mileage 74.25 to 87.65.

12264. Nov. 11.—Temporarily approving Bell Telephone Co.'s agreement with Maidstone tp.

12265. Nov. 11.—Relieving G.T.R. from providing further protection at crossing of three-quarter township line at lot 19, mileage 95¼, Drumbo, Ont.

12266. Nov. 11.—Authorizing town of Maisonneuve, Que., to lay a gas pipe under C.N.Q.R. at First Ave.

12267. Nov. 12.—Approving temporary crossing by Toronto Ry., of C.P.R., C.N.R. and G.T.R. at Queen St.

12268. Nov. 12.—Authorizing G.T.R. to build spur to Milnes Coal Co.'s premises, North Toronto, Ont.

12269. Nov. 12.—Amending order 12211, Nov. 8, ordering Atlantic and Lake Superior Ry. to build shelter for freight and passengers at St. Jean de l'Evangeliste, Que., by substituting "Quebec Oriental," for "Atlantic & Lake Superior," in line 5 of the recital.

12270. Nov. 7.—Authorizing Trenton Electric & Water Co., to erect wires across Bell Telephone Co.'s wires at lot 36, con. 2, Sydney, tp., Ont.

12271. Nov. 14.—Authorizing C.P.R. to open for traffic portion of its Teulon branch, between mileages 47.7, and 74.5, Man.

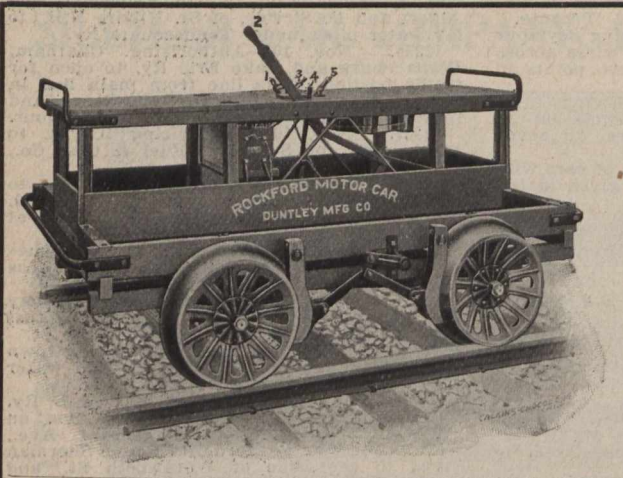
12272. Nov. 14.—Authorizing C.P.R. to build spur for Bawlf Collieries Co., Bawlf, Alta.

12273. Nov. 14.—Authorizing Alberta Central Ry. to build branch at Rocky Mountain House, in tp. 39, r. 7, w. 5 m.

12274. Nov. 14.—Authorizing Seymour Power and Electric Co., to erect wires across Central Ontario Ry., near Anson Jct., Ont.

12275. Apr. 29.—Ordering, on application of the Mount Royal Milling Co., that rice, not otherwise specified in packages, in less than carloads, be included in first supplement to Canadian Classification 15, at fourth class instead of third class, as at present.

12276. Nov. 10.—Ordering that G.T.R. cease from interfering with any facilities now enjoyed by D. McManamy, Sherbrooke, Que., for handling traffic over its siding adjacent to his property.



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WITH
**ROCKFORD
MOTOR CARS**

Workmen are taken to and from work in one third of the time.

All of their energy is saved for track work.

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CHICAGO, ILL., U.S.A.

Electric Headlight Saves Train

(From Daily Papers)

"Wednesday night B—— forgot to deliver an order to hold Eastbound Passenger Train No. 6, and only the fact that the Electric Headlight of the oncoming Passenger train was seen at a great distance by the Engineer of the Westbound Freight prevented a head end collision in the —— Canyon near ——, The warning light was seen in time to enable the freight to get back on to the siding at ——."

PYLE-NATIONAL ELECTRIC HEADLIGHT CO.

CHICAGO

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

Sir Thos. G. Shaughnessy, President, on his return to Montreal, Oct. 30, from his annual trip of inspection of the line to the Pacific Coast, in company with other directors, said, in an interview, that he found everything in a satisfactory condition. Referring to work in hand or in prospect, he said:—"At present we are at work on 400 miles of new lines, and have made plans ready for the building of at least 400 miles additional next year. We are also about to commence the construction of a fine new hotel at Calgary, and on its completion we will put on a daily train service between Calgary and Field. We also intend to place another steamship on the Pacific as soon as we can get one built." With reference to Toronto he said he hoped very soon to announce some of the company's plans for the city and vicinity.

Truro to Tatamagouche Bay.—A press report from Prince Edward Island states that surveys have been made by the C.P.R. for an extension of the Dominion Atlantic Ry. Midland division from Truro to Tatamagouche Bay, near Brule, N.S., and that a site for a dock at Charlottetown, P.E.I., is being looked for, so as to operate a car ferry service from the mainland to the Island.

Digby, N.S.—C.P.R. engineers, officers of the Dominion Atlantic Ry. and Dominion Government engineers, were in Digby, Oct. 27, inspecting the shipping facilities there. A local press report states that everything is favorable for building tide elevators, and extensions to the freight sheds, so as to provide for increased business when the C.P.R. formally takes over the D.A.R.

Improvements at St. John, N.B.—The purchases of land by the company in St. John are reported to have been completed. The properties purchased are on Mill and Main streets, and the price of the three areas is said to have been \$241,000.

Fredericton Improvements.—W. Downie, General Superintendent Atlantic Division, is reported to have stated Nov. 5 that the yard facilities at Fredericton, N.B., were insufficient to handle the growing freight business, and plans for new yards had been completed. He expected that construction would be started in the spring.

Orford Mountain Ry.—Application is being made to the Dominion Parliament to authorize the building of a line from near Mansonville, Que., to the International boundary line, and for other purposes.

Connection with Montreal Terminal Ry.—At a recent meeting of the Montreal board of control it was stated that the C.P.R. had started laying a track to connect with the Montreal Terminal Ry. between Forsythe and Moreau streets, for the building of which notice of application had been given to the Board of Railway Commissioners.

St. Lawrence Boulevard, Montreal.—The work on the steel superstructure carrying the C.P.R. tracks over the St. Lawrence boulevard, has been completed. The structure is wide enough to allow eight tracks to be laid.

Place Viger Improvements.—It was reported Nov. 1 that the buildings over a large area of the land acquired for the improvements in the yards at this station had been torn down, and that 12 new tracks leading into the area set apart for the new station had been laid. Some of these new tracks were used Nov. 1, when the lines leading into the present station were abandoned. The work on the Notre Dame St. viaduct is proceeding rapidly, and the steel work

for the new station building is being rapidly got into place.

Hawkesbury to Cornwall.—A meeting of representatives of the municipalities interested is being arranged to discuss a project for building a line from Hawkesbury to Cornwall, Ont., running through Vankleek Hill, Alexandria and Martin-town, to be operated by the C.P.R.

Ottawa Tunnel Proposals.—It was stated Nov. 10 that negotiations were in progress between the C.P.R. and the Canadian Northern Ry. with a view to their co-operation in the project for the building of a tunnel into the city. The City Engineer suggested that the C.P.R. should give other companies running rights over the Alexandria Bridge as a quid pro quo for permission to build the tunnel along the canal. It is proposed that the plan should be reported on by an independent engineer for the city, and the city engineer has recommended W. F. Tye, formerly Chief Engineer C.P.R., in connection with the matter. While the opinion at Ottawa is rather in favor of the proposed tunnel, opposition is being manifested in municipalities along the canal, and according to a local report of Nov. 15, a deputation representing the different interests is being arranged to interview the Government. The matter is to be considered by the Government Dec. 8.

Ottawa-Mattawin River.—A press report states that a contract has been let

Canadian Railway Prosperity.

The relatively happy position of Canadian railways, as compared with roads in the United States, is shown by the earning statements for September and three months of the year of 48 U.S. railways. These 48 U.S. railways show an average gain in gross for the month of only 5.70%, and net shows a decrease of 4.19%, while for the three months these roads show an average gross gain of 6.59% and an average net decrease of 6.80%. The showing of the Canadian roads, especially the Canadian Pacific and the Canadian Northern, is vastly different. They show gains in gross for September of 18.86% for the C.N.R., and 11.92% for the C.P.R., and in net of 22.37 and 13.97% respectively, while for the three months the C.P.R. gained 19.87% in gross and 24.92 in net, and the C.N.R. 31.18 and 33.11.

eight in North Orillia tp., and six in South Orillia tp. Location plans for the to Stewart and Hewitson, Port Arthur, Ont., for the concrete work for the bridge at the junction of the Ottawa and Mattawin rivers, at the Ontario-Quebec boundary near Mattawa. The bridge is 2,700 ft. long.

Brockville, Ont.—H. P. Timmerman, Industrial Commissioner, and other C.P.R. officials were in Brockville Nov. 10, looking into the business situation. This visit is connected locally with press reports that the company has abandoned, temporarily at any rate, its project for a line from Kingston to Toronto in favor of an extension of the Georgian Bay and Seaboard Ry., from Peterboro via Kingston to Brockville. In this connection Toronto papers state it has been officially announced that by Nov., 1911, all the wooden bridges between Smiths Falls and Toronto will be replaced by structures of steel or re-inforced concrete, and that the facilities at all stations will be increased.

Georgian Bay and Seaboard Ry.—The Board of Railway Commissioners has authorized the company to build its line across five highways in Medonte tp., one between Medonte and North Orillia tps., line between mileage 74.25 and 87.65 have been approved.

North Toronto.—A freight shed has been built at North Toronto, and considerable improvements have been made at the passenger station to meet the requirements since the new trains to Montreal have been put on.

West Toronto Yards.—The Board of Railway Commissioners has directed the construction of a subway under the tracks at Elizabeth St., within a year. The buildings on the site of the extension of the yards west of Elizabeth St. are being torn down, and the ground along the street is being cleared in preparation for the subway.

Lambton Westerly Second Track.—The station at Lambton, Ont., has been moved nearer Dundas St., and the second track, heretofore ending east of the station, is being extended to meet that recently laid westerly from the west end of the platform. The second track has been laid to the east bank of the Humber River, and the grading for the second track has been almost completed from the west bank of the river to east of Islington station, where a second track has been laid to a connection with the Islington-Mimico spur, and westerly to near Summerville.

Islington-Mimico Spur.—The Board of Railway Commissioners has authorized the opening for traffic of the line from mileage 9.56 from Toronto, near Islington, to a connection with the G.T.R. near Mimico, with Y connections.

Guelph Station.—Work was started Oct. 28 on the foundations of the new station at Guelph, Ont. The plans show a building 125 by 33 ft., with roof projections at each end. The foundations are being carried down to the rock, about 12 ft. below ground level. The cost of the building is put at \$20,000, and the contract for the structure, which is to be of brick with slate roof, has been let to Wells and Gray.

The plans show a brick building with slate roof, having a frontage to the tracks of 122 ft., and a depth of 35 ft. at the office section, with covered areas at each end 30 by 22 ft. over all. The layout shows a general waiting room 75 by 32 ft., off which there is an office 16 by 20 ft., lavatories for men and women, each 10 by 20 ft. There are four entrances to this room. At one end is accommodation for baggage and express, the baggage room being 18 by 28 ft., and the express room 30 by 28 ft. The building will be lighted by electricity, and the heating apparatus will be installed in a basement under the baggage and express rooms.

Tillsonburg, Lake Erie and Pacific Ry.—The Board of Railway Commissioners has approved of a change in the location of the line along Victoria St., Ingersoll, Ont. Plans have been prepared for a station building on the corner of Thames and Carnegie streets.

St. Mary's and Western Ontario Ry.—A Stratford press report says it is likely that the project to build a line from St. Marys to Stratford will be abandoned, and that a line will be built from Embro through to Linwood, probably via Wellesley, and that the line to Gravel Bend will be located through Carlingford, Russeldale and Exeter.

London Improvements.—Work has been started on the improvements north-east of London, Ont. Several wells are being sunk to give the company its own water supply.

Toronto-Sudbury Branch.—Since the opening of the line from Bolton Jct., Ont., to Sudbury, the C.P.R. has been carrying out a work of grade reduction and general improvement on the line from West Toronto to Bolton Jct. The wooden trestles are being replaced by concrete and steel bridges, or concrete arches with solid embankments, curves have been cut out, and the gradient reduced over considerable distances. The

The Jack

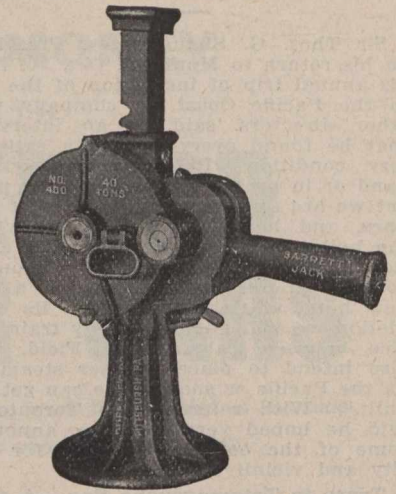
That Has Superseded All Others

For the Handling of Heavy Railway Equipment

40 TONS LIFTING CAPACITY

AN IMPROVED BARRETT GEARED RATCHET JACK

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in Geared Jack Construction



Designed particularly for the rapid, safe and convenient handling of the heaviest loaded freight cars, passenger or Pullman coaches, locomotives in round-house, etc., and is fully capable of taking care of any kind of railroad equipment under all conditions. The Jack is single-acting and is extremely quick in action, raising the load rapidly, and in view of the special leverage provided in this Jack the full load may be raised with much less energy at the end of the lever than with any other type of Geared Jack.

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largest bridge on the section, which, it is expected to complete this season, is over the Humber River, between Weston and Woodbridge. The rail level is 80 ft. above high water mark, and the bridge has a span of 285 ft. There were used in the construction of the bridge 2,000 cubic yards of concrete, and it is estimated that it will take about 140,000 yards of clay and other material to complete the embankment.

Bridge at Fort William, Ont.—The Board of Railway Commissioners has authorized the building of a bridge over the McKellar River at Fort William.

Teulon Branch.—The Board of Railway Commissioners has authorized the opening for traffic of the Teulon branch, in Manitoba, from mileage 47.7 to 74.5.

Second Track, Winnipeg to Regina.—We are advised that the second track has been completed between Winnipeg and Portage la Prairie, Man., and that some grading for a second track between Portage la Prairie and Brandon has been done. The second track is expected to be completed to Brandon in 1911. Nothing has been arranged with regard to the construction of a second track between Brandon and Regina, Sask.

Increasing Facilities at Brandon.—We are advised that nothing has been discussed as yet in regard to the building of a new station at Brandon, Man., although it is apparent that it will soon be necessary to provide increased facilities there.

Virden-McAuley Branch.—The Board of Railway Commissioners has authorized the opening for traffic of a section of 14 miles on the Virden-McAuley branch.

Hamiota to Birtle, Man.—The Minister of Railways has approved of the route plan of the proposed branch line between Hamiota and Birtle, Man., and it is said that construction will be gone on with next year.

Pheasant Hills Branch.—The Board of Railway Commissioners has authorized the opening for traffic of the section of this branch from mileage 430.39, at Wilkie, Sask., to mileage 561.63, at Hardisty, Alta. This completes the connection from the main line at Kirkella, Man., to a junction with the Calgary and Edmonton Ry. Wetaskiwin branch.

Regina and North Saskatchewan Branch.—The Board of Railway Commissioners has approved the revised location of the Regina, Saskatoon and North Saskatchewan branch from mileage 26.35 to 28.56. It has also approved the location plans of the line from mileage 199.2 to the crossing of the Canadian Northern Ry. spur to East Prince Albert, mileage 232.4.

Subway at Regina, Sask.—The civic authorities at Regina, Sask., have received an intimation from the Board of Railway Commissioners that, in connection with the recent order for the erection of a subway under the C.P.R. tracks, the city will be required to do all the excavating and paving, and to erect all substructures, drains and lights, and to pay abuttal damages, if any; while the C.P.R. is to provide all the land necessary and to build all the superstructures.

Calgary Yards, etc.—The new yards at Calgary, Alta., are practically completed. In the area taken in, 16 miles of additional track have been laid, and the new buildings comprise a 20-stall roundhouse, 40,000 gall. water tank, a 2,000-ton icehouse, and a new shed for outgoing freight, the old shed being given over for incoming freight. A new wing, two stories, is being added east of the main station house, and it is expected that next year a similar wing will be added at the west end.

Bridges at Lethbridge.—The Board of Railway Commissioners has authorized the building of a bridge about 1,200 ft. west of the present crossing at mileage 2.6, west of Lethbridge, Alta., and another at mileage 10.6.

Vancouver, B.C.—W. Whyte, Vice President, on the occasion of his recent visit to Vancouver, is reported to have stated that the traffic there was growing so rapidly that enlarged station accommodation was imperative. The matter would be discussed in Jan., 1911, when the estimates for the year would be under consideration.

Esquimalt and Nanaimo Ry.—We are advised that work is being gone on with clearing the right-of-way from tidewater to Cowichan Lake, for the proposed branch to open up timber lands sold to the Empire Lumber Co. of New York. The final negotiations for the transfer of the lands are expected to be completed at an early date, when the building of the line will be gone on with. All the work for the building of the line will be let to Janse, McDonnell and Timothy.

The Board of Railway Commissioners has authorized the opening for traffic of the first 30 miles of the Alberni extension, viz., from Wellington to Cameron Lake. A passenger service was inaugurated Nov. 9, a train being run each way three days in the week. A stage is run between Cameron Lake and Port Alberni.

Representatives of the Songhees tribe of Indians and agents of the B.C. Government have reached an agreement by which the Indians will abandon the reserve in the centre of Victoria. It is expected that the city council will be able to so arrange matters that a portion of the reserve may be secured for joint terminal facilities for the C.P.R. and the Canadian Northern Ry.

C.P.R. Hotels.—We are advised that Sir Thos. G. Shaughnessy, President, during his recent trip to the West, authorized the erection of a hotel at Calgary, Alta., work on which will be started as soon as possible. It was also decided to enlarge the Royal Alexandra at Winnipeg, and to provide additional accommodation at Lake Louise, Banff, and Vancouver, B.C. We are also informed from another source that there was no foundation for the recent press reports that the company was about to build hotels at different points, so as to complete a chain of such along its line from the Atlantic to the Pacific.

Press reports state that an effort is being made to secure the erection of C.P.R. hotels at Gore Landing, Ont., and at Moose Jaw, Sask. (Nov., pg. 933.)

Dominion Railway Subsidies.—Under the terms of the act granting aid to certain railways the Dominion Government has entered into the following contracts: For the building by the Atlantic, Quebec and Western Ry., of a line from Paspébiac to Gaspé, as near the shore as practicable, 102 miles. For the building by the Manitoulin and North Shore Ry., of a line from Little Current to Sudbury, Ont., 88 miles.

The annual meeting of the Vancouver branch of the Canadian Society of Civil Engineers was held Nov. 7, and the following elected for the current year: Chairman, G. H. Webster; Secretary and Treasurer, H. K. Dutcher; Executive Committee, C. E. Cartwright, J. C. Kennedy and H. Bayfield.

H. W. Brodie, Assistant General Passenger Agent C.P.R., Vancouver, B.C., writes:—"Will you kindly change my address on your mailing list from Winnipeg to Vancouver, so that I will continue to receive a copy of the Railway and Marine World, which I am always glad to have on my table."

Too Late for Classification.

Atlantic, Quebec and Western Ry.—A contract has been entered into between the Dominion Government and the company under the act granting aid to certain railways for the building of a line from Paspébiac to Gaspé, Que., as near the shore as possible, 102 miles. (Nov., pg. 909.)

British Columbia and Alaska Ry.—We are advised under date of Nov. 21, that the present officers and directors of the B.C. Ry. and Development Co., which owns the charter of the B.C. and A. Ry., are: President, J. Wolkenstein, New York; Vice President and General Manager, E. C. Harris; Second Vice President, C. G. Young; Secretary, Wm. C. Pratt; Treasurer, A. T. Sullivan; other directors, B. Brooks, J. C. Clifford, J. W. Kendrick, and S. D. Townsend.

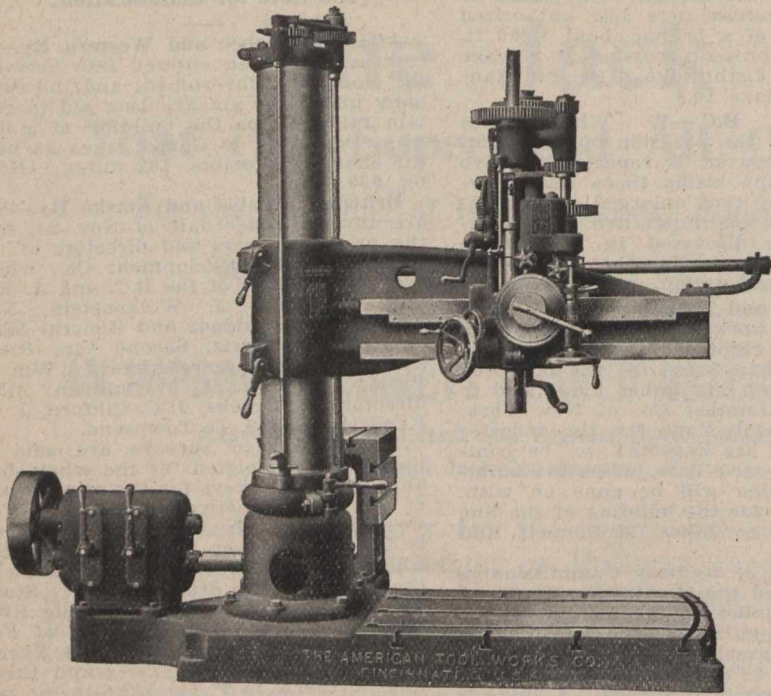
Reconnaissance surveys are said to have been completed for the whole line, and location surveys for the greater part of the distance between Lytton and Fort George have been completed. The route is from Vancouver through Lytton and Lillooet to Fort George, thence following the valley of the Stuart River. Stuart Lake and Tacla Lake and Middle River to North Tacla Lake by way of Fort Connelly thence following the Skeena and Stikine Rivers to Telegraph Creek, and northerly to Teslin Lake to the northern boundary of British Columbia, or in the alternative by the most feasible route between Lytton and Teslin Lake. The surveys have been done under the direction of L. M. Rice and Co., Vancouver, B.C., and Seattle, Wash. (Nov., pg. 909.)

Manitoulin and North Shore Ry.—The Dominion Government has entered into a contract with the company, under the act granting aid to certain railways for building a line from Little Current, thence crossing the C.P.R. near Nairn, to Sudbury, Ont., 88 miles. (Nov., pg. 911.)

Southern Central Pacific Ry.—The Dominion Parliament is being asked to authorize the building of the following additional lines: from where the projected main line crosses the North Saskatchewan River in Alberta, northwesterly, crossing the Athabasca River, to Dunvegan on the Peace River; thence to Parsnip River, southerly to Nechaco River, southwesterly to Dean's Channel, or to Gardener's Channel, B.C.; from the Elk River, B.C., easterly to the Waterton River and on to the International boundary, near Coutts, Alta. An extension of time is also asked for the building of its projected railway from Vancouver, northerly and easterly by way of the Kootenay Pass to the Old Man River, and thence north easterly through Saskatchewan, to Hudson Bay, at least 100 miles north of Fort Churchill. A. T. Thompson, Ottawa, is solicitor for the applicants.

In an interview at Winnipeg, Nov. 17, Jas. Conmee, M.P., said the line is projected to run north and south from Berman on the C.P.R. Crow's Nest Pass line, the northern line to run to Calgary and Edmonton, and on to the Peace or Pine River pass, thence to the Pacific Coast on Gardner Canal; and the southern line to run to the International boundary. A subsidy in aid of construction was voted to the company last session of the Dominion Parliament. Mr. Conmee who is interested in the company, says the line will be built with all possible speed, and he expects that about 250 miles will be under construction within the next 18 months. (July 1909, pg. 481.)

J. R. Cowans, General Manager Cumberland Ry., and Coal Co. has been removed to Montreal, where he will have charge of the office work, a local manager taking over the work at the collieries at Springhill, N.S.



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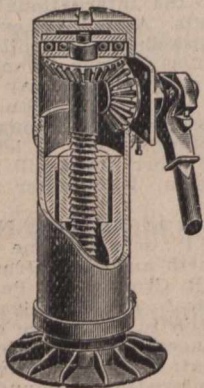
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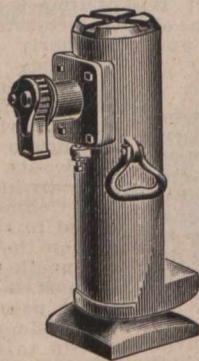
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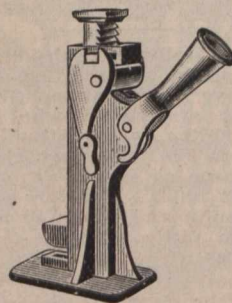
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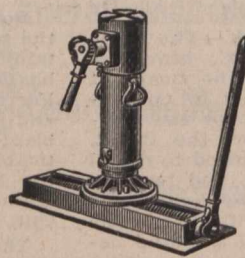
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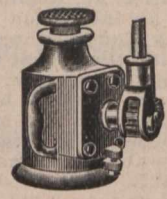
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James Bay and Eastern Ry.—The Board of Railway Commissioners has approved location plans for this projected railway between mileage 14.39 and mileage 14.93, in Ashuapachouan tp., Lake St. John county, Que. A company with this title was incorporated last session of the Dominion Parliament to build a line from James Bay, easterly to a junction with the Quebec and Lake St. John Ry. near Roberval, Que. The provisional directors are associated with the Mackenzie, Mann & Co., Ltd.

Canadian Northern Quebec Ry.—The mayor of Quebec was reported Oct. 28, as having given instructions to the city solicitors to push the action against the company for the return of \$200,000 granted to the Great Northern Ry., one of the companies amalgamated in the C.N.Q. Ry., on condition that its shops be located in the city.

We are officially advised that the company has purchased the property at the corner of St. James St. and Dollard Lane, Montreal. It is intended to make some alterations in the existing buildings in the near future, with a view to having all the company's offices in Montreal located there. This will include the general freight and passenger department, the steamship department and the express department. The price paid for the property is said to have been \$175,000.

In an interview at Ottawa, Nov. 10, W. Mackenzie, President, said work was progressing favorably on the new section of the line between Hawkesbury, Ont., and Montreal, which it is expected will be opened for traffic next fall.

The Dominion Parliament is being asked to authorize the company to build a line from Rawdon northerly to a junction with the National Transcontinental Ry., and from St. Jerome to St. Eustache, Que.

Bay of Quinte Ry.—Application is being made to the Dominion Parliament to authorize the company to enter into agreements with the C.N. Ontario Ry. and the Ontario and Ottawa Ry., for any of the purposes specified in sec. 361 of the Railway Act.

Brockville, Westport and North Western Ry.—Application is being made to the Dominion Parliament to authorize the company to enter into agreements with the C.N. Ontario Ry. and the Ontario and Ottawa Ry. for any of the purposes specified in sec. 361 of the Railway Act.

Canadian Northern Ontario Ry.—In an interview at Ottawa, Nov. 10, W. Mackenzie, President, is reported to have said that the construction of the Toronto-Ottawa line was now within 90 miles of Ottawa, and he expected the whole would be completed by next fall.

The matter of the entrance of the line into Ottawa was before the Board of Railway Commissioners, Nov. 3, when the company's application for a temporary crossing of the Hurdman road was considered. The application, it was stated, was made for the purpose of establishing a connection for freight purposes with the Ottawa and New York Ry., which could be used during certain hours only. The mayor had expressed approval, but the city solicitor was present to oppose the application. The matter was adjourned in order to permit a formal assent to be obtained from the city council. The arrangement which the company proposes, which is now under consideration, is that the permission to use the crossing be restricted to two years.

In the course of a recent interview, D. D. Mann, Vice President C.N. Ry., is quoted as stating that the Toronto-Trenton section of the line from Toronto to

Ottawa will be opened for traffic about June 1, 1911. The section is about 100 miles long and the grading is completed, with the exception of some rather heavy cuttings between the Don and Cobourg, but this is not likely to delay the work very seriously, as the bridge work has been progressing rather slowly owing to the non-delivery of the steel work. There are a large number of these bridges along the route, the most important being:—At the point of junction with the Sudbury line; west fork of Rouge River, 500 ft. steel viaduct; east fork Rouge River, 180 ft. bridge; crossing of Bowman's Creek; Dixie Creek, 850 ft. steel viaduct; Greenwood Creek, 545 ft.; Oshawa Creek, 430 ft.; Stephen's Mill pond, 650 ft. steel viaduct; Port Hope, 840 ft. steel bridge. The last three bridges are not yet built. Track has been laid on various portions of the line between the Don Valley and Cobourg, and between Cobourg and Trenton track-laying has been completed, and a good deal of the ballasting done. At Trenton a steel viaduct is being erected, and when this is completed a connection will be made with the Central Ontario Ry., which has come under the control of Mackenzie, Mann & Co. There will be 15 stations on the line, the most important being at Oshawa, Bowmanville, Port Hope and Cobourg. Jex & Co., Cobourg, have the contract for the erection of the stations at Port Hope and Cobourg.

There has been a change in the location of the line to Trenton from that originally laid out. The route originally surveyed crossed the Central Ontario Ry. just south of Frankford, and then proceeded in a direct line easterly, crossing the Bay of Quinte Ry. at Mud Lake, the Kingston and Pembroke Ry., at Vernon, and the Brockville, Westport and Northwestern Ry. at Newboro, thence working northerly to Ottawa. By an amended plan the route was changed, and starting at the boundary of Haldimand and Cramahe tps., the location now being followed is more southerly, crossing the G.T.R. near Brighton, and keeping along the lake shore, crosses the G.T.R. again at Shannonville, and works north and east to Mud Lake. With the taking over of the Bay of Quinte Ry. a further change in the route has been made. The route now approved leaves the location last mentioned near Shannonville, and proceeds south and east to Deseronto, joining up with the Bay of Quinte Ry., which line will be utilized as far as Harrowsmith, and a new route has been located from that point, joining up with the original survey at Portland. Some part of the present line from Harrowsmith to Sydenham is to be used. The Board of Railway Commissioners has authorized the building of a bridge across the Molra River at Belleville, on five instead of seven piers, as originally planned, and has authorized the Bay of Quinte Ry. to move its tracks from its yard at Napanee.

Press reports state that the company's agents are purchasing land for a right of way from Ottawa to Smiths Falls, Ont., and that the projected line from Ottawa to Key Harbor will branch off from the Toronto line, about four miles southwest of the capital.

At a meeting of the board of trade of North Bay, Ont., Nov. 8, the question of the building of a line from Key Harbor to North Bay, 88 miles, by the C.N.R., was under consideration. The president of the board and the mayor reported having had an interview with W. Mackenzie, President C.N.R., Nov. 3, when he expressed a willingness to undertake the building of such a line. A committee was appointed to see what steps could be taken locally to further the project.

The Dominion Parliament is being

asked to pass an act authorizing the company to build the following branch lines:—From Washago to Kincardine; from Arrnprior to Gananoque, from Pembroke to Port Hope or Cobourg; from Pickering tp. to Owen Sound; from about 10 miles east of Toronto to Hamilton, London and Windsor, with a branch from London to St. Thomas and Sarnia, and a loop north of Toronto in Scarborough and York tps.; from the International bridge near Fort Erie northwesterly to Goderich; from between Dunnville and Port Dover to Owen Sound or Meaford; from Washago to Midland; from Hawkesbury to an unnamed point in Leeds or Lanark county, and from Parry Sound to North Bay.

A route map has been filed at the Brantford registry office showing a line through Brant county east and west, passing through Brantford.

The plan of the proposed entrance of the C.N.O. Ry.'s Toronto-Ottawa line into Toronto shows that it will cross the Don River from the east and approach the Toronto-Sudbury line, north of St. Clair Ave., and west of Woodbine Ave. From there it will parallel the C.N.O.R. existing line, crossing the river five times, to the road from Deer Park, where it will bear away easterly, and run almost due south, crossing the Don again, and then keeping along the eastern bank to south of Queen St., thence turning westerly to the land acquired for yards, etc., along Cherry St. When the matter came before the Minister of Railways, Nov. 2, the company's solicitor was informed that an arrangement should be reached with the C.P.R. as to the location of the tracks. The question was again before the Minister of Railways, Nov. 21; the general route plan was approved and the settlement of the details was left to the Board of Railway Commissioners.

Canadian Northern Ry.—The cut off which gives the C.N.R. a straight line from Slate River to Kakabeka, Ont., was used for the operation of trains Oct. 26. The new route not only cuts out a heavy gradient, but also effects a saving of two miles in distance.

Grading on the Greenway-Wakopa, Man., branch is almost completed, and the bridges and culverts are all in. Rails and ties were being delivered at Adelpa, the present end of track, Nov. 10, and it was expected that 12 miles of track will be laid this season.

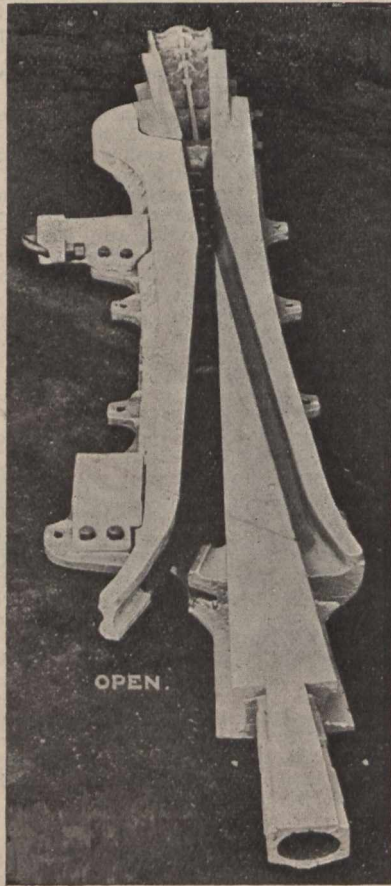
Grading was resumed Nov. 1 on the line which will enter Moose Jaw, Sask., and the gangs are now working near New Warren, and will enter Moose Jaw from the south. The Cowan Construction Co. has the contract, and was reported to have 300 teams at work Nov. 1.

Grading on the line from Prince Albert to North Battleford, Sask., has reached a point 30 miles from the latter place, but no more grading will be done this season. Track is expected to be laid to the end of grading this season.

The Board of Railway Commissioners has approved the revised location of the Vegreville - Calgary branch, mileage 224.49 to 238.82 from the junction with the main line at Vegreville, Alta.

A press report states that the company is making surveys for a new line from near Lac Ste. Anne, Alta., to the crossing of the Athabasca River, at Fort Assiniboine. This is one of the lines for which the Alberta Government has guaranteed the company's bonds.

Canadian Northern Branch Lines.—The Dominion Parliament is being asked to incorporate a company with this title to build the following lines:—From Grosse Isle northerly to Grand Rapids, with a branch to Sturgeon Bay, Man.; from Wassewa westerly and northerly to Ethelbert, Man.; from Yorkton northerly to Hudson Bay Jet., Sask.;



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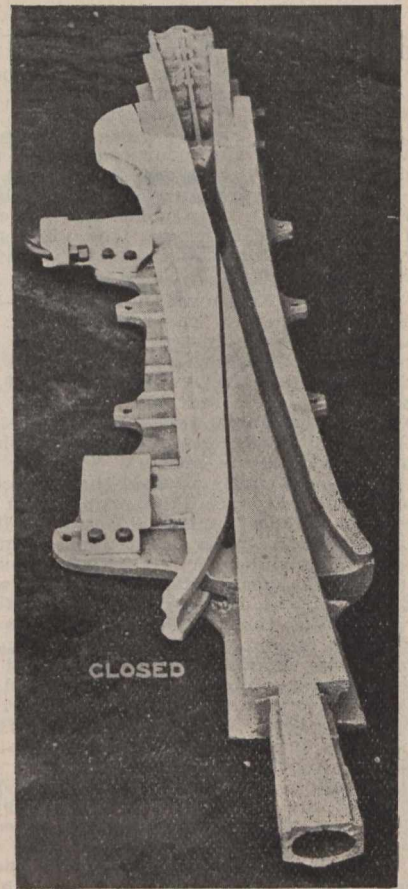
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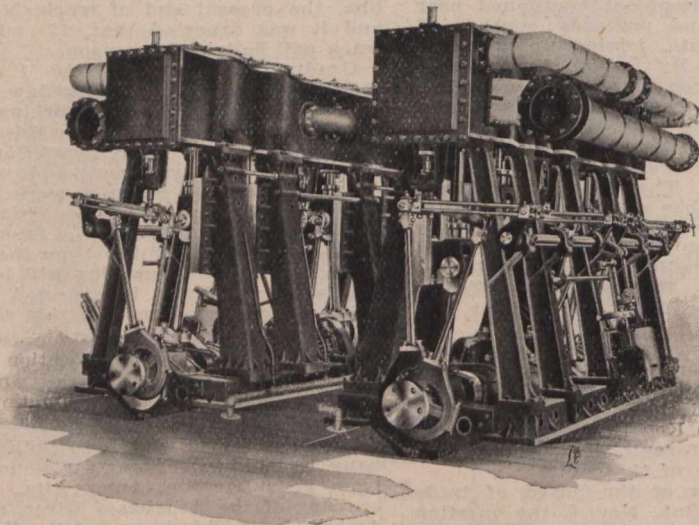
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from Craven northeasterly to Hudson Bay Jct., Sask.; from Craven easterly to the C.N.R. Rossburn Branch, east of Yorkton, Sask.; from Craven northerly through Humboldt, to Prince Albert, Sask.; from the Craven-Hudson Bay Jct. to between Davidson and Aylesbury; from between Brancepath and Kinishno northeasterly to Pas Mission, Sask.; from the Craven-Hudson Bay line in tp. 40, range 7, west of the second meridian, to Jack Fish Lake, northwest of North Battleford, Sask.; from near Moose Jaw northwesterly to the Vegreville-Calgary line between Camrose and Stettler, Alta.; from the International boundary near range 7, west of the 4th meridian, northerly and easterly to west of Battleford, Sask.; from Macleod northeasterly to the Saskatoon-Calgary line of the C.N. Ry., near ranges 1 to 4, west of the 4th meridian; from the Maryfield-Lethbridge line of the C.N. Ry., ranges 1 to 4, west of the 4th meridian, westerly via Cardston to Pincher, Alta.; from the Maryfield-Lethbridge line, ranges 1 to 4, west of the 4th meridian, northwesterly via Taber to a junction with the proposed Moose Jaw-Camrose-Stettler line; from the Maryfield-Lethbridge line, ranges 1 to 10, west 4th meridian, to tps. 20 to 23, range 6, west 5th meridian; from Lloydminster northwesterly and westerly to Bruderheim, Alta.; from the Edmonton and Slave Lake Ry. north of Morinville, to tp. 26, range 8, west 5th meridian; from near Fort Pitt northwesterly to Athabasca River, Alta.

The Canadian Northern Alberta Ry. runs westerly from St. Albert, north of Edmonton. The location plans for the first 70 miles were approved some months ago, and construction is now being proceeded with. The route map for the section from the termination of the first 70 miles, as far as the Yellowhead Pass, was approved by the Minister of Railways Nov. 2, with the stipulation that the line must not be built through any Grand Trunk Pacific Ry. townsites. Press reports from Edmonton, Alta., state that a new company has been formed to take over the whole of the construction work for the C.N.R. lines between Edmonton and the Rocky Mountains, and that Jos. Mackenzie and C. J. Merry are at the head of the new company.

Press reports from Edmonton, Nov. 21, state that a proposition is before the Alberta Legislature which will assure the building of a railway into the Peace River country, and to the Yukon boundary within the next two years. The building of the line is expected to be started in the spring, the Northern Construction Co. being mentioned as having the contract. One of the dispatches stated that the assent of the Lieut.-Governor to the act, which had been rushed through the Legislature, was expected to be given Nov. 22.

Canadian Northern Western Ry.—Application is being made to the Alberta Legislature to incorporate a company with this title to build a line from Edmonton or Strathcona to the boundary between Alberta and British Columbia, near the Pine or Peace River Pass; from some point on the line between Edmonton and Calgary to Rocky Mountain House, thence to the Brazeau and Macleod Rivers, and on to a junction with the C.N.R. west of Edmonton, with power to build branch lines.

Canadian Northern Pacific Ry.—Grading is reported to be making satisfactory progress on the mileage under contract in the Fraser River Valley. It is expected to have the grading completed from New Westminster to Hope early in the summer of 1911, when tracklaying will be started. Survey parties are in the field near Lytton for the purpose of securing an alternative route through

Fraser Canyon. The route originally surveyed was objected to by the C.P.R., and the present party was sent out under the charge of C. Hoard, with C. E. Cartwright as Consulting Engineer, at the instance of the two companies, to endeavor to secure another location. A contract was reported let Nov. 5, for the clearing of 1,000 acres of the Por. Mann townsite. The clearing is to be completed by Mar. 15, and the brush burned by June 15, 1911. The construction of a wharf at Bon Accord is being proceeded with.

Vancouver Island.—The Premier of British Columbia, in a recent interview, gave details of the route selected for the first section of the line on Vancouver Island, which will ultimately be extended from end to end of the line, and form part of the C.N.R. transcontinental system. The plans provide for 153 miles instead of the 100 miles contemplated and provided for in the programme of the session of 1910. Victoria is the southern terminus, and the line will cross the Esquimalt and Nanaimo Ry. at the southeastern corner of Langford Lake, and passing the head of Pedder bay, run on to Sooke Inlet, via Mathieson Lake. Sooke Inlet will be crossed at its mouth, and the river followed on its west bank to Sooke Lake, where the line will swing easterly to Shawinigan Lake, thence north, crossing Koksilah River, about eight miles from its mouth, thence the line reaches Cowichan River, about four miles above Duncan, reaches the lake near the mouth of Mud Creek, thence northerly to the Nitinat River, Coleman Creek, and along the Alberni canal to Alberni. Engineers are in the field along the greater part of the route, and it is said tenders will be asked for as soon as the necessary data is available. A press report states that a contract has been let to the Hub Construction Co. for the building of this line. (Nov., pg. 939.)

Locomotive Engineers' Requests.

The Board of Railway Commissioners has made the following order, 12287, Nov. 3, re the resolutions passed by the Dominion Legislative Board of the Brotherhood of Locomotive Engineers at a sitting held in Ottawa, March 29-April 2 (as published in full in the Railway and Marine World for October). Upon the reading of the resolutions and the reports and recommendation of its operating officers, and upon the hearing of the matter in the presence of counsel for the Grand Trunk, Canadian Pacific, Michigan Central, and Canadian Northern Railway Companies, the International Brotherhood of Locomotive Engineers being represented at the hearing, the evidence offered, and what was alleged, it is ordered that the requests contained in the said resolutions be refused, with the exceptions following, viz.:—That railway companies subject to the Board's jurisdiction be required to equip their locomotives with air bell ringers; such equipment to be installed within six months from the date of this order; that the consideration of the question of the removal of snow-cleaning devices from locomotives stand pending the receipt by the Board of additional information upon the subject, such information to be furnished by and on behalf of the applicants.

The International Society of Railway Financial Officers held its third annual convention at Old Point Comfort, Va., early in Nov., when Frank Scott, Treasurer G.T.R. and G.T.P.R., the retiring President, spoke on some features of railway finances. He was elected to the executive committee for a two year period.

National Transcontinental Railway.

The speech from the throne at the opening of the Dominion Parliament, Nov. 7, contained the following paragraph: "Marked progress is being made in the construction of the N. T. Ry., and a large quantity of grain is this season finding an outlet from the West to the Great Lakes over this new highway. It is hoped that ere long a satisfactory arrangement can be made for the operation of the finished portions of the line, pending the completion of the road from Moncton to Winnipeg."

The Department of Railways and Canals in its report for the year ended Mar. 31, gives considerable information as to the progress of construction the National Transcontinental Ry., from facts supplied by the Commission, the report of which has been prepared for submission to Parliament. The line to be built under the Commission's control extends from Moncton, N.B., to Winnipeg, Man., 1,804.84 miles. The entire line is under contract, and grading has been completed for 1,106 miles, 698.7 miles of track have been laid on the main line, together with 114.5 miles of siding. The work is covered by 21 contracts, and 60.1% of the whole has been done. The construction work has been divided into six districts, and the report shows progress, as follows:—

DISTRICT A.—Moncton to Quebec boundary, 256.51 miles. Grading completed 246 miles; track laid, 155.91 miles; 81.07% of the work completed. Expenditure during the year, \$4,996,543.26.

DISTRICT B.—Quebec boundary to Weymontachi, 507.22 miles. Grading completed 358.25 miles; track laid 216.4 miles; 64.87% of work completed. Expenditure on construction, \$5,313,240.10; on transport, \$14,169.14.

DISTRICT C.—Weymontachi to east of Abitibi Lake, 192.91 miles. Grading completed 13 miles; 5.31% of work done. Expenditure on construction, \$360,264.18; on transport, \$26,691.28; on location, \$6,948.04.

DISTRICT D.—East of Abitibi Lake to near Missinaibi River, 216.11 miles. Grading completed, 127.5 miles; track laid, 57.9 miles; 36.89% of work done. Expenditure on construction, \$3,479,414.94; on transport, \$27,286.12.

DISTRICT E.—Near Missinaibi River to west of Lake Nipigon, 255.19 miles. Grading completed, 41.5 miles; 20.58% of work done. Expenditure on construction, \$857,325.09; on transport, \$10,249.70.

DISTRICT F.—West of Lake Nipigon to Winnipeg, 376.80 miles. Track laid as far as Lake Superior Junction, and work in progress easterly. The work on this division embraces the laying out of yards, and the building of locomotive and other shops at Springfield, about six miles east of Winnipeg. The track connecting the line with the Canadian Northern Ry.'s Dundee branch was laid in Oct., 1909, and 46.7% of the work of constructing the station buildings, etc., over this distance has been completed. The substructure of a double track bridge over the Red River at Winnipeg is under contract, and six of the piers have been completed. The foundations of all the terminal shop buildings are completed, and about 2,500 tons of the general steel work erected; 82.21% of the whole work has been done. Expenditure during the year on construction, \$4,648,295.23; on transport, \$11,982.58.

The amount expended upon the six districts during the year was \$19,968,126.86, bringing the total expenditure to Mar. 31 up to \$71,918,843.88.

C. M. Hays President G.T.R., and G.T.P. Ry., accompanied by a number of officials met the Dominion Minister of Public Works at St. John, N.B., recently and went over the site selected for ter-

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minals at Courtenay Bay. At a dinner subsequently at the Union Club, St. John, Mr. Hays said by its agreement with the Government the Company was compelled to build an all-Canadian line, and to do all its business through Canadian ports. The only Canadian ports on the east were Montreal, Quebec, St. John and Halifax. If the proper scheme of development was carried out at these ports there would be no other port necessary. The company was coming to St. John, and he hoped that it would not be more than a year hence. The plans for the development of the port had been prepared by L. Costo, of the Department of Public Works, and with the co-operation of the Dominion Government, St. John and the G.T.P. Ry., these plans would be carried through. The Minister of Public Works in a speech, stated that he had gone very fully into the question of the development of Courtenay Bay, and had made substantial progress in an agreement that would justify the Government in making large expenditures for the purpose of starting the work. It would be necessary for St. John to convey to the Government its rights on the Courtenay Bay foreshore in order to enable the work to be progressed with. The work proposed to be done was for the general good of Canada and in the fulfilment of the national idea of Canadian trade over Canadian railways and through Canadian ports.

Before returning to Montreal the party went over the section of the N.T.R., in New Brunswick, and in interviews Mr. Hays is reported to have stated it was probable that for some time the company would use the I.C.R. tracks from Moncton to St. John. The matter of securing the N. B. Central Ry. from Chipman to Norton had been discussed, but it was felt that the gradients were too heavy, and that it would probably be cheaper to build a new line. The N.T.R. Commissioners completed an inspection of the line in New Brunswick, Oct. 30. The estimates for the payments required for work done on the six contracts in the province during Oct. were \$224,578.13.

The speech from the throne at the opening of the Dominion Parliament, Nov. 17, contained the following paragraph: "The construction of the bridge across the St. Lawrence river at Quebec, the largest work of its kind ever undertaken, has been receiving the careful attention of my Government, and the utmost care is being observed so that success may be assured. The sub-structure is now under contract. Tenders for the erection of the substructure have been received from four responsible companies, and are now being considered. It is expected that the contract will shortly be awarded and the work pushed forward to completion."

Referring to the Quebec Bridge the report of the Department of Railways for the year ended Mar. 30, says: The expenditure for the preparation of plans salaries, etc., was \$111,788.02; to which is added \$355,279.07, paid for acquiring the Quebec Bridge and Ry. Co.'s stock and \$31,765.44, attending the commission of inquiry into the causes of the collapse of the old structure, making the total expenditure since the collapse \$498,832.53. There is, however, a credit of \$100,000, the amount paid to the Government by the contractors for the collapsed bridge, under an agreement of Mar. 12, in settlement of all claims for damages, arising out of the collapse of the bridge, together with the value of the material in the old bridge and the manufactured material at the bridge site. The Government on its part, relinquished its lien on the plant at the bridge site, and on all steel and manufacturing material for the bridge at the contractors' work at Phoenixville, Pa.

The members of the board of engineers for the bridge visited the site Nov. 4, and inspected the damaged caisson in the dry dock at Levis. It was arranged to hold another meeting Nov. 23, when it was expected to reach a decision as to whether the caisson can be repaired or a new one will have to be built. In an interview H. E. Vantelet stated that the damage to the caisson would not retard the building of the bridge. The caissons required for the substructure work on the south shore would be built in the spring. It was expected that the putting up of the substructure would be started next fall. The work of clearing away the fallen steel had been nearly completed. The Minister of Railways stated Nov. 8, that no decision had been reached with regard to the contract for the superstructure. "It must be understood," he added, "that in a work of such magnitude it is not so much a question of price as the scientific character of the designs. These are being carefully gone over."

Respecting the terminals in Quebec, S. N. Parent, Chairman N.T.R. Commission, in an interview Nov. 12, said the Commissioners obtained possession of the Champlain market site Nov. 1, and all tenancies of stall, etc., would be terminated by Feb. 1, 1911. The buildings on the site would be demolished as speedily as possible. Meanwhile the clearing of the right of way for the line from the market to the bridge site was being gone on with, and plans for laying out the terminals were being prepared.

We are advised that freight only is being handled on the N.T.Ry. between Graham, Ont., and Winnipeg, and that no time table has been issued. The G.T. Pacific Ry. started operating its passenger trains from Fort William to Graham, Oct. 21, instead of to the actual terminal of the Lake Superior branch as formerly. The commissioners have under consideration tenders for the erection of icehouses at Graham, Ont., and Redditt and Springfield, Man., to be completed Feb. 1911.

GRAND TRUNK PACIFIC RAILWAY.

The report of C. Schreiber, Chief Engineer for the Government for the building of the Western Division of the line, extending from Winnipeg, Man., to Prince Rupert, B.C., 1,751 miles, upon the work done during the year ended Mar. 31, says the Prairie section, extending from Winnipeg to Wolfe Creek, 915 miles, is graded; track has been laid, and the structures built. Sidings aggregating 140.5 miles have been laid at 138 stations. Of the main line 474 miles have been fully ballasted, 350 have received a first lift of about five inches of ballast, and there remained only about 35 miles of skeleton track between Entwistle and Wolfe Creek. There have been erected 732 miles of double fence, 793 miles of a four-wire, and 122 miles of a two-wire telegraph line; 11 interlocking plants have been installed at the crossings of other railways; and water services have been introduced at 47 points. Round houses have been built as follows:—Rivers, 18 stalls, with machine shop; Melville, 12 stalls, with machine shop; Watrous, Biggar, Wainwright, 12 stalls each; Edmonton, 18 stalls, with machine shop; two stall engine houses have been built at Portage la Prairie and South Saskatchewan. The other buildings erected include four divisional station houses, 26 way station houses, 54 section houses, 66 tool houses, 79 bunk houses, five coaling plants, 80 permanent and 22 temporary loading platforms, 18 stock yards. There have also been built 115 grain elevators at stations on the line.

On the Mountain section extending from Wolfe Creek to Prince Rupert, 836 miles, location plans and profiles have

been approved by the Minister of Railways and the Board of Railway Commissioners from Wolfe Creek westward for 289 miles, and from Prince Rupert eastward for 409 miles, leaving a gap of 138 miles for which location plans have not yet been approved. Of the 289 miles westerly from Wolfe Creek, only 119 miles have been put under contract, and of this the first mile involved some very heavy work, a cutting of over 130,000 cubic yards having to be taken out. The crossing of Wolfe Creek is by a bridge 622 ft. long and 130 ft. above highwater mark, and a mile distant is the crossing of McLeod River, which necessitates a bridge 1,052 ft. long and 125 ft. high. Of the 409 miles westerly from Prince Rupert, 240 are under contract. On this mileage grading, etc., had been well advanced on the first 100 miles when the inspection was made, but very little had been done on the next 140 miles, which carries the line to Aldermere. A wharf and warehouse had been built at Prince Rupert.

In a recent interview at Montreal, E. J. Chamberlain, Vice-President and General Manager, is reported to have said the company was anxious to get the business from its western lines over its eastern lines as quickly as possible. As to the entrance into Montreal he said the shortest route would be by building from the N.T.R. to about 25 miles west of Ottawa, and then reaching Montreal over the old Canada Atlantic Ry. In a subsequent interview, Nov. 2, Mr. Chamberlain said he had been somewhat misquoted. One way in which the Montreal connection would be affected was by building a line from about 200 east of Abitibi to the Canada Atlantic Ry. between Ottawa and Arnprior. The G.T.P.R. owns a charter for building such a line. Press despatches dealing with the original report says that the suggested line would leave the N.T.R. about 150 miles east of Cochrane, the junction with the Temiskaming and Northern Ontario Ry., keep to the west of Queen Victoria Lake, and come down between the Gatineau and Conlonge rivers, effecting a junction with the Canada Atlantic Ry. near Carp, Ont. The Montreal Chambre de Commerce has passed a resolution condemning this proposal and asking the Quebec Government to undertake the construction of a direct line from Montreal to the N.T.R. as a government work.

A resolution was passed by the Port Arthur, Ont., city council, Nov. 8, for the purpose of endeavoring to bring the negotiations with the G.T.P.R. for a line to the city to an immediate conclusion.

The first span of the superstructure of the bridge across the Red River at the foot of Lombard St., Winnipeg, was completed, Nov. 10.

The question of the entrance of the branch line, which is to reach the International boundary, was before the Regina city council, Nov. 9, but no decision was reached. Track laying is being proceeded with on the sections of the line under construction, and the Board of Railway Commissioners has approved the amended location plans from mileage 0 to 10.47 of the extension southerly from Regina to the International boundary.

The Minister of Railways Nov. 2, approved of the plans for the entrance of one of the company's branch lines into Prince Albert, Sask.

With respect to the work west of Edmonton, it is expected to have track laid to Prairie Creek by the end of the year, on the main line, and to have made considerable progress with the branch line to the Brazeau River country. The coal fields are situated about 50 miles from Edson, and the revised location plans for the section from mileage 37 to 56.04 have just been passed by the

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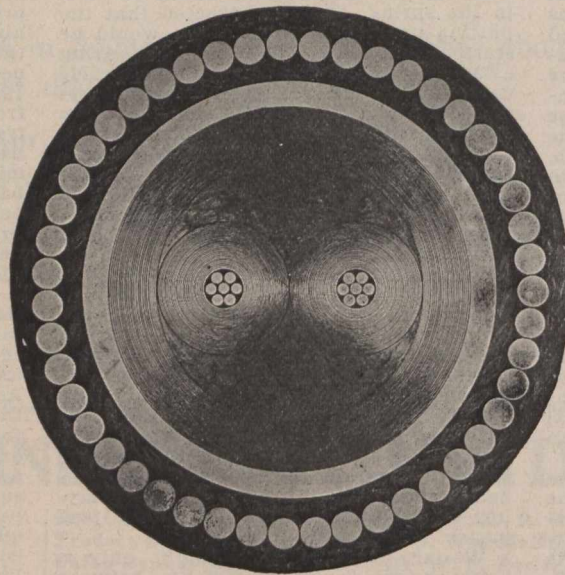
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Board of Railway Commissioners. The Dominion Government has had a geological survey at work on the Rocky Mountain country during the summer and D. B. Dowling, who returned to Ottawa, Nov. 14, reported that there were considerable deposits of coal along the route of the railway 200 miles west of Edmonton, one at Jasper Park, and another near Brule Lake. The question of the route of the line in the vicinity of Fort George is not yet settled, as the reserve has not been given up by the Indians. From this point the branch to Vancouver will probably start and it is expected that this will traverse the Lillooet district to Agassiz, and parallel the C.P.R. to Vancouver. In the Prince Rupert district considerable damage was done to the line by storms, Oct. 23, one big trestle bridge being blown down; and two miles of track washed out. We were officially advised Nov. 12, that the first 100 miles of the main line from Prince Rupert easterly was being ballasted, and that if the weather continued favorable it was expected to have this finished by Dec. 31.

The G.T. Pacific Branch Lines Co. is applying to the Dominion Parliament for authority to build the following additional lines: From between range 21 and range 28 west of the second meridian, westerly to between tp. 29, and tp. 37, joining up with another branch line; from near Moose Jaw, in a generally westerly direction to Calgary, or near there, joining up with one or other of already authorized branch lines from the G.T.P. Ry. between ranges 9 and 13 west of the fourth meridian south westerly and westerly to a junction with a line passing through tps. 39, 40, or 41; from the line passing through range 24 west third meridian, and range 2, west fourth meridian, northwesterly and westerly to the G.T.P. Ry. in ranges 21, 22, 23, 24, or 25; from the G.T.P. Ry., between range 21 and range 25, west of the fourth meridian, southerly and southeasterly to a connection with the line passing through tps. 46, 47 or 48; from the G.T.P. Ry. between range 27 and range 23 west of first meridian, westerly to the branch line passing through tps. 18, 19, 20, or 21; from between range 12 and range 16 west of sixth meridian, southerly to the International boundary between range 10 and range 18, west of the second meridian. (Nov., pg. 919.)

Machine Drawing is the title of a book dealing with the principles of graphic expression as illustrated by machine drawing, together with the technique of drafting, dimensioning, and sketching, by G. C. Anthony, D.Sc., Dean of the School of Engineering, Tufts College. This is a re-issue of Dr. Anthony's former book, revised in the light of the experience of those who used it in teaching and with the illustrations redrawn, and others added. The book is practical, consequently it is largely used for teaching purposes. The price is \$1.50, and the publishers are D. C. Heath & Co., Boston, Mass. It can be obtained through the Railway and Marine World's book department.

At a meeting of the Canadian Accountants' Association in Montreal, Nov. 14, there was an interesting discussion on the questions of claims against railways. The discussion was opened by Mr. Finlayson, who dealt with the subject from the claimant's point of view, and Jas. Cherry, C.P.R., and Copeland G.T.R., protected the railways' side of the question. It was stated that the C.P.R. deals with about 55,000 claims a year, and the G.T.R. with an average of 160 claims a day. Claims for damage against railways have increased largely during the last few years.

G. T. R. Betterments, Construction, etc.

Shops at Richmond, Que.—The roundhouse which the company is building at Richmond, Que., will be of concrete, with wooden frame roof, with stalls for 18 locomotives. Each stall is 90 ft long, and is provided with a pit 66 ft. long. A wheel shed 100 ft. long and a machine shop 48 by 125 ft, with boiler room 27½ by 26 ft. to accommodate two return flue boilers, are attached. An elevated track conveys coal to bins 25 by 12 ft. The distance between the centre of the doorposts is 14 ft. The house and shop are heated with hot air throughout, generated in the machine shop and forced through overhead piping by a large fan situated in the machine shop. The size of piping runs from 5 ft. to 3½ ft. Down spouts 2 by 3 ft. between every second pit conveys the hot air to pits. The machine shop equipment consists of one engine and one air compressor; two lathes, one planer, one drill, one heater, one fan, and one engine to operate the same; and the necessary pumps. The lay-out provides for four cinder pits, two being 100 ft. long, one 120 ft. and one 150 ft.—with G.T.R. cinder hoists, and an 80 ft. turntable. The roundhouse is also equipped with two drop pits, one for driving wheels and one for small wheels.

Lachine, Jacques Cartier and Maisonneuve Ry. Co.—Application is being made to the Dominion Parliament to declare the line, which the Quebec Legislature incorporated a company with this title to build, to be a work for the general advantage of Canada, and extending the time within which it may be built.

Bonaventure Station.—Press reports Nov. 1, stated that the G.T.R. had acquired all the land necessary for the purpose of "providing Montreal with big passenger terminals to replace the present inadequate Bonaventure station," and that the first steps in the actual work had been taken that day when the dismantling of the buildings on a portion of the land had been begun. We were officially advised Nov. 12, that while the company may replace Bonaventure station at an early date, no definite move has been made in that connection.

Chateau Laurier Hotel, Ottawa.—It was reported Nov. 12, that the walls of the building were completed, the roof on, and practically the whole of the exterior work completed. The heating apparatus, etc., is being installed, and other interior work is being progressed with. It is expected that the building will be completed and furnished ready for opening by the fall of 1911.

Ottawa Station Annex.—In connection with the annex which is being built at the Central Station, as part of the new union station, a coniform concrete chimney, which we are informed is the first to be built in Canada, is under construction. The shaft is 169 ft. high, with diameter at base of 12½ ft., and at top of 7 ft. The shaft is being reinforced by vertical bars and horizontal rings. The vertical bars are of sufficient strength to take up all the tensile stresses caused by wind pressure and reach partly down into the structure of the foundation, thus forming a perfect anchorage for the chimney. J. G. Siegfried, C.E., is the structural engineer, with M. M. Campbell, C.E., inspector in charge of construction.

Ottawa, Rideau Valley and Brockville Ry.—An Ottawa press dispatch states that it is proposed to start work at once on its proposed line from Ottawa to Brockville, via the Rideau River valley.

Belleville Roundhouse and Yards.—The new roundhouse which is under construction, will have a capacity of 42

stalls, each 90 ft. deep, with a wheel shed and machine shop annex. The roundhouse is expected to be completed this year. In connection with this work the yards have been extended and re-arranged. The highway at the back of the station which crosses the Northern Division main line, is to be closed from west of the roundhouse to lot 12, where the yard ends, and a new highway is to be opened up from that point, running northwesterly until it reaches the northern boundary of the yard, thence to a connection with a projected street west of the northern division lines.

Toronto Belt Line.—Considerable progress is reported to have been made with the reconstruction of the section of the old Belt Line, from Fairview to Yonge St., which the G.T.R. proposes to bring into use once more. Ties have been put in where necessary, and a lot of ballast put down. The bridge across Yonge St. has been reconstructed and a start has been made on the reconstruction of the Dufferin St. bridge.

Holmedale Industrial Spur, Brantford.—In conference with the mayor of Brantford, Ont., Nov. 4, C. M. Hays, President, made an arrangement to build a spur line to the Holmedale district by a route in the rear of the Institution for the Blind. An agreement to this effect is to be submitted to the city council, and the work will be gone on with as soon as it is approved of. One of the points arranged at the conference was that when built this Holmedale spur will form part of a new route for the G.T.R. Tillsonburg branch line.

Guelph Freight Sheds.—The G.T.R. is applying for authority to build freight sheds on its Cardigan street property, from the C.P.R. to Norwich St., 340 ft.

Goderich Station.—The comparatively new station built at Goderich, Ont., was destroyed by fire, Nov. 6. The station agent stated Nov. 11, that he expected that a new station would be ready by the end of the year. The foundations and walls of the burned building will be used so far as possible. The ruins are being cleared away and material is being received from the London, Ont., shops for the new building.

The Imperial Privy Council heard arguments in London, Eng., Nov. 22, in the appeal of the provinces of Saskatchewan and Alberta from the decisions of the Canadian courts in the C.P.R. lands taxation case. The case has been before the courts for years.

The Montreal city council has issued a permit to Transportation Limited Company, for the erection of a \$1,000,000 building on St. Francois Xavier St., between Notre Dame and St. James St., Montreal. Ross and McFarlane, Montreal, are the architects, and P. Lyall and Sons are the contractors. The building is to be completed by May, 1911.

An Ottawa dispatch states that the question of regulating the tariff of tolls upon international freight traffic between Canada and the United States is one that cannot be decided by concurrent legislation, but must be regulated by treaty. The question has been under discussion by J. P. Mabee, Chief Commissioner, Board of Railway Commissioners, and the Chairman of the Interstate Commerce Commission.

The Board of Control, according to a Winnipeg despatch of Nov. 15, alleges that the C.P.R. is neglecting to perform its part of the agreement under which the city granted exemption from taxation, and is considering what action should be taken in order to abrogate the agreement. Alleged inadequate accommodation at the stockyard is the special ground for complaint. The agreement provides that in case any dispute arises between the city and the company an arbitration board is to be appointed.

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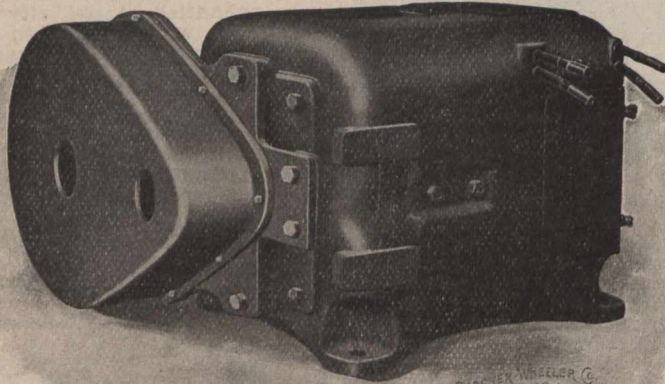
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Coghlin, B. J. Co., Ltd.	1072

Commercial Acetylene Co.	1062
Consolidated Car Htg. Co.	1070
Continental Iron Works	1054
Crossen Car Mfg. Co. of Cobourg, Ltd.	1010
D	
Date, John	1068
Dearborn Drug & Chemical Works	1046
Delaware & Hudson Co.	1066
Dickinson, Paul, Inc.	1078
Dominion Bridge Co., Ltd.	1068
Dominion Iron & Steel Co., Ltd.	1040
Dominion Wire Rope Co.	1012
Dougall Varnish Co., Ltd.	Cover 1
Drewery, E. L.	1068
Drummond, McCall & Co., Ltd.	1038
Duckworth-Boyer Eng. & Insp. Co.	1078
Duner Co.	1024
Duntley Mfg. Co.	1024
F	
Falls Hollow Staybolt Co.	1068
Flannery Bolt Co.	1032
Franklin Mfg. Co.	1066
Fuce, E. O.	1037
G	
Galena Signal Oil Co.	1006
Galt Malleable Iron Co., Ltd.	1076
Gardner, J. T.	1074
Gartshore, J. J.	1072
Gartshore-Thomson Pipe & Fdry. Co., Ltd.	1068
Goldschmidt Thermit Co.	1074
Grand Trunk Railway	1012
Greening, The B. Wire Co., Ltd.	1076
Greenlee Bros. & Co.	1076
H	
H. & E. Lifting Jack Co., Ltd.	1038
Hart, John A., & Co.	Cover 1
Hart-Otis Car Co., Ltd.	1036
Holden Co., Ltd.	998
Hopkins, F. H. & Co.	1042
Hudson's Bay Co.	1070
Hunt, Robert W., & Co.	1076
Hutton, James & Co.	1076
I	
Illinois Central Railroad	1072
Imperial Bank of Canada	1074
Imperial Guar. & Accident Ins. Co.	1078
Inglis, The John, Co., Ltd.	1030
Intercolonial Railway	1044
International Marine Signal Co., Ltd.	1056
International Mercantile Marine Co.	1064
International Textbook Co.	1060
J	
Jardine, A. B. & Co.	1042
Johnston, R. F., Paint Co.	1066
K	
Kerr Engine Co., Ltd.	1060
Kennedy, Wm. & Sons, Ltd.	1074
Kingsmill, Saunders, Torrance & Kingsmill ..	1037
L	
*Legg Bros.	1050
Lewis, Rice & Sons, Ltd.	1076
London Guarantee & Accident Co., Ltd.	1070
Long and Allstatter Co.	Cover 1
Lufkin Rule Co.	1068
Lumen Bearing Co.	1068
M	
McAvity, T. & Sons	1018
McConway & Torley Co.	1064
McCord & Co.	1010
Males Co.	1076
Marsh Co.	1072
Matheson, I. & Co.	1076
*Meaford Wheelbarrow Co., Ltd.	1076
Metcaff, John S., Co., Ltd.	1076
Missouri Lamp & Manufacturing Co.	992
Montreal Locomotive Works, Ltd.	994
Montreal Steel Works, Ltd.	1048
Moorehouse, J. M.	1048
Mussens Limited	Cover 1 and 1044
N	
*Northern Electric & Mfg. Co., Ltd.	1034
Northern Engineering Works	1078
Norton, A. O.	1028
Nova Scotia Steel & Coal Co., Ltd.	1016
O	
Ontario Wind Engine & Pump Co., Ltd.	1072
Orford Copper Co.	1078
Ottawa Car Co., Ltd.	Cover 1
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P	
Parry Sound Lumber Co., Ltd.	Cover 1
Pay-As-You-Enter Car Corporation	1044
Peteler Car Co.	1066
Phillips, Eugene F., Electric Works, Ltd.	1074
Piper, The Hiram L., Co., Ltd.	1078
Piper, N. L., Railway Supply Co., Ltd.	1050
Pittsburg Forge & Iron Co.	1020
Polson Iron Works, Ltd.	1018
Positive Lock Washer Co.	1072
Pratt & Whitney Co.	Cover 1
Preston Car & Coach Co., Ltd.	Cover 1
Provincial Steel Co., Ltd.	1064
Pyke, J. W. & Co.	1054
Pyle National Electric Headlight Co.	1024
R	
Rail Joint Co. of Canada, Ltd.	Cover 1 and 1014
Railway Materials Co., Ltd.	1078
Re'd, Jno., & Co.	1037
Robb Engineering Co., Ltd.	1032
Russel Wheel & Foundry Co.	996
S	
Safety Car Heating & Lighting Co.	1026
Saxby & Farmer, Ltd.	Cover 1
Schools of the Sisters of the Church.	1070

Scully Steel & Iron Co.	1046
Shanly, J. M.	1037
Silliker Car Co., Ltd.	1022
*Smart, James, Manufacturing Co., Ltd.	1074
Southam Press	1062
Standard Coupler Co.	1062
Standard Explosives, Ltd.	1036
Standard Steel Works Co.	1062
Steel Co. of Canada, Ltd.	1014
Symington, T. H. & Co.	1038
T	
Tallman Brass & Metal Co.	Cover 1
Tate Accumulator Co.	1050
Tate, Jones & Co., Inc.	1078
Taylor & Arnold, Ltd.	1054
Taylor, J.	1037
U	
Utica Steam Gauge Co.	1070
V	
*Vandeleur & Nichols	1062
Vulcan Iron Works	1062
W	
Western Wheeled Scraper Co.	Cover 1
Williams & Wilson	1028
Wire & Cable Co.	Cover 1
Wood, Guilford S.	1046

*Advertisements marked with an asterisk appear in alternate issues.

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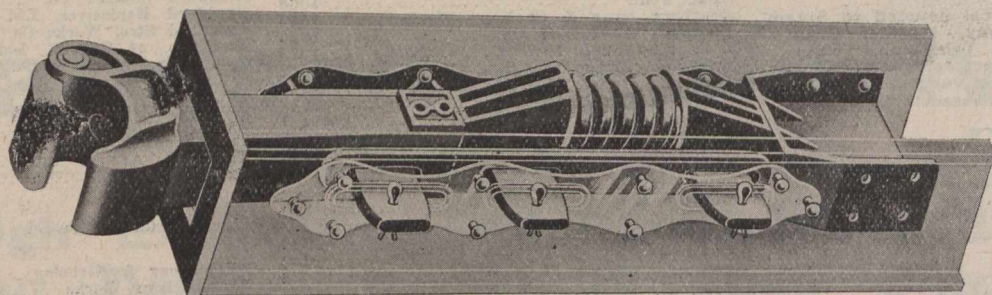
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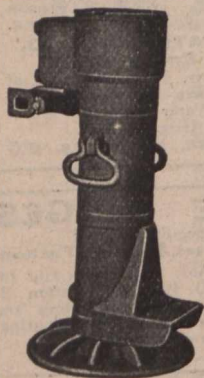
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MAINLY ABOUT PEOPLE.

Lord Strathcona has subscribed \$25,000 to the Vancouver Y.M.C.A. building fund.

D'Arcy Tate, Solicitor G.T.P.R., Winnipeg, has been appointed a K.C. by the Ontario Government.

F. C. Salter, European Traffic Manager G.T.R., has been elected a Fellow of the Royal Colonial Institute.

J. R. Shaw, of C.P.R. passenger staff at Yokohama, Japan, arrived in Montreal on furlough, Oct. 24.

W. Mackenzie, President Canadian Northern Ry., has given \$10,000 to the Winnipeg Y.M.C.A. building fund.

J. H. Plummer, President Dominion Steel Corporation, has been elected Vice President Canada Life Assurance Co.

Jas. Osborne, General Superintendent Ontario Division, C.P.R., left Toronto, Nov. 8, for a two months trip to Europe.

C. Stackhouse, B. Sc., a travelling inspector of locomotives for the C.P.R., was married Oct. 25 at Riverfield, Que.

Miss Margaret Angus, sister of R. B. Angus, of the C.P.R. directorate, Montreal, died in Victoria, B.C., Nov. 17, aged 82.

G. J. Bury, General Manager C.P.R. Western Lines, Winnipeg, was in Montreal and Toronto, early in Nov., on a business trip.

T. Skinner, director C.P.R. and Deputy Governor Hudson's Bay Co., sailed from Quebec Nov. 4, on the Empress of Ireland for Great Britain.

Hugh Sutherland, Executive Agent Canadian Northern Ry., Winnipeg, was among the exhibitors at the Chicago Horse Show, Nov. 22 to 26.

J. P. Quilty, at one time a station agent on the Intercolonial Ry., has been appointed chief of the rate bureau, Boston and Maine Rd., Boston, Mass.

Miss R. Burpee, daughter of T. C. Burpee, Engineer of Maintenance of Way Intercolonial Ry., was married recently at Sheffield, N.B.

W. F. Bleecker, C.P.R. outside ticket agent at Marmora, Ont., died there recently. He was a member of the Canadian Ticket Agents' Association.

G. G. Foster, K.C., Vice President, of the Orford Mountain Ry., a C.P.R. controlled railway, has been elected a director of the Montreal Street Ry.

G. Wright, a subcontractor on the Canadian Northern Ry., near Deloraine, Man., was shot and seriously injured by a discharged laborer, Nov. 9.

Lord Strathcona has given \$200,000, making \$500,000 in all, to the Strathcona Trust, for the encouragement of physical training in Canadian public schools.

P. H. McFadden, who recently resigned the position of Superintendent Prairie Division, G.T.P.R., at Melville, Sask, has we are advised, entered Great Northern Ry. service.

W. E. Mullins, General Manager of the Northern Ry. of Costa Rica, South America, and formerly in the G.T.R. service, arrived in London, Ont., for a holiday, Oct. 24.

W. W. Jones, a superannuated employe of the Intercolonial Ry., who died at Halifax, N.S., Nov. 1, aged 81, is said to have sold the first passenger ticket issued at Richmond station.

Jas. Black, for a number of years G.T.R. boiler inspector, died in Montreal, Oct. 27, aged 82. W. D. Robb, Superintendent of Motive Power, G.T.R. married one of his daughters.

G. I. Evans, Mechanical Engineer, C.P.R. Angus Shops, Montreal, was

presented with a cabinet of silver by the officials of the mechanical department recently on the occasion of his marriage to Miss A. Peel.

J. Barnet, accountant in the General Superintendent's office, Canadian Northern Ry., Winnipeg, was presented with a travelling bag, by the office staff on the occasion of his recent retirement from the service.

R. Muirhead was presented with \$100 and a cut glass water set by the employes at the G.T.R. Simcoe St. freight sheds Nov. 24, on his promotion to the position of passenger yardmaster at Union Station, Toronto.

Judson Harmon, who was Receiver of the Pere Marquette Rd. prior to its recent reorganization, has been re-elected Governor of Ohio, an office which he has already held for one term.

Miss N. Davis, daughter of J. T. Davis, of M. P. and J. T. Davis, contractors for the substructure of the Quebec Bridge, was married at St. Colombe de Sillery, Que., Nov. 8, to C. M. Hart, of Montreal.

J. C. Whitehelo, C.P.R. outside ticket agent at Parry Harbor, Ont., died there, Nov. 9, aged 76. He was a member of the Canadian Ticket Agents' Association, and both he and his wife attended the annual meetings for years.

D. Thomas, who died at Point St. Charles, Que., Oct. 23, was engaged in bridge and other construction work on the G.T.R., from the time of his arrival in Canada in 1853, until his retirement from the service in 1899.

H. L. Loughlin, Chief Engineer of the Twin City and Lake Superior Rd., who died recently at Minneapolis, Minn., was for a number of years engineer of maintenance of way of the Minneapolis, St. Paul and Sault Ste. Marie Ry.

T. Howell, the recently appointed Immigration Agent of the Canadian Northern Ry., left Toronto, Nov. 8, for Great Britain to organize the work of the company's agents there for next season.

R. S. Richardson was presented with a purse of money by the staff of the Superintendent's office of the Canadian Northern Quebec Ry. Joliette, Que. Nov. 8, on his leaving the company's service.

J. J. Warren, President of the Kettle Valley Lines, and of the Okanagan Land Co., has joined with his fellow directors of the latter company in presenting a site for the Anglican Church of All Saints at Okanagan Centre, B.C.

A. Hawkes, Superintendent Canadian Northern Ry. Publicity Department, who had charge of the delegation of merchants from Bristol, Eng., during their tour through Canada, was presented with a silver rose bowl, by the delegates on their return to Bristol.

F. W. Brunskill, who died at Forward, Sask., recently, was engaged for some time with G. H. Strevel, and the Cowan Construction Co., and latterly had been taking contracts on his own account along the Canadian Northern Ry. in Saskatchewan.

F. H. McGuigan, jr., engineer in local charge of the grade separation works on the G.T.R., between Bathurst St. and Mimico, Toronto, was thrown off a handcar near the Sunnyside crossing, Nov. 16, and received injuries to one of his knees.

J. E. Muhlfeld, formerly in the G.T.R. and Intercolonial Ry. service, and for some years Mechanical Superintendent Baltimore and Ohio Rd., has been appointed Vice President and General Manager Kansas City Southern Ry., Kansas, Mo.

H. G. Elliott, Assistant General Passenger Agent G.T.R., was presented with a gold fob and a set of furs for

Mrs. Elliott by transportation and other friends at a dinner, Oct. 27, in connection with his transfer from Montreal to Chicago, Ill.

W. A. Cooper, General Superintendent C.P.R. Dining and Sleeping Cars, was elected for a third term as President of the American Association of Dining Car Superintendents at the annual convention recently held at Minneapolis, Minn.

A. Whittaker, who died at Windsor, Ont., Oct. 24, aged 77, was at one time locomotive foreman on the old Great Western Ry., at Windsor, and was continued in the same position when that line was taken over by the G.T.R. He had retired from railway work for some years.

Jas. McLaughlin, who has been on the Trent Valley Canal engineering staff at Campbellford, Ont., for some time, was entertained at dinner there Nov. 22, and presented with a travelling bag, etc., on leaving to take a position with the Department of Railways and Canals, at Ottawa.

Lord Strathcona has been re-elected President, and Sir H. Montagu Allan, R. B. Angus, E. B. Greenshields, C. M. Hays, C. R. Hosmer, Sir Thos. G. Shaughnessy, Sir Wm. C. Van Horne, Jas. Ross, and Hon. R. Mackay have been re-elected directors of the Royal Trust Co.

J. T. Thompson, a locomotive driver of over 50 years experience, died at Toronto, Nov. 8, aged 77. He was in G.T.R. service during the Fenian raid, and later ran one of the first trains from Toronto to Orangeville for the Credit Valley Ry., now part of the C.P.R. He was on the C.P.R. superannuation list for some years.

T. Hoben, Assistant Superintendent Canada Eastern Division Intercolonial Ry., was recently presented with a purse of gold by the station agents and telegraph operators on the line; with an address and travelling bag by the conductors, and with a gold-headed cane by the employes at Gibson, N.B., station in connection with his approaching retirement after 40 years active railway service.

H. G. McMicken, European Traffic Agent in London for the Great Northern Ry., U.S.A., is one of the advisory board of the Canadian Mills and Timber, Limited, which issued a prospectus in London recently offering 500,000 shares at four shillings a share. The company is incorporated in British Columbia, its properties being inside Quatsino Sound, on the northwest coast of B.C.

The directorate of the Royal Trust Co., Montreal, as recently elected, includes Sir Thos. G. Shaughnessy, President C.P.R.; Sir Wm. C. Van Horne, R. B. Angus, C. R. Hosmer, and Lord Strathcona (President of the company), directors of the C.P.R.; C. M. Hays, President G.T.R. and G.T. Pacific Ry., and Sir H. Montagu Allan, of the Allan Line Steamships.

H. W. Brodie, whose promotion from the position of Assistant General Passenger Agent, Winnipeg, to that of General Passenger Agent Western Lines west of Revelstoke, Vancouver, B.C., was announced in our last issue, was entertained to dinner by railway officials in Winnipeg, Nov. 8, and presented with a case of pipes, and Mrs. Brodie with a silver set. The clerks in the station and down town ticket offices presented him with a cut glass punch set.

The engagement is announced of Miss Grace Mackenzie, youngest daughter of Wm. Mackenzie, President Canadian Northern Ry., to Count Jacques de Lesseps, the aviator, and son of the late Count Ferdinand de Lesseps, who projected and superintended the construction of the Suez Canal, and who after-

DOMINION IRON & STEEL CO.

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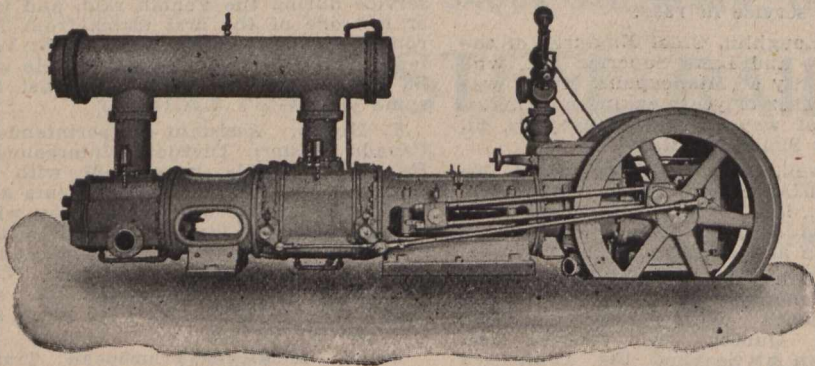
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GOOD STEAM ECONOMY effected by Automatic Long Range Cut-off, consisting of special internal ports, combining convenience in starting with better steam economy by giving a quick, short, running cut-off.

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wards formed a company for the construction of the Panama Canal, which, however, was unsuccessful, the work subsequently being taken over by the U.S. Government.

Capt. H. W. Shepherd, who died at Montreal, Oct. 31, aged 86, was connected with marine interests at Montreal and Ottawa for over 60 years. He first commanded the *Lady Simpson*, one of the first steamboats on the inland waters, and at one time or another had command of nearly all the steamboats plying between Montreal and Carillon, until about four years ago, when he retired. He was for many years President of the Ottawa River Navigation Co., which owns the *Carillon* and *Grenville Ry.*

A. B. Calder, General Agent Passenger Department C.P.R., Seattle, Wash., was entertained to dinner, Nov. 8, by a number of friends on the occasion of his leaving for Chicago, Ill., where he has been transferred in a similar capacity.

James Leitch, K.C., Chairman Ontario Railway and Municipal Board, was compelled to return to Toronto from Niagara Falls, where he was hearing an expropriation application by the Victoria Park Commission, Nov. 16, on account of a sudden illness.

J. E. Robitaille, whose appointment as Accountant and Auditor Ha Ha Bay Ry., Chicoutimi, Que., was announced in our last issue, was born at Quebec, Que., Feb. 17, 1870, and entered railway service Jan. 1890, since when he has been, to Oct., 1897, freight cashier and accountant G.T.R., Quebec; Oct. 1907 to May 1902, Freight and Passenger Agent Quebec Southern Ry., St. Hyacinthe, Que.; May 1902 to Aug. 1910 Assistant Auditor and Car Accountant, Bay of Quinte Ry., Thousand Islands Ry., Oshawa Electric Ry., and Deseronto Navigation Co., Deseronto Ont. He is Acting Adjutant of the Ninth Brigade Canadian Field Artillery.

J. W. Herrold, who has been appointed General Agent Algoma Central and Hudson Bay Ry., at Sault Ste. Marie, Ont., was born at Hibbardsville, Ohio, Apr. 12, 1875, and entered railway service in July 1892, since when he has been, to 1894 clerk in freight office Kanawha and Michigan Ry., Athens, O.; 1894 to 1895, ticket agent same road, Athens, O.; 1895 to 1898, cashier and chief clerk K. and M.R., and Hocking Valley Ry., Athens, O.; 1898 to 1904, Freight and Passenger Agent same companies, Athens, O.; 1904 to Oct. 5, 1910, Agent K. and M. Ry., in charge of freight and passenger traffic and yards at Charleston, W. Va.

Canada has now several Grand Old Men, and T. C. Keefer, the eminent engineer, who has rendered great service to the country through the practice of his profession, is one of them. He has now reached his ninetieth year. Of U. E. Loyalist stock, he is a thorough Canadian. He early took an interest in the transportation question, and was concerned in the building of our canal system. He also took part in railway construction, and helped to survey for the Grand Trunk and for the Victoria Bridge. An active life in the service of Canada brought Mr. Keefer the title of C.M.G., which he had well earned.—Mail and Empire.

H. W. Brodie, whose appointment as General Passenger Agent Western Lines, C.P.R. west of Revelstoke with office at Vancouver, B.C., was announced in our last issue, was born at Fredericton, N.B., June 8, 1874, and entered railway service, Jan. 1, 1895, since when he has been, to July 1895, junior clerk and stenographer C.P.R. Passenger Department, St. John, N.B.; July to Aug. 1895, in a similar capacity at Boston, Mass.; Aug. to Feb. 1898, stenographer to Assistant General Passenger Agent, C.P.R.,

Toronto; Feb. 1898 to Oct. 1899, chief clerk in same office; Oct. 1899 to Feb. 1903, chief clerk to General Passenger Agent Western Lines, C.P.R., Winnipeg; Feb., 1903, to Oct., 26, 1910, Assistant General Passenger Agent, Western Lines C.P.R., Winnipeg.

C. E. McPherson, whose appointment as Assistant Passenger Traffic Manager Western Lines, C.P.R., Winnipeg, was announced in our last issue, was born at Chatham, Ont., June 7, 1861, and entered railway service in 1876, since when he has been, to 1882, ticket clerk G.T.R., Toronto, and subsequently, Travelling Passenger Agent same road; 1882 to 1886, Assistant General Agent, Chicago, Rock Island and Pacific Ry., in Canada; 1886 to 1887, General Travelling Agent C.P.R.; 1887 to 1889, District Passenger Agent, C.P.R., Boston, Mass.; 1891 to June, 1895, Assistant General Passenger Agent, C.P.R., St. John, N.B.; June 1895 to June 1899, Assistant General Passenger Agent, C.P.R., Toronto; June, 1899 to Oct. 26, 1910, General Passenger Agent, Western Lines, C.P.R., Winnipeg.

M. B. Dube, who was recently appointed locomotive foreman G.T.P.R. at Graham, Ont., was born in Quebec, Que., Sept. 6, 1877, and entered railway service Sept., 1891, since when he has been, to 1893, messenger G.T.R., Gorham, N. H.; 1893 to 1902, in G.T.R. shops, Gorham, N.H.; 1902 to Jan. 31, 1904, in charge motive power and car department, Gorham shops; Jan. 31 to Apr., 1904, night foreman G.T.R. shops, Belleville, Ont.; Apr., 1904, to Jan. 1, 1907, in G.T.R. shops, Gorham, N.H.; Jan. 1 to Mar. 1, 1907, locomotive foreman G.T.R., Madawaska, Ont.; Mar. 1, 1907, to Apr. 20, 1908, locomotive foreman G.T.R., Coteau Jct., Que.; Apr. 20, 1908, to Dec. 22, 1909, locomotive foreman G.T.R., Island Pond, Vt.; Jan. 1 to Oct. 1, 1910, locomotive foreman G.T.P.R.

D. Crombie, who has been appointed Assistant to the First Vice President G.T.R., at Montreal, was born at Hamilton, Ont., May 13, 1864, and entered railway service in 1883, since when he has been, to 1887, telegraph operator G.T.R.; 1887 to 1889, ticket clerk same road, Chatham, Ont.; 1889 to 1890, train dispatcher same road, London, Ont.; 1890 to 1892, train dispatcher, Flint and Pere Marquette Rd., Saginaw, Mich.; 1892 to 1894, car distributor same road; 1894 to Jan. 1, 1900, Car Service Agent same road; Jan. 1, to July 1900, Superintendent Car Service Pere Marquette Rd.; July 1900 to Apr. 1906, Superintendent of Transportation same road, Detroit, Mich.; Apr. 1906 to Oct. 1907, Master of Transportation G.T.R. Middle Division, London, Ont.; Oct. 1907 to Nov. 22, 1910, Assistant to General Transportation Manager, G.T.R., Montreal.

Frank Grundy, Vice President Quebec Central Ry., died at Sherbrooke, Que., Nov. 15. Born at Bury, Lancashire, Eng., in 1836, he entered railway service in 1850 as clerk in the Manchester, Sheffield & Lincolnshire Ry. (now the Great Central Ry.), and subsequently was with the Oxford, Worcester and Wolverhampton Ry. (now a part of the Great Western Ry.), and from 1863 to 1889 he was Manager of the Mid-Wales Ry., Brecon, and of some other small railway and dock works. In 1889 he was appointed General Manager of the Quebec Central Ry. by the bondholders, retiring in 1905, when he became Vice President. He was also President of the Temiscouata Ry., and director of the Eastern Townships Bank. Three of his sons are engaged in railway service, the eldest with the Egyptian Government; G. G., as General Manager of the Temiscouata Ry., and E. O., as General Passenger Agent, Quebec Central Ry.

F. W. Morse, formerly Vice President and General Manager Grand Trunk Pacific Ry., has been appointed General

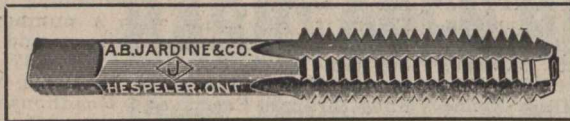
Manager Toledo, St. Louis and Western Rd., and Chicago and Alton Rd., with office in Railway Exchange Building, Chicago. The circular announcing his appointment is signed by G. H. Ross, Vice President, and approved by T. P. Shonts, President. The Toledo, St. Louis & Western and Chicago & Alton lines form a part of what is known as the Hawley group, the other lines in the group being the Minneapolis and St. Louis Rd., and the Iowa Central Rd. The Toledo, St. Louis and Western Rd. has a mileage of 450.7, extending from Toledo to St. Louis, with a number of branch lines; and the Chicago and Alton Rd. has a mileage of 1,004.67, extending from Chicago to St. Louis, with lines through Peoria and Roadhouse into St. Louis, from Roadhouse through Mexico to Jefferson City, and from Mexico to Kansas City.

C. B. Foster, whose appointment as General Passenger Agent C.P.R. Western Lines, Revelstoke and east, with office at Winnipeg, was announced in our last issue, was born at Kingston, Kings county, N.B., Sept. 30, 1871, and entered C.P.R. service in April, 1891, since when he has been, to Oct., 1892, stenographer in Passenger Department, St. John, N.B.; Oct., 1892, to Sept., 1893, senior clerk Passenger Department, St. John, N.B.; Sept., 1893 to July, 1899, Travelling Passenger Agent, St. John, N.B.; July, 1899, to Feb. 8, 1902, chief clerk Passenger Department, St. John, N.B.; Feb. 8, 1902, to Nov. 22, 1904, District Passenger Agent, St. John, N.B.; Nov. 22, 1904, to Sept. 8, 1908, District Passenger Agent, Toronto; Sept. 8, 1908, to Oct. 31, 1910, Assistant General Passenger Agent, Vancouver, B.C.

W. G. Brownlee, whose portrait appears on the first page of this issue, was born at Lawrenceville, Ill., Sept. 9, 1858, and entered railway service in 1877, since when he has been, to 1879, operator Ohio, Mississippi Ry.; 1879 to 1881, operator and train dispatcher Union Pacific Ry.; 1881 to 1884, train dispatcher and Trainmaster Denver and Rio Grande Rd.; 1884 to 1887, train dispatcher Union Pacific Rd., Laramie, Wyo.; 1887 to 1889, train dispatcher same road, St. Louis, Mo.; 1892 to Feb., 1900, Division Superintendent same road, St. Louis, Mo.; Feb., 1900, to May, 1901, Assistant Superintendent Eastern Division G.T.R., Belleville, Ont.; June, 1901, to Mar., 1902, Superintendent Eastern Division, same road, Montreal; Mar., 1902, to Dec., 1904, Superintendent Western Division same road, Detroit, Mich.; Jan., 1905, to April, 1907, Superintendent Middle Division same road, Toronto; April, 1907, appointed General Transportation Manager, same road, with office at Montreal.

Railroad Administration.—In a 300-page volume with a number of charts and diagrams, Ray Morris, brings together a large mass of information covering the executive work involved in building and operating railroads. The problems discussed are largely those of organization, and in this volume the author endeavors to show how the railway executive so organizes its forces as to apply them to the best advantage. The non-technical reader is given the manager's viewpoint towards the problems of actual railway administration in the United States, with some idea of certain comparative conditions in other countries. Divisional versus departmental organization is discussed, also British railway organization. In the appendices the unit system of railway organization, and the railway organization in France are reviewed. The volume is published by D. Appleton & Co., New York, at \$2 net and may be obtained from the Railway and Marine World's book department.

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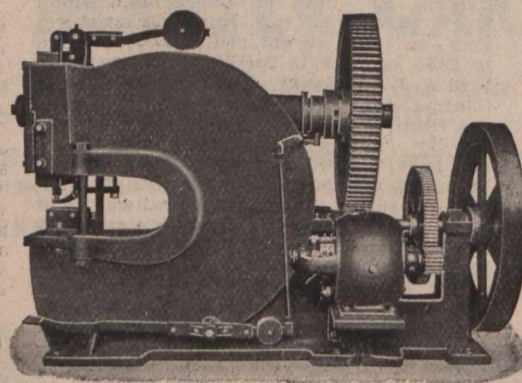
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Railway Rolling Stock Notes.

The G.T.P.R. has ordered one rotary snow plow with 12ft. cut, scoop wheel type, from the Montreal Locomotive Works.

Henri Menier, Anticosti Island, has received one four-coupled locomotive from the Montreal Locomotive Works, for use on the railway on the island.

The Michigan Central Rd. has received six Pacific type and five six-coupled locomotives from the Montreal Locomotive Works.

The Canadian Northern Ry. has ordered six sleeping cars from the Canadian Car and Foundry Co., Montreal, and 10 second class coaches from the Crossen Car Manufacturing Co., Cobourg, Ont.

The Intercolonial Ry. has received one second class sleeping car from the Silliker Car Co., Halifax, N.S., and two baggage cars from the Canadian Car and Foundry Co., Montreal, and has ordered 15 tank cars from the Canadian Car and Foundry Co., Montreal.

The Canadian Northern Ry. between Oct. 15 and Nov. 15, received the following additions to rolling stock:—One baggage car, 95 box cars, from the Canadian Car and Foundry Co., Montreal; 20 refrigerator cars, 10 box cars, from the Crossen Car Manufacturing Co., Cobourg, Ont., and one combination second class and baggage coach and 25 box cars from the Silliker Car Co., Halifax, N.S.

The C.P.R., between Oct. 13 and Nov. 15 received the following additions to rolling stock:—175 box cars, six flat cars, two vans, two first class cars, six flangers, seven horse cars, four D10 and two switching locomotives from its Angus shops, Montreal; 184 steel coal cars from the Canadian Car and Foundry Co., Montreal, and one wrecking crane from the U.S.

The G.T.P.R. has received the final lot of its order for 1,000 box cars, nos. 311325 to 312234; 87 refrigerator cars, nos. 340149 to 340236, and 76 flat cars, nos. 361300 to 361375, from the Canadian Car and Foundry Co., Montreal, and four ten-wheeled locomotives, nos. 620 to 623, from the Montreal Locomotive Works, being part lot of an order for ten.

The C.P.R. between Oct. 13 and Nov. 15, ordered the following rolling stock:—One baggage and smoking car, one pile driver, 89 box cars, one refrigerator (passenger) car, eight stock cars, four flat cars, six steel coal cars, three vans and one ballast car, from its Angus shops, Montreal; 12 G1 and G2 locomotives from the Montreal Locomotive Works; 10 D10 locomotives from the Canadian Locomotive Co., Kingston, Ont., and 50 steel tank cars in the U.S.

Following are the chief details of the five all steel snow plows, which the C.P.R. is having built by the Canadian Car and Foundry Co., Montreal, as mentioned in our Oct. issue:—

Weight, complete with trucks, estimated, 43,500 lbs.
Height from rail to top of cupola . . . 14 ft. 10½ in.
Height from rail to top of roof . . . 11 ft. 6¾ in.
Length over all . . . 32 ft. 1 in.
Centre to centre of trucks . . . 18 ft.
Width, extreme . . . 9 ft. 2½ in.

The International Ry. of New Brunswick has ordered one ten-wheeled locomotive from the Montreal Locomotive Works, of which the following are the chief details:—

Weight in working order . . . 110,500 lbs.
Weight on drivers . . . 84,500 lbs.
Weight on engine tank . . . 26,000 lbs.
Wheel base, engine and tender . . . 47 ft. 6¾ in.
Wheel base, driving . . . 10 ft. 6 in.
Wheel base, engine . . . 20 ft. 8 in.
Cylinders . . . 18 in. by 24 in.
Boiler, type . . . Extended wagon top
Boiler pressure . . . 160 lbs.
Tubes, no. and diar. . . 198 2 in.
Tubes, length . . . 12 ft. 3 in.
Brake . . . Westinghouse American
Tank capacity . . . 3,500 imp. gals.

The Toronto, Hamilton and Buffalo Ry. has ordered one ten-wheeled locomotive from the Montreal Locomotive Works, of which the following are the chief details:—

Weight in working order . . . 188,000 lbs.
Weight on drivers . . . 142,000 lbs.
Weight on engine tank . . . 46,000 lbs.
Wheel base, driving . . . 15 ft. 10 in.
Wheel base, engine . . . 26 ft. 10 in.
Wheel base, engine and tender . . . 55 ft. 6 in.
Valve gear . . . Walschaert
Cylinders . . . 23 in. by 26 in.
Boiler pressure . . . 170 lbs.
Boiler, type . . . Extended wagon top
Tubes, no. and diar. . . 188 2 in.
Tubes, length . . . 14 ft. 9 in.
Superheater . . . Vaughan-Horsely
Brake . . . Westinghouse American
Tank capacity . . . 5,500 U.S. gals.

Following are the chief details of the 12 Pacific type locomotives, which the C.P.R. has ordered from the Montreal Locomotive Works:—

Weight in working order . . . (5) 218,000 lbs.
 . . . (7) 220,000 lbs.
Weight on drivers . . . (5) 136,000 lbs.
 . . . (7) 138,000 lbs.
Weight on trailer . . . 34,500 lbs.
Weight on engine tank . . . 47,500 lbs.
Wheel base, driving . . . 13 ft. 0 in.
Wheel base, engine . . . 33 ft. 7 in.
Wheel base, engine and tender . . . 60 ft. 0 in.
Valve gear . . . Walschaert
Cylinders . . . 21 in. by 28 in.
Boiler, type . . . Extended wagon top
Boiler pressure . . . 200 lbs.
Tubes, no. and diar. . . 193 2¼ in. 22 5 in.
Tubes, length . . . 19 ft. 6 in.
Superheater . . . Vaughan-Horsely
Brake . . . Westinghouse American
Tank capacity . . . 5,000 imp. gals.

Following are chief details of the six sleeping cars which the Canadian Northern Ry. is having built by the Canadian Car and Foundry Co., Montreal:

Length over end sills . . . 72 ft. 6 in.
Width over side sills . . . 9 ft. 10½ in.
Height, top of sill to bottom of plate . . . 6 ft. 9 in.
Width of deck opening . . . 5 ft. 6 in.
Vestibule . . . Pullman wide type
Vestibule diaphragms . . . Ajax
Inside finish . . . Smoke room, Blanchet wood, remainder mahogany
Trimmings . . . Statuary bronze
Lighting . . . Commercial Acetylene Co.
Steam heating . . . Gold system
Platform . . . Standard steel
Body bolsters . . . Cast steel
Brakes . . . Westinghouse P1612
Trucks . . . C.N.R. Standard six wheel
Wheel base . . . 10 ft. 6 in.
Wheels . . . 36 in. steel tired
Axles . . . Steel
Brake beams . . . Simplex standard
Journal boxes . . . McCord m.i.
Side bearings . . . Susemihl frictionless

Following are the chief details of the four all steel hopper cars which the Canada Cement Co. is having built by the Canadian Car and Foundry Co., Montreal, as mentioned in our Oct. issue:—

Capacity . . . 100,000 lbs.
Length inside . . . 36 ft. ¼ in.
Length over end sills . . . 31 ft. 6 in.
Centre to centre of trucks . . . 21 ft. 9 in.
Width over side stakes . . . 10 ft. 1½ in.
Width inside . . . 9 ft. 6 in.
Height, top of rail to top of brake mast . . . 10 ft. 6 11-16 in.
Height, top of rail to top of side . . . 10 ft.
Height, top of rail to centre of drawbar . . . 2 ft. 10½ in.
Airbrakes . . . Westinghouse KD 812
Couplers, type . . . R. E. Janney cast steel
Couplers . . . Shank, 5 x 7 in.; end, 6½ in.
Draft gear . . . M.C.B. twin spring.
Truck wheel base . . . 5 ft. 6 in.
Height from rail to bearing face of centre plate . . . 2 ft. 3¾ in.
Bolsters and brake beams . . . Simplex.
Side bearings . . . Susemihl telescoping lever.
Wheels . . . Cast iron, 33 in.
Journal bearings . . . Canadian Bronze Co.
Journal boxes . . . McCord m.i.
Truck type . . . Diamond arch bar.

Following are the chief details of the 18 D10 ten wheeled locomotives, which the C.P.R. has ordered from the Canadian Locomotive Co., Kingston, Ont.:

Weight on drivers . . . 141,000 lbs.
Weight, total . . . 190,000 lbs.
Wheel base, rigid . . . 14 ft. 10 in.
Wheel base, engine, total . . . 26 ft. 1 in.
Wheel base, engine and tender . . . 54 ft. 10½ in.
Heating surface, firebox . . . 180 sq. ft.
Heating surface, tubes . . . 2,238 sq. ft.
Heating surface, superheater . . . 408 sq. ft.

Heating surface, total . . . 2,826 sq. ft.
Driving wheels, diar. . . 63 in.
Driving wheel centres . . . Cast steel
Driving journals . . . Main 9½ by 12 in.
 . . . Others . . . 9 by 12 in.
Cylinders . . . 21 in. by 28 in.
Boiler, type . . . Radial stayed
Boiler pressure . . . 200 lbs.
Tubes, no. and diar. . . 240 2 in., 24 5 in.
Tubes, length . . . 14 ft. 5 in.
Brakes . . . Westinghouse ET.
Valve gear . . . Walschaert
Superheater . . . Vaughan-Horsely
Weight of tender, loaded . . . 134,000 lbs.
Capacity, water . . . 5,000 imp. gals.
Capacity, coal . . . 10 tons
Truck, type . . . Outside equalized
Wheels, diar. . . 36 in.
Wheel, type . . . Steel tired, cast steel centre
Journals . . . 5½ in. by 10 in.
Brake beams . . . Simplex high speed

Following are the chief details of the 60 steel ore cars, which the Canada Iron Corporation is having built by the Canadian Car and Foundry Co., Montreal, as mentioned in our Oct. issue:—

Capacity . . . 100,000 lbs.
Length over end sills . . . 26 ft. 7¾ in.
Length over striking plates . . . 28 ft. 8 in.
Centre to centre of trucks . . . 19 ft. 3 in.
Width over side sills . . . 10 ft. 5½ in.
Width over stakes . . . 10 ft. ¾ in.
Height from rail to top of floor . . . 2 ft. 5½ in.
Height from rail to top of side . . . 9 ft. 5½ in.
Height from rail to top of brake mast . . . 9 ft. 8¾ in.
Height from rail to centre of drawbar . . . 2 ft. 10¼ in.
Length inside . . . 26 ft. 7½ in.
Width inside . . . 9 ft. 6 in.
Height inside . . . 6 ft. 7 in.
Doors, type . . . Horizontal, side hung.
Door openings . . . 5 ft. 11¼ in. by 3 ft. 2½ in.
Number of hopper doors . . . 2.
Couplers, type . . . R. E. Janney
Couplers . . . shank, 5 x 7 in.; end, 8¾ in.
Air brakes . . . Westinghouse HD 1012
Trucks, type . . . Diamond arch bar, rigid.
Wheel base . . . 5 ft. 6 in.
Height from rail to top of centre plate, 2 ft. 2¾ in.
Brake beams . . . Simplex, inside hung.
Side bearings . . . Susemihl centreing lever.
Journal boxes . . . McCord m.i., M.C.B. 5½ x 10 in.
Journal bearings . . . Canadian Bronze Co.
Bolsters . . . Simplex.
Wheels . . . M.C.B. 33 in., 700 lbs. c. i.

Following are the chief details of the 50 all steel hopper cars and of the 12 steel Hart-Otis cars which the Dominion Coal Co. is having built by the Canadian Car and Foundry Co., Montreal, as mentioned in our Oct. issue:—

Capacity . . . 100,000 lbs.
Length inside . . . 36 ft. ¼ in.
Length over end sills . . . 31 ft. 6 in.
Centre to centre of trucks . . . 21 ft. 9 in.
Width over side stakes . . . 10 ft. 1½ in.
Height, top of rail to top of brake mast . . . 10 ft. 6 11-16 in.
Height, top of rail to top of side . . . 10 ft.
Height, top of rail to centre of drawbar . . . 2 ft. 10½ in.
Air brakes . . . Westinghouse KD 812.
Couplers, type . . . R. E. Janney.
Couplers . . . Shank, 5 x 7 in.; butt, 6½ in.
Draft gear . . . M.C.B. twin spring.
Width inside . . . 9 ft. 6 in.
Truck wheel base . . . 5 ft. 6 in.
Height from rail to bearing face of centre plate . . . 2 ft. 3¾ in.
Bolsters . . . Simplex.
Brake beams . . . Simplex, inside hung.
Side bearings . . . Susemihl telescoping lever.
Wheels . . . Cast iron, 33 in.
Journal bearings, Canadian Bronze Co. . . 5½ x 10 in.
Journal boxes . . . McCord m.i.
Truck type . . . Diamond arch bar.

Following are the chief details of the 100 steel frame automobile cars, which the C.P.R. is having built by the Canadian Car and Foundry Co., Montreal:—

Capacity . . . 80,000 lbs.
Length inside . . . 36 ft.
Length over buffer blocks . . . 38 ft. 1¼ in.
Centre to centre of trucks . . . 26 ft. 10 in.
Width over eaves . . . 9 ft. 9 in.
Height from floor to under side of carline . . . 8 ft. 4¼ in.
Side door, clear opening, 7 ft. 11¼ in. by 10 ft.
End door clear opening, 7 ft. 10½ in. by 7 ft. 6 in.
Width over side posts . . . 9 ft. 3¼ in.
Width clear inside . . . 8 ft. 6¼ in.
Height, top of rail to top of brake mast, 13 ft. 10 in.
Height, top of rail to eaves . . . 12 ft. 7 9-16 in.
Height, top of rail to centre of drawbar . . . 2 ft. 10½ in.
Height, top of rail to bottom centre sill, 2 ft. 4 in.
Under frame and side framing . . . Steel.
Lining of wood, sides 1½ in., ends and floor 1¾ in.
Air brakes . . . Westinghouse KC 812.
Couplers . . . Simplex side lift, with Farlow completely reinforced slot.
Truck . . . Specially designed, low.
Height from rail to bearing face of centre plate . . . 2 ft. ¾ in.

A HISTORY OF THE PAY-AS-YOU-ENTER CAR AND ITS LESSON

The following cities are using Pay-As-You-Enter Cars: Chicago City Railway, 839 cars; Chicago Railways, 1,328; Public Service Corporation of New Jersey, 466; New York City Railway, 555; Third Avenue Railroad, New York, 550; International Railway, Buffalo, 200; Buffalo & Lake Erie Traction Co., 10; Washington Ry. & Elec. Co., Washington, D.C., 100; Capital Traction Co., Washington, D.C., 51; Municipal Traction Co., Cleveland, Ohio, 180; United Rys. Co. of St. Louis, Missouri, 310; Portland Ry., Lt. & Pwr. Co., Portland, Ore., 25; Columbus Ry. & Lt. Co., Columbus, Ohio, 10; Wichita R.R. & Lt. Co., Wichita, Kan., 14; Jacksonville Elec. Co., Jacksonville, Fla., 5; Dallas Elec. Co., Dallas, Texas, 20; Houston Elec. Co., Houston, Tex., 41; Northern Texas Trac. Co., Ft. Worth, Texas, 25; Ithaca Street Ry., Ithaca, N.Y., 2; Peoria Street Ry., Peoria, Ill., 13; Urbana & Champaign Ry., Champaign, Ill., 3; Mutual Lt. & Water Co., Brunswick, Ga., 4; Rochester Ry. Co., Rochester, N.Y., 25; Ft. Dodge, Des Moines & So. R.R. Co., 2; Muskogee Elec. Trac., Muskogee, Okla., 6; Union Traction Co., Dubuque, Ia., 4; Topeka Ry. Co., Topeka, Kas., 12; United Rys. & Elec. Co., Baltimore, Md., 32; Detroit United Ry., Detroit, Mich., 225; Cincinnati Traction Co., Ohio, 50; Montreal Street Railway, 400; British Columbia Elec. Ry., 30; Calgary Street Railway, 18; Metropolitan Street Ry., Kansas City, Mo., 50; Edmonton Radial Ry., 4; San Antonio Traction Co., San Antonio, Tex., 6; Rockford & Int. Ry., Rockford, Ill.; Cairo Street Ry. & Lt. System, 6; Des Moines City Railway, Iowa, 12; Macon Ry. & Lt. Co., Macon, Ga.; Virginia Ry. & Power Co.; Columbia Elec. St. Ry. & Lt. & Power Co., Columbia, S.C.; Aurora, Elgin & Chicago Ry., Chicago, Ill.; Wichita Falls Traction Co., Wichita Falls, Tex.; Ottawa Electric Ry. Co., Ottawa; Bloomington & Normal Ry. & Lt. Co., Bloomington, Ill.; Corsicana Transit Co., Corsicana, Tex.; Compania Electrica y de Ferrocarriles, Mexico; The Milwaukee Elec. Ry. & Lt. Co., Milwaukee, Wis.; Springfield Street Ry. Co., Springfield, Mass.; Lynchburg Traction Co., Lynchburg, Va.; Chicago & Southern Traction Co., Chicago, Ill.; Calumet & South Chicago Ry. Co., Chicago, Ill.

THE LESSON

taught by this widespread use of Pay-As-You-Enter Cars is obvious. Increased Revenue, Accident Elimination and Schedule Improvement have been demonstrated in every case. Isn't all this sufficient to show that it always pays to operate the Pay-As-You-Enter Car? Why not remodel some of your present cars?

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TORONTO

(King Edward Hotel Block)

Wheel base	5 ft. 6 in.
Bolsters	Simplex.
Brake beams	Simplex, inside hung.
Side bearings	Susemihl.
Wheels	Cast iron, 33 in., 695 lbs.
Journal bearings	Canadian Bronze Co., 5 x 9 in.
Journal boxes	McCord m.i.
Truck type	Diamond arch bar.

Following are the chief details of the two experimental drop bottom box cars for grain, which the C.P.R. is having built by the Canadian Car and Foundry Co., Montreal, as mentioned in our Oct. issue:—

Capacity	80,000 lbs.
Length over buffer blocks	38 ft. 5 in.
Length over end sills	37 ft. 5 in.
Length inside	36 ft.
Width inside	8 ft. 6 1/2 in.
Width over eaves	9 ft. 9 in.
Height from rail to centre of drawbar	2 ft. 10 1/2 in.
Height from rail to top of running board	13 ft. 9 3/4 in.
Height from rail to top of brake mast	14 ft. 1/4 in.
Centre to centre of trucks	25 ft. 10 in.
Number of drop doors	14.
Number of convertible doors	6.
Couplers	Simplex cast steel, style A, knuckle p.
Air brakes	Westinghouse KC 1012.
Draft gear	M.C.B. twin spring.
Under frame	Steel.
Floor	Convertible drop bottom.
Trucks, wheel base	5 ft. 4 in.
Height from rail to bearing face of centre plate	2 ft. 5 in.
Bolsters	Simplex.
Brake beams	Simplex, inside hung.
Side bearings	Susemihl telescoping lever.
Wheels	Cast iron, 33 in., 695 lbs.
Journal boxes	McCord m.i.
Journal bearings	Canadian Bronze Co.
Truck type	Diamond arch bar.

The second car is of the following dimensions, with other particulars, as in the first:—

Length over buffer blocks	38 ft. 1 1/4 in.
Length back to back of end sills	36 ft. 1 1/2 in.
Width overall	9 ft. 3 1/2 in.
Height from rail to top of running board	13 ft. 4 3/4 in.
Height from rail to top of brake mast	13 ft. 10 in.
Centre to centre of trucks	26 ft. 10 in.
Number of drop doors	8.
Number of convertible doors	8.

Railway Finance, Meetings, Etc.

Alberta Ry. and Irrigation Co.—Approximate net profits from all sources, exclusive of land sales, for Sept., \$26,900, against \$39,020 for Sept., 1909. Cumulative net profits for three months ended Sept. 30, \$72,781.

Alexander Gibson Ry. and Manufacturing Co.—The date of the sale of the property of this company in the counties of York, Carleton and Northumberland, N.B., under orders of the Master of the Supreme Court, is Feb. 22, 1911. The sale has been ordered upon the petition of the Royal Trust Co. and others under a trust mortgage deed of Nov. 1, 1909.

Algoma Central and Hudson Bay Ry.—The Dominion Parliament is being asked to confirm the conversion of 50,000 shares of the company's capital stock from common stock into 5% non-cumulative preferred stock.

Atlantic and Lake Superior Ry.—The holders of preference certificates, certificates of participation, deferred certificates and ordinary certificates of participation have been notified to meet at 21 Leadenhall St., London, Eng., Dec. 6, for the purpose of approving a partial distribution of assets among the four classes of certificate holders.

Canadian Pacific Ry.—At a meeting of directors, Nov. 14, a dividend of 2% was declared on the common stock for the quarter ended Sept. 30, being at the rate of 7% per annum from revenue, and 1% from land sales. The dividend is payable Dec. 31 to shareholders of record Nov. 30. This is the first quarterly dividend, payments heretofore having been half yearly. Application has been made to the London, Eng., Stock Exchange to list a further £2,678,227 of C.P.R. 4% stock.

Dominion Atlantic Ry.—Gross earnings for Sept. \$165,200, against \$173,465 for Sept. 1909. Aggregate gross earnings for three months ended Sept. 30, \$473,400, against \$475,202 for same period 1909.

Guelph Junction Ry.—Returns received by the Guelph, Ont., city council from the C.P.R. show that a profit of \$9,355.37 was made for the three months ended Sept. 30, against \$7,492.26 for the corresponding period of 1909.

Quebec and Lake St. John Ry.—Total earnings for Oct., \$63,544.31, against \$52,982.85 for Oct. 1909. Aggregate total earnings for 10 months ended Oct. 31, \$505,329.50, against \$497,733.06 for same period 1909. The average earnings per mile for Oct. were \$222.65, and for the 10 months ended Oct. 31, \$185.98, against \$1,781.98 and \$1,752.98 for similar periods, respectively, 1909.

Quebec and New Brunswick Ry.—Following are the officers and directors for the current year:—President, Hon. J. Costigan; other directors, J. A. Guy, L. A. Gagnon, A. Lawson and J. M. Stevens.

Quebec Central Ry.—Gross earnings for Aug., \$131,806.55; expenses \$80,125.20; net earnings \$51,681.35, against \$101,821.89 gross earnings; \$64,399.42 expenses; \$37,422.47 net earnings for Aug. 1909. Aggregate gross earnings for two months ended Aug. 31, \$255,877.44; expenses \$157,626.36; net earnings \$98,251.08, against \$209,233.25 gross earnings; \$131,842.46 expenses; \$77,390.79 net earnings for same period 1909.

St. Mary's and Western Ontario Ry.—A meeting of the holders of second mortgage bonds will be held in the offices of the trustee, J. Munro, Embro, Ont., Dec. 6, for the purpose of considering what steps shall be taken in view of the default of the company to pay interest on these bonds, and to take such action in connection with the matter as shall be deemed advisable. The company's line between St. Marys and Embro, Ont., is leased to the C.P.R. at a rental equal to 4 1/2% interest on first mortgage bonds, together with the right to purchase the common stock at any time within 12 years from 1909 for the sum of \$25,000.

Temiscouata Ry.—Profits for Aug., \$4,558, and for eight months ended Aug. 31, \$31,032.

The London Financial Times says:—“The Temiscouata Ry. was recently described by a well known member of the Stock Exchange as a concern whose prospects ranged between splendid possibilities and schemes for the protection of the debenture holders. Just at present the former of these two alternatives is being adopted by some of those who follow the affairs of the undertaking. That is to say, the prospects are regarded as having considerably improved. For 1909-10 a distribution of 7% was made on the consolidated mortgage income bond certificates, and there are rumors that for 1910-11, a more substantial rate of distribution will be announced, while in some quarters it is suggested that an interim payment will be made. There is nothing in recent traffics to support this view; nevertheless, purchases are being made of the income bond certificates at the current price of £32. The chief thing to remember in connection with this property is that its physical condition has undergone a very great improvement during recent years, and it is understood that the line is now in a generally more efficient state than for a long time past.”

White Pass and Yukon Ry.—Gross earnings for Sept., \$233,900, against \$249,854 for Sept. 1909. Aggregate gross earnings for three months ended Sept. 30., \$676,087, against \$726,111 for same period 1909.

Protection of Railway Employees.

The Board of Railway Commissioners passed the following order, 12225, Nov. 9:—Re application of the Trainmen's Association of Canada, for a revision of order 5888, Dec. 16, 1908, making provision for the protection of railway employees. It is ordered as follows:—

1. Whereas subsec. 3 of sec. 264 of the Railway Act provides that “there shall also be such a number of cars in every train equipped with power or train brakes that the engineer of the locomotive drawing such train can control its speed, or bring the train to a stop in the quickest and best manner possible, without requiring brakemen to use the common hand brake for the purpose.” Therefore, at least 85% of the number of cars in every train shall be equipped as above required.

2. When more than one engine is attached to a train, the engineer of the leading engine shall operate the brakes.

3. Every road locomotive engine shall be equipped with a step or steps and hand holds on both sides of and at or near the rear ends of tenders; foot-rests shall be provided on the pilot of every such engine, sufficiently wide for a man to stand on; every switching or yard engine shall be equipped with foot-boards and head-lights on the front and rear ends of the engine and tender, such foot-boards to be not less than 10 ins. wide; the back of such foot-boards shall be protected by a board not less than 4 ins., and if cut in the centre, the inner ends shall be protected in like manner.

4. No light engine shall be run against the current of traffic a greater distance than 25 miles in any one direction without a conductor in addition to the engineer and fireman.

5. No railway company shall permit any employe to engage in the operation of trains, or handle train orders, without first requiring such employe to pass an examination on train rules and undergo a satisfactory eye and ear test by a competent examiner.

6. (a) Locomotive engineers must be at least 21 years of age, undergo a satisfactory eye and ear test by a competent examiner, and pass an examination on train rules and regulations and the proper care and operation of locomotives and air brakes. (b) Conductors must be at least 21 years of age, undergo a satisfactory eye and ear test, and pass an examination on train rules and regulations and the operation of air brakes. (c) Telegraph or telephone operators engaging in the operation of trains or handling train orders must be at least 18 years of age; write a legible hand, and pass an examination on train rules and regulations. Telegraph operators must be able to send and receive messages at the rate of not less than 20 words a minute. (d) Train dispatchers must be at least 21 years of age, be familiar with the line over which they have charge, and pass an examination on train rules and regulations. (e) Railway companies shall, within 90 days from the date of this order, file with the Board a copy of each examination paper for the examinations herein required to be passed by the employes of such railway company.

7. All railway companies shall strictly conform to the rules and regulations from time to time approved by the Master Car Builders' Association, governing the loading of lumber, logs and stone upon open cars, and the loading and carrying of structural material, plates, rails and girders; and no material of any kind shall be carried upon the roofs of cars.

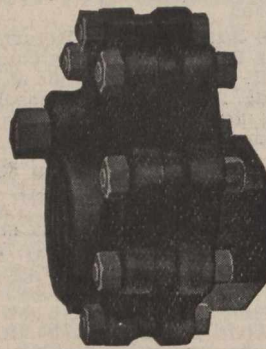
8. (a) All open drains crossing tracks in railway yards shall be safely covered for at least five feet from the gauge side of each rail, except in times of

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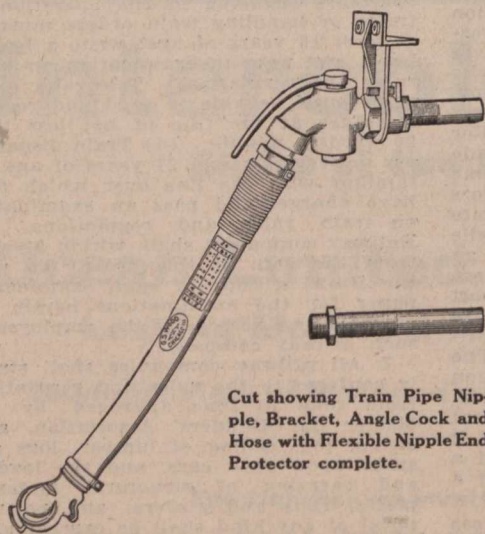
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flood, when temporary open drains may be provided, if necessary. (b) No semaphores, signals, poles, high or intermediate switchstands, or piles of material, erected or placed in future, shall be nearer than 6 ft. from the gauge side of the nearest rail. (c) No structure over 4 ft. high shall hereafter be placed within 6 ft. from the gauge side of the nearest rail without first obtaining the approval of the Board. (d) Where semaphores, signals, poles, high or intermediate switchstands, or piles of material are nearer than 6 ft. from the gauge side of the nearest rail, the same shall be dealt with as follows:—(1) Semaphores, signals, poles, or high or intermediate switchstands shall, within two years from this date, be either removed or changes made so that the same shall not be nearer than the said 6 ft.; or high and intermediate switchstands shall be changed to low or dwarf signals or switchstands. (2) Piles of material shall, within six months, be removed to a greater distance than the said 6 ft. (e) Water stand-pipes shall not be nearer than 2½ ft. from the widest engine cab, and the spout of the stand-pipe shall, when not in use, be fastened parallel with main track, and enginemen are required to see that this is done after using any such pipe.

9. Order 5888 is repealed.

10. Every person or company offending against any of the foregoing provisions shall forfeit and pay \$50 for every such offence.

Great Northern Ry. Lines in Canada.

In the company's annual report for the year ended June 30, reference is made to its Canadian lines, as follows:—

The Manitoba Great Northern Ry. is the title of a company authorized by the Manitoba Legislature to take over the lines and charter rights of the Midland Ry. of Manitoba. To pay for these two lines—one from the International boundary to Portage la Prairie, and the other from the International boundary to Morden—the company issued \$2,040,000 of stock, which was subscribed and paid for in cash at par by the G.N. Ry. This sale left the M. Ry. of Man., which is controlled jointly and equally by the G.N. Ry. and the Northern Pacific Ry., divested of all its railways, but owning valuable properties in Winnipeg, which have not been developed, for terminal purposes. The G.N. Ry. investment in these properties is \$1,253,043.06.

The Winnipeg city council has the question of the terminals under consideration, and is desirous of ascertaining when it is proposed to proceed with the work. The company was granted an exemption from taxation on the understanding that the terminals were to be built immediately.

Brandon, Saskatchewan and Hudson Bay Ry.—An additional \$20,000 of the company's capital stock was issued to and paid for at par by the G.N. Ry., the proceeds being used to pay for additions and improvements completed to the line during the year.

It has been reported frequently recently that there was a likelihood of the line being sold to the Grand Trunk Pacific Ry., but this is denied by officers of both companies.

Crow's Nest Southern Ry.—There was issued \$30,000 of additional capital stock during the year, which was subsidized and paid for in cash by the G.N. Ry. The proceeds of the issue were used in repaying advances of \$19,393.32 made for betterments during 1908-09 by the G.N. Ry., and the balance used for additions and improvements to the property during 1909-10.

Nelson and Fort Sheppard Ry.—During the year there was expended on ad-

ditions and improvements on the line \$2,094.64, advanced by the G.N. Ry.

Red Mountain Ry.—Repairs, etc., on this line during the year were done to the value of \$767.84, which was supplied by the G.N. Ry.

Vancouver, Victoria and Eastern Ry. and Navigation Co.—During the year the G.N. Ry., advanced to the V.V. and E. Ry. and Nav. Co., \$1,742,355.21 for construction purposes and to pay for property acquired. In partial repayment of advances previously made them has been issued to the G.N. Ry. the fully paid capital stock at par to the amount of \$10,000,000. It is proposed to apply to the Dominion Parliament for authority to issue additional common stock, to be issued to the G.N. Ry. in liquidation of its account.

The President's report showed that 40.91 miles of an extension from Keremeos to Princeton had been opened for traffic on Dec. 23, 1909. A branch line was under construction from Oroville, Wash., southerly to Pateros, 78 miles, which was expected to be opened in the spring of 1911. Grading was being carried on from Princeton westerly to Tulameen, and from Abbotsford, near Sumas, easterly to Chilliwack, B.C.

The Board of Railway Commissioners, Oct. 28, directed the construction of a subway at Montrose Ave., Abbotsford, the cost to be met by a grant of 20% from the Dominion Railway Grade Crossing fund, but not to exceed \$5,000; the British Columbia Government consenting to pay 48% of the cost, the balance of 32% to be paid by the railway.

The question of acquiring foreshore rights at False Creek, Vancouver, by the city corporation is being brought before the Provincial and Dominion Governments, in order that the terms of the agreement between the city and the G.N. Ry. may be carried out. The terminals which it is proposed to erect on the site will be used not only by the G.N. Ry., but by the Canadian Northern Ry. and the Grand Trunk Pacific Ry.

New Westminster Southern Ry.—Additions and betterments completed on the line during the year cost \$10,304.70, which was paid by the G.N. Ry. (Nov., pg. 927.)

Thomas Tait's Resignation.

Australian papers received since our last issue went to press give further information as to Mr. Tait's resignation of the chairmanship of the Victorian Railway Commission. In his letter to the Minister of Railways he stated that he had advised the Premier confidentially in June last that it was his intention to continue in office until the completion of his second term of appointment, in April, 1911, but that private and family affairs might render it necessary for him to leave Australia before the end of 1910. The necessity had arisen, and as he desired to visit India before returning to Canada, he had arranged to sail from Melbourne on Nov. 30. His resignation had been withheld pending the completion of the enquiry into the accident at Richmond. In announcing the resignation the Premier said, amid cheers, that whatever difference of opinion there might be about Mr. Tait, they all recognized that he was a man of really great ability, who thoroughly understood railway matters, and who in many ways rendered the State of Victoria excellent service, which would be remembered long after he left. He was a strong and fearless man, who never desired to do an injustice to anyone. It would be a long time before Victoria could get a stronger man, and they would have to go far before they could get as competent and able a man to fill his place.

That recent accidents on the Victorian

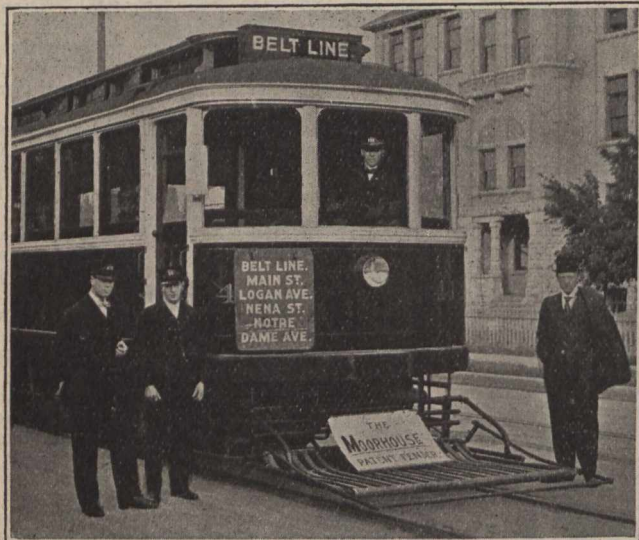
railways had anything to do with Mr. Tait's resignation is emphatically contradicted. The investigation board found that the Richmond accident, the most serious one, was due to contraventions of regulations by employes, and no fault was found with the administration.

In an interview at Melbourne, just after his resignation was announced, Mr. Tait said:—I have been working since I was 15 years old, and since I was 21, when I was Assistant Superintendent of a prairie section of the C.P.R., I have had the burden of more or less serious responsibility. I am not an old man yet by any means—I am only 46 years of age—but I have had, I think, my share of responsible and strenuous work, and I now propose to take it easy, which, fortunately, I am in a position to do. I am looking forward with keen anticipation and pleasure to spending the next summer season in Canada, at a summer residence which I own on an island in the Muskoka Lakes, in the highlands of Ontario—a place I am very fond of. It is not likely that I will resume active railway work again. I shall be occupied to some extent with my personal affairs in Canada, but should I find time hanging heavily on my hands it is possible I may take on some work of an advisory or expert character, and I hope from time to time to do a good deal of travelling.

The Melbourne Argus says:—"Mr. Tait's resignation will excite feelings of surprise and regret in the minds of all who are capable of appreciating the value of the work he has done during his seven years service. The tributes of admiration paid to his administration by leading members of the House were remarkable for their sincerity. The commanding personality of the Chief Commissioner seemed to be before their eyes as they spoke, and the generous warmth of their language showed they were conscious that Victoria is about to lose the services of a public official of high merit. On such an occasion responsible members could not but recollect the condition of the railways when Mr. Tait assumed control of them, in 1903, and contrast it with the state in which he is leaving them. During the preceding six years there was an average daily loss of about £730. For the six years ending June 30, 1909, they returned the Treasury an average profit of over £350 a day. Against facts like these it should be impossible to argue. They speak for themselves. Mr. Tait was told that the appalling drift must be stopped, and the task was not a promising one. He could not reduce wages; he could not increase hours; it was equally impossible to raise fares and freights. Expenditure on lines and rolling stock had, moreover, been kept down to the lowest possible point, so nothing could be saved in maintenance. Everything depended on the skill of the management. Mr. Tait certainly had the help of a succession of excellent seasons, but even allowing for that factor in his favor he must be admitted to have done splendidly. Not only has a ruinous annual deficit been transformed into a handsome annual profit, but the lines have been built up, and the rolling stock has been immensely improved and increased."

A demonstration in Mr. Tait's honor was held in Melbourne, Nov. 3, at which he made an important speech. On Nov. 24 the Premier and other members of the Government entertained him at a farewell parliamentary dinner, when the Premier said the resignation was entirely voluntary and greatly regretted by the Government.

We are advised that Mr. Tait may arrive in Canada in March or April, but not later than July.



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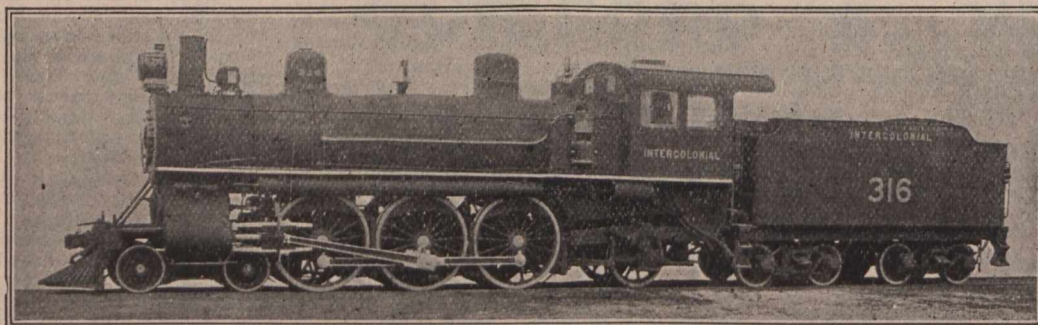
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Atlantic Quebec and Western Railway.

The financial prospects of the Atlantic, Quebec and Western Ry., operating and building a line in the Gaspé Peninsula of Quebec, are involved in the failure of A. W. Carpenter, carrying on business in London, and elsewhere in the United Kingdom and the Isle of Man, as the Charing Cross Bank. A receiving order was made Oct. 17 in the London Bankruptcy Court, upon the debtor's own petition, and the order of adjudication was made the same day. The debtor denies insolvency and says he filed his petition in consequence of threats of criminal proceedings against him in relation to the investment of the bank's funds in a Canadian railway. A statement of affairs, prepared by the debtor, was filed Oct. 24, showing liabilities of about £2,500,000, almost entirely due to about 25,000 depositors, with assets of £133,000 in cash, £60,000 in book debts, and properties valued at £156,000. The latter include shares in various properties; 40,000 acres of timber lands and other properties in the Gaspé Peninsula; but does not include shares in the New Canadian Co., which is constructing the Atlantic, Quebec and Western Ry., £300,000 of mortgage debentures, and all the common stock of the railway company. It is estimated that the bank has provided altogether about £1,250,000 for the building of the line, and the other railways owned by it. The bank has also large interests in South Africa, which are not included in the statement of affairs. A meeting of depositors was held in London Nov. 2, when it was stated that the official receiver disclaimed any responsibility for the figures in the statement of affairs, and that the value of the bulk of the Canadian assets, and of the whole of the South African assets was doubtful. Sir Clifton Robinson, who died suddenly in New York, Nov. 6, had consented, on the invitation of the creditors, to make an inspection and report of the railway properties in Canada, but had not been able to do anything at the time of his death. While nothing was done, an opinion was expressed by certain of the creditors, that it might be necessary to raise money to complete the railway, in order that the money already expended might not be entirely lost. A meeting of creditors, called by the Official Receiver, was held in London, Nov. 21, and the public examination of the debtor was fixed for Jan. 26, 1911.

The history of railway building and operation in the Gaspé peninsula has been a chequered one. The first line to be built was the Baie Des Chaleurs Ry., which in 1897 was taken over by the Atlantic and Lake Superior Ry., an ambitious scheme promoted by C. N. Armstrong, who had been engaged in railway promotion and construction works in various parts of Ontario and Quebec. The A. and L.S. Ry. proposed to take over the Baie des Chaleurs Ry., extending from Metapedia, on the Intercolonial Ry., to New Carlisle; the Great Eastern Ry. and some other short lines in different parts of Quebec, connect them up and to extend the line to some point on Lake Superior. A steamship was put on to run between New Carlisle and Liverpool, Eng., which was unsuccessful, and the whole concern was taken over, July, 1900, by the bondholders, C. R. Scoles being appointed Manager. The Baie des Chaleurs Ry. was the only line taken over by the A. and L.S. Ry., and the bondholders, with Dominion Government aid, made improvements on the line to New Carlisle, and extended it to Paspébiac, completing this work in 1902-03. The Carpenters, who had been for years interested in oil and timber lands in the Gaspé Peninsula, subsequently became interested in the railway projects, and

when the Atlantic, Quebec and Western Ry. was given a charter by the Dominion Parliament in 1905, the New Canadian Co. was formed, with C. B. K. Carpenter, son of the proprietor of the Charing Cross Bank, as Managing Director, and entered into a contract for building the lines authorized. The capital of the New Canadian Co. was fixed at £100,000, in shares of £1 each, and of these 49,493 are fully paid up, the remaining 50,507 having 5s. each paid. Under this contract the line has been completed as far as Port Daniel, and construction is well advanced to Gaspé Harbor. Meanwhile the affairs of the Baie des Chaleurs Ry. and of the Atlantic and Lake Superior Ry. were before the courts, not only in Canada, but in England, and several suits had to be fought out before a settlement was effected in 1907, when what is known as the A. and L.S. Ry. Trust Fund was formed. In Sept., 1909, the holders of the trust fund certificates authorized the sale of the line, and an order-in-council was passed July 10, 1910, confirming the transfer to the Quebec Oriental Ry., a company chartered by the Quebec Legislature, and controlled by the A.Q. and W. Ry. The line, which is involved in the liquidation of the bank, includes therefor the following:—The original Baie des Chaleurs Ry., Metapedia to New Carlisle, 98 miles; section from New Carlisle to Paspébiac, built by the Atlantic and Lake Superior Ry., two miles, and the section from Paspébiac to Gaspé Harbor, under construction by the A.Q. and W. Ry., of which 37 miles are completed and in operation.

The A., Q. and W. Ry. is authorized to issue \$5,000,000 of common stock, and of this \$1,500,000 was to be allotted to the contractor—the New Canadian Co.—as the work progressed. The company is authorized to build a line from Gaspé Bay through the centre of the peninsula to Amqui, on the Intercolonial Ry., thence southerly to Edmundston, to a connection with the C.P.R. and the National Transcontinental Ry., and a line from Gaspé Harbor, skirting the coast to Paspébiac, on the A. and L.S. Ry., with power to take over that line. The Dominion Government has voted a subsidy, on the usual conditions, not to exceed \$6,400 a mile, and because of the unusual number of bridges on the coast route, an additional \$250,000 for bridges, while the Quebec Legislature has voted 4,000 acres of land for 150 miles of the coast line.

At a general meeting of shareholders in London, Oct. 28, the Earl of Ranfurly, President, said he hoped that at their next meeting he would be able to report the successful opening of the railway, thus placing in direct rail communication with the interior Gaspé Harbor, destined, as they believed, to become in the near future one of the great ports of the Dominion of Canada. The engineers-in-chief, Sir Douglas Fox and Partners, had certified that 78% of the work on the coast line had been completed, leaving 22% to complete at the end of Sept., since which time considerable progress had been made. Possession had been obtained of the whole of the land, and construction was being carried out in the most substantial and efficient manner. The line was in operation up to mile 37, and would be open for traffic as far as mile 61 in November, and through to Gaspé before this time next year. At Gaspé Harbor the Government were constructing a large wharf at which there would be sufficient depth of water to accommodate ocean steamers. The company had already received \$365,568 on account of cash subsidies, and was now in a position to claim a considerable further amount. It had also received official notification that it was entitled to 188,197 acres of land, and in

November, when a further 24 miles of line were open, they would have earned under the terms of the subsidy agreement a further large acreage.

A Railway to Hudson Bay.

The speech from the Throne at the opening of the Dominion Parliament, Nov. 17, contained the following paragraph: "The construction of a railway to Hudson Bay, which has occupied the attention of the people for many years, has assumed practical shape. Already a contract has been awarded for the construction of a bridge forming part of this railway, across the Saskatchewan River at Pas Mission, and the work is in progress. During the present session, a measure will be laid before you providing for the prosecution and completion of this work with all possible speed. The connection of the great west with the eastern portions of Canada and also with the overseas markets by this new rail and ocean route, will not only open up a new section of Canada, but will greatly assist in the development of trade, and thus benefit both producers and consumers."

In dealing with the surveys for the proposed railway from Le Pas Mission, on the Saskatchewan River, to Hudson Bay, the report of the Department of Railways for the year ended March 31, refers to the engineers' reports and estimates presented to Parliament last session, a summary of which was given in our Jan. issue, pg. 17, and Feb. issue, pg. 97, at the close of the year, Mar. 31. It was reported that location plans and profiles of the proposed line for about 75 miles from Le Pas were prepared, and that further location work was in progress to Split Lake, 150 miles from Le Pas. Split Lake is the point to which the line can be built independently of any question as to whether the terminus on the Bay be at Port Nelson or Fort Churchill.

J. L. Armstrong, Chief Engineer in charge of surveys, was in Ottawa, Nov. 15, conferring with Minister of Railways. He is reported to have stated that the surveys for the first 200 miles have been completed, and active work on the construction of this mileage could be gone on with at once. Surveys for the route from Split Lake to Fort Churchill or Port Nelson, had not been completed. The location of the terminus on Hudson Bay will largely be determined by the hydrographic surveys now being made.

The Winnipeg Board of Trade passed a resolution recently asking the Dominion Government to undertake the building of the line as a national work, and to provide for its operation under a commission, and to make it available for the use of all Canadian lines. (Nov., pg. 917.)

Canadian Ticket Agents' Association.

Three errors occurred in the report of this Association's meeting at Quebec in our last issue. The number of members present was stated at 113, instead of 118; Alderman Cannon, pro-Mayor, was reported as having spoken in French, instead of in English, and F. W. Churchill, C.P.R. Ticket Agent, Collingwood, was omitted from the list of those elected as members of the executive committee.

A Victoria, B.C., dispatch of Nov. 25, said D. D. Mann, Vice President Canadian Northern Ry. was there arranging for construction of a line from Victoria, via Sooke to Alberni and that tenders for clearing the right of way would be invited immediately. It also stated that the C.P.R. would proceed at once with the Esquimalt and Nanaimo Ry., Cowichan Lake branch.

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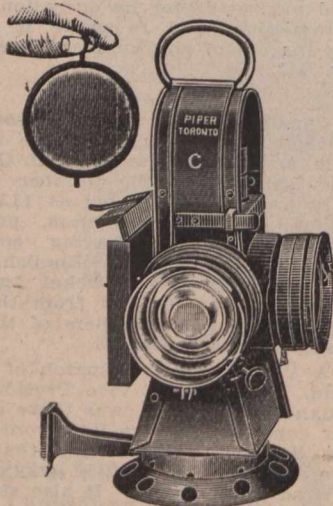
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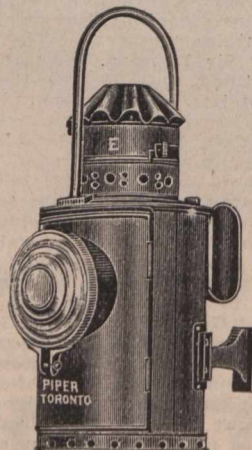
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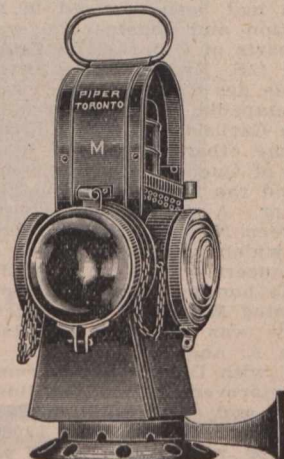
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Orders by Railway Commissioners.

(Continued from pg. 1023)

12277. Oct. 12.—Ordering C.P.R. to remove switch off Bridge St. Port Burwell Ont.
- 12278, 12279. Nov. 14.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across G.T.R. at Springford station grounds and across C.P.K. Mimico spur, Etobicoke tp.
12280. Nov. 15.—Authorizing Trenton Electric and Water Co. to erect wires across G.T.R. between Trenton and Belleville, Ont.
12281. Nov. 14.—Authorizing Hinton Electric Co. to erect wires across C.P.R. Westminster branch at Coquitlam station, Mount Cook, B.C.
12282. Nov. 14.—Authorizing Seymour Power and Electric Co. to erect wires across Bell Telephone Co.'s wires in Seymour tp., Ont.
12283. Nov. 14.—Authorizing Nipissing Power Co. to erect wires across G.T.R. at Callendar, Ont.
12284. Nov. 15.—Authorizing city of Toronto to lay sewer under G.T.R. on Front St.
12285. Nov. 14.—Authorizing city of Hamilton Ont., to lay a sewer under G.T.R. at Sherman Ave.
12286. Nov. 14.—Authorizing N. St. C. & T. Ry. to build temporary siding at Niagara Falls, Ont., from Victoria Ave. to southwest corner of South and Victoria St.
12287. Nov. 3.—Dismissing application with exceptions of Dominion Legislative of Engineers' Brotherhoods. This order is given in full another page.
12288. Nov. 15.—Authorizing C.P.R. to build additional track across Westminster Ave., Montreal, West. Que.
12289. Oct. 10.—Dismissing application of city of Port William, Ont., for authority to cross C.P.R. Copp industrial spur, with its street railway.
12290. Sept. 8.—Ordering G.N.R. to adopt, not later than Jan. 1, 1911, rates and minimum weights of C.P.R. Special Mileage Tariff, C. R. C. 1112, effective Feb. 20, 1909, to apply on lumber, etc., on New Westminster Southern Ry., and also on other railways operated by it in British Columbia.
12291. Nov. 15.—Authorizing Simcoe Ry. and Power Co. to erect wires across G.T.R. in Tay tp., Ont.
12292. Sept. 22.—Ordering C.N.R. and G.T.P.R. to build connection between their respective tracks at Tuxedo Park Co., and Canada Cement Co.'s properties, St. Boniface, Man.
- 12293 to 12295. Nov. 16.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires at three points in Hamilton.
- 12296 to 12297. Nov. 15.— Authorizing Mount McKay and Kakabeka Falls Ry. to operate its cars over crossing of C.P.R. and C.N.R. at Yonge St. Fort William, Ont., without first being brought to a stop.
12298. Oct. 12.—Dismissing application of Hamilton & Toronto Sewer Pipe Co., for order directing G.T.R. to provide switch from its main line between Hamilton and Dundas to applicant's premises.
12299. Nov. 16.—Rescinding order 12127, Oct. 28, re G.T.R. crossing $\frac{3}{4}$ mile east of Tillsonburg, Ont.
12300. Nov. 16.— Authorizing C.N.O.R. temporarily to cross G.T.R. at Cobourg, Ont.
12301. Sept. 20.—Ordering C.P.R., G.T.R., and C.N.Q.R. to publish and file tariffs, to be effective not later than Jan. 1, 1911, reducing export rates to Montreal on lumber from points in Quebec, north and east of Montreal, so that same difference shall exist between present domestic rates on lumber to Montreal and old rates for export, as existed between old domestic rates and old rates for export.
12302. Nov. 16.—Ordering C.P.R., within 90 days to install improved type of electric bell at William St. crossing, Carleton Place, Ont.
12303. Nov. 17.—Ordering G.T.R., within 90 days to install electric bell at St. Clair Ave. crossing, Toronto.
12304. Nov. 15.—Authorizing G.T.R. to take for additional facilities certain lands in Richmond Que.
12305. Nov. 17.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires near Jane St., Swansea.
- 12306, 12307. Nov. 17.—Authorizing city of Toronto to lay sewer under C.P.R. and C.N.O.R. on Eastern Ave., and under G.T.R., G.T.R. Belt Line and C.P.R. at Don Esplanade.
12308. Nov. 15.—Removing discrimination complained of by residents of Kingsville, Cottam, and Essex, Ont., by advancing one-way fare between Cottam and Essex from 10 to 15c. and reducing one-way fare between Cottam and Kingsville from 20 to 15c.
12309. Oct. 13.—Dismissing application of Palgrave village, Ont., for order directing G.T.R. to provide a subway at County Road crossing.
12310. Nov. 13.—Extending for such time as G.T.R. may desire to raise its tracks at Hog Bay, near lots 13 and 14, con. 5, Tay tp., Ont., time within which Georgian Bay and Seaboard Ry. may use trestle at that point.
12311. Nov. 12.—Ordering C.P.R. to place inner guard on inner side of inner rail of curve and limit speed of trains to 20 miles an hour on Horseshoe Curve at Caledon Mountain, Ont.
12312. Sept. 8.—Ordering G.N.R. to operate its morning train between Point Guichon and Cloverdale, B.C., as before July 2, and to build not later than Nov. 15, a road to its Hazelmere station across its right of way.
12313. Nov. 17. Ordering C.P.R. to install improved electric bell at Lake Ave. crossing, Carleton Place, Ont.
12314. Nov. 2.—Approving location of C.P.R. proposed station in Woodstock, N.B.
- 12315 to 12319. Nov. 18.—Authorizing Stratford Light and Heat Commission to erect wires across G.T.R. at five points in Stratford, Ont.
12320. Nov. 18.—Ordering that C.N.R. shall require its employes to precede and flag all movements of cars or engines over McDonald spur crossing, Peace Ave., Edmonton, Alta.
12321. Nov. 18.—Ordering C.P.R., within 90 days to install improved electric bell at Cote des Neiges road crossing about 500 ft. east of mileage 48. Hochelaga Co., Que.
12322. Nov. 18.—Rescinding order 10427, Apr. 29.
12323. Nov. 12.—Authorizing C.P.R. to build bridge 60.37 on its North Bay Section, Lake Superior Division, Ont.
12324. Nov. 18.—Rescinding order 9873, Mar. 14, respecting G.T.R. crossing one mile north of Mount Forest, Ont., and ordering G.T.R. within 90 days to install improved signal electric bell there.
12325. Nov. 19.—Approving location of C.P.R. second track, grade revision, and highway crossings from mileage 74 to 124, Smith's Falls Section, Ont.
12326. Nov. 19.—Authorizing C.P.R. to build bridge 85.17, on district 2, Schreiber section, Lake Superior Division, Ont.
12327. Nov. 19.—Approving location of C.N.R. through tps. 54-53, r. 3-7, w. 5, m. mileage 31.34 to 62.47, Alta.
12328. Nov. 19.—Approving location of C.P.R. Weyburn-Lethbridge branch from sec. 8, tp. 9, r. 14, w. 3 m., Sask., at mileage 200, to sec. 25, tp. 3, r. 1, w. 4 m., Alta. at mileage 316.78.
12329. Nov. 19.—Authorizing C.N.O.R. to build between lots 403 and 417, East North River range, St Andrew's parish.
12330. Nov. 19.—Amending order 10891, June 13, which approved revised location of C.P.R. (Ontario and Quebec Ry.), from mileage 19 in Quebec to mileage 74 Ontario.
12331. Nov. 18.—Authorizing C.N.Q.R. to open for traffic, its lines between Lorette and Quebec Bridge.
12332. Nov. 18.—Authorizing C.N.O.R. to build between lots 208 and 211, con. 1, Chatham, tp., at station 431.46.
12333. May 12, 13.—Ordering C.N.R. to keep station at La Broquerie Man., open, and properly heated for passengers; and dismissing application for appointment of permanent agent.
12334. Nov. 19.—Approving revised location of C.N.O.R. from mileage 58.42 to 62.00 from Sudbury Jct., at Kalace Lake.
12335. Nov. 19.—Authorizing G.T.R. to cross with its deviated line, Kingston road, Brighton tp., Ont.
12336. Nov. 19.—Relieving G.T.R. from providing further protection at second highway crossing south of Tottenham, Ont.
- 12337, 12338. Nov. 19.— Authorizing town of Maisonneuve, Que., and Montreal Water and Power Co., to lay pipes under Montreal Terminal Ry. on Aird Ave.
- 12339 to 12341. Nov. 19.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires in Brantford and North Oxford and across G.T.R. in Hamilton.
12342. Nov. 21.—Approving location of G.T.R. Regina-Moose Jaw branch from east line of sec. 26, tp. 17, r. 20, to east line of sec. 28, tp. 17, r. 23, w. 2 m., Assiniboia District, Sask., mileage 0 to 20.3.
12343. Nov. 21.—Authorizing C.N.R. to open for traffic deviation of its main line from mileage 12.2 Slate River to Kakabeka Falls, on Port Arthur subdivision, Ont., 9.76 miles.
12344. Nov. 21.—Recommending for approval of Governor in Council, rules and regulations governing G.T.R. Transportation Department.
12345. Nov. 21.—Approving C.N.R. location through tps. 29 to 32, r. 9, w. p. m., Man., mileage 127.92 to 151.10, from abandoned junction with C.P.R. main line, Winnipeg.
12346. Nov. 21.—Authorizing C.N.O.R. to erect telegraph wires across North River Electric Co.'s wires at station 534-98.5, St. Andrews parish.
12347. Nov. 21.—Approving plan of Sept. 23 showing C.N.O.R. standard crossing over highways and rescinding order 10096, April 7.
12348. Nov. 21.—Authorizing C. E. Dewey, General Freight Agent, and J. W. Hanley, General Passenger Agent Central Vermont Ry., to prepare and issue tariffs of tolls for all traffic carried on its railways or vessels.
12349. Nov. 21.—Authorizing C.P.R. to use bridges 4.9 and 12.2 on its Eganville section, Ont.
12350. Nov. 21.—Authorizing C.N.R. to build spur between Ninth and Tenth Sts. from McTavish Ave. to Princess St., Brandon, Man.
12351. Nov. 21.—Approving plan of Sept. 21, showing C.N.O.R. standard crossing over highways and rescinding order 10091, April 7.
12352. Nov. 22.—Authorizing Trenton Electric and Water Co. to erect wires across G.T.R. at lot 36, con. 2, Sidney tp., Ont., and rescinding order 12280, Nov. 15.
12353. Nov. 22.—Approving location of C.N.R. through tps. 30-27, rs. 8-9, w. 3 m., Sask., mileage 25.81 to 45.54.
12354. Nov. 22.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires at lot 9, con. 2, Dorchester tp.
12355. Nov. 24.—Authorizing C.P.R. to build a spur for Lumber Manufacturers' Yards, Moose Jaw, Sask.
12356. Nov. 23.—Authorizing C.N.O.R. to build bridge over Trent River, in Trenton.
- 12357 to 12359. Nov. 23.—Authorizing Niagara, St. Catharines & Toronto Ry. to erect wires across Bell Telephone Co.'s wires at three points in Thorold tp., Ont.
- 12360, 12361. Nov. 23.—Authorizing Seymour Power and Electric Co. to erect wires across G.T.R. between Stirling and Campbellford, and near Belleville, Ont.
- 12362 to 12372. Nov. 23.—Authorizing town of Maisonneuve to lay pipes under C.N.Q.R. at Second Ave., and under Montreal Terminal Ry. at Fifth, Third, Fourth, Second, and First Aves.
12373. Nov. 23.—Authorizing city of Montreal to lay sewer under C.N.Q.R. and Montreal Terminal Ry. at St. Antoine Boulevard, Tetreaultville.
12374. Nov. 23.—Authorizing Niagara, St. Catharines & Toronto Ry. to erect wires across Bell Telephone Co.'s wires at Ormonde St., Thorold, Ont.
- 12375, 12376. Nov. 23.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across M.C.R. at lot 28, con. X.S., Norwich, and across Bell Telephone Co.'s wires at Sherman Ave., Hamilton.
12377. Nov. 24.—Approving alteration of small portion of Western Canada Power Co.'s line, from Ruskin to Stave Falls, B.C., being an extra width of 25 ft. on each side of its right of way, required from J. MacDonald, between stations 67 and 71.
12378. Nov. 24.—Authorizing C.P.R. to build spur for Continental Oil Co., Bengal, Alta.
12379. Sept. 13.—Authorizing C.N.Q.R. to temporarily connect with National Transcontinental Ry. at Cap Rouge, mileage 2.4 from Quebec Bridge; the temporary connection to be protected by semaphore to be installed by C.N.Q.R.
- 12380 to 12382. Nov. 24.—Authorizing Ontario Hydro-Electric Power Commission to erect wires across Bell Telephone Co.'s wires at three points.

The London Stock Exchange has listed £2,678,227 Canadian Pacific fours; Duluth, Winnipeg and Pacific, \$950,000 fours; Mexican Light & Power, \$1,500,000 sevens, and Minneapolis, St. Paul and Sault Ste. Marie, \$3,600,000 bonds.

Sir Thos. Shaughnessy has issued his annual circular to C.P.R. employes offering two free scholarships in McGill University to employes under 21 years of age and to minor sons of employes. These scholarships cover four years' tuition in the faculty of applied science, and are subject to competitive examination.

An Edmonton, Alta., press dispatch of Nov. 25, said that a caucus of Government supporters in the Legislature had endorsed Premier Sifton's proposal to abandon the Alberta and Great Waterways Ry. project and to use the \$7,400,000 obtained by the sale of bonds in liquidation of the provincial debt and for other purposes of general benefit to the whole province.

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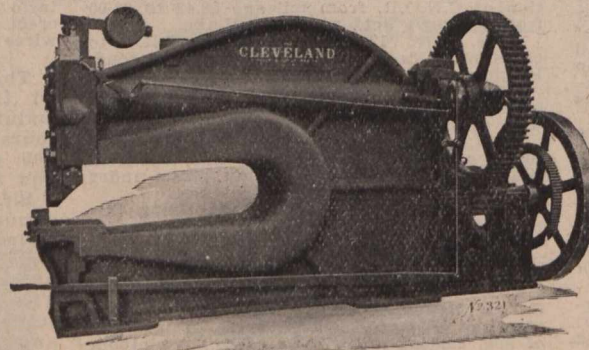
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TRANSPORTATION APPOINTMENTS.

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

Algoma Central and Hudson Bay Ry.—J. W. Herrold heretofore agent Kanawha and Michigan Ry. Charleston, West Virginia, has been appointed General Agent, A.C. and H.B.R., with office at Sault Ste. Marie, Ont.

W. M. Hugill has been appointed Chief Dispatcher at Sault Ste. Marie, Ont., vice F. Robinson, Trainmaster and Chief Dispatcher, appointed Superintendent Manitoulin and North Shore Ry., at Sudbury, Ont.

Canadian Northern Ry.—J. H. McKinnon, heretofore in Assistant General Passenger Agent's office, Winnipeg, has been appointed Travelling Passenger Agent Toronto, vice Osborne Scott, transferred to Winnipeg.

Osborne Scott, heretofore Travelling Passenger Agent, Toronto, has been appointed chief clerk to Assistant General Passenger Agent, Winnipeg.

Canadian Pacific Ry.—G. C. Wells, heretofore Assistant General Passenger Agent, Eastern Lines, has been appointed Assistant to Passenger Traffic Manager, and in addition to other duties will have charge of the Passenger Rate Bureau. Office, Montreal.

M. A. Fullington, formerly Resident Engineer, District 1, has been appointed Resident Engineer, District 4, Ontario Division. Office, Toronto. This is a new position on District 4.

P. Coakley, heretofore Roadmaster Guelph and Goderich subdivision, Guelph, Ont., has been appointed Roadmaster Windsor subdivision, Ontario Division, vice A. Cameron, transferred. Office, London, Ont.

J. Garstang was on Oct. 29, appointed acting Roadmaster Guelph and Goderich subdivision, Ontario Division, Guelph, vice A. Coakley transferred, and, on Nov. 9, A. Cameron, heretofore Roadmaster Windsor subdivision, was appointed Roadmaster, Guelph and Goderich and Listowel subdivisions, Ontario Division, vice J. Garstang. Office, Guelph, Ont.

A. C. Bleecker has been appointed outside ticket agent at Marmora, Ont., vice W. F. Bleecker, deceased.

The outside office at Parry Harbor, Ont. has been closed and no appointment made to fill the position occupied by the late J. C. Whitchele.

O. Bibby has been appointed Superintendent's Accountant at North Bay, Ont., vice W. K. P. Kennedy, transferred.

A. C. Shaw, heretofore General Passenger Department, Chicago, Ill., has been appointed Assistant General Passenger Agent Winnipeg.

J. A. McLean has been appointed Chief Train Dispatcher District 1, Saskatchewan Division, vice N. S. Fraser, resigned. Office, Moose Jaw.

G. Sandstrom has been appointed Roadmaster Last Mountain subdivision and the portion of the Lanigan subdivision between Strassburg and Lanigan, District 2, Saskatchewan Division, vice G. Vanalstye, resigned.

J. D. Muir, heretofore acting Locomotive foreman at Red Deer, Alta. has been appointed locomotive foreman there, vice J. G. Norquay, assigned to other duties.

W. North has been appointed foreman blacksmith, Revelstoke shops, vice J. Rycroft, transferred.

A. B. Calder, heretofore General Agent Passenger Department, Seattle, Wash., has been appointed General Agent Passenger Department, Chicago, Ill., vice A. C. Shaw, promoted.

E. E. Penn, heretofore General Agent Passenger Department, San Francisco, Cal., has been appointed General Agent

Passenger Department, Seattle, Wash., vice A. B. Calder, transferred.

G. M. Jackson has been appointed General Agent Passenger Department, at San Francisco, Cal., vice E. E. Penn, transferred.

Dominion Atlantic Ry.—O. F. Walford has been appointed Secretary, vice R. L. Campbell, transferred.

Grand Trunk Pacific Ry.—P. Harrity has been appointed General Roadmaster in charge of Road and Bridge and Building Departments. Office, Fort William, Ont.

H. McCormick, heretofore general foreman, Fort William, Ont., has been appointed Roadmaster between Fort William and Pelican, including Fort William and Graham terminals. Office, West Fort William, Ont.

J. Abbott, Chief Dispatcher, Lake Superior Division, has been transferred from Fort William to Graham, Ont.

D. W. Steeper heretofore Trainmaster, Lake Superior Division, at Fort William, Ont., has been appointed Trainmaster, with jurisdiction between Westfort, Ont., and Springfield, Man. Headquarters, Graham, Ont.

M. B. Dube has been appointed locomotive foreman at Graham, Ont.

J. R. Morton has been appointed acting locomotive foreman at Redditt, Ont.

J. Ness has been appointed car foreman at Portage la Prairie, Man., vice A. Possnett, transferred.

A. Possnett, heretofore car foreman at Portage la Prairie, Man., has been appointed car foreman at Springfield, Winnipeg.

A. C. Loudon, heretofore construction foreman at Gainford, Alta., has been appointed locomotive foreman at Springfield shops, Winnipeg.

W. W. Yeager, heretofore locomotive foreman at Wainwright, Alta., has been appointed locomotive foreman at Edmonton, Alta., vice A. Bell, transferred.

A. Bell, heretofore locomotive foreman at Edmonton, Alta., has been appointed locomotive foreman at Wainwright, Alta., vice W. W. Yeager, transferred.

W. J. Marchen, Roadmaster from west end of Edmonton yard to end of steel, has had his headquarters changed from Edmonton to Edson, Alta.

The following agents have been appointed: St. James, Man., E. W. Dewey; Atwater, Sask., A. Kurtz; Melville, Sask., A. Donnelly; Uno, Man., R. Marshall; Raymore, Sask., W. P. Kenefick; Clavet, Sask., R. E. Patterson; Young, Sask., A. B. Dowling; Tofield, Alta., C. H. Cress; Lake Superior Jct., Ont., V. D. Sibbard; W. O. Junct., Ont., N. A. Phillips; Yorkton, Sask., A. E. Hoffer; Springfield, Man., J. S. Agnew; Redditt, Ont., W. Gotro; Graham, Ont., G. H. W. McCullough.

Grand Trunk Ry.—D. Crombie, heretofore Assistant to General Transportation Manager, has been appointed Assistant to First Vice President. Office, Montreal.

F. W. Bergman has been appointed Manager of the Chateau Laurier, Ottawa.

As the installation of the new terminal facilities at Belleville, Ont., will necessitate several changes, no one has been appointed as locomotive foreman to succeed J. Gibson, who was recently appointed Assistant Master Mechanic at Deering, Portland, Me. W. Cahill is acting as locomotive foreman at Belleville in the meantime.

R. Muirhead, heretofore freight foreman of Simcoe St. sheds Toronto has been appointed Passenger Yard Master, G.T.R., Union Station, Toronto.

R. M. Nielson has been appointed Soliciting Freight Agent, Kansas City, Mo., vice F. L. Norman, now Commercial Agent Seattle, Wash.

The following agents have been appointed; St. Agapit, Que., J. L. A. Cou-

ture; Sutton Ont., J. Hutchings; Callander, Ont., A. S. Quinlan; London East, Ont., W. J. Moore; Hyde Park, Ont., C. Sampson; Bell River, Ont., J. W. Millen; Shallow Lake, Ont., H. Rose; Wiar-ton Ont., G. Mann. The outside agency at Port Carling, Ont., has been closed.

Intercolonial Ry.—As stated in our last issue, we were officially advised that G. R. Joughins, Superintendent of Motive Power, has resigned, and that the resignation would be considered at the regular meeting of the Government Railway Managing Board during the second week of November. Although the meeting was held, it has not been possible to secure any official information as to what action, if any, was taken in regard to the resignation. The daily press in Moncton and elsewhere in the Maritime Provinces has had a good deal to say about the matter, much of it no doubt being for political effect. It is stated that the resignation has not been accepted and that Mr. Joughins is to be given leave of absence for a change and rest.

T. Hoben, Assistant Superintendent at Gibson, N.B., will be placed on the superannuation list Jan. 1, 1911. We are officially advised that, on account of this change, there will be no change in titles nor location of headquarters, and there is no present intention of filling the position.

New York Central and Hudson River Rd.—E. J. Wright heretofore Assistant Superintendent Western Division, Syracuse, N.Y., has been appointed Superintendent Hudson Division, Albany, N.Y., vice F. T. Slack.

H. E. Brown has been appointed Assistant Superintendent Western Division, Syracuse, N.Y., vice E. J. Wright, promoted.

D. Fleming has been appointed Assistant Superintendent Hudson Division, New York City, vice H. E. Brown, transferred.

Wabash Rd.—A. F. Helm, heretofore Trainmaster at Decatur, Ill., has been appointed Superintendent Detroit and Buffalo Divisions, vice W. C. Heth, acting Superintendent, assigned to other duties. Office Detroit, Mich.

The G.T.P. Telegraph Co., has opened offices, at Change, Clearwater, Dona, East Lake, Graham, Lake Superior Jct., Lost Lake, Mack, Malachy, Oscar, Quorn, Raith, Redditt, Willett, Walsh Lake, Westfort, West Ontario Jct., Ont.; Dott, Elma, Springfield, Vivian, Man., all of which are stations on the National Transcontinental Ry. east of Winnipeg.

C. H. Mackay, President Commercial Cable Co., recently stated that the company had been at work for some time, formulating a plan by which the rates for cablegrams sent by the general public, as distinguished from code messages, would be reduced by about one half. This would involve a proportionate decrease in the land charges in Europe, and thus the co-operation of those countries would have to be obtained.

Notice is hereby given that the Lachine, Jacques Cartier & Maisonneuve Railway Company will apply to the Parliament of Canada, at the next session thereof, for an Act declaring the railway which the Company is by its Act of incorporation, chapter 99 of the Statutes, passed by the Legislature of the Province of Quebec in the year 1909, authorized to construct a work for the general advantage of Canada, and providing that the said railway may be commenced and completed within two years and five years respectively from the passing of the Act hereby applied for.

Dated at Montreal this 19th day of October, 1910.

W. H. BIGGAR,
Solicitor for Applicant.

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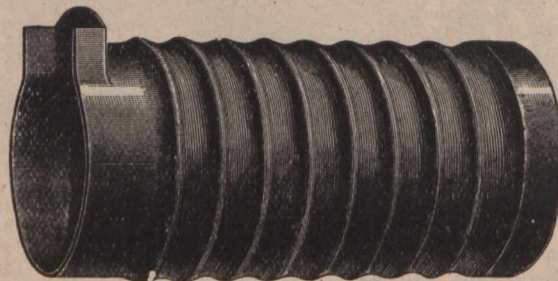
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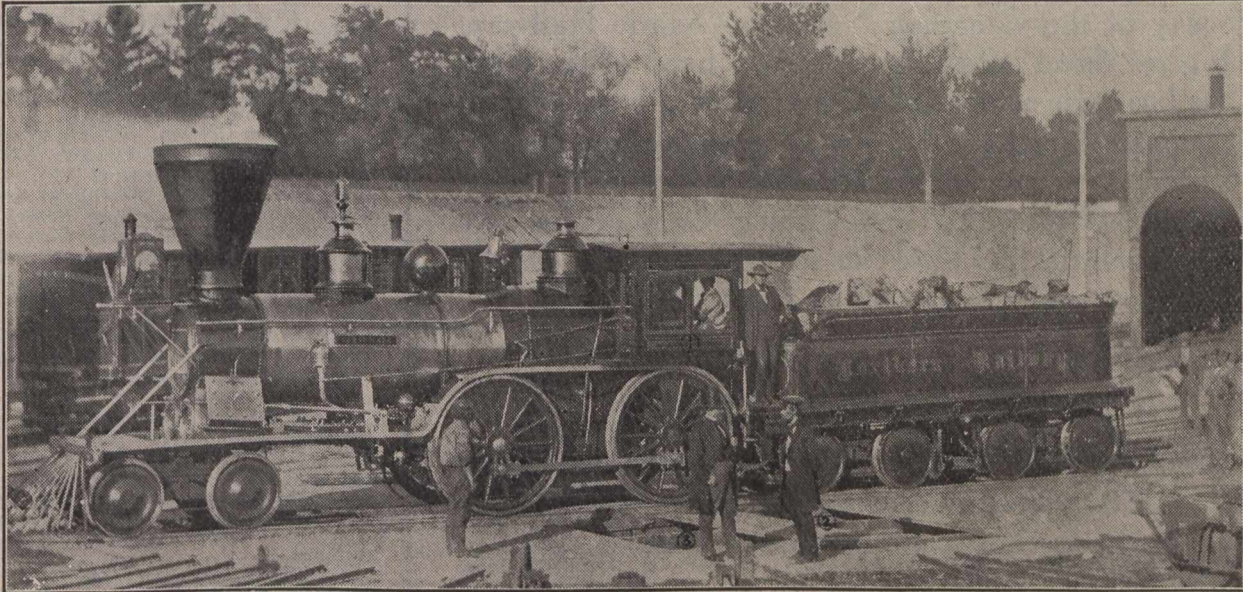
Old Northern Railway Rolling Stock.

J. M. Williams, wrote the Buffalo Express recently as follows:—

"It is not generally known that when King Edward VII. visited Canada and the United States, in 1860, as Prince of Wales, the special train, consisting of two coaches, the Prince's observation car and the finest locomotive in Canada at that time, the Cumberland, named after

Messrs. Tillinghast and Williams, with J. L. Grant, superintendent of the Northern Ry. of Canada, helped to build the Rome, Watertown & Ogdensburg Rd., and held the same positions relatively, on this road as were afterwards tendered to them on the Northern Ry. of Canada. At the beginning of the Civil War J. L. Grant returned to the U.S. and was made superintendent of the Buffalo & Erie Rd., now part of the

servation car and the engine Cumberland, which are herewith reproduced, the writer believes are the only ones in existence. The time-table shows that the Prince travelled at the rate of 21 miles an hour, or from Toronto, Ont., to Collingwood, Ont., on Georgian Bay, 94½ miles, in 4½ hours. After the train had covered 18½ miles, in 45 minutes, which was pretty fast for those days, it had to stop for water at Richmond Hill,



Wood-burning, inside connected, Northern Railway locomotive Cumberland.

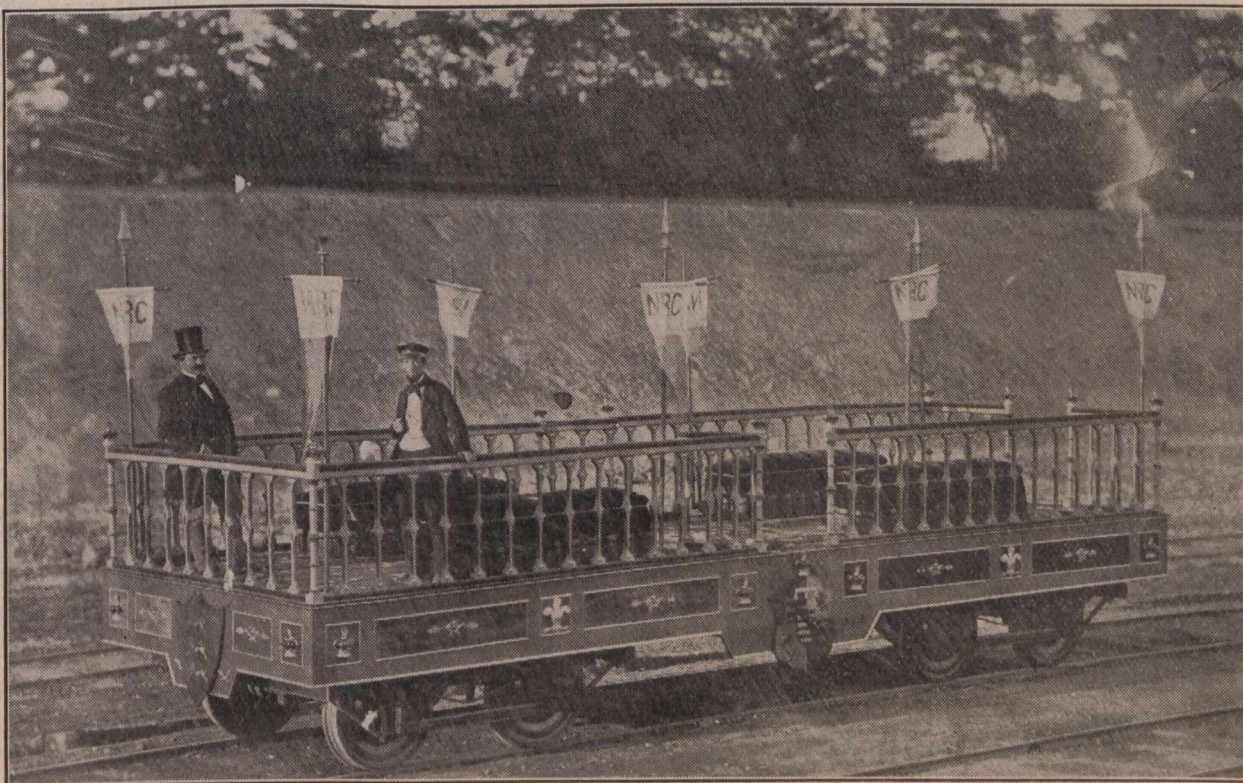
the General Manager of the Northern Railway of Canada, was in charge of and run by two former Buffalonians. They were James Tillinghast, then superintendent of motive power of the Northern Ry. of Canada, who planned and supervised the construction of the observation car and had charge of the special train, and L. S. Williams, (the writer's father), who was the engineer chosen to handle the Cumberland.

Eastern division of the Lake Shore & Michigan Southern Ry. Messrs. Tillinghast and Williams returned with him, and Mr. Tillinghast received the appointment of Division Superintendent of the New York Central, and Mr. Williams that of Master Mechanic of the Buffalo & Erie at Erie, Pa.

The special time-table of Sept. 10, 1860, for the train of the Prince of Wales, with the photographs of the ob-

then again at Aurora, Ont., 30.2 miles from Toronto, for wood for fuel arriving at Collingwood at 1 p.m. The Prince, in returning, left Collingwood at 3 p.m., and arrived at Toronto at 7 p.m., the return trip being made in just four hours, or at the average rate of 23.625 miles per hour."

We are indebted to the Buffalo Express for the use of the accompanying illustrations.



The Prince of Wales' Observation Car on Northern Railway, 1860

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The Maganetawan Country

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Portable Flare Lights

International Marine Signal Company, Ltd.

OTTAWA

CANADA

CANADIAN NORTHERN BRANCH LINES COMPANY.

NOTICE is hereby given that application will be made to the Parliament of Canada at its next session, for an Act incorporating a company under the name of the Canadian Northern Branch Lines Company, with power to construct the following lines of railway:—

(a) From Grosse Isle, Manitoba, northerly to Grand Rapids, with a branch to Sturgeon Bay;

(b) From Wassewa, westerly and northerly to or near Ethelbert;

(c) From Yorkton, northerly to or near Hudson Bay Junction;

(d) From Craven, north-easterly to or near Hudson Bay Junction;

(e) From Craven, easterly to the Rossburn Branch of the Canadian Northern Railway east of Yorkton.

(f) From Craven, northerly through or near Humboldt to or near Prince Albert.

(g) From the line (d) westerly to a point between Davidson and Aylesbury.

(h) From a point between Brancepeth and Kinistino, north-easterly to or near Pas Mission;

(i) From line (d) in or near Tp. 40, Rge. 7, w. 2 m., westerly to or near Jack Fish Lake, north-west of North Battleford.

(j) From or near Moose Jaw, north-westerly to join the Vegreville-Calgary line of the Canadian Northern Railway between Camrose and Settler.

(k) From the International Boundary near Range 7, W. 4 M., northerly and easterly to a point near or west of Battleford;

(l) From or near Macleod, north-easterly to the Saskatoon-Calgary line of the Canadian Northern Railway in or near Ranges 1 to 4, W. 4 M.;

(m) From the Maryfield-Lethbridge line of the Canadian Northern Railway at or near Ranges 1 to 4 W. 4 M., westerly via Cardston to or near Pincher;

(n) From the Maryfield-Lethbridge line of the Canadian Northern Railway in or near Ranges 1 to 4, W. 4 M., northwesterly via Taber to a junction with line (l);

(o) From the Maryfield-Lethbridge line of the Canadian Northern Railway between ranges 1 and 10, w. 4 m., north-westerly to a point at or near Tps. 20 to 23, Rge. 6, W. 5 M.;

(p) From Lloydminster northwesterly and westerly to Bruderheim;

(q) From the Edmonton and Slave Lake Railway north or Morinville to a point in or near Tp. 56, Rge. 8, W. 5 M.;

(r) From or near Fort Pitt, north-westerly to the Athabasca River.

With power to acquire and navigate vessels, wharves, elevators and other facilities, to generate and use electrical and other energy, and to dispose of the surplus thereof, to construct and operate telegraph and telephone lines and to charge tolls for the use thereof; also fixing the amount and nature of securities to be issued with respect to the lines authorized and the manner of securing the same; also authorizing amalgamation with other companies and the guarantee and holding of securities and shares of any company; with power to construct, acquire and manage hotels, restaurants, and parks, and to authorize the issue of securities on properties of the company other than its railways; with other usual and customary powers.

GERARD RUEL,

Solicitor for the applicants.

Dated at Toronto, this 10th day of November, 1910.

Chatham, Wallaceburg and Lake Erie Ry.—The Board of Railway Commissioners has authorized the opening of this line from opposite the blind lane of con. 4, Dover East tp., to Pain Court, but limiting the speed of trains over it to 18 miles an hour. (Nov., pg. 963.)

Trade and Supply Notes.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers to distinctly understand that we are not paid for the publication of any of this matter and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

The Canada Rolling Stock Co. has passed a resolution changing the location of its head offices from Amherst, N.S., to Montreal.

The McConway and Torley Co., Pittsburgh, Pa., has issued an illustrated booklet, "The McConway Wheel," especially dealing with its steel tired wheels for steam and electric railway service.

The Dearborn Drug and Chemical Co., McCormack Building, Chicago, has issued a booklet on the treatment of boiler feed waters, which is of interest to all boiler users, and especially to steam and electric railway mechanical officials.

The Duckworth-Boyer Engineering & Inspection Co., Ltd., Montreal, are the inspecting engineers for the steel work entering into the construction of the C.P.R. Windsor St. station extensions, the Place Viger station extension, the Dominion Express Co.'s new building in Montreal and Bank of Montreal's new building in Winnipeg.

Jas. W. Pyke & Co., Limited, has been incorporated under the Dominion Companies Act, with a capital stock of \$300,000, and head office in Montreal, to acquire the business heretofore carried on by J. W. Pyke & Co. as general merchants, importers, etc., and with other extensive powers, including manufacturing, railway and other contracting.

The Thermit Process of Rail Welding is the title of an illustrated booklet issued by the Goldschmidt Thermit Co., 103 Richmond St. west, Toronto, in which the method of welding rails by the Thermit process is fully described and illustrated. The application of the same process to repairing motor cars and truck frames is also dealt with.

The Canadian Car and Foundry Co., Ltd., held its annual meeting in Montreal Nov. 15. Press reports state that the reports showed the past year's business amounted to \$8,500,000, that orders are booked for \$7,000,000 worth of work, and that it is expected the output for the current year will amount to \$11,000,000. The old board was re-elected, and the same officers. N. Curry is President, and W. W. Butler Vice President.

The Ajax Manufacturing Co., Cleveland, Ohio, has issued a beautifully printed and well bound reference book and catalogue of about 100 pages, describing its hot metal working machinery, including rivet and bolt headers, axle upsetting machines, bolt headings, upsetting and forging machines, standard and new high speed bulldozers, hot sawing and burring machines, universal forging machines, hot pressed nut machines, taper forging rolls, and reclaiming rolls.

Aurelien Boyer, Vice President of the Duckworth-Boyer Engineering & Inspection Company, Ltd., Montreal has been elected a director of l'Ecole Polytechnique, the applied science branch of Laval University. Mr. Boyer, whose grandfather was the first Superintendent of Education for Lower Canada, has always taken a good deal of interest in the cause of education. He will represent on the board the graduates of the above named school.

C. E. Cartwright, C.E., of Vancouver, B.C., who a short time ago resigned his

position as Division Engineer C.P.R. to practice as a consulting engineer, has entered into partnership with A. J. Matheson, C.E., formerly of Ottawa, who has had 18 years experience in civil engineering, specializing in hydraulics. The new firm, Cartwright, Matheson & Co., will undertake reports, surveys, plans, superintendence of construction for railways, wharves, bridges, townsites, power plants, irrigation, water supply, etc.

The Baldwin Locomotive Works, Philadelphia, Pa., has issued its record no. 67, describing 14 locomotives built recently for passenger service. The extent to which superheated steam is used in locomotive practice is indicated by the fact, that seven of the 14 locomotives shown are equipped with superheaters. Improvements in design have rendered the maintenance of the superheater a comparatively simple matter. Furthermore, a locomotive using superheated steam can, with an increased economy and without decreasing its efficiency, be worked at a lower boiler pressure than one using saturated steam. Consequently the expense of boiler maintenance is reduced and this, in consideration of the high ratio which boiler repairs bear to total repairs, is a distinct advantage. The use of superheated steam undoubtedly increases the capacity of a locomotive. This is an important feature, especially in express passenger service, where the margin of reserve power is frequently small.

Among the Express Companies.

The Canadian Northern Ex. Co. has closed its office at Lavenham, Man.

The Canadian Northern Ex. Co. has opened an office at Kakabeka Falls, Ont., and has closed its office at Rounthwaite, Man.

F. W. Forster, C.P.R. agent, 14 Redcross St., Liverpool, Eng., has been appointed agent there for the Dominion Ex. Co., vice M. Beck and Co.

A. E. Seeley, Dominion Ex. Co.'s agent at Perth, Ont., has retired, after many years service. He acted as an express agent at Perth for 50 years.

The Dominion Ex. Co., has instructed its agents that under no circumstances, are they to receive or hold any money on deposit, pending the arrival of goods by express.

J. D. Fraser, C.P.R. station agent, and who also acted for the Dominion Ex. Co., at Rutter, Ont., was arrested recently on charges of stealing several sums of money from the C.P.R. and the Dominion Ex. Co.

The Dominion Ex. Co. is notifying its agents, that shipments of millinery, which for any reason, remain on hand for 24 hours, must be reported to the superintendent and to the agent at the shipping point.

The Trunk Line Association has issued a notice that aeroplanes will not be transported as baggage, and all applications concerning such transportation will be referred to the freight departments or express companies.

The Dominion Ex. Co., has opened offices at Amisk, Cairns, Cadogan, Alta.; Walhacin, B.C.; and has closed its offices at Beaumaris, Minet, Port Carling, Port Cockburn, Port Sandfield, Rosseau, Royal Muskoka, Waldemar and Windermere, Ont.

The Canadian Ex. Co. has opened offices at Vancouver, B.C., agent W. H. Natress; Stewart, B.C., agent, P. A. Godenrath; Prince Rupert, B.C., agent, A. E. McMaster; Victoria, B.C., agent, W. E. Duperow; Seattle, Wash., agent, J. H. Burgess.

The Dominion Ex. Co., has advised its agents that they will be held responsible for any money advanced to individuals on shipments to be forwarded by ex-

press, unless previous authority has been obtained from the agent at point of destination.

The Dominion Ex. Co. has notified its agents east and south of Sudbury, Ont., that after Nov. 26, the date of the last sailing from Owen Sound for Georgian Bay local ports, shipments for Manitoulin Island, must be forwarded according to instructions in the express guide.

Shipments of goods consigned to a person or firm to the order of a bank, or some other person or firm, or to instructions accompanying them, which would require the agent to notify such bank, firm or person, must not be accepted by agents, but shipments addressed to a person or firm, in care of another person, or firm, may be.

The attention of agents is called to the necessity of seeing that the name and address of the shipper are attached to all goods returned to departmental stores, and to parts of vehicles and machinery returned to manufacturers, as such shipments are apt to accumulate at destination stations owing to consignees refusing to accept them, owing to the omission.

Express packages of valuables, exceeding in size, 8 by 11 by 16 ins., must not be accepted by agents, unless specially advised by the superintendent, as they cannot be placed in the car safes. Packages or vehicles, exceeding 4 ft. 7 ins. wide, by 5 ft. 10 ins. high, should not be accepted unless advised by superintendent, as the dimensions given are the average of express car doors.

The Dominion Ex. Co. gives notice that the Alaska Pacific Ex. Co., having withdrawn from the White Pass and Yukon Ry., shipments should only be accepted at tariff rates to Skagway, and subject to the rates of the White Pass and Yukon Route, beyond; also that shipments for Skeena River points, including Hazelton and McIntosh, B.C., should not be accepted until the reopening of navigation.

The Canadian Ex. Co. was fined \$30 and costs at Toronto, Nov. 11, for shipping two dogs from a rabies infected district at Blair to Shawanagan, Ont. in contravention of the Animal Contagious Diseases Act. For the defence it was urged that the shipping bill contained nothing to show the contents of the box, which was done up in such a way as not to show the contents, and that the agent at Blair was given to understand that the dogs were billed for an infected district.

On account of rabies known to exist in parts of Western Ontario, the area situated west of the eastern boundaries of York and Simcoe counties, is declared to be infected, and express agents are advised that no dogs must be moved out of that section, until Dec. 7, or until further advised. This does not affect dogs passing through Canada in bond, nor such dogs as may be passing through the infected area. No dogs must be accepted for transportation to Montreal, until further notice.

The Dominion Ex. Co., is cautioning its agents against persons representing themselves to be route agents or other officers of the company, and who may try to obtain possession of money or money orders, and instructs that such persons must not be permitted to have access to any books, etc., unless identified by letter or other satisfactory evidence of the superintendent of that particular division, and even then the agent must satisfy himself that such superintendent's signature is genuine.

The Dominion Ex. Co. has issued special instructions to its agents regarding Christmas traffic to England. In order to avoid serious delay at the Liverpool customs office duplicate invoices, with description and value of each article,

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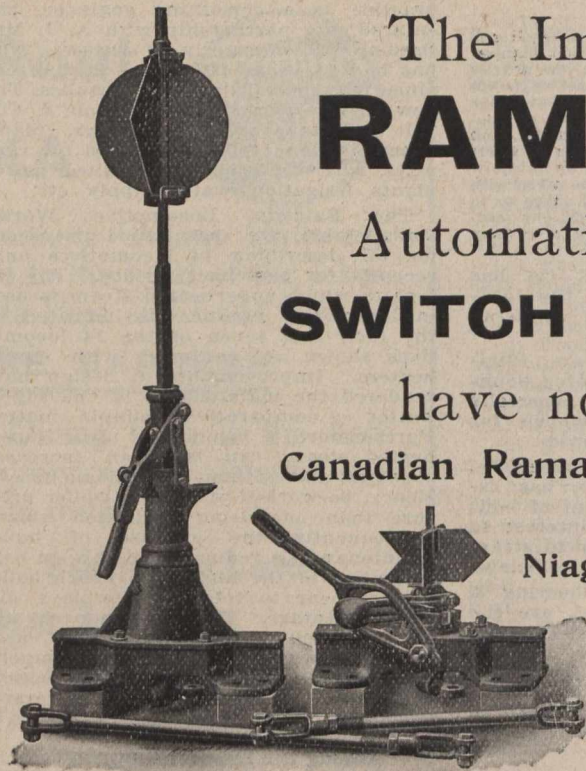
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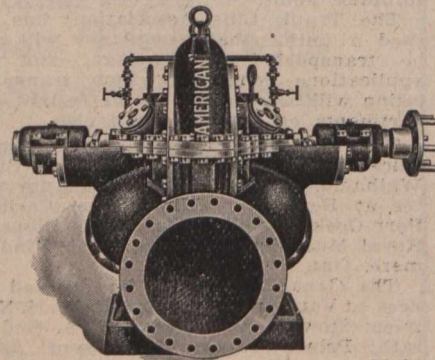
—more than was given to all other makes of pumps combined—were awarded by the
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efficiencies than others is they are so designed that there is a shorter passage and
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At the entrance of the discharge pipe is a cut-off, preventing fluid passing the
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The same care that is employed in de-
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is carried out in every detail of construc-
tion; in balancing the impeller, overcom-
ing the end thrust, water-sealing the
inner end bearings and oiling the main
outer end bearings with rings and chains
and oil cellars.

"American" Volute centrifugals are
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with outward entries, must accompany shipments. Invoices simply describing goods as Christmas presents are useless, and should not be accepted, and charges if not prepaid, should be covered by guarantee or deposit. Marine insurance is only affected if specially requested, and shipments should be specially marked for marine insurance.

Express companies have notified their agents that owing to the provisions of the Canada Temperance Act, they must refuse to accept shipments of intoxicating liquors, when destined to points in Albert, Carleton, Charlotte, York, Kings, Northumberland, Queens, Sunbury and Westmoreland counties, N.B., and Annapolis, Cape Breton, Cumberland, Digby, Guysboro, Hants, Inverness, Kings, Pictou, Queens, Shelburne and Yarmouth counties, N.S., unless it is represented that they are for the consignee's personal or family use, which must be endorsed on the shipping bill by the shipper. All shipments of intoxicating liquors for these counties, sent c.o.d., must be refused, whether for consignee's personal use or not.

Judgment was recently delivered in the Ontario courts, on a claim of the Ontario Wheel Co., against the Canadian Ex. Co., in favor of the defendants. The claim was for damages for delay, owing to the Ex. Co. having delivered goods to a place for which they were not intended. It appeared in the evidence, that the goods were delivered to the Ex. Co. for shipment to a point in Quebec, there being several places of the same name in that province, but only one reached by the Canadian Ex. Co., and the goods were forwarded to that point. In giving his decision, Judge Reynolds said: "I hold that it is the duty of the consignors to furnish clear and unambiguous addresses to the express companies, and, if in consequence of the address being ambiguous, delay or expense occurs, they must bear the loss. I therefore find that neither the plaintiffs, nor the consignee can recover in this action."

Telegraph and Cable Matters.

The Canadian Northern Telegraph Co. has closed its office at Lavenham, Man.

Press reports state that the C.P.R. is to erect a telegraph wire connecting Merritt with Vancouver, early in the coming year.

The Canadian Northern Telegraph Co. has opened an office at Kakabeka Falls, Ont., and has closed its office at Rounthwaite, Man.

The Western Union Telegraph Co., has filed with the Board of Railway Commissioners, its tariff of maximum telegraph tolls, between points in Nova Scotia, New Brunswick and Quebec.

The Board of Railway Commissioners recently extended the time for the approval of the G.T.P. Telegraph Co.'s tariff of tolls between points in Canada, with the exception of the tolls between its local offices on its Ottawa Division, and Quebec, and between them and Swanton, Vt., to Dec. 1.

The Department of Public Works has completed the laying of a cable between Gannett Rock and Seal Cove, Grand Manan, which will materially lessen the danger to ocean steamships at that point. It was near Gannett Rock that the s.s. Hestia, with a number of lives, was lost about a year ago.

The Board of Railway Commissioners recently extended the time for the approval of the C.P.R. tariff of telegraph tolls between points in Canada west of and including Sudbury, Ont., to and from points west of Sudbury from and to points east thereof and east of and including Windsor, Ont., to Dec. 1.

The Maritime Telegraph and Telephone Co.'s cable across the Northumberland Strait, between Pictou, N.S., and Prince Edward Island, has been satisfactorily laid and connected. The line has been leased for private telegraph work, but it is stated that there is a possibility of arranging for its use for a public telephone service.

During the year ended Mar. 31 the Dominion Government built 31 miles of new line in Cape Breton, from Enon to Gabarus, and 63½ miles from Strathlorne to Whyccomagah. In Quebec, two short lines were built, totalling 27 miles, while in the Northwest 70 miles of line were erected from Athabasca Landing towards Peace River Landing, and the remaining distance of 220 miles was being proceeded with. This line skirts the western shore of Lesser Slave Lake for 80 miles, and from thence runs northwesterly for 90 miles. The Dominion Government, at that date, had 7,748½ miles of pole line.

The Board of Railway Commissioners reserved its decision, Nov. 15, in connection with the application of several telegraph companies for approval of their message forms, on the question of the companies' liability for the proper delivery of messages. On the present tariffs the companies only hold themselves responsible to the amount of the tolls for the proper transmission of ordinary messages and for 50 times the tolls for repeated messages. The Board suggested a maximum liability of \$500, and the companies suggested a maximum liability of \$200 for ordinary messages and \$400 for repeated messages.

In the course of the hearing of the Marconi Wireless Telegraph Co.'s application for approval of its tariff of tolls, Nov. 15, the question arose as to the Board's jurisdiction over the rates for wireless messages to and from foreign registered vessels in Canadian waters. The company claimed that the Board had no jurisdiction. J. P. Mabee, Chief Commissioner, in reserving judgment, said: "It seems to me that British or foreign ships come under the Canadian Law the moment they enter the waters of the Gulf of St. Lawrence. The waters of the St. Lawrence Gulf are territorial waters, just as the Canadian part of Lake Superior."

Grain Elevator Notes.

The Western Terminal Elevator Co., Ltd., has been licensed to carry on its business in Manitoba.

The Western Canada Flour Mills Co.'s elevator at Goderich, Ont., will, it is expected, be opened for business Dec. 15.

A bill respecting terminal elevators at the head of Lake Superior will be introduced at the Dominion Parliament's current session.

The name of the Caron Farmers' Elevator Co., Ltd., has been changed to the Caron Farmers' Elevator and Trading Co., Ltd., Caron, Sask.

The Homewood Farmers Elevator Co. Ltd., has resolved to voluntarily wind up its affairs, and to apportion its assets among the contributors.

D. Horn Chief Grain Inspector, Winnipeg, was presented with a cabinet of silver by the western grain inspection staff Nov. 2, on his retirement from that position, which he held for 11 years.

The G.T.P. Elevator Co.'s elevator at Tiffin, Ont., during the past 20 months handled 13,804,000 bush. of grain, the largest amount for one day being 527,000 bush. in 22 hours, the record for one hour being 40,000 bush.

A. McD. Allan, who is connected with a U.S. firm, was in negotiation, recently, with the Goderich board of trade regarding the proposal to erect a large elevator there. A site has been located,

and estimates are in course of preparation. It is stated to be the intention to utilize the elevator in connection with the shipment of grain to Buffalo.

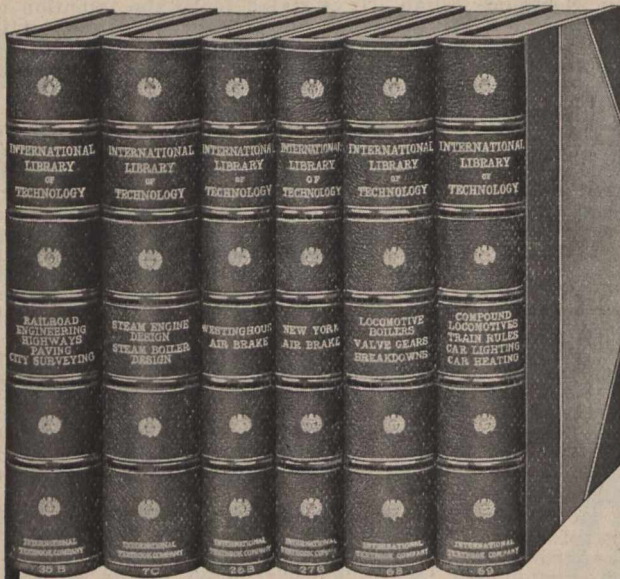
A special general meeting of the Reston Farmers' Elevator Co., Ltd., was held at Reston, Man., Nov. 17, to approve and confirm a bylaw passed by the board, providing for the transfer of all the undertakings, property and interests of the company to the Manitoba Government, and providing for the discharge of any mortgage or encumbrance affecting the company's assets.

A Winnipeg report states that 33,557,460 bush. of the 1910 crop has passed inspection there, or about 750,000 bush. less than for the same period 1909. Of this total, there are, 18,000,000 bush. required for seed; 6,000,000 bush. required for interior mills, and 6,000,000 bush. in interior elevators. The stock in the terminal elevators at the end of Oct. was 721,203 bush. wheat; 5,479,271 bush. oats, 648,017 bush. barley; and 548,040 bush. flax.

The Western Grain Standards Board of Canada, at a recent meeting, passed a resolution drawing the attention of the Dominion Government to the advisability of acquiring and operating the terminal elevators at Fort William and Port Arthur, and elsewhere in Canada, including the eastern transfer elevators, with a view to assuring and maintaining the admitted high standard of Canadian grain in all markets, and as inspected at Winnipeg.

Saskatchewan Elevator Commission.

The Commission, which was appointed in Feb. to enquire into the various schemes submitted for the Government control of elevators has submitted its report, which does not favor any of the schemes placed before it, entirely, but has evolved a scheme embodying the best points of each. State aided farmers' elevators, and modifications of similar ideas have been discarded, and a plan submitted by the Commission, on the basis of a co-operative joint stock company, owned entirely by the agriculturists of the province, without Government representation on the executive. It is suggested that a minimum of 15% shall be paid up by the farmers, upon as many of the \$50 shares as are subscribed for, that the maximum number of shares allotted to any one person shall be 10, and that 25 elevators shall be the minimum proposed to be operated before the central body shall be organized and Government assistance called for. The proposed assistance shall take the form of a loan for each elevator, secured by mortgage, repayable in 20 annual instalments, principal and interest. The Saskatchewan Grain Growers' Association executive is named as suitable provisional directors to carry out the first details of the plan. To secure the maximum amount of local control, consistent with ownership by the whole body of shareholders and management through the central board of directors, it is recommended that each elevator be a separate unit, with a local board elected by the local shareholders. Each local board shall have one representative for the organization and subsequent annual meetings at which the whole board shall be elected, and it is suggested that the stock subscribed for each unit should be equal to the cost of the elevator, and the annual aggregate crop acreage of the shareholders should not be less than 2,000 acres for each 10,000 bush. of capacity of the elevator, or one acre for every dollar of the proposed expenditure at each unit. The Commission consisted of Prof. R. Magill, Dalhousie University, N.S.; G. Langley, M.L.A., Redberry, Sask., and F. W. Green, Secretary-Treasurer Saskatchewan Grain Growers' Association, Moose Jaw.



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THE AJAX MFG. COMPANY
3830 Lakeside, CLEVELAND, O.

THE CANADIAN NORTHERN ONTARIO RAILWAY COMPANY.

NOTICE is hereby given that the Canadian Northern Ontario Railway Company, will apply to the Parliament of Canada, at its next Session, for an Act extending the time within which it may construct the following lines of railway:—

- (a) From Washago to Kincardine;
- (b) From Arnprior to Gananoque;
- (c) From Pembroke to Cobourg or Port Hope;
- (d) From the Township of Pickering to Owen Sound;
- (e) From within ten miles east of Toronto to Hamilton, London and Windsor, with a branch from London to St. Thomas and Sarnia; and a loop line in the Townships of York and Scarborough, north of Toronto;
- (f) From the International bridge, northwesterly to Goderich;
- (g) From between Dunnville and Port Dover to Owen Sound or Meaford;
- (h) From Washago to Midland;
- (j) From Hawkesbury to a point in the County of Leeds or Lanark;
- (j) From Parry Sound to North Bay; and to increase the limits to the amount of the securities which the company may issue in respect of its authorized lines.

GERARD RUEL,
Chief Solicitor.

Dated at Toronto, this 16th day of November, 1910.

ELECTRIC RAILWAYS.

Canadian Street Railway Association.

PRESIDENT, D. McDonald, General Manager Montreal St. Ry.; VICE PRESIDENT, J. Anderson, Manager Sandwich, Windsor and Amherstburg Ry.; SECRETARY-TREASURER, Acton Burrows, Managing Director Railway and Marine World. ASSOCIATION'S OFFICE, 70 Bond St., Toronto. EXECUTIVE COMMITTEE.—C. E. A. Carr, General Manager Quebec Ry. Light, Heat and Power Co.; P. Dube, Secretary Montreal St. Ry.; H. M. Hopper, Secretary-Treasurer, St. John Ry.; J. E. Hutcheson, Superintendent and Purchasing Agent Ottawa Electric Ry.; C. B. King, Manager London St. Ry.; W. R. McRae, Superintendent Motor and Truck Department Toronto Ry.

ASSISTANT SECRETARY, Aubrey Acton Burrows, Secretary and Business Manager Railway and Marine World.

OFFICIAL ORGAN, THE RAILWAY AND MARINE WORLD.

Montreal Street Ry. Company.

The annual meeting, held Nov. 2, excited much more than the usual interest, as it was considered almost certain that a change in control would occur, a majority of the stock having been secured by persons interested in the Canadian Light, Heat and Power Co. The President, Hon. L. J. Forget, who is not in good health, did not attend, and the chair was taken by the Vice President, K. W. Blackwell. Only one ticket was suggested for the directorate, the following being unanimously elected:—E. A. Roberts, J. W. McConnell, G. C. Foster, K.C., F. H. Wilson, W. C. Finlay, J. M. Wilson, D. L. McGibbon. The old directors were Hon. L. J. Forget, President; K. W. Blackwell, Vice President; W. G. Ross, Managing Director; Sir H. Montagu Allan, J. Caverhill. The new board met immediately after the annual meeting and elected E. A. Roberts President and J. W. McConnell Vice President. P. Dube was reappointed Secretary; D. McDonald, heretofore Manager, was appointed General Manager, and H. A. Lovett was appointed General Counsel. REPORT FOR YEAR ENDED SEPT. 30, 1910.

Your directors beg to submit their 50th annual report, accompanied by the financial statements, which show the following results:—

Gross earnings	\$ 4,352,551.18
Operating expenses	2,455,301.06
Net earnings	1,897,250.12
Interest from M.P. & I. Ry. Co.	85,878.04
Total income	\$ 1,983,128.16
From which deduct:—	
City percentage on earnings	278,084.93
Interest	175,421.07
Rental leased lines	6,472.05
Taxes	48,000.00
	507,973.05

Net income	\$ 1,475,150.11
Dividend 10%	1,000,000.00

Surplus	\$ 475,150.11
From which has been appropriated for:—	
Contingent account	\$250,000.00
Fire insurance fund	25,000.00
	275,000.00

Transferred to general surplus \$ 200,150.11

The gross earnings increased during the year \$477,712.67, or 12.33%, the operating expenses \$200,281.86, or 8.88%, the net earnings \$277,430.81, or 17.13%. The gross earnings continue to show very satisfactory increases. The per cent. of expenses to gross earnings is 56.41%, against 58.20% for the previous year.

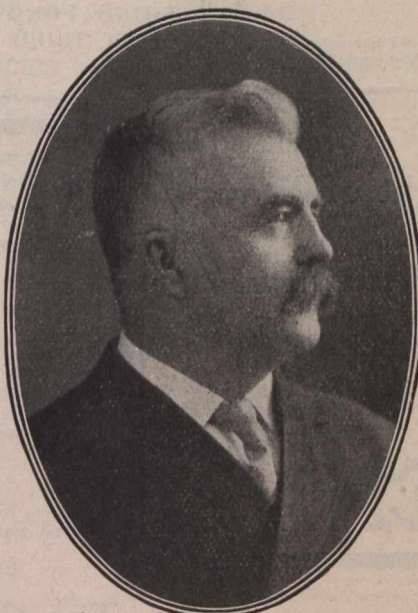
Your directors appropriated \$25,000 from surplus earnings as a credit to the fire insurance fund. The interest on the investments for the year was \$26,766.66. The amount now at the credit of the fund is \$521,560.24.

During the year the Company secured an amendment to its charter authorizing the construction and operation of underground railways. Preliminary plans for the construction of the same have been prepared by Jacobs & Davies, of

New York, and the question will be taken up with the city during the coming year. Owing to the continued rapid growth and congestion of the city, your directors again took up the question of securing additional routes which would relieve the present congestion, but regret that no definite action has been taken as yet by the city. It is hoped, however, that the matter will receive early attention. The delay has added to the difficulties of operation in, at best, a difficult and dangerous city to operate in.

The Supreme Court of Canada rendered judgment in favor of this company's appeal from the decision of the Board of Railway Commissioners, relative to the rates of fares from Cote des Neiges to the city. The city of Montreal has appealed from this decision to the Privy Council.

During the past year negotiations were entered into between your directors and the directors of the Montreal Light, Heat & Power Co., with a view to bringing about closer relations between the two companies. The scheme submitted did not, however, receive the support of the shareholders of either company to the extent anticipated, and has been abandoned; and your directors have been notified by the Montreal



Duncan McDonald, General Manager Montreal Street Ry. and President Canadian Street Ry. Association.

Light, Heat & Power Co. of its withdrawal from any further negotiations in this connection.

The property has been maintained in a high state of efficiency, and a considerable sum has been spent in the upkeep of the tracks and rolling stock; the power plants and buildings are in excellent condition, it being the policy of your directors to spare no efforts or expense in this direction; yet notwithstanding this the surplus earnings of the company are the largest in its history. There has also in addition been carried over to the credit of the snow account a substantial balance towards this year's expenses. Notwithstanding the above the operating expenses percentage of earnings have decreased.

The company has continued its liberal policy towards its employees in respect to their wages, having increased them during the year, and to the Men's Benefit Association, which is now in a flourishing condition.

The large expansion of the company's business necessitated the erection of new shops for the construction and repair of cars, etc., and work in connection there-

with has been commenced. These shops are to be completed during the coming year, and will be most complete and up to date in every respect.

The Company has paid to the city of Montreal taxes and percentages on earnings amounting to \$387,264.25, on account of snow removal \$50,919.30, a total of \$438,183.55, being an increase over the previous year of \$51,998.39.

The Company has recently received a proposition from the Montreal Light, Heat & Power Co., offering to make a contract to furnish additional power to this company, but owing to the annual meeting of shareholders being so near at hand, your directors decided to leave the matter to the incoming board to deal with.

The Montreal Park and Island Ry.'s gross earnings show a gross increase of \$57,270.80, the operating expenses an increase of \$28,450.32, the net results being \$85,878.04, against \$57,057.56 for the previous year.

The Montreal Terminal Ry.'s gross earnings increased \$23,697.66, the operating expenses increased \$5,933.09, and the net surplus for the year was \$23,159.71, against \$5,477.08 for the previous year.

STATISTICAL STATEMENT.

	1910.	1909.
Expenses % of earnings	56.41	58.20
Passengers carried	1,072,241,406	95,376,373
Car earnings per passenger	3.95c.	3.96c.
Transfers	36,437,123	32,285,208
Total passengers carried	1,143,678,529	127,661,581
Car earnings per pass. total carried	2.95c.	2.96c.

GENERAL BALANCE SHEET.	
ASSETS.	
1910.	
Cost of road and equipment:	
Construction, etc.	\$ 5,004,238.74
Equipment, etc.	5,334,452.02
Real estate and buildings	2,198,732.84
Stock and bonds of other companies	3,672,473.73
	\$16,209,897.33

CURRENT ASSETS:	
Montreal Park & Island Ry. advances	654,109.00
Montreal Terminal Ry. advances	
Accounts receivable	115,673.47
Stores	336,408.16
Cash	930,084.19
	2,036,274.82
Fire insurance fund investment	395,597.50
	\$18,641,769.65

LIABILITIES:	
Capital stock	\$10,000,000.00
Bonds 4½% payable Aug., 1922	681,333.33
Bonds 4½% payable Nov., 1922	1,500,000.00
Bonds 4½% payable May, 1922	2,238,666.67
Mortgages	1,863.00
	\$14,421,863.00

CURRENT LIABILITIES:	
Accounts and wages payable	207,732.05
Accrued interest	75,530.00
Accrued tax on earnings	290,387.41
Employees' securities	18,699.93
Unclaimed dividends	1,956.57
Unredeemed tickets	69,105.92
Dividend payable Nov. 2	250,000.00
Suspense account	298,244.61
Montreal Terminal Ry.	19,537.99
	1,231,194.48
Fire insurance fund	521,560.24
Contingent account	83,540.75
Surplus	2,383,611.18
	2,988,712.17
	\$18,641,769.65

COMPARATIVE STATEMENT OF OPERATIONS.		
	1910.	1909.
Gross earnings	\$4,352,551.18	\$3,874,838.51
Operating expenses	2,455,301.06	2,255,019.20
Net earnings from operation	1,897,250.12	1,619,819.31
Interest from M.P. & I. Ry. Co.	85,878.04	55,606.67
Total income	1,983,128.16	1,675,425.98

FIXED CHARGES:		
City percentage on earnings	278,084.93	260,203.42
Interest	175,421.07	179,724.70

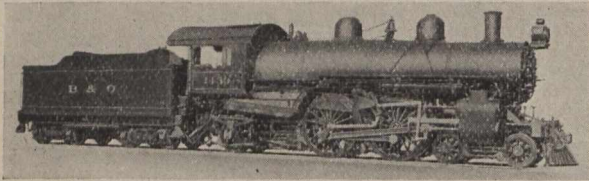
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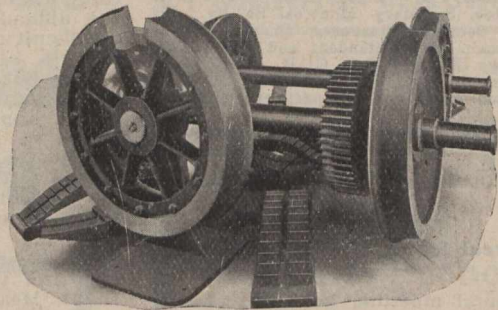
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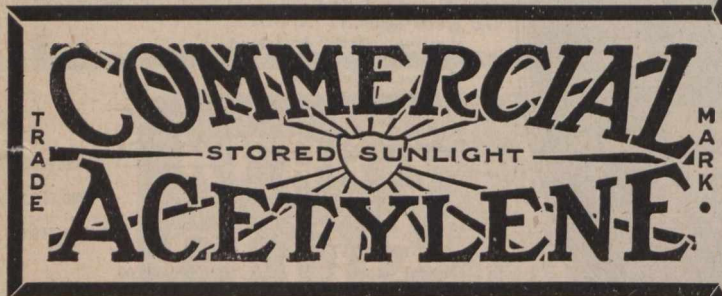
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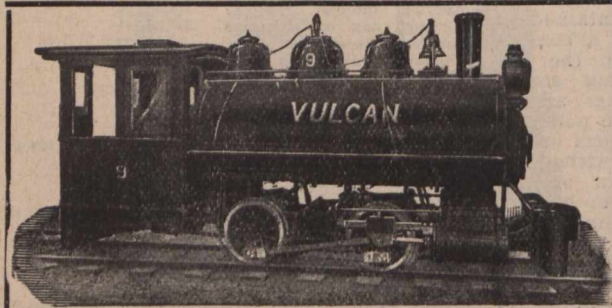
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STANDARD STEEL PLATFORMS

Used by all Canadian Railways

Rental leased lines	6,472.05	5,821.35
Taxes	48,000.00	*
Total	507,978.05	445,749.47
Net income	1,475,150.11	1,229,676.51
Dividend 10%	1,000,000.00	976,332.08
Surplus	475,150.11	253,344.43
From which has been appropriated:		
Contingent account	250,000.00	175,000.00
Fire insurance fund	25,000.00	25,000.00
Transferred to surplus account	\$ 200,150.11	\$ 53,344.43
*Taxes 1909 in operating expenses.		

Toronto Railway By-Laws.

The Toronto Ry. Co. has passed two bylaws relating to traffic. One prohibits smoking and spitting on any part of closed and open motor and trailer cars.

The other has the following provisions: All passengers shall enter closed motor and trailer cars by the rear door and shall leave by the front door. No person riding on any closed motor or trailer car shall stand or remain on the platform or step in such a position or for such time as to obstruct free entrance or exit of any passenger. No person shall ride on the step, bumper, draw bar, railing, cross chain, nor on any fixture on the outside of dash of any motor or trailer car.

All persons entering the body of the car after the seating space is occupied shall immediately pass up to the front end, if there be any available standing room there, and shall not occupy any standing space at the rear end while there is room forward in the car, nor under any circumstances in such a manner as to block the free entrance of passengers. Whenever the number of persons on the platform of any motor car or trailer shall be such as to block the entrance, or whenever it shall appear to the conductor that the entrance is not unobstructed, any person riding on the platform shall on being requested to do so by the conductor or motorman, enter the body of the car, or, if inside, shall move up to the front end. Any person riding on any platform of, or inside any car who shall refuse or fail to forthwith comply with the request of the conductor or motorman to enter the body of the car or pass up to the front end, shall on request of the conductor or motorman of the car forthwith leave the car and upon failure or refusal, the conductor or

motorman shall eject said person from the car, using for that purpose no unnecessary force.

No passengers shall ride on any platform of any closed motor car, or in the vestibule occupied by the motorman, nor shall any passenger remain on front platform of a closed motor car or in the vestibule occupied by the motorman or on the steps of the car for a longer time than is necessary to enable such passenger to alight. Motormen and conductors shall require passengers to conform to this bylaw, and shall see that the free entrance or exit of passengers is not prevented, hindered, or delayed by any persons standing on any of the platforms or steps or in the aisle at rear of car directly in the way of entrance door and for this purpose every conductor or motorman may and whenever necessary shall require any passenger to occupy such place or places on or in the cars as will prevent any obstruction of the entrance to or exit from the same.

Every person committing any violation of this bylaw shall forfeit a penalty not exceeding \$20 in addition to all other penalties by law provided.

Application has been made to the Ontario Railway and Municipal Board to approve the bylaws.

Toronto Railway Cars.

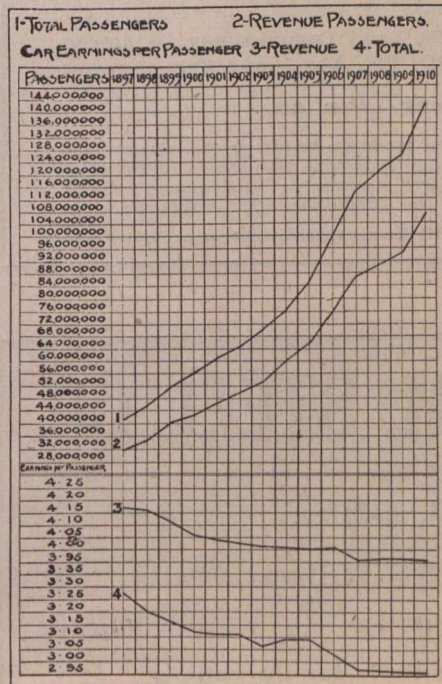
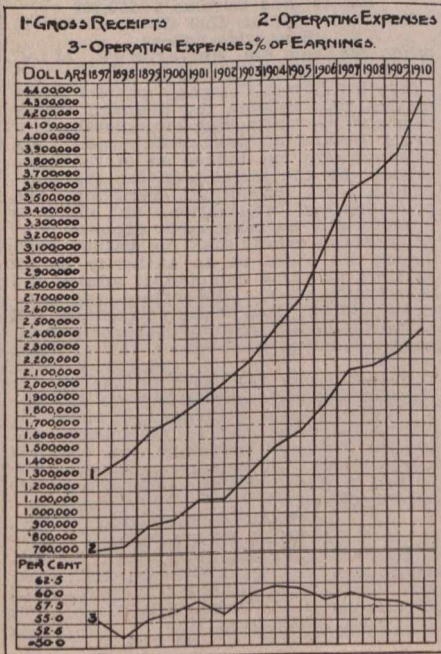
The Toronto Railway has put into service recently a number of its latest type of standard convertible cars, which are the invention of its Master Car Builder, M. Powers. They are 30 ft. long over body and 44 3/4 ft. long over all. The bottom framework is of semi-steel construction. The side sill-plates are placed on the extreme outside of body, reinforced by an angle on the inside allowing the wheels to curve under it. This angle carries all the cross floor supports which are reinforced by truss-rod in order to take care of the floor load. The posts on the inner side are tapered. The heavy steel construction usually used in supporting large platforms, in this case, is dispensed with. The only steel used is the two outside platform supports made of light steel on the cantilever principle, reinforced on the bottom side by a light angle. The platform centres are supported by adjustable trusses having their bearing on

the bottom of the cantilever under the car-body sill. In this position the weight is taken care of by the ordinary platform suspension bolts.

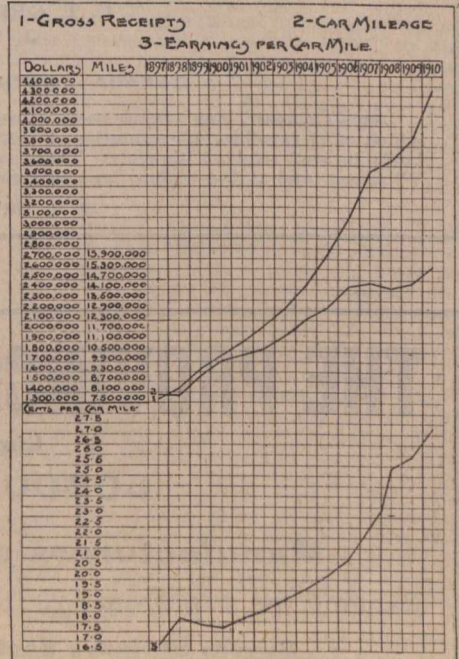
The vestibule is surrounded by the usual angle bumper, placed on the centre of which, and curved to suit, is a piece of the same material bolted securely about 2 1/2 ft. long to protect a higher car should they collide. Both vestibules are of the same size. The front is fitted with a wide sliding door, operated by the motorman, locking each time it closes. Two switch-irons are inserted in the floor over the tracks, alongside of which is placed a metallic frame containing plate glass. This frame is so constructed as to open in order to be cleaned. The object of this device is to enable the motorman to see the switch, and at the same time to prevent the cold from entering the car. This system assures the motorman of his switch-iron every time, and saves the company the cost of replacing lost ones. There is a rail behind the motorman, which performs the double purpose in separating the motorman from the passengers, and providing a location for the sand-box, the lid of which, when open, conforms to a comfortable seat for the motorman. The placing of the sand box in such a position is certain to prevent dampness, and being in full view of the operator he may see the condition of the sand. Over this rail a blind is suspended from the roof, which can be drawn down to prevent the light of the car from interfering with the motorman's view. The vestibule is also provided with an outside mirror, giving the motorman a clear view of the whole car side. There is only one hand-rail placed on the front of the vestibule, for the use of persons alighting, making it almost impossible to get off backwards. The steps are very wide and spacious, having a ribbed lead covering to prevent slipping.

The back vestibule is large, the inside being sheeted upright, having a base well scalloped up from the floor to prevent dampness at the post bottoms. The entrance to the car is large on the inside of vestibule, making it very convenient for the pay-as-you-enter system, as all passengers have to pass over the entire platform in order to enter. The practice in Toronto is to leave by the front door. In order to make this more convenient and comfortable, the General Manager, R. J. Fleming, it is said,

Montreal Street Railway.



Montreal Street Railway.



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T. O. S. C. IRVING,
Gen. Man. Western Canada, Toronto.

conceived the idea of dispensing with the front door, or bulkhead, leaving almost all the end open. This gives excellent operating results as well as extra capacity both winter and summer. Both seasons are mentioned as the foregoing description is of a convertible car in its closed form.

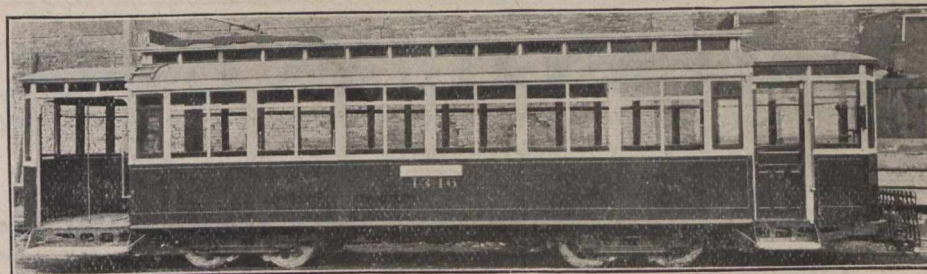
The car interior is finished in quarter-cut white oak relieved by cherry. The trimmings are of bronze. The upholstery is of the finest red plush. The exterior is of cherry sheeting 1½ ins. wide, which can easily be replaced in the event of damage from collisions. The cross seats used in summer are placed longitudinally for winter use, and covered by a cushion, a leg being required only at the extreme end of each length of cross seat. They are supported in the centre by truss-rods underneath the seat. There are very few legs required, thus leaving the space under the seat open, and giving the interior of the car a very sanitary appearance. There is a space left at each door in order to give a clear passage in and out. The seatbacks are very light to handle, each side having two sections. They rest on the seats, being securely held by means of clips which they engage. The top of this seat is secured by gate hooks, making the removal of the backs an easy task.

The cars are brilliantly lighted, the bulbs being situated on each side of roof, directly above the seats, giving a very fine illuminating effect, and providing the passengers with plenty of light to read by in any part of car. By the aid of a special switch, controlling an extra number of bulbs, additional light can be provided during the rush hours, thus giving the conductor an excellent opportunity to collect fares and examine transfers.

For summer use, the side sections of the car are removed, and cross-seats placed in position and supported by lugs on the panels and car wall, and held in place by buttons. Wooden backs are dropped into slotted castings, making a cool and comfortable seat. The bottom step is attached by means of suitable suspending castings and connected to both platform steps. The second step is contained in the wall of the car, making a support for the sections in winter, and also a guard to prevent the car side from damage by wagons. All the hand-rails remain in position; the removable parts are all secured by bolts which remain in place. The seating capacity of this car in closed form is 38; in open form 70.

Following are some particulars of the equipment:—Double trucks, all steel frame swinging bolster; axles, 4½ inch open hearth cold rolled steel; wheels, 33 ins. diameter. 2¼ ins. tread, chilled iron; brakes, storage air, with power brakes as an auxiliary; automatic fenders.

Following are some particulars of the electrical equipment:—Four motors, rated at 40 h.p. each; two on each truck, single reduction gear drive, open hearth,



Toronto Ry. Standard Convertible Car, closed for Winter.

cut steel, gears and pinions; new type pressed steel gear housings, replacing old type heavy malleable iron cases; Toronto standard rheostat, removable grid type; K. 6 series parallel controller and M.K. type automatic circuit breaker; standard car lightning arresters; Toronto Ry. roller bearing trolley stands, steel trolley pole.

A special feature of these new cars is the buzzer system for passengers signalling motorman. The electric current operating these buzzers is supplied from the trolley wire and not from batteries, as heretofore. This system of operating buzzers is one of recent developments in the electric field. The principal reason why electric bells or buzzers were not used more extensively by electric railways was on account of the batteries being so unreliable, the energy contained in cells giving out unexpectedly and the signal device refusing to respond to contact at the push buttons. Hence the reliable pull bell has always been adhered to in car construction, and the pull bell will continue to be used for conductor's signals and for emergency use, in conjunction with any other system which may be used.

Projects, Construction, Betterments, Etc.

Alberta Electric Ry.—Application is being made to the Dominion Parliament to incorporate a company with this title to build the following lines:—From Calgary to Banff, Alta.; from Calgary south to Bow River through or near Thigh Hills to Medicine Hat, crossing the Bow River between Rolling Hills and Grand Forks; from the last mentioned line near Long Coulee to Lethbridge; from near Expense Coulee, on the Calgary-Medicine Hat line, to Taber and Lethbridge, and back to the Calgary-Medicine Hat line, at Long Coulee; from the Calgary-Medicine Hat line, near Thigh Hills to Macleod; from Calgary to Carbon, and on to the point of junction of the Knee Hill Creek and Red Deer River; from Lethbridge to the International boundary at the Milk River; from Medicine Hat to Wood Mountain; also power to build lines in Calgary, Medicine Hat, Lethbridge, Banff, Taber, Macleod and Carbon. The company also asks power to acquire and

operate coal mines, and to dispose of any surplus electric power or energy over and above that required for the operation of its railways, for power and lighting purposes in towns along its lines. Stewart and Lathwell, solicitors, Calgary, Alta., are solicitors for the applicants.

Brandon, Man.—The city council has under consideration a plan for granting a franchise for an electric railway in the city to a Vancouver syndicate. A petition, signed by over 2,000 citizens, was sent to the council, Nov. 15, protesting against the granting of the franchise. (Jan., pg. 57.)

British Columbia Electric Ry.—The contract for the erection of a passenger station for the company's interurban traffic at New Westminster was, Nov. 15, reported let to Martin and Broley. The building is estimated to cost about \$80,000.

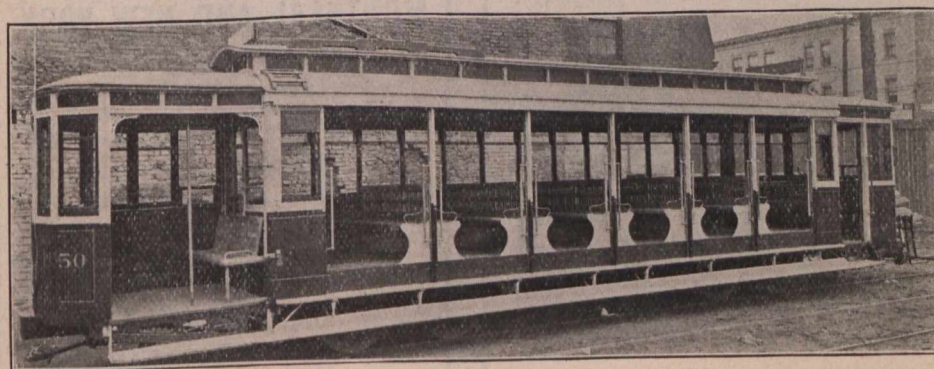
The Vancouver, Fraser Valley and Southern Ry., a subsidiary line of the B.C.E. Ry., is under construction from the Hastings townsite, Vancouver, via Burnaby to Sapperton, where it will connect with the present interurban line between Vancouver and New Westminster. Grading is expected to be completed Dec. 31. M. P. Cotton & Co., Vancouver, the contractors, are represented by J. A. Mallory, as engineer.

The company has notified the Point Grey town council of its readiness to start tracklaying as soon as the grading of the streets has been completed by the council. An application has been made to the courts on behalf of residents in Point Grey, to quash the by-law under which the work is proposed to be done. (Nov., pg. 963.)

Buffalo, Niagara Falls and Toronto Ry.—The Dominion Parliament is being asked to extend the time for the construction of the lines authorized to be built by the act passed in 1907; to authorize the branch line mentioned in sec. 8, to be built from Niagara-on-the-Lake and St. Davids to St. Catharines, and to authorize the use of any motive power except steam. The notice is signed by H. H. Collier, St. Catharines, Ont., solicitor for the company. (July, 1909, pg. 522.)

Edmonton Radial Ry.—The Board of Railway Commissioners has authorized the Edmonton city council to cross at rail level with its street railway the tracks of the Edmonton, Yukon and Pacific Ry. (Canadian Northern Ry.) at several points within the city. (Nov., pg. 963.)

Electric Railways Construction Co.—A proposition has been laid before the Stanley Park board of Vancouver, B.C., by the E. Ry. Construction Co. for building a double track, foreshore, scenic railway encircling the park. The company asks for a lease of the necessary right of way between high and low water for 21 years, the city to have the right of way over the line at cost of construction, plus a bonus of varying percentages at the end of six, 11 or 16 years, or at the end of the franchise period. If the city does not then take the line over the franchise to be renew-



Toronto Ry. Standard Convertible Car, open for Summer.

THE CANADIAN BRIDGE CO., LIMITED

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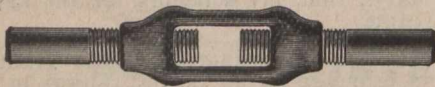
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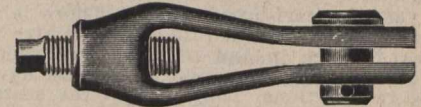
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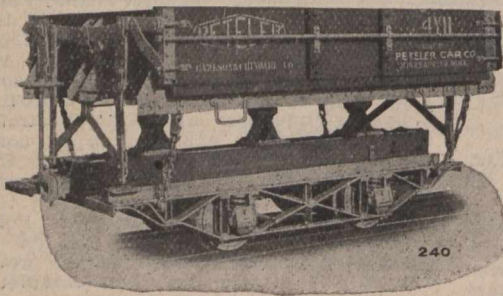
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ed for a further period of 21 years on an equal division of the profits. During the first 21 years the net profits to be divided, 25% to the board and 75% to the company. The Park Board does not favor the proposition, and several members have expressed themselves against granting a franchise to any company.

Grand Valley Ry.—Application has been made to the Brantford, Ont., city council for permission to build a line along the river bank from Church St., under Lorne bridge, along Wharf St. to Market St. (Oct., pg. 875.)

Monarch Radial Ry.—The agreement which is under consideration by the Barrie, Ont., town council, provides for an exclusive franchise; that the service on the line from Toronto to Barrie and from Barrie to Orillia shall be such as the Ontario Railway and Municipal Board shall direct; that the service may be extended on the streets in the town by agreement, and that the tracks may be used by other companies for running through Barrie. The town council offers a 25 year franchise without special privileges. At a recent committee meeting the company's representatives agreed to submit modified proposals. The Barrie board of trade has considered the whole matter and has passed a resolution advising the council not to approve of any agreement containing a provision for an exclusive franchise. (Nov., pg. 965.)

Montreal Street Ry.—The Metropolitan Parks Commission has been giving some consideration to the question of improved means of communications in the city, which it is authorized to do by its act. One of the plans suggested with a view of relieving the congestion of traffic is to construct a triple-tunnel from Sherbrooke and Guy St. to Belvedere and Cote des Neiges Road, the centre section of which would be utilized for laying a double track electric railway. The Commission expects to be able to report on the question at its December meeting. D. McDonald, General Manager M.S.R., was present at the meeting, and explained that the proposed tunnel would be 5,500 ft. long. The company had also under consideration plans for a subway along St. James St., from near Gosford St. west to near Bonaventure St. (Oct., pg. 875.)

Morrisburg and Ottawa Electric Ry.—The provisional officers and directors are: Chairman, J. McFarlane, Ottawa; Vice Chairman, W. H. Fetterly, Morrisburg, Ont.; other directors: E. J. Laverdure, R. A. Bishop, H. McDonald, Ottawa; J. W. Bogart, J. H. Longbridge, Morewood, Ont.; W. C. Strader, Williamsburg, Ont.; C. Munro, Chesterville, Ont. The company's stock is being put on the market, and it is reported that it is being well taken up by residents in the townships through which the line will pass. The chairman is quoted as having stated in an interview, Nov. 11, that while it was proposed not to sell more than 10 shares to any single subscriber, already half of the amount required to start work on a permanent basis had been subscribed, that the length of the proposed line was 43 miles, that the cost of construction was estimated at \$750,000, and that the farmers were offering land for right of way at a very low price and to do a considerable amount of team work free. (April, pg. 311.)

Nanaimo, B.C.—The agreement granting a franchise for building an electric railway in the city is to be submitted to the ratepayers for approval at an early date. (Oct., pg. 875.)

Ontario West Shore Electric Ry.—The draft of an agreement for a franchise in Goderich, Ont., was approved by the town council, Nov. 5, and has been submitted to the company for ap-

proval. There are a few points upon which the company's engineer and secretary expressed dissent at the meeting, but it is thought they will be arranged by the company. It is hoped to be able to have a by-law approving the agreement submitted to a vote at an early date.

The section of the line under construction extends from the Goderich town boundary to Prince Albert. Track has been laid to Prince Albert and ballasting has been done as far as Sheppardton. Beyond Prince Albert grading work is in progress but no more track laying will be done until the bridge has been built across the river. This will be of steel on stone piers with trestle approaches. Reports from Kincardine state that right of way is being secured through Huron tp. and that grading will shortly be started. There are 26 cars of rails lying at Kincardine station for the line. The project for the extension of the line from Kincardine to Tiverton, Port Elgin and Owen Sound, it is said, will shortly be taken up by J. W. Moyes. (Nov. pg. 965.)

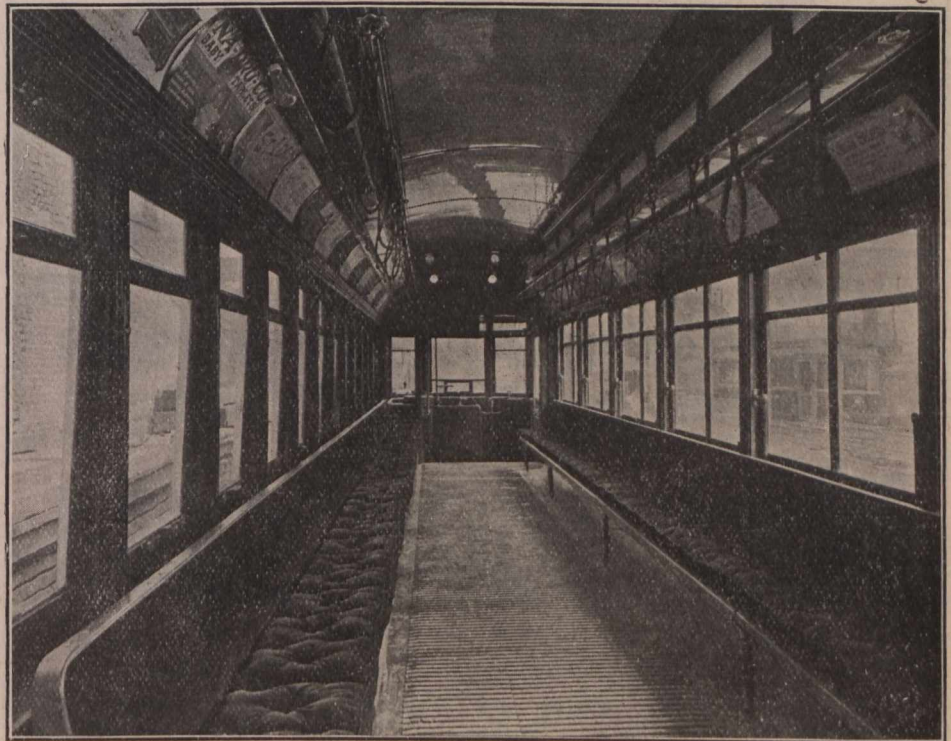
Ottawa and Kingston Electric Ry.—A letter signed by G. L. Dickinson, Manotick, Ont., has been received by the Kingston, Ont., city council inviting consideration to a project for building an electric railway from Kingston to Ottawa. It is proposed to apply for a provincial charter with the above title, the route suggested being from Ottawa via Perth to Lanark, thence along the west bank of the Rideau river to Kingston. A meeting in support of the proposal was held at Ottawa, Nov. 2, at which the following were appointed provisional directors for the purpose of securing a charter, etc. R. McElroy, M.L.A., Carp, Ont.; G. L. Dickinson, D. Clark, Manotick, Ont.; T. Kidd, Burritts Rapids, Ont.; F. A. Heney, Westboro, Ont.; G. Boyce, Merival, Ont.; J. C. Graham, A. E. Baker, Merrickville, Ont.; J. E. Caldwell, City View, Ont.; Rev. D. A. Clayton, Kars, Ont.; E. P. McGrath, Ottawa; J. S. McCann, Kingston.

Ottawa Electric Ry.—A press report states that the company has agreed to

build extensions through Ottawa South as soon as a high level bridge is constructed over the Rideau Canal at Bank St. (Nov., pg. 965.)

Pigeon Lake and Ferintosh Ry.—R. M. Angus, a member of the Wetaskiwin, Alta., town council is engaged in the formation of a company with this title to build an electric railway from Wetaskiwin, westerly to Pigeon Lake, and easterly to Ferintosh, Alta. The suggestion is that as soon as the plans are completed the company will endeavor to secure assistance from the municipalities through which the line will run. A plan showing the proposed route of the line has been prepared. The total length of the proposed line from Pigeon Lake to Ferintosh is 60 miles. Pigeon Lake is about 35 miles due west of Wetaskiwin; while the line towards Ferintosh will run south easterly for about 12 miles to Lewisville, passing through Swenson Corners and Angus Ridge, and then for about 13 miles due east, passing through Beaver Lake and Highland Park to Ferintosh.

Quebec Ry., Light and Power Co.—In a recent interview, C. E. A. Carr, General Manager, is quoted as having said that just as soon as an opportune time arrived and the company could do away with locomotives, the present system of using steam and electric motive power would be abandoned, and electric power only used. Plans were being prepared for the complete electrification of the Montmorency division, on which steam locomotives were used to haul part of the traffic. "We have now the control of the Quebec County Ry." added Mr. Carr, "which runs to St. Patrick's Seminary, or close to the Quebec Bridge, and this line is paying well. We have applications from three suburban municipalities to have the company's lines extend into these places." There have been deposited in the registry office for the county by the Quebec County Ry. a plan, profile and book of reference of the proposed line from Victoria Park Bridge, to the Charlesbourg Road. The plans have also been submitted to the Quebec Minister of Public Works for approval. (Nov., pg. 965.)



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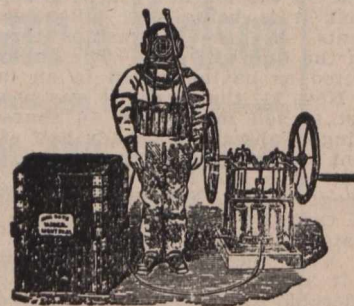
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Hamilton Street Ry.—A committee has been appointed by the Hamilton, Ont., city council to discuss with the H.S.R. management a plan for the carrying out of improvements next year. The city is desirous of laying permanent pavement on sections of King and Main Streets, and wants to arrange with the company to lay new tracks thereon at the same time. (Nov., pg. 963.)

Huron and Ontario Ry.—Application is being made to the Dominion Parliament to extend the time within which the company may build its projected railway from Georgian Bay, via Port Perry to Lake Ontario. (Oct., 1907, pg. 761.)

Lacombe and Blindman Valley Electric Ry.—The Alberta Legislature is being asked to extend the time within which this projected line may be built. (Aug., 1909, pg. 609.)

Lacombe, Bullockville and Alix Electric Ry.—An extension of time for the construction of this projected electric railway is being asked from the Alberta Legislature. (Aug., 1909, pg. 609.)

Levis County Ry.—It was reported at the annual meeting recently held that the entire track had been rebalasted, and was now in excellent condition. (April, 1909, pg. 281.)

The London and North Western Ry. Co. was reported, Nov. 16, to be preparing the necessary documents asking for the submission of a bylaw to the ratepayers of a number of municipalities at the forthcoming elections. The places interested are London, Sarnia, and the townships of Plympton, Lobo, Lucan, Arkona, Parkhill and Strathroy. These bylaws are to provide for a guarantee of bonds, \$150,000 being asked from London, \$100,000 from Sarnia, and about \$50,000 from each of the townships. A press report states that the charter is controlled in the interests of the C.P.R.

The company is making application to the Dominion Parliament to extend the time for building their projected railway from London to Sarnia. (Nov., pg. 963.)

London Street Ry.—It is said that no further work will be done in the way of improving the electric railway tracks on Richmond and Dundas streets, London, Ont., this season. C. B. King, Manager, stated Nov. 3, that the tracks had been undermined in several places, and it would be necessary for the filling to become properly settled before any further work could be done. The directors are reported to have decided that "it would be impossible to accept the offer of hydro-electric power at \$31 per horse power on the peak load basis."

Montreal Park and Island Ry.—The Dominion Parliament is being asked to extend the time for the construction and completion of the authorized lines; to change the date of the annual meeting and for other powers. (Dec., 1908, pg. 891.)

Niagara, St. Catharines and Toronto Ry.—Press reports state that the company is planning to extend its lines from Fonthill to Fernwick, and to construct a second track between Port Dalhousie and Niagara Falls, Ont. (Nov., pg. 965.)

Peoples Ry.—The work of grading on the line between Guelph and New Hamburg, Ont., it is announced, will be commenced at once, the right of way having been acquired. At the municipal elections in Jan. bylaws will be submitted in six townships subscribing for stock in the company, as follows:—Proton, \$36,000; Luther, \$30,000; Garafraxa, \$25,000; Arthur, \$20,000; Fergus, \$20,000; Elora, \$15,000.

W. A. Bugg and F. J. Todd, of Berlin, have completed a trip northerly to Col-

lingwood, Thornbury and Meaford, looking into the prospects of these places as possible points to which the Peoples ry. may be extended. (Nov., pg. 965.)

The Peterborough Radial Ry., is now part of the system operated by the Electric Power Co., Ltd. The officers of the P.R.R. Co., now are: President, G. Kerry; Secretary, E. A. MacNutt; Assistant Secretary, A. B. Colville; General Manager, J. H. Larmonth; Local manager, W. H. Munroe. We are advised that the company expects to make several extensions next year, including about three miles of track. A new car barn will probably be built and several cars are likely to be added to the equipment.

Rural Ry. of Manitoba.—Jos. Bernier has withdrawn his application to the St. vital, Man., township council. The council adjourned the question at a previous meeting until Nov. 5, in order to compare the terms of the franchise asked for with an offer from the Winnipeg Electric Ry., and as a result Mr. Bernier withdraws. (Nov., pg. 965.)

St. Thomas Street Ry.—The rebonding of the line on Talbot St., from the car barn to Manitoba St. has been completed, and the defective bonds on the rest of the line replaced. (June, pg. 497.)

Saskatoon, Sask.—W. S. Weeks, Edmonton, Alta., is negotiating with the Saskatoon city council for a franchise for an electric railway in the city. (Nov., pg. 965.)

Toronto, Niagara and Western Ry.—In connection with recent press reports that the building of this line will soon be started, it may be recalled that when the question of the approval of the route plans was before the Board of Railway Commissioners the company's representative stated that there was no intention to go on with construction for some time. One of the questions in connection with the route plans is the entrance into Hamilton. The Board of Railway Commissioners' Chief Engineer recently made an inspection of the various routes suggested, and has the whole matter under consideration. Until he has reported nothing can be done in the way of approving plans. (Nov., pg. 965.)

Toronto and York Radial Ry.—The question of providing a better service on the Metropolitan Division came before the Ontario Railway and Municipal Board recently. It was suggested that the only solution of the difficulty was to lay a second track, but the various municipalities object to this, and propose that the company should buy a private right of way. Further consideration of the matter was adjourned until Feb. 1, 1911.

The Toronto city council, Nov. 21, passed a resolution authorizing the taking of the necessary steps for acquiring the section of the Mimico Division from Sunnyside to the Humber River, the franchise for which is about to expire. The townships of York and Etobicoke are interested in the line between the Humber and Long Branch, the franchise for which is also about to expire, and have been considering what steps to take in regard thereto. (Nov., pg. 965.)

Western Central Ry.—Application is being made to the Dominion Parliament by the company incorporated by the Ontario Legislature under this title for an act declaring the company's undertaking to be one for the general advantage of Canada, and extending the time for the building of the authorized lines. It is also desired to have power to guarantee the securities of other companies, to lease and operate municipally owned lines, and to extend its powers to lines acquired by it. Mowat, Langton and MacLennan, Toronto, are solicitors for the company. (April, 1908, pg. 232.)

Electric Ry., Finance, Meet. ngs, Etc.

British Columbia Electric Ry.—Gross earnings for Sept., \$311,803; working expenses, \$174,237; net operating earnings \$137,566; renewal funds, \$22,417; net earnings \$115,149; approximate income from investments, \$20,000; net income \$135,149, against \$240,185 gross earnings; \$130,426 working expenses; \$109,759 net operating earnings; \$16,394 renewal funds; \$93,365 net earnings, \$16,500 approximate income from investments; \$109,865 net income for Sept. 1909. Aggregate gross earnings for three months ended Sept. 30, \$897,458; net earnings \$377,856, against \$702,866 gross and \$321,563 net for same period 1909.

Calgary Street Ry.—Total earnings for Sept., \$19,293.76; operating expenses, \$10,104.37; net revenue, \$9,189.39; passengers carried, 464,543; car mileage, 60,666; hours operated, 7,219; car earnings, \$31.32 per mile, and \$2.63 an hour per car.

Cape Breton Electric Co.—Dividends of 1½% on the common stock and 3% on the preferred stock have been declared. The company does the lighting and operates the street railway in Sydney, N.S., also the ferry service between Sydney and North Sydney, and owns half of the Sydney and Glace Bay Ry., between Sydney and Glace Bay.

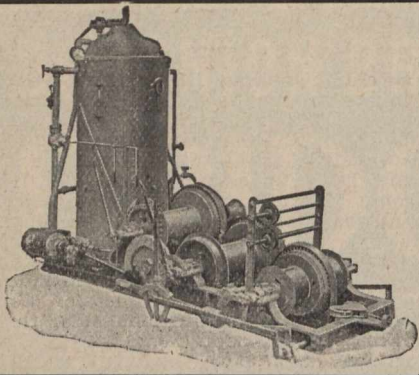
Halifax Electric Tramway.—Railway receipts for Oct., \$19,455.30, and for three weeks ended Nov. 21, \$10,926.19, against \$17,803.09 and \$9,934.75 for same periods 1909.

Levis County Ry.—The retiring directors were re-elected at the annual meeting recently. S. H. Ewing was re-elected President, and Hon. R. Turner, Vice President. It is said that the gross earnings for the year ended June 30 showed an increase of 7%, and the net earnings a larger percentage of increase over the figures of 1908-09.

London St. Ry.—Gross earnings for Oct., \$21,021.06; expenses, \$14,866.12; net earnings, \$6,154.94; deductions, \$2,441.75; net income, \$3,713.19, against \$19,339.01 gross earnings; \$13,811.54 expenses; \$5,527.47 net earnings; \$2,453.63 deductions; \$3,063.84 net income for Oct., 1909. Aggregate for 10 months ended Oct. 31:—Gross earnings, \$211,745; expenses, \$149,723.10; net earnings, \$62,022.69; deductions, \$23,945.20; net income, \$38,077.49, against \$202,721.11 gross earnings; \$140,149.87 expenses; \$62,571.24 net earnings; \$24,082.76 deductions; \$38,488.48 net income for same period 1909.

Montreal St. Ry.—Passenger earnings for Oct., \$372,487.35; miscellaneous earnings, \$14,200.31; total earnings, \$386,687.66; operating expenses, \$205,750.06; net earnings, \$180,937.60; city percentage on earnings, \$12,392.74; interest on bonds and loans, \$15,052.37; rent leased lines, \$552.90; taxes, \$4,000; total charges, \$31,998.01; surplus, \$148,939.59; expenses per cent. of earnings, 53.21, against \$336,765.13 passenger earnings; \$17,241.82 miscellaneous earnings; \$354,006.95 total earnings; \$174,734.97 operating expenses, \$179,271.98 net earnings; \$12,251.20 city percentage on earnings; \$14,329.61 interest on bonds and loans; \$498.67 rent leased lines; \$4,000 taxes; \$31,079.48 total charges; \$148,192.50 surplus; 49.36 expenses per cent. of earnings for Oct., 1909.

Port Arthur & Fort William Street Ry.—Total earnings for Sept., \$14,091.76; operating expenses, \$7,592.60; net earnings, \$6,499.16. General statistics:—Car mileage, 55,890; gross earnings per mile, 25.213 cents; operating expenses per car mile, 13.585 cents; net earnings per car mile, 11.628 cents.



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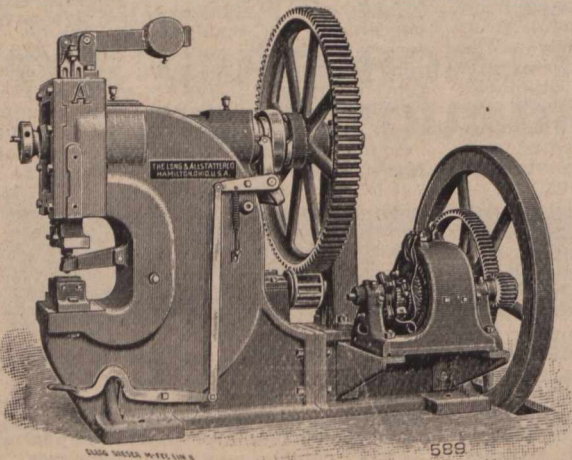
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Quebec Ry., Light, Heat and Power Co.—Steps are being taken to have the company's stock listed on the London Stock Exchange, and on the Geneva Bourse.

St. Thomas Street Ry.—Car receipts for Sept., \$369.91, against \$352.63 for Sept., 1909; pay roll, \$1,457.10, against \$1,263.45 in Sept., 1909. The committee in charge of operations has overdrawn \$829.61, and the city council voted \$1,000 to enable it to meet current expenditure.

Toronto Ry.—Gross earnings for Oct., \$379,720.88; expenses, \$188,567.67; net earnings, \$191,153.21, against \$332,976.40 gross earnings; \$168,657.64 expenses; \$164,318.76 net earnings for Oct., 1909. Aggregate gross earnings for 10 months ended Oct. 31, \$3,575,658.89; expenses, \$1,841,334.61; net earnings, \$1,734,324.28, against \$3,190,267.70 aggregate gross earnings; \$1,618,379.06 expenses; \$1,571,888.64 net earnings for same period 1909.

Winnipeg Electric Ry.—Gross earnings for Sept., \$267,127; expenses \$131,969; net earnings \$135,158, against \$218,088 gross earnings; \$109,005 expenses; \$109,083 net earnings for Sept. 1909. Aggregate gross earnings for nine months ended Sept. 30, \$2,298,384; net earnings \$1,144,626, against \$1,840,897 gross and \$921,627 net for same period 1909.

Electric Railway Notes.

The British Columbia Electric Ry. has received four cars from the Preston Car and Coach Co., Preston, Ont.

The Quebec Public Utilities Commission has been provided with accommodation in the Court house at Quebec.

The Brantford St. Ry. (Grand Valley Ry.) put in operation a new time table for its main line service in Brantford, Ont., Nov. 4.

The British Columbia Electric Ry. has ordered one heavy double broom electric sweeper from the Ottawa Car Co., Ottawa.

The St. Thomas city council has granted an increase of pay to the older motor men and conductors from 18 to 19 cents an hour.

A press report states that J. P. Fitzpatrick, President, has sold his interest in the Nipissing Central Ry., and will shortly sever his relations with the line.

The Quebec Ry. Light and Power Co. has received six 18 ft. pay-as-you-enter cars, 30 ft. long over all, from the Ottawa Car Co., Ottawa.

The Toronto city council decided Oct. 24, by 12 votes to nine, against proceeding any further with the proposition to acquire the Toronto Ry.

The Hamilton St. Ry. has received four 31 ft. car bodies, 44 ft. long over all, mounted on 27 G1 trucks, from the Ottawa Car Co., Ottawa.

The Nelson St. Ry. has received two 30½ ft. semi-convertible car bodies, 41½ ft. long over all, mounted on 27 G1 trucks, from the Ottawa Car Co., Ottawa.

The Calgary St. Ry. has received one 33½ ft. semi-convertible pay-as-you-enter car body, 46½ ft. long over all, mounted on 27 G1 truck, from the Ottawa Car Co., Ottawa.

The Sherbrooke St. Ry. has ordered one heavy double broom electric sweeper, and two 18 ft. single truck pay-as-you-enter car bodies, 30 ft. over all, from the Ottawa Car Co., Ottawa.

Proceedings are to be taken against the London and Lake Erie Ry. and Transportation Co. under the Lord's Day Act, for operating a car service over its

line between London and Port Stanley, Ont.

The Board of Railway Commissioners has approved of standard passenger tariff at two cents a mile, and standard maximum freight rates to be applied where no separate tariff is given, for the Hamilton Radial Electric Ry.

The Hamilton Radial Ry. has ordered three suburban car bodies, 55 ft. long over all, mounted on Baldwin trucks, with steel wheels and equipped with Westinghouse 101B motors, from the Preston Car and Coach Co., Preston, Ont.

The Queen Victoria Niagara Falls Park Commission gave consideration, Nov. 25, to the fares charged on the electric lines of the International Ry. and the Niagara Falls Park and River Ry. Tourists are charged a higher rate than residents.

W. G. Ross was presented with a diamond stick pin by the officers of the Montreal Street Ry., on retiring from the position of Managing Director, Nov. 10. Accompanied by Mrs. Ross, he left Montreal, Nov. 11, to spend the winter in Great Britain.

The Dominion Power and Transmission Co. has granted increases of pay to the motormen and conductors employed on all its electric railway lines in and radiating from Hamilton, Ont. The new schedule goes into effect Dec. 1, and means an extra outlay of about \$13,000 a year.

A new schedule of pay has been approved for the employes of the Port Arthur and Fort William Street Ry., as follows:—First six months service, 21c. an hour; second six months service, 23c. an hour; second year, 25c. an hour; third year, 27c. an hour; fourth year, 29c. an hour; time and a quarter to be allowed as overtime on Sundays.

L. L. Pelletier, mayor of Fort William, Ont., has been nominated by the employes of the Winnipeg Electric Ry., and Capt. Wm. Robinson, Winnipeg, has been nominated by the company as members of the arbitration board to investigate the differences between the employes and the company. W. J. Christie has been appointed third arbitrator.

The Toronto Ry. Co. has decided to adopt the pay-as-you-enter car system. Application will be made to the Ontario Railway and Municipal Board for an order limiting the number of passengers who may stand on rear platforms. The General Manager stated recently that smoking on these platforms will be prohibited in the near future.

The Ontario Division Court has given judgment for \$1,000 in favor of J. McR. Selkirk and W. Simpson against the Windsor, Essex and Lake Shore Rapid Ry. The action was brought under the agreement under which they were to support the company in its application for a franchise and to abandon their efforts on behalf of the Essex and Kent Ry., a rival project.

A Montreal dispatch says:—"It is stated here that the financial plans of the syndicate which controls the Montreal St. Ry. stock are gradually maturing, and that in the course of the next few months a large block of stock will be retired and debentures sold against it in London. At present nearly \$9,000,000 is tied up in M.S.R. stock. It is believed that interests identified with Vickers Sons & Maxim, who took a large interest in the syndicate which purchased the control of the M.S.R., will be prominently identified with the debenture issue across the water."

C. B. Vorce, until recently with Sanderson and Porter, Consulting Engineers, New York, has been appointed Chief Engineer British Columbia Elec-

tric Ry., with full charge of construction work, excepting hydro-electric work, and including railway location, civil engineering, surveying, laying out of property and drafting room.

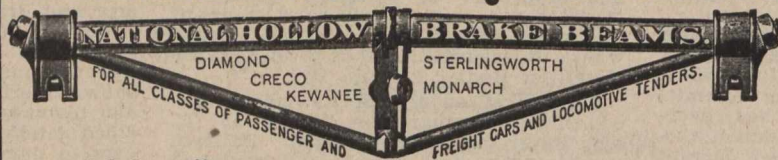
The Montreal St. Ry. has communicated with the Montreal board of control in connection with the removal of snow, offering, if the city will supply 500 teams and deliver the snow at specified landing places, to transport it in cars to outside dumps, for 40c. a cubic yard. The board of control estimate the amount to be moved at 1,000,000 cubic yards, thus costing \$400,000 for removal, half of which is paid by the city and half by the Montreal St. Ry.

The Hamilton city council fire and police committee on Nov. 7 discussed the question of the free use of the Hamilton St. Ry. cars by firemen, and the company's refusal to grant the privilege. It was stated that the company would be willing to carry the firemen to and from their homes three times a day for about \$4,000 a year. The company also stated that on the termination of its present contract with the Government, for carrying postmen on its cars for \$4,000 a year, it had decided not to renew, but to charge the Government on a mileage basis. The committee took no action in the matter.

The Quebec Public Utilities Commission, which has been investigating street car accidents in Montreal, has given its decision, the principal feature of which is as follows:—"That no further cars of the single truck pattern be placed in use upon any of the routes without the special permission of the commission; that the number of such cars be reduced each year by 50. Upon application and for reasons shown and satisfactory to the commission, the use of such cars on certain routes will be permitted, and sufficient cars may be retained for the purpose. That all cars 30 ft. or more in length and weighing 25,000 lbs. or over be equipped with air brakes in addition to hand brakes; that cars on routes with severe grades be equipped in addition with emergency brakes. The speed limit of eight miles per hour must be adhered to."

Duncan A. L. McDonald, who has been appointed General Manager Montreal St. Ry., and whose portrait appears on another page in this issue, was born at St. Thomas de Montmagny, Que., June 17, 1859, and removed to Montreal in 1875. He entered Montreal St. Ry. service in 1881, as a driver, in order to acquire a thorough knowledge of street railway work from its very commencement. He was soon changed to conductor, and, after about twelve months service in that capacity, was appointed roadmaster. In 1886 he severed his connection with the company, and engaged in other business. Anticipating the progress that the trolley system would make, he went to St. Paul and Minneapolis, Minn., in 1889, and secured a practical knowledge of the operation of electric tramways. He returned to Montreal in 1892, and re-entered Montreal St. Ry. service as inspector, and in 1894 was appointed Superintendent of Transportation, which position he held until 1898, when he resigned to become General Manager Parisian Tramway Co., with headquarters in Paris, France, in which position he organized the Parisian system to a high degree of efficiency. In 1903 he returned to Montreal, having been offered the position of Manager Montreal St. Ry., which position he held up to his present appointment. He is a director of the Montreal Park and Island Ry., President of the Pay-As-You-Enter Car Co., director of the Automobile Club of Canada, a member of the Civil Engineers' Society of France, and is interested in several other corporations.

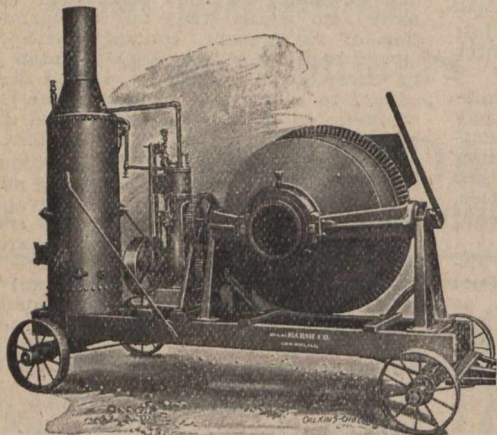
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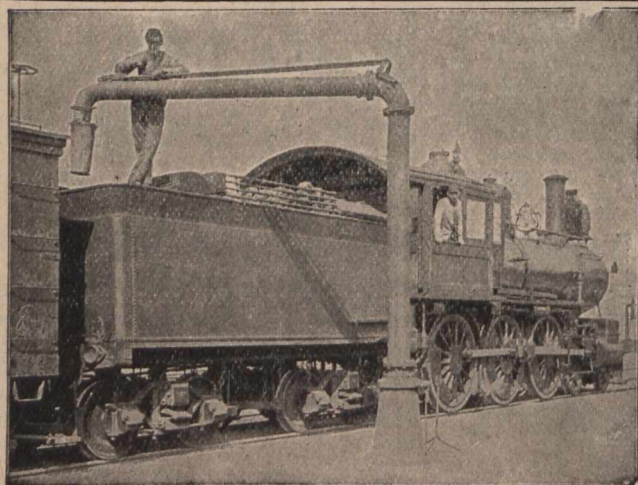
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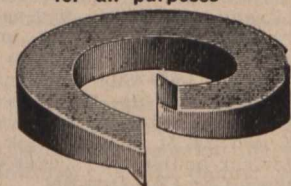
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CHAIRMAN, E. E. Horsey, Kingston, Ont.
SECRETARY, Jas. Morrison, Montreal.

International Water Lines Passenger
Association.

PRESIDENT, W. M. Lowrie, New York.
SECRETARY, M. R. Nelson, New York.

The Shipping Federation of Canada.

PRESIDENT, A. A. Allan, Montreal; MANAGER,
AND SECRETARY, T. Robb, 526 Board of Trade,
Montreal.

Ship Masters' Association of Canada.

GRAND MASTER, Capt. J. H. McMaugh, Toronto,
Ont.; GRAND SECRETARY-TREASURER, Capt. H.
O. Jackson, 376 Huron St., Toronto.

The Water Carriage of Goods Act.

A memorandum prepared by Peers Davidson, K.C., of the Quebec Bar, upon the Water Carriage of Goods Act, passed last session of the Dominion Parliament has been published by the Canada Law Book Co., Toronto. The act is dealt with under the following heads: Introductory; application and scope of the new act; contracting out of negligence prohibited; exemptions of liability in favor of shipowner; obligation to issue bill of lading; delivery in case of wood goods; notice of arrival of ship; offences; dangerous goods; onus of proof; priority of lien; effect of act in respect to general average construction. The concluding section of the memorandum is a summary covering the several heads as follows:

1. Application and scope of act: The act applies to all articles capable of carriage except live stock, and to all ships carrying goods from a Canadian port. The Merchant Shipping Act must be applied to British ships not registered in Canada in respect of liability for loss or damage to goods, when it conflicts with the new act. The conflict is slight.

It is probable that the act would be held to be *intra vires* of the Canadian Parliament, and that it could be recognized by courts without Canada, as forming part of the contract of carriage. The foreign law would possibly be applied only in so far as it was consistent with the terms of the act.

2. Contracting out of negligence.—Contracting out of negligence is no longer lawful in Canada, in respect to the water-carriage of goods, and to do so involves a penalty.

3. Exemptions of liability in favor of the shipowner.—The act materially improves the position of the shipowner in giving statutory approval of exemptions of liability, which it has heretofore been necessary to ensure by elaborate bill of lading clauses. The more important among these statutory exemptions are as to "faults or errors in navigation or in the management of the ship, or from latent defect," and generally as to all "loss arising without their (shipowners) actual fault or privity or without the fault or neglect of their agents, servants or employees."

Probably, but not with certainty, the shipowner will not be allowed to rely upon the exemptions contained in section 7, notwithstanding its absolute terms, where his own negligence or the negligence of his servants has brought the excepted cause of loss (e.g., fire) into operation, unless the negligence of the servants consist of faults or errors

in navigation or relate to the management of the ship.

4. Onus of proof.—The onus of proof would, by law, be upon the ship to prove that the loss fell within one of the exemptions in its favor; but a clause whereby the onus was placed on the cargo owner would, apparently, be valid. This, however, remains to be settled.

5. Priority of lien.—It has yet to be settled whether the cargo owner would have a prior lien over the shipowner on a fund insufficient for both, when the loss has resulted from the negligence of the shipowner's servants, for which he is not responsible under the act.

6. General average.—Several questions arise as to the respective rights and obligations of shipowner and cargo owner of a more or less complicated character, which also await decision.

7. Conclusion.—On the whole, it would appear that the new legislation will be beneficial to Canadian trade; and, while opposed and severely criticized by shipowners, it may prove ultimately of benefit to them.

Trent Valley Canal Constuction.

The section of the Trent Valley Canal, known as the Ontario Rice Lake Division under construction, is dealt with in the report of the Superintending Engineer for the year ended Mar. 31. The division is 56½ miles long, and extends from Trenton on Lake Ontario to Rice Lake. This mileage has been divided into 7 sections, and of these five are under construction. The route chosen follows the Trent River and comprises 9½ miles of canal, 13 miles of subaqueous channel, and 34 miles of deep river. The total rise between low water level on Lake Ontario and normal navigation level at Rice Lake is 369 ft., which is to be overcome by 13 locks. The river level will be controlled by 14 concrete dams and the completed waterway will be crossed by 16 bridges of which six will be for the accommodation of railways. With one exception, the bridges will be swing or bascule spans. The locks will be of concrete, 175 ft. in length, 33 ft. in width, and having 8 ft. 4 in. of water on the sills. They will be capable of accommodating barges 150 ft. long, 30 ft. wide, drawing 8 ft. of water and having a capacity of 1000 tons. The work involved requires the removal of about 1,500,000 cubic yards of earth, 1,250,000 cubic yards of loose and solid rock, and the building of about 400,000 cubic yards of concrete. The estimated cost of the entire section is \$6,750,000 and there has been expended to Mar. 31, \$1,285,092.40. The work done to that date included the building of the following locks: No. 2, at 2.4 miles from Trenton; lift, 20 ft., no. 3, at Glen Miller, 3.9 miles from Trenton, lift, 27 ft.; no. 6, at Frankford, 7.3 miles from Trenton, lift, 16 ft.; no. 7, at Glen Ross, 13.9 miles from Trenton, lift, 9 ft.; no. 14, at Middle Falls, 33.6 miles from Trenton, lift, 25 ft. Dams, 2, 3, 6, 7, 11 and 12 are also built. The contractors are: Sec. 1, Trenton to Glen Miller, 4½ miles, Larkin and Sangster; sec. 2, Glen Miller to Frankford, 4½ miles, Dennon and Rogers; sec. 3, Frankford to three miles beyond Glen Ross, 7½ miles, Canadian General Development Co.; sec. 4, Adams Landing to Campbellford, 14 miles, contract let since the report was issued; sec. 5, Campbellford to Crow Bay, about three miles, Brown and Aylmer; sec. 6, Crow Bay to Heely Falls bridge, about three miles, Haney, Quinlan and Robertson; sec. 7, Heely Falls to Rice Lake, about 19¾ miles, Randolph Macdonald Co., Ltd. When this work is finished there will be a complete navigable channel from Lake Ontario to Orillia on Lake Simcoe, about 180 miles, with

a branch from near Sturgeon Point, through Lindsay to Port Perry via Scugog River and Lake, 144 miles. A branch canal from Lake Simcoe, via Holland Landing, to Newmarket, is also under construction.

A hydrographic survey of the chain of lakes which forms part of this system of connected waterways is being made. The field work for the surveys of Rice, Lovesick, Sturgeon, Cameron and Balsam lakes and Otonabee river have been completed, and during the winter of 1910-11 the surveys of Katchewanoe, Clear, Stoney, Deer, Buckhorn, and Pigeon lakes will be proceeded with. Very little office work in connection with the charts has been done.

Survey Steamboat of British Columbia.

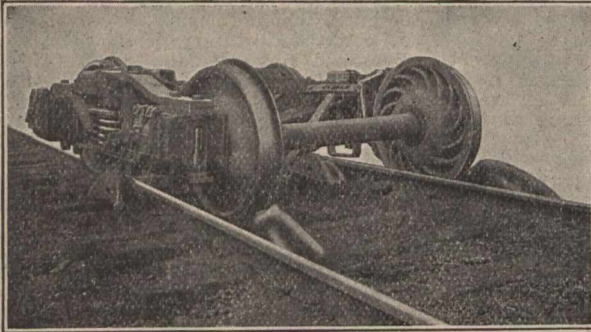
Tenders are under consideration by the Dominion Department of Public Works, for the building of a steel tug, to be used as a survey boat on the Pacific Coast. The specifications call for the delivery of the vessel complete with full equipment at New Westminster, B.C., under steam and ready for service, and to guarantee the same for three months after delivery. The vessel is to be built of steel, and is to class 100 A in Lloyds' Register, and to be of the following general dimensions: Length, over all, 91½ ft.; length between perpendiculars, 78½ ft.; moulded beam 20 ft.; moulded depth, 12¾ ft.; draught, aft, about 10½ ft. The hull is divided into six watertight compartments by five bulkheads, extending from floor plates to the deck. The forward compartment contains the chain locker, etc., the next one a fresh water tank on the floor plates, and above this berth accommodation for eight of a crew; the two next compartments contain the furnace, boiler and engines, while that to the rear contains fresh water tank, on the floor plates, a section of the shaft tunnel, and over this berth accommodation for four officers; the stern compartment contains the continuation of the shaft tunnel. The deck house contains forward, a pilot house, with lamproom and lavatory accommodation to the rear, and aft of the engine room space is the messroom, galley and pantry. There will be two pole masts; two boats, each 17 ft. long, provided with proper davits, etc., fogbell and search light on top of pilot house. The propeller is to be supplied by the Department, and the specifications provide for a shaft 7¾ in. in diameter. The driving machinery will consist of an inverted fore and aft compound surface condensing engine, cylinders, 15 and 34 in. diameter, having a stroke of 24 in., to which steam will be supplied by a single ended Scotch marine type boiler, 12 ft. internal diameter at largest course, by 11 ft. long inside, at a working pressure of 150 lbs. a square inch. There are to be three furnaces, each 36 in. mean diameter, and 216 tubes, 3 in. diameter, 72 to each furnace.

Vessels Removed from the Register.—

The following vessels were removed from the register during October, for the reasons assigned:—Steam, Osso, Kingston, Ont., 4 tons, destroyed by fire; Pilot, Victoria, B.C., 5 tons, destroyed by fire; Tokolo, Kingston, Ont., 8 tons, destroyed by fire. Sailing, Alka, Chatham, N.B., 12 tons broken up; Havana, Lunenburg, N.S., 100 tons, sold to foreigners.

The Kenora Boat Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of \$50,000 and office at Kenora, to build, own, operate and dispose of steamboats and other vessels; to carry on a general transportation, boat building and livery business. The provisional directors are R. J. Parrott, N. C. Parrott, G. Brunsel, J. Burns, and J. M. MacFarlane, Kenora.

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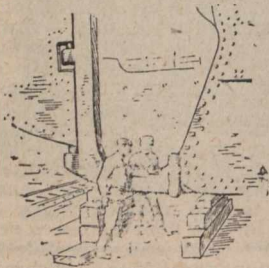
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**RAILWAY AND
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Notices to Mariners.

The Department of Marine has issued the following:

- 107. Oct. 28. 285. Quebec, River St. Lawrence, ship channel between Quebec and Montreal, Cap Levrard channel, buoys established, change in position of Grondines upper range lights.
- 108. Oct. 29. 286. Nova Scotia, south coast, Port Bickerton, hand fog horn at lightstation. 287. Newfoundland, south coast, Cape Freels, fog alarm established.
- 288. United States of America, Maine, St. Croix River mouth, Clark ledge, beacon established.
- 109. Nov. 2. 289. Ontario, Lake Ontario, Cobourg harbor, gas beacon established on west pier. 290. Ontario, Georgian Bay, east side, approach to Waubauskene, off Long point, beacons.
- 110. Nov. 4. 291. Quebec, Gulf of St. Lawrence, Anticosti Island, Ellis bay, hydrographic information. 292. Quebec, north shore of Gulf of St. Lawrence, corrections to charts and sailing directions, hydrographic information.
- 111. Nov. 7. 293. Nova Scotia, south coast, Lunenburg bay, Halifax harbor and approach, gas buoys to be placed for testing purposes. 294. United States of America, Maine, Portland harbor, Diamond island road, House island, light established. 295. England, west coast, Bristol channel, Monkstone beacon light, alteration in character.
- 112. Nov. 9. 296. British Columbia, Vancouver island, southeast coast, Victoria harbor, buoy established. 297. British Columbia, Strait of Georgia, Sandheads at entrance to Fraser River, old disused light-house removed. 298. British Columbia, Strait of Georgia, Cortes island, off Reef point, gas buoy replaced by gas and bell buoy. 299. United States of America, Washington, Bellingham bay, Post point bell buoy to be moved and renumbered.
- 113. Nov. 10.—300. Ontario, St. Joseph channel, depths in channel at Bamford island. 301. Ontario, Lake Superior, Thunder bay, Port Arthur, intended change in character of light. 302. United States of America, River St. Mary, Vidal shoals, channel range lights moved, provisional lights, gas buoy moved.

- 114. Nov. 12.—303. Ontario, Lake Huron, chart of Goderich harbor issued. 304. Ontario, Lake Huron, off Great Duck island, Jennie Graham shoal, bell buoy not in position.
- 115. Nov. 14.—305. Nova Scotia, Bay of Fundy, Lurcher shoal, light replaced on her station. 306. Newfoundland, east coast, Trinity bay, Trinity harbor, Fort point, fog alarm established.
- 116. Nov. 16. 307. Ontario, Bay of Quinte, shoal spot east of Baker island. 308. Ontario, Lake Erie, Port Burwell, bell buoy not in position. 309. United States of America, Michigan, River St. Mary, Sault Ste. Marie, Branch Hydrographic Office and time ball moved.
- 117. Nov. 17. 310. Nova Scotia, Cape Breton island, west coast, entrance to Cheticamp harbor, Caveau shoals, bell buoy to be established. 311. United States of America, Massachusetts, Boston harbor, Castle rocks bell buoy to be replaced by gas buoy.
- 118. Nov. 18. 312. Quebec River St. Lawrence ship channel between Quebec and Montreal Pointe aux Trembles gas buoy established.

of 123,652 tons over the previous year. OTTAWA RIVER CANALS.—Tons carried, 336,939; an increase of 78,412 over 1908.

CHAMBLY.—Tons carried, 752,117, an increase of 248,841 over 1908.

RIDEAU.—Tons carried, 91,774, an increase of 2,134 over 1908.

ST. PETER'S.—Tons carried, 79,850, an increase of 7,835 over 1908.

MURRAY.—Tons carried, 102,291, an increase of 76,390 over 1908.

TRENT.—Tons carried, 59,952.

Atlantic and Pacific Ocean Marine.

The Canadian Northern Steamships' s.s. Royal Edward, in arriving at Quebec, Nov. 2, beat her own previous record by four hours.

The captain of the Thomson Line s.s. Cairnrona was recently fined \$20 in each of 14 cases, with costs, 15 other similar cases being withdrawn, for not reporting sickness on board his vessel at Quebec.

The Canada Line's s.s. Prinz Adalbert collided with a barge near Sorel, Nov. 6, and returned to Montreal for examination. The damage, which was confined to the rudder, was repaired without the vessel going into dock.

The s.s. Regulus, owned by Harvey and Co., St. John's, Nfld., which became a total loss, with her crew, while homeward bound from New York, as mentioned in our last issue, was valued at £7,000 and insured in London, Eng.

An Australian dispatch of Nov. 15 states that the Government will not accept the Canadian Government's proposal to renew the Canada-Australia mail service subsidy contract, with calls at Auckland and Sydney only.

Capt. F. D. Lugg, Marine Superintendent.

Traffic on Canadian Canals.

The total traffic through the several canals of the Dominion for the season of navigation of 1909, was 33,720,748 tons, an increase of 16,217,928 over 1908. There were 272,222 passengers carried, an increase of 8,608 over 1908. Following are the principal statistics:

SAULT STE. MARIE.—Tons carried, 27,861,245; increase over previous year, 15,102,029 tons; no. of passages of vessels, 6331.

WELLAND.—Tons carried, 2,025,951; increase over previous year, 322,498 tons. Carried in Canadian vessels, 1,247,694 tons; in U.S. vessels, 728,346 tons; freight through the canal to U.S. ports, 445,419 tons.

ST. LAWRENCE CANALS.—Tons carried, 1,564,584 eastbound, and 846,045 westbound; total 2,410,629 tons, an increase

LIST OF STEAM VESSELS REGISTERED IN CANADA DURING OCTOBER, 1910.

Name	No.	Where and When Built.	Engines, etc.	Length	Breadth	Depth	Gross Tons	Reg. Tons	Port of Registry	Owners
Aggie B. Reid (1)	126,865	Toledo, O., 1897	Screw 8 n. h. p.	43.0	12.0	5.5	17	10	Sault Ste. Marie, Ont.	R. C. Reid, Cockburn Island, Ont.
Arthur W.	126,905	Dartmouth, N.S., 1910	" 2 "	60.4	17.0	7.9	36	33	Halifax, N.S.	E. F. Williams, Dartmouth, N.S.
Emma G.	130,344	Coulonge River, Que., 1900	Paddle 2 "	39.0	12.0	3.3	29	16	Ottawa, Ont.	Gilmour & Hugeson, Ottawa, Ont.
Fisherman's Pride	123,775	Richibucto, N.B., 1909	Screw 1 "	29.0	11.0	4.6	11	10	Richibucto, N.B.	A. Logie, Dalhousie, N.B.
H. A. Root	124,195	Saugatuck, Mich., 1883	" 3 1/2 "	114.0	24.6	9.2	208	172	Windsor, Ont.	S. H. Braund, and C. W. Cadwell, Windsor, Ont.
Hanaco	126,614	Naas River, B.C., 1909	" 3 "	40.2	11.4	4.5	14	10	Prince Rupert, B.C.	N. Hamadi, Claxton, B.C.
Hattie M.	130,242	Shelburne, N.S., 1904	" 2 "	27.7	10.4	5.6	9	8	Liverpool, N.S.	A. G. Pentz, Beachmeadows, N.S.
Iviza	126,040	Mill Village, N.S., 1910	" 3 "	42.0	9.6	4.6	10	9	"	W. N. Reinhardt, M. O., Mill Village, N.S.
Kaleden	130,297	Okanagan L'nd'g, B.C., 1910	Paddle 4 "	94.0	18.4	4.6	180	113	Vancouver, B.C.	C. P. R., Montreal
Kealey	130,263	River Desert, Que., 1907	" 2 "	36.0	12.0	3.3	23	14	Ottawa, Ont.	Gilmour & Hugeson, Ottawa, Ont.
Kitaro	130,299	Vancouver, B.C., 1910	Screw 3 "	45.0	9.0	3.9	14	10	Vancouver, B.C.	K. Asari, Atkinson Point, B.C.
Monobel	130,295	" " "	" 4 "	40.1	9.6	5.0	14	10	"	Hamilton Powder Co., Montreal
Royal Edward (2)	125,656	Govan, Scotland, 1907	" 14,500 "	526.1	60.2	18.8	11117	5669	Toronto	Canadian Northern Steamships Ltd., Toronto
Royal George (2)	125,643	" " "	" 14,500 "	525.8	60.2	19.0	11146	5685	"	" " " "
Scugog	116,634	Port Perry, Ont., 1910	" 2 "	39.0	7.2	3.4	6	4	Lindsay, Ont.	J. Bowerman, Port Perry, Ont.
Wawa	126,908	Mahone Bay, N.S., 1910	" 1 "	32.6	10.0	6.0	9	8	Halifax, N.S.	F. U. Anderson, Halifax, N.S.
Wayne-Isbell	126,866	East Saginaw, Mich., 1876	" 18 "	70.0	17.6	6.0	48	29	Sault Ste. Marie, Ont.	N. Trotter, Little Current, Ont.

(1) Formerly Victor. (2) Turbines.

LIST OF SAILING VESSELS AND BARGES REGISTERED IN CANADA DURING OCTOBER, 1910.

Name	No.	Where and When Built	Rig	Length	Breadth	Depth	Reg. Tons	Port of Registry	Owners
Delima	126,907	Magdalen Islands, Que., 1909	Schr.	42.9	15.2	5.7	17	Halifax, N.S.	B. Lester, Halifax, N.S.
Dorothy M. Smart	126,874	Shelburne, N.S., 1910	"	90.0	22.9	9.9	94	Digby, N.S.	Maritime Fish Corporation, Montreal
Fort No. 1	130,298	N. Westminster, B.C., 1910	Scow	61.0	26.1	7.0	99	Vancouver, B.C.	J. Hind, Vancouver, B.C.
Frank D. Ewen	130,321	West Bay City, Mich., 1888	Barge	202.4	34.8	15.5	878	Kingston, Ont.	Quebec Transportation & Forwarding Co., Quebec.
Gladys G. Hart	126,817	Tancook, N.S., 1910	Schr.	53.2	13.8	7.0	27	Lunenburg, N.S.	J. L. Hart, Sambro, N.S.
*Gladys H. (3)	126,469	West Bay City, Mich., 1892	"	212.0	35.0	16.6	919	Kingston, Ont.	Quebec Transportation & Forwarding Co., Quebec.
J.E.A.F. No. 1	126,729	Peterboro, Ont., 1909	Scow	92.0	25.6	4.6	74	Peterboro, Ont.	J. E. A. Fitzgerald, Peterboro, Ont.
J.E.A.F. No. 2	126,730	Bobcaygeon, Ont., 1909	"	92.0	26.0	5.0	91	"	"
J.E.A.F. No. 3	130,371	" " 1910	"	94.0	24.5	5.3	89	"	"
Jane Anderson	126,906	Petpiswick, N.S., 1910	Schr.	67.0	19.8	6.7	53	Halifax, N.S.	G. A. W. Rowlings, Musquodoboit Harbor, N.S.
Murray R. Munroe	126,296	Whitehaven, N.S., 1910	"	45.0	14.8	8.9	21	Canso, N.S.	T. Munroe, Whitenaven, N.S.
Myrtle L.	126,873	Hillsburn, N.S., 1910	"	63.2	18.0	8.8	47	Digby, N.S.	A. Longmire, Hillsburn, N.S.
V.T.B. 9	130,296	Vancouver, B.C., 1910	Scow	83.5	30.1	8.0	181	Vancouver, B.C.	Vancouver Tug & Barge Co., Vancouver, B.C.
W.S.M. Bentley	126,597	Port Greville, N.S., 1910	Schr.	141.4	34.1	11.9	364	Parrsboro, N.S.	G. E. Bentley, Port Greville, N.S.
Zapotec	126,470	Marine City, Mich., 1890	Barge	207.5	34.7	14.8	779	Kingston, Ont.	Quebec Transportation & Forwarding Co., Quebec.

(3) Formerly Aberdeen.

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ent Elder-Dempster Co., London, Eng., and for seven years, subsequent to the taking over of the Beaver Line, by the C.P.R., also Marine Superintendent for the C.P.R. there, has retired from active service.

Reports from England state that the results of the service between Montreal and Manchester for the past two years have been so satisfactory that the service to Canada will be continued throughout the winter, Manchester Liners, Ltd., running a vessel each week.

The Department of Public Works is reported to have circularized the shipping companies asking them to appoint a representative to meet the Superintendent of Immigration to discuss the requirements and possible site of additional immigration sheds at Quebec.

The Montreal pilots have entered a complaint against the use of the ship channel by tugs and their tows. They claim that the deep water way was made for the use of ocean going vessels, and there is no necessity for tugs and tows using it, as there is ample water on either side.

An Ottawa press dispatch, Nov. 3, stated that the Union Steamship Co. was the only firm to tender for the service between Vancouver, New Zealand and Australia. The company at present holds the contract for the service, and it is probable that it will be renewed on its expiry in Aug., 1911.

The schooner F. W. Pickels, owned in Quebec, Que., which was abandoned in a waterlogged condition, in the Gulf of Mexico in October, has been set on fire and destroyed. She was built at Bridgetown, N.S., in 1902, and was of the following dimensions:—Length, 146 ft.; breadth, 33 ft.; depth, 12.5 ft.; 386 tons register.

A Montreal dispatch of Nov. 21 says: G. M. Bosworth, Vice President C.P.R., stated to-day that the company had no information to give out re the report that two new lines would be added to its fleet, to run from St. John, N.B., to South American and West Indian ports. It can be definitely stated, however, that negotiations are proceeding with the C.P.R. whereby the introduction of vessels to run on these routes is contemplated.

The President of the Montreal Chamber of Commerce, at a recent meeting, in speaking of the recent inspection trip of the St. Lawrence channel, which he undertook with the Minister of Marine, said that the channel had been considerably straightened and widened. At St. Thomas de Montmagny, where there were considerable difficulties encountered, there is now a channel 500 ft. wide and 30 ft. deep, and from Quebec to the sea, the depth is nowhere less than 30 ft.

J. B. Ismay, President International Mercantile Marine Co., while in Montreal, Nov. 8, is reported to have said that the experiment of placing the White Star-Dominion Line steamships Laurentic and Megantic on the St. Lawrence routes had been so successful that a proposal was being considered to replace the steamships Canada and Dominion with vessels of equal, or larger capacity, than the two first mentioned. Much, however, would depend on the question of mail contracts, tenders for which had been submitted to the Government.

R. W. Brock, Director of the Geological Survey, in speaking before the Canadian Club at Hamilton, Ont., recently, referred to his trip through Hudson Bay with the Governor-General. He is reported to have said that many Hudson Bay ports were farther south than some important European ports. The railway would open up an immense territory. With light-houses, ice-breakers,

wireless telegraphy, etc., the Hudson Bay route would be navigable seven months in the year. He predicted that Hudson Bay would become as important in future to Canada as it had been historically.

A Montreal press dispatch of Nov. 4 stated that it had been officially announced that the C.P.R. had decided to build four new steamships for a fast direct service between Nova Scotia ports and Boston and New York, this being one of the important developments that would follow on the absorption of the Dominion Atlantic Ry. next spring. The vessels, it was stated, would be of the ocean liner type, about 450 ft. long, with a carrying capacity of 5,000 tons and a speed of 20 knots an hour. We were officially advised, Nov. 8, that the press report was incorrect.

The St. Lawrence season of navigation was officially closed for passenger steamers, by the sailing of the C.P.R. s.s. Lake Champlain, Nov. 24. The last vessel of the Allan Line to leave Montreal, was the Corsican, Nov. 18. Halifax and St. John will be the winter ports of these lines. The last Canadian Northern Steamships' sailing from Montreal was the Royal George Nov. 19, and the service will be continued throughout the winter to Bristol, from Halifax. The White Star-Dominion Line will call at Portland, Me., through the winter, and at Halifax, inward only; the s.s. Laurentic will be taken off the route after Dec. 3, and the service continued with the Megantic, Canada and Dominion.

Canadian Northern Steamships Ltd. has transferred its two turbine steamships Royal Edward and Royal George from the British to the Canadian register, the port of registry being Toronto. These vessels were built at Govan, Scotland, in 1907, and overhauled, partially reconstructed and renamed last year, being formerly known as the Cairo and Heliopolis, and being run in the Mediterranean service. The Royal Edward is of the following dimensions:—Length, 526.1 ft.; breadth, 60.2 ft.; depth, 18.8 ft.; tonnage, 11,117 gross, 5,669 register, and are equipped with steam turbine engines of 14,500 n.h.p. driving screws. The dimensions of the Royal George are as follows:—Length, 525.8 ft.; breadth, 60.2 ft.; depth, 19 ft.; tonnage, 11,146 gross, 5,685 register, with steam turbine engines of 14,500 n.h.p. driving screws. These are the largest vessels on the Canadian register.

Maritime Provinces and Newfoundland.

J. G. Peters, lightkeeper at Low Point, N.S., has been awarded the Imperial service medal for long and meritorious service.

Boring operations were undertaken recently, at the mouth of St. Andrew's harbor, to determine the possibilities of dredging there.

Capt. W. Dixon, a well known New Brunswick pilot, was drowned while launching his boat at Hopewell Cape recently.

The Grand Manan Steamship Co.'s s.s. Aurora is being re-timbered, etc., at Liverpool, N.S. The repairs and overhauling will, it is expected, be completed by the end of the year.

Work has been commenced on the site of the proposed new piers to be constructed in Courtenay Bay, St. John, N.B. These will be built on the western side, and will accommodate four vessels.

The Newfoundland members of the crew of the vessel Roosevelt, utilized in the Polar expedition of 1908-9, have been awarded bonuses varying between \$125 and \$250 each, for their services.

A press dispatch from St. John, N.B.,

Nov. 9, states that if private companies do not undertake the construction of dry docks at St. John and Levis, it is probable that the work will be undertaken by the Government.

C. T. White and Sons, have under construction, at Shelburne, N.S., a steamboat to take the place of the steamboat Mikado. She will be about 90 ft. long, and will be equipped with the most modern machinery and electric lighting arrangements.

Bowring Bros., St. John's, Nfld., recently received a cablegram from Great Britain, to the effect that owing to a serious fire at the shipbuilding yards, the completion of their steamship, which it was hoped to have ready for next spring, would be delayed.

The Marine Department has erected a Marconi wireless telegraph station, and also a life-saving station on the Magdalen Islands. The latter is placed at Entry Island, and both were expected to be fully equipped before the St. Lawrence season closed.

The Department of Public Works has awarded contracts for construction, as follows: wharf at Barrington's Cove, N.S., \$29,900, to J. W. Dobson, Sydney; breakwater at New Edinburgh, N.S., \$11,900, to J. E. and H. Bigelow, Canning, N.S., and breakwater at Great Salmon River, N.B., \$10,740, to C. A. Huntley, Parrsboro, N.S.

C.P.R. officials, in conjunction with others representing the Government, were reported to have examined the shipping facilities at Digby, N.S., recently, with a view to the extension of buildings on the wharf there, to accommodate C.P.R. freight traffic through Digby, between Ontario, Montreal, St. John and Halifax.

The Department of Marine has issued the Tidal and Current Survey reports, covering the eastern coast, including the River and Gulf of St. Lawrence, the Bay of Fundy, and Northumberland and Cabot Straits, for 1911. The present is the fifteenth annual issue, and is compiled by W. Bell Dawson, D.Sc., M.I.C.E., F.R.S.C., Superintendent of Tidal Surveys.

The survey ship Ellinor, which will winter at Halifax, N.S., has accomplished considerable work in the neighborhood of Newfoundland, during the past season. A complete survey was made of St. John's Bay, and about 20 banks, dangerous to navigation were located and charted. Other similar work was undertaken at Hare Bay, Graois Islands, White Bay and near the Great and Little Meccatina Islands.

Press reports from Halifax state that a company is in course of formation to establish a ferry between Halifax and Dartmouth, in opposition to the service operated by the Dartmouth Ferry Commission. There are two boats run on this service, both being in by no means first class condition. The Chebucto Is., at present, undergoing repair, and it is stated, that the Dartmouth's machinery will not stand steady running.

Newfoundland press reports state that the largest steamer yet built on the Isherwood system of longitudinal framing has recently been launched at Wallsend-on-Tyne, Eng., for the iron ore trade between Wabana, Nfld., and Sydney, N.S. Her dimensions are given as:—Length overall, 425 ft.; breadth, extreme, 58 ft.; total dead weight capacity, 10,650 tons on a moderate draught. She has been built to the British Corporation Survey and Norske Veritas, and is equipped with 10 powerful steam winches and 10 derricks. The engines are of the triple expansion type, with cylinders 28½, 47 and 78 ins. diam. by 54 ins. stroke, supplied with steam by three boilers, 15 ft. diam. by 12 ft. long, at 180 lbs. pressure.

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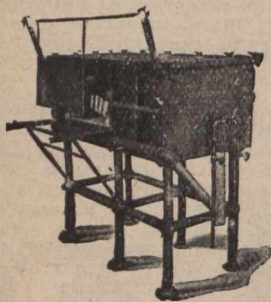
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The Canadian Pacific Railway Co.

A dividend of 2% on the Common Stock of the Company for the quarter ended 30th September, 1910, being at the rate of 7% per annum from revenue and 1% per annum from interest on the proceeds of land sales, is hereby declared, payable on 31st December next to

Shareholders of record in Montreal, New York and London, at 3 p.m. on Wednesday, 30th November instant.

Warrants will be mailed on 30th December next.

By order of the Board,

W. R. BAKER,

Secretary.

Montreal, November 14th, 1910.

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BAY OF QUINTE RAILWAY COMPANY.

NOTICE is hereby given that application will be made to the Parliament of Canada at its next session, for an Act authorizing the Bay of Quinte Railway Company to enter into agreements with the Canadian Northern Ontario Railway Company and the Ontario and Ottawa Railway Company for any of the purposes specified in section 361 of The Railway Act.

GERARD RUEL,

Solicitor for the applicants.

Dated at Toronto, this 16th day of November, 1910.

BROCKVILLE, WESTPORT & NORTHWESTERN RAILWAY COMPANY.

NOTICE is hereby given that application will be made to the Parliament of Canada at its next session, for an Act authorizing the Brockville, Westport & Northwestern Railway Company to enter into agreements with the Canadian Northern Ontario Railway Company and the Ontario & Ottawa Railway Company for any of the purposes specified in section 361 of The Railway Act.

GERARD RUEL,

Solicitor for the applicants.

Dated at Toronto, this 16th day of November, 1910.

Province of Quebec Marine.

The Montreal Harbor Commission held its annual inspection of the works in the harbor, Nov. 15.

A deputation from Quebec visited Ottawa, Nov. 8, to urge on the Premier that the appropriations to be voted at the ensuing session should include an amount for the construction of locks on the River St. Charles.

The Montreal harbor revenue for Oct. was \$51,984.54 and for the period from the opening of navigation to Oct. 31, \$336,149.65, against \$50,766.59, and \$238,982.09 for the same periods 1909. The number of steamship arrivals to Oct. 31, was 674, with a total tonnage of 2,010,924, against 601 with a total tonnage of 1,705,570, for 1909.

The Richelieu and Ontario Navigation Co., has declared a dividend of 1½% for the quarter recently ended, payable Dec. 1 to shareholders of record on Nov. 18. This is the first time since 1903 that the company has paid a dividend at the rate of 6%. The earnings for the year are said to have been equivalent to about 12% on the common stock.

The Department of Public Works has awarded contracts for the following constructions: Wharf at Bic, \$33,810, to T. Beaumont, St. Thomas de Montmagny; wharf at Aylmer, \$8,974, to T. and J. Moran, Arnprior, Ont.; piers at Riviere des Prairies, \$8,520, to Morrow and Beatty, Peterboro, Ont., and wharf at St. Andrews, \$3,245 to the Bridge and Wharf Builder Co., Montreal.

Eastern Canada Fisheries, Ltd., has been incorporated under the Dominion Companies Act, with a capital of \$1,500,000, and office at Montreal, to take over the Magadlen Islands Development Co., Ltd., to carry on a general fishing business, etc., and to build, own and operate steam and other vessels, wharves, docks, warehouses, railway sidings, and other transportation facilities.

The Levis Ferry Ltd., is reported to have decided to order two additional ferry steamers for the summer service between Levis and Quebec. These, it is stated, will be built during the winter, and will be strictly in accordance with the terms of the contract, relating to the ferry service between these points. The vessels which were running last summer, were claimed to have been not in accordance with the contract, and as a result a number of suits have been entered against the company.

The British Board of Trade is reported to have entered an objection to the naming of the steamboat for which the Dominion Government is asking tenders, and which is to be utilized for the St. Lawrence buoy and lighthouse service. The name which it is proposed to use, is Dollard, and the objection is on the ground that there is already a vessel of that name on the register. It is stated that an effort will be made to have the vessel, which already bears that name, change it, so that it may be adopted by the Canadian vessel, and so perpetuate the name of one of Canada's heroes.

The Montreal board of control, in discussing the question of building a landing pier at St. Helen's Island, adopted the plans which had been approved by the old parks and ferries committee, and recommended to the council that the Harbor Commissioners should build the landing and fix a tariff of charges for the ferry company landing passengers there. It is stated that the Harbor Commissioners are opposed to this course, and consider their offer to erect the pier, the city paying 6% per annum on the cost of about \$25,000, reasonable. The city council is considering the question of asking the Government to make a grant to the Harbor Commissioners to

enable them to erect the pier without cost to the city.

The Montreal Harbor Commissioners recently announced that the negotiations for the construction of a dry dock at Montreal have been suspended, pending the decision of the Government as to the nature of the subsidy to be granted. It is stated that the Government favors the granting of a second class subsidy, and that the company with which negotiations have been proceeding has declined to go on unless a first class subsidy is assured. In this connection the Minister of Public Works is reported to have said recently that the Government is quite prepared to give Montreal the kind of dock which the Harbor Commissioners decide, namely, one for commercial purposes, and carrying with it a subsidy on an outlay of \$2,500,000. While the Government expected the promoters to submit plans for a dock of the second class, they had put in an application for a subsidy on \$4,000,000, which is of the first class. Regarding the Quebec dock, the application, as filed, exceeded in financial demands, the statutory limitations, and the company had been asked to modify them.

Ontario and the Great Lakes.

The last steamboat of the season for Georgian Bay local ports sailed from Owen Sound Nov. 26.

The International Waterways Commission, at a recent sitting at Toronto, discussed the question of the demarcation of the International boundary through the St. Lawrence.

The Reid Wrecking Co., Sarnia, has been awarded the contract for the raising of the steamboat W. C. Moreland, which was recently wrecked at Eagle River, Lake Superior.

Capt. Lepine, of the Montreal Transportation Co.'s tug Emerson, suffered a compound fracture of his right leg at Kingston, Nov. 13, while assisting in raising the anchor.

The steamboat Roberval, which struck a rock and sank in the Ottawa River, below the Grenville canal, in October, has been raised and taken to Montreal for examination and repairs.

W. C. Barr, who retired from the position of Superintendent Algoma Central Steamship Line at Sault Ste. Marie, about

a year ago, on account of ill health, died at Detroit, Mich., Nov. 2, aged 55.

J. B. Foote, formerly Superintendent Canadian Lake and Ocean Navigation Co., has been appointed surveyor to the British Corporation for the Survey and Registry of Shipping at Toronto.

The Lake Champlain and Ship Canal Co. is applying to the Dominion Parliament to revive its corporate powers and to extend the time for the construction of the works authorized by chap. 107, Vic. 61.

The Board of Railway Commissioners, Nov. 4, dismissed the application of the Mutual Transit Co. for permission to unload and tranship freight from its vessels to C.P.R. trains on the Lord's Day.

The Montreal River Transportation Co. has assigned to N. L. Martin and Co., Toronto, with liabilities estimated at \$50,000. The cause of the failure is given as keen competition and the fact that trade at Gowganda and Elk Lake was lighter than expected.

At a recent meeting of the Montreal board of trade and chamber of commerce, the Mayor of Ottawa supported the immediate construction of the proposed Georgian Bay canal, and opposed the proposal for deepening the Welland canal.

A number of men have been charged, at Sault Ste. Marie, with the theft of cargo from the steamboat Wissahickon, which was wrecked on the Outer Duck island, south of Manitoulin Island, last winter. It is claimed that cargo valued at \$20,000 has disappeared.

E. Bassett, contractor for the handling of Northern Navigation Co.'s freight at Point Edward, was found not guilty, there recently on a charge of violating the immigration laws by bringing alien laborers into Canada without their having passed inspection.

The dredge Russell which has been at work in the Welland River and Chippewa Creek for some time, has been moved to Toronto for the winter, and it is stated that dredging will be continued early in the spring, with a view to making the creek navigable and giving Chippewa Wharf Builder Co., Montreal.

Revillon Bros' steamboat Ombabika was reported to be fast aground at Jackfish Island in Lake Nipigon, at the end of Oct. She was built at Lake Nipigon

SAULT STE. MARIE CANALS TRAFFIC.

The following commerce passed through the Sault Ste. Marie Canals in October :

ARTICLES.	CANADIAN CANAL	U. S. CANAL	TOTAL
Copper..... Eastbound..... Net tons	1,352	18,368	19,720
Grain..... "..... Bushels	2,105,176	2,542,432	4,647,608
Building stone..... "..... Net tons	300	820	1,120
Flour..... "..... Barrels	389,788	958,241	1,348,029
Iron ore..... "..... Net tons	3,133,726	1,590,729	4,724,455
Pig iron..... "..... ".....	".....	8,817	8,817
Lumber..... "..... M. ft. B.M.	3,691	68,581	72,272
Silver ore..... "..... Net tons	".....	".....	".....
Wheat..... "..... Bushels	16,743,389	4,780,946	21,524,335
General merchandise..... "..... Net tons	10,833	11,829	22,662
Passengers..... "..... Number	1,022	450	1,472
Coal, hard..... Westbound..... Net tons	64,528	135,528	202,056
Coal, soft..... "..... ".....	392,516	1,260,224	1,652,745
Flour..... "..... Barrels	".....	".....	".....
Grain..... "..... Bushels	".....	".....	".....
Manufactured iron..... "..... Net tons	18,383	20,351	38,734
Iron ore..... "..... ".....	3,248	".....	3,248
Salt..... "..... Barrels	3,444	52,837	56,281
General merchandise..... "..... Net tons	88,345	94,102	182,447
Passengers..... "..... Number	1,142	91	1,233
Vessel passages..... Number	915	1,795	2,710
Registered tonnage..... Net	2,675,137	3,437,085	6,112,222
Freight—Eastbound..... Net tons	3,738,137	2,043,009	5,781,146
" —Westbound..... ".....	569,512	1,518,135	2,087,647
Total freight..... ".....	4,307,649	3,561,144	7,868,793

in 1906, and is a screw driven vessel, with engine of 11 n.h.p. Her dimensions are:—Length, 70 ft.; breadth, 15 ft.; depth, 6 ft.; tonnage, 76 gross, 51 register.

The Minister of Public Works, in reply to a deputation from London regarding proposed improvements at Port Stanley, said recently that the suggested works would be well considered by the Department. He pointed out that it would be necessary to spend about \$640,000 to carry out the suggestions, the breakwater costing about \$400,000, the balance being for general improvements.

The new lock which the U.S. Government is constructing in the Sault Ste. Marie canals, will be 1,350 ft. long by 80 ft. wide, with a depth of 24½ ft. at extreme low water. It will connect with an independent canal about 8,000 ft. long by 300 ft. wide. The drawing showing the various details of construction are about completed, and bids for the work will shortly be invited.

The Department of Public Works has awarded contracts for the following constructions: wharf at Pelee Island, \$13,000, to D. McDermid, Toronto; wharf and retaining walls at Hamilton, \$60,844, to J. Battle, Thorold; reconstruction of wharf at Lakeport, \$16,430, to S. Gowan, Brockville, and breakwater at Goderich, \$140,417, to M. Connolly, Montreal.

The Government scow Pioneer, which is built entirely of reinforced concrete, was launched at Port Dalhousie, Nov. 9. Her dimensions are:—Length, 80 ft.; breadth, 24 ft.; depth, 7 ft., with deck, sides and bottom 2½ ins. thick. She is built with two bulkheads running crossways and one lengthways, the work having been conducted under the supervision of Superintendent Weller of the Welland canal.

A Kingston press dispatch states that the U.S. Consul there has been instructed to locate and report on naturalized U. S. citizens, who reside in and about Kingston, and who go across the line and obtain positions as steamboat captains and engineers. The U.S. law relating to citizenship will not allow such to reside outside the country for more than two years, without forfeiting all rights as U.S. citizens, and thus losing their steamboat licenses.

The U.S. Lake Survey reports the levels of the Great Lakes in feet above tide-water for Oct., as follows:—Superior, 601.89; Michigan and Huron, 580.12; Erie, 571.77; Ontario, 245.38. Compared with the average October levels for the past 10 years, Superior was 1.14 ft. below; Michigan and Huron, 0.68 ft. below; Erie, 0.37 ft. below, and Ontario, 0.42 ft. below. It was anticipated that, during November, there would be a fall of 0.1 ft. in Superior and 0.3 ft. in each of the other lakes.

The Collingwood Shipping Co.'s steamboat Wasaga, operated by the Merchants' Mutual Line, was burned to the water's edge at Copper Harbor, Nov. 6. She was built at Buffalo, N.Y., in 1875, and was on the U.S. register under the name of Wissahickon. She was a screw driven vessel, with engine of 120 n.h.p., and of the following dimensions:—Length, 244.4 ft.; breadth, 36.6 ft.; depth, 14.8 ft.; tonnage, 1,745 gross, 1,108 register.

The Board of Railway Commissioners, by order 12162, Nov. 4, granted permission to the C.P.R., in order to prevent any undue delay to its passenger steamers running between Owen Sound and Fort William, Ont., to do on the Lord's Day any work necessarily incidental to the loading or unloading of freight and merchandise upon or from the said steamers, or transhipping of freight and merchandise between the said steamers and its cars, at Owen Sound and Fort William, and the coaling of the said steamers at Owen Sound.

The Manager of the Niagara, St. Cath-

arines and Toronto Navigation Co. has received tenders for a steamboat to replace the Lakeside and run between Toronto and Port Dalhousie. It is said that the new boat, which must be ready by June 15, 1911, will be 200 ft. long and carry 1,000 passengers. She will have triple expansion engines with a single screw and will be capable of making 16 knots. A wireless telegraph system will be installed. The Garden City, a sister boat, will undergo extensive repairs and remodelling this winter. The order was reported to have been placed in Collingwood, Nov. 28.

The Department of Marine has issued notice that all Canadian lights and fog alarms on Lake Superior will be kept in operation until Dec. 10, with the exception of those on Caribou Island, which may not be kept in operation later than Dec. 5, subject to weather conditions or early closing of navigation. The Canadian lights and signals on the other lakes will be kept in operation until Dec. 15, and mariners must not rely upon finding any of these lights in operation later than the dates specified.

The Peterborough and Lake Simcoe Navigation Co., Ltd., has been incorporated under the Ontario Companies Act, with a capital of \$250,000 and office at Peterboro to carry on the business of a navigation company and common carriers of passengers and freight on Ontario navigable waters, and in connection therewith to build, own and operate steam, electric and other railways on the company's property. The provisional directors are, W. J. Thomson, W. H. Smith, A. Eyer, W. J. Taylor and E. Barber, Toronto.

We are advised that press reports to the effect that the Northern Navigation Co. has placed, or is about to place a contract for the construction of an additional vessel for its fleet, are incorrect. The company does not propose to build a vessel this year, but, in connection with its contract with the G.T.R., it may have to do so by next winter. With reference to the report that new cabins are to be placed on the Huronic and other large alterations to the fleet, we are advised that it is improbable that any such work will be undertaken this winter.

The preliminary survey work on the proposed enlarged Welland canal is nearing completion. The route surveyed is generally north and south from Jordan harbor on Lake Ontario to Morgan's point, on Lake Erie, 27 miles. Leaving Jordan harbor it follows Twenty Mile Creek past Jordan station and village, due south, touching Pelham Union and passing Rosedene, then south past Boyle to the Welland river, which would be utilized for about three miles to Forks Creek, where the survey runs southward past Cranberry marsh to Morgan's point. The cost of the proposed works is estimated at \$30,000,000. No definite decision has been reached as to the outcome of the work undertaken, and it is stated that nothing will be done in the way of any cutting or construction until the whole matter has been considered from every standpoint. The object of the survey is chiefly for the purpose of gathering information on behalf of the Department of Railways and Canals.

Manitoba, Saskatchewan and Alberta.

In the early part of Nov. reports were received at Winnipeg that the Northern Fish Co.'s steamboat Wolverine, with a number of other vessels, were held in mid-lake, owing to a sudden freeze-up. It was also rumored that the Wolverine was considerably damaged, and in danger. Relief parties were dispatched by dog train, and by Nov. 24 it was reported that passengers and crew had been landed safely. The vessel has sustained damages to

The Victoria Rolling Stock & Realty Co., of Ontario, Limited

Notice is hereby given that a dividend of three per cent. on the paid-up capital stock of the Company for the half-year ended Nov. 30th, 1910, has been declared payable Dec. 1st, 1910, to the shareholders on record as of the 30th of Nov., 1910.

By order of the Board.

G. T. CHISHOLM, Secretary.
Toronto, Nov. 15th, 1909.

NOTICE is hereby given that the Grand Trunk Pacific Branch Lines Company will apply to the Parliament of Canada, at the next session thereof, for an Act further amending the Act incorporating the company, chapter 99 of the Statutes of 1906, as amended by chapter 86 of the Statutes of 1909, and by chapter 103 of the Statutes of 1910, by authorizing the construction of the following additional lines of railway:—

28. From a point on the Western division of the Grand Trunk Pacific Railway between the east limit of Range 21 and the west limit of Range 28, west of the Second Meridian, thence in a westerly direction to a junction with the line mentioned in paragraph 23 between the north line of Township 29 and the south line of Township 37.

29. From Moose Jaw or a point on the line mentioned in paragraph 24 between the east limit of Range 24 west of the Second Meridian, and the west limit of Range 5, west of the Third Meridian, thence in a generally westerly direction to Calgary, or to a junction with the line mentioned in paragraph 23 or the line mentioned in paragraph 14 between the north line of Township 23, and the south line of Township 30.

30. From a point on the Western division of the Grand Trunk Pacific Railway between the east limit of Range 9 and the west limit of Range 13, west of the Fourth Meridian, thence in a south-westerly and westerly direction to a junction with the line mentioned in paragraph 14 within or near Townships 39, 40 or 41.

31. From a point on the line mentioned in paragraph 25 between the East limit of Range 24, west of the Third Meridian, and the West limit of Range 2, west of the Fourth Meridian, thence in a north-westerly and westerly direction to a point on the Western division of the Grand Trunk Pacific Railway within or near Ranges 21, 22, 23, 24 or 25.

32. From a point on the Western division of the Grand Trunk Pacific Railway between the east limit of Range 21 and west limit of Range 25, west of the Fourth Meridian, thence in a southerly and southeasterly direction to a connection with the line mentioned in paragraph 14 within or near Townships 46, 47 or 48.

33. From a point on the Western division of the Grand Trunk Pacific Railway between the east limit of Range 27, and west limit of Range 33, west of the First Meridian, thence in a generally westerly direction to a point on the line mentioned in paragraph 11, within or near Townships 18, 19, 20 or 21.

34. From a point on the line mentioned in paragraph 11 between the East limit of Range 12, and the West limit of Range 16, west of the Second Meridian, thence in a southerly direction to the International Boundary between the East limit of Range 10 and the West limit of Range 18, west of the Second Meridian;

And for authority to issue bonds in respect of each of the said lines of railway to the extent of \$30,000.00 per mile.

W. H. BIGGAR,

Solicitor for applicants.

Dated at Montreal, this 3rd day of November, A.D. 1910.

her wheel and other equipment, and is partly submerged.

It is reported, from Winnipeg, that the Department of Marine is undertaking the survey of the water front there, on which it may base plans for the construction of docks and other shipping facilities. The steamboat Victoria is stated to be engaged on the work, after having carried out considerable survey work during the summer, along both shores of Lake Winnipeg. The mouth of the Berens, Black and Icelandic Rivers have been surveyed and charted, and extensive hydrographic notes taken regarding shoals, currents, etc. It is also stated that a larger and more up to date vessel may be provided for the service by next year.

The report of the Public Works Department for the last fiscal year, in referring to the surveys which have been undertaken, with a view to the estab-

lishment of a navigable waterway from Winnipeg to Edmonton, by way of the North Saskatchewan River, states that such development would make Canada unique in the matter of inland water transportation. The total distance from the sea, on the inland waters would be 3,300 miles, with only one break, between Fort William and Winnipeg, about 400 miles. The work has been suspended for the winter, and while the interim reports are said to show that the route is practicable, no details have been worked out.

B.C. and Pacific Coast Marine.

The C.P.R. has placed an order for the construction, at Wallsend-on-Tyne, Eng., of another steamship, similar to its s.s. Princess Adelaide, for its Pacific Coast service.

The C.P.R. Pacific Coast s.s. Princess Adelaide is expected to arrive at Vancouver, from Great Britain, about Dec. 24, after which she will be placed on the Vancouver, Victoria and Seattle route.

The ferry boat Vedder, which has been operating between Chilliwack and Harrison, for several years, is reported to have been taken off the service, owing to lack of business occasioned by the opening of the British Columbia Electric Ry. Fraser Valley branch.

The G.T.P. Steamship Co. is reported to have arranged with Capt. S. F. Mackenzie, who is now in Great Britain, to purchase a suitable steamer, of about 500 tons register, for service between Prince Rupert, Queen Charlotte Islands and Stewart.

Press reports from New Westminster state that the C.P.R. has commenced construction of a new pier at shed 2.

The Purchasing Agents' Guide

To the Manufacturers of and Dealers in Steam and Electric Railway, Marine, Grain Elevator, Express, Telegraph, Telephone and Contractors' Supplies, &c.

- Accumulators, Electric**
Tate Accumulator Co. of Canada, Toronto
- Aerated Waters**
E. L. DrewryWinnipeg.
- Air Brakes and Fittings**
Allis-Chalmers-Bullock Ltd.Montreal.
Canadian Westinghouse Co. Hamilton, Ont.
- Ales**
E. L. DrewryWinnipeg.
- Alloys**
American Vanadium Co....Pittsburg, Pa.
- Angle Bars**
Hamilton Steel & Iron Co. Hamilton, Ont.
Montreal Rolling Mills Co.....Montreal.
Nova Scotia S. & C. Co., New Glasgow, N.S.
- Anti Rail Creepers**
The Holden Co., Ltd.....Montreal.
- Automobiles**
Preston Car & Coach Co...Preston, Ont.
- Axes**
James Smart Mfg. Co....Brockville, Ont.
- Axles**
Canadian Car & Foundry Co....Montreal.
Hamilton S. & I. Co., Ltd., Hamilton, Ont.
James Hutton & Co.Montreal.
Nova Scotia S. & C. Co., New Glasgow, N.S.
Pittsburg Forge & Iron Co., Pittsburg, Pa.
Jas. W. Pyke & Co.....Montreal.
- Babbit Metal**
Tallman Brass & Metal Co., Hamilton, Ont.
- Beacons**
International Marine Signal Co....Ottawa.
- Bearings, Side**
Canadian Car & Foundry Co....Montreal.
Chicago Railway Equipment Co..Chicago.
- Blankets and Bedding**
The Hudson's Bay Co.
- Boilers**
Babcock & Wilcox, Ltd.....Montreal.
Polson Iron Works, Ltd.....Toronto.
Robb Engineering Co., Ltd..Amherst, N.S.
- Boilers, Portable**
Babcock & Wilcox, Ltd.....Montreal.
Polson Iron Works, Ltd.....Toronto.
Robb Engineering Co., Ltd..Amherst, N.S.
- Boilers, Stationary and Marine**
Babcock & Wilcox, Ltd.....Montreal.
John Inglis Co., Ltd.Toronto.
I. Matheson & Co....New Glasgow, N.S.
Polson Iron Works, Ltd.....Toronto.
Robb Engineering Co., Ltd..Amherst, N.S.
- Boiler Staybolt Iron or Steel Bars**
Falls Hollow Staybolt Co..Cuyahoga Falls.
- Boilers, Steam**
Babcock & Wilcox, Ltd.....Montreal.
John Inglis Co., Ltd.Toronto.
Polson Iron Works, Ltd.....Toronto.
Robb Engineering Co., Ltd..Amherst, N.S.
- Boilers, Water Tube**
Babcock & Wilcox, Ltd.....Montreal.
John Inglis Co., Ltd.Toronto.
Polson Iron Works, Ltd.....Toronto.
Robb Engineering Co., Ltd..Amherst, N.S.
- Boilers**
Canadian Car & Foundry Co....Montreal.
Canadian Ry. Equipment Co., Welland, Ont.
- Bolts, Bridge**
Montreal Rolling Mills Co.....Montreal.
Pittsburg Forge & Iron Co., Pittsburg, Pa.

- Bolts, Track**
Montreal Rolling Mills Co.....Montreal.
Nova Scotia S. & C. Co., New Glasgow, N.S.
Pittsburg Forge & Iron Co., Pittsburg, Pa.
- Borers, Car Wheel**
John Bertram & Sons Co....Dundas, Ont.
- Braces, Cross Arm**
Montreal Rolling Mills Co.....Montreal.
- Brake Beams**
Canadian Car & Foundry Co....Montreal.
Chicago Railway Equipment Co..Chicago.
- Brake Shoes**
Am. Brake Shoe & F'dry Co., Mahwah, N.J.
Canada Iron Corporation, Ltd..Montreal.
The Holden Co., Ltd.....Montreal.
- Brake Shoes, Locomotive Driver**
Am. Brake Shoe & F'dry Co., Mahwah, N.J.
Canada Iron Corporation, Ltd..Montreal.
Railway Materials Co.New York.
- Brass and Copper Cloth**
The B. Greening Wire Co..Hamilton, Ont.
- Brasses, Car**
T. McAvity & SonsSt. John, N.B.
- Bridge Numbers**
Acton Burrows, LimitedToronto.
- Bridges**
Canadian Bridge Co....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
- Bronze**
American Vanadium Co....Pittsburg, Pa.
- Buckets, Coal, Ore and Concrete**
M. Beatty & Sons, Ltd....Welland, Ont.
Brown Hoisting Machinery Co., Cleveland.
Williams & Wilson, LtdMontreal.
- Buildings, Steel**
Canadian Bridge Co....Walkerville, Ont.
Dominion Bridge Co.....Montreal.
- Bumping Posts**
The Holden Co., Ltd.....Montreal.
McCord & Co.Chicago, Ill.
- Buoy Lighting**
Safety Car Heat. & Light. Co..New York.
- Buoys**
International Marine Signal Co....Ottawa.
- Cables, Electric and Feeder**
Chapman & Walker, Ltd.....Toronto.
E. F. Phillips Electrical Works.Montreal.
The Wire and Cable Co.....Montreal.
- Car Furnishings**
Guilford S. Wood.....Chicago, Ill.
- Car Loaders, Box**
Mussens, Ltd.Montreal.
- Car Movers**
F. H. Hopkins & Co.....Montreal.
Mussens, Ltd.Montreal.
- Cars**
Crossen Car Mfg. Co.....Cobourg, Ont.
Canadian Car & Foundry Co....Montreal.
J. T. GardnerChicago, Ill.
Hart-Otis Car Co., Ltd.....Montreal.
The Males Co.,Cincinnati, O.
Ottawa Car Co., Ltd.....Ottawa.
Pay-As-You-Enter Car Co....New York.
Preston Car and Coach Co., Ltd..Preston.
Russel Wheel & Fdry Co..Detroit, Mich.
Silliker Car Co., Ltd.....Halifax, N.S.
- Cars, Logging**
Peteler Car Co.Minneapolis, Minn.
Russel Wheel & Fdry Co..Detroit, Mich.

- Castings**
Edgar Allen & Co., Ltd.Montreal.
American Vanadium Co....Pittsburg, Pa.
Canadian Car & Foundry Co....Montreal.
Crossen Car Mfg. Co.....Cobourg, Ont.
John Inglis Co., Ltd.Toronto.
Lumen Bearing Co....West Toronto, Ont.
I. Matheson & Co....New Glasgow, N.S.
Russel Wheel & Fdry Co..Detroit, Mich.
Standard Steel Works Co..Philadelphia, Pa.
- Castings, Brass**
Canadian Bronze Co.Montreal.
Canada Iron Corporation, Ltd..Montreal.
Kerr Engine Co.Walkerville, Ont.
Lumen Bearing Co....West Toronto, Ont.
I. Matheson & Co....New Glasgow, N.S.
Tallman Brass & Metal Co., Ltd.Hamilton.
- Castings, Car**
Edgar Allen & Co., Ltd.Montreal.
Am. Brake Shoe & F'dry Co., Mahwah, N.J.
Canada Iron Corporation, Ltd..Montreal.
Russel Wheel & Fdry.. Co..Detroit, Mich.
- Castings, Iron**
Allis-Chalmers-Bullock Ltd.Montreal.
Canada Iron Corporation, Ltd..Montreal.
Kerr Engine Co....Walkerville, Ont.
Russel Wheel & Fdry.. Co..Detroit, Mich.
- Castings, Iron and Steel**
Edgar Allen & Co., Ltd.Montreal.
Am. Brake Shoe & F'dry Co., Mahwah, N.J.
- Castings, Malleable**
Galt Malleable Iron Co.....Galt, Ont.
Taylor & ArnoldMontreal.
- Castings, Manganese Steel**
Edgar Allen & Co., Ltd.Montreal.
Lumen Bearing Co....West Toronto, Ont.
Montreal Steel Works, Ltd.....Montreal.
- Castings, Steel**
Edgar Allen & Co., Ltd.Montreal.
American Vanadium Co....Pittsburg, Pa.
Canada Iron Corporation, Ltd..Montreal.
W. Kennedy & Sons, Ltd., Owen So'd, Ont.
Montreal Steel WorksMontreal.
- Chains**
B. J. Coghlin & Co.....Montreal.
- Chisels for Pneumatic Chipping Hammers**
Edgar Allen & Co., Ltd.Montreal.
Cleveland Punch & Shear Wks., Cleveland.
- Closets, Car**
Duner Co.Chicago, Ill.
- Coal**
Nova Scotia S. & C. Co., New Glasgow, N.S.
- Compressors, Air**
Allis-Chalmers-Bullock Ltd.Montreal.
The American Well Works...Aurora, Ill.
Canadian Rand Co.Montreal.
The Holden Co., Ltd.....Montreal.
John Inglis Co., Ltd.Toronto.
Vandeleur & NicholsToronto.
- Concrete Mixers and Rock Crushers**
Edgar Allen & Co., Ltd.Montreal.
F. H. Hopkins & Co.....Montreal.
Mussens, LimitedMontreal.
- Contractors' Supplies**
F. H. Hopkins & Co.....Montreal.
Rice Lewis & Son.....Toronto.
Peteler Car Co.Minneapolis, Minn.
Russel Wheel & Fdry.. Co..Detroit, Mich.
Williams & Wilson, LtdMontreal.
- Conveyors, Coal and Ash**
Babcock & Wilcox, Ltd.....Montreal.
Williams & Wilson, LtdMontreal.
- Copying Presses**
James Smart Mfg. Co....Brockville, Ont.

The new pier, it is stated, will be about 800 ft. long, and at the same angle as pier A. Plans are said to be under consideration for an overhead bridge across the tracks to the docks.

W. Erwin, lightkeeper at Point Atkinson, has been awarded the Imperial service medal for long and meritorious service.

The Department of Marine will receive tenders to Jan. 3, 1911, for the construction of a buoy depot at Prince Rupert, B.C., including the erection of a re-inforced concrete wharf timber approach trestle, power house with chimney, buoy shed, stores, offices and dwellings, with installations of drainage and water systems.

The Yukon Transportation Co., Ltd., has been incorporated under the Dominion Companies Act, with a capital of \$50,000, and offices at Windsor, Ont., to carry on a general transportation business. The provisional directors are: F. H. Asam, Dawson, Yukon; J. G. France, Detroit, Mich.; A. R., and N. A. Bartlet, W. W. LaMarsh, Windsor, Ont.

The Department of Marine has issued a report on the tide tables of the Pacific Coast, including the Fuca Strait, the Strait of Georgia, and the Northern Coast, with data for slack water in the navigable passes and narrows, and information on currents, for 1911. This is the eleventh annual issue, and is compiled by Dr. W. Bell Dawson, Superintendent of Tidal Surveys.

The Pacific Towing and Contracting Co., Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$10,000 and office at Vancouver, to carry on the general business of sand merchants, and that of towing, wharfingers and warehousemen, shipping and general agents, and in connection therewith to own and operate steam and other vessels.

The G.T.P. Steamship Co.'s s.s. Prince George has been taken off her route for a short time, and has been taken to Victoria for overhauling. When this is completed she will take the place of the s.s. Prince Rupert, which, in turn, will be overhauled, in readiness for her trip to the Hawaiian Islands in Feb., 1911. A weekly service only will be operated to the north during the winter.

The Imperial Fisheries, Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$150,000, to take over certain businesses in Vancouver and Nanaimo; to carry on a general fisheries business, and in connection therewith to own and operate steam and other vessels, wharves, docks, warehouses, etc., and to act as general carriers by land and water.

The Evans Coleman Wharf Co., Ltd., has been incorporated under the B. C. Companies Act, with a capital of \$10,000, to carry on the business of wharfingers, warehousemen, stevedores and shipping agents, and in connection therewith to own and operate steam and other vessels of every description, and to make traffic arrangements with other steamboat, railway or other transportation companies.

The Sechelt Steamship Co. commenced a weekly service between Victoria and New Westminster, Nov. 9, with the steamboat B.C.P., leaving New Westminster every Thursday. The B.C.P. was built at Vancouver in 1908, for the Packers' Steamship Co., and is a screw driven vessel, with engine of 22 n.h.p. Her dimensions are:—Length, 80.5 ft.; breadth, 18 ft.; depth, 7.8 ft.; tonnage, 121 gross, 83 register.

In connection with the proposed dry dock, which the G.T.P.R. may build at Prince Rupert, C. M. Hays, President, in a letter to the Prince Rupert board of trade, Nov. 3, said that it was subject to agreement with the Government, and

as soon as arrangements could be made work could be started and prosecuted to completion. The city would be asked to grant exemption from taxation for this property on the same basis as other G.T.P.R. property.

The Kingcome Navigation Co. Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$10,000, to take over the steamboat Teign, registered at Vancouver; to own and operate steam and other vessels, and to carry on a general carrying and navigation business. The Teign was built at Vancouver in 1909, and is screw driven, with engine of 3 n.h.p. Her dimensions are, length, 35.1 ft., breadth 9.4 ft., depth 3.3 ft., tonnage, 13 gross, 9 register.

Foley, Welch and Stewart's fleet of steamboats have been withdrawn from the Skeena River for the winter, and have been hauled out on the company's ways at Digby Island, where they will remain until the spring. The five boats, Distributor, Omineca, Operator, Conveyor and Skeena, have been operated throughout the season without serious accident, and have chiefly been engaged in conveying material and supplies to points on the Skeena River for G.T.P.R. construction.

The Hamlin Tug Boat Co., Ltd., has been incorporated under the B.C. Companies Act, with a capital of \$20,000, to purchase the steamboat Hamlin, to carry on the business of wharfingers, warehousemen, and general shipping agents, and to own and operate steam and other vessels. The steamboat Hamlin is a paddle wheel steamer, built in Vancouver in 1898, and is equipped with engine of 17 h.p. Her dimensions are, length, 146.2 ft.; breadth, 30.8 ft.; depth 4.6 ft.; tonnage, 515 gross, 323 register.

The appeal of the defendant in the case of the North Vancouver Ferry Co. v. Braim, against the decision of the lower court, granting an injunction to restrain defendant from engaging in a competitive business, came before the Court of Appeal, Nov. 3. The defendant claimed that the company did not have a valid franchise over the waters of Burrard Inlet from Vancouver to North Vancouver, on the ground that the license was granted for 15 years, instead of five only, and that it should have been voted on by the taxpayers.

Press reports from Victoria, recently stated that the acquirement of the Pacific Whaling Co., by interests connected with the Canadian Northern Ry., would be completed by Dec. 1, the amount involved approximating \$1,000,000. It is also stated that whaling operations will be extended northerly, and that a station will be built at the mouth of the Mackenzie River, which will be the base of two whaling steamers. The name of the recently incorporated Canadian Northern Fisheries, Ltd., has been changed by supplementary letters patent, to Canadian North Pacific Fisheries Ltd.

H. A. Bayfield, dredge superintendent for British Columbia, on his return to New Westminster from Ottawa recently, announced that the Dominion Government had ordered a steel elevator dredge for use in widening the Second Narrows, a steel tug boat for use in dredging work in Victoria harbor, and a pair of rockbreakers for submarine rock excavation in Victoria harbor. The dredge will have a capacity of 1,000 cubic yards an hour, and is being built in Scotland, as stated in our last issue. A contract is reported to have been awarded to Macdougall and Jenkins, North Vancouver, for building the steel tug boat, which, it is stated, will be 90 ft. long by 20 ft. beam, equipped with engines of 500 i.h.p. The rockbreakers are reported to be now en route to Vancouver from Scotland.

THE CANADIAN NORTHERN QUEBEC RAILWAY COMPANY.

NOTICE is hereby given that the Canadian Northern Quebec Railway Company will apply to the Parliament of Canada, at its next session, for an Act, authorizing it to construct the following lines of railway:—

(a) From Rawdon, northerly to a junction with the National Transcontinental Railway;

(b) From St. Jerome to St. Eustache.
GERARD RUEL,
Chief Solicitor.

Dated at Toronto, this 16th day of November, 1910.

NOTICE is hereby given that an application will be made on behalf of the New Brunswick Southern Railway Company to the Board of Railway Commissioners for Canada at the expiration of four weeks from the date of this notice or as soon thereafter as the application can be heard, for a recommendation to the Governor in Council for the sanction of a lease of the railway of the New Brunswick Southern Railway Company to the Canadian Pacific Railway Company for a term of nine hundred and ninety-nine years from the first day of January, nineteen hundred and eleven upon the terms and conditions therein mentioned.

This notice is given pursuant to the provisions of section 361 of The Railway Act.

OSCAR RING,
Secretary, New Brunswick
Southern Ry. Co.

Dated at St. John, N.B., the 16th day of November, 1910.

NOTICE is hereby given that an application will be made on behalf of the Kootenay Central Railway Company to the Board of Railway Commissioners for Canada at the expiration of four weeks from the date of this notice or as soon thereafter as the application can be heard, for a recommendation to the Governor in Council for the sanction of a lease of the railway of the Kootenay Central Railway Company to the Canadian Pacific Railway Company for a term of nine hundred and ninety-nine years from the first day of January, nineteen hundred and eleven, upon the terms and conditions therein mentioned.

This notice is given pursuant to the provisions of section 361 of The Railway Act.

H. C. OSWALD,
Secretary, Kootenay Central Ry. Co.
Dated at Montreal the 16th day November, 1910.

NOTICE is hereby given that an application will be made on behalf of the St. Maurice Valley Railway Company to the Board of Railway Commissioners for Canada at the expiration of four weeks from the date of this notice or as soon thereafter as the application can be heard, for a recommendation to the Governor in Council for the sanction of a lease of the railway of the St. Maurice Valley Railway Company to the Canadian Pacific Railway Company for a term of nine hundred and ninety-nine years from the first day of January, nineteen hundred and eleven, upon the terms, and conditions therein mentioned.

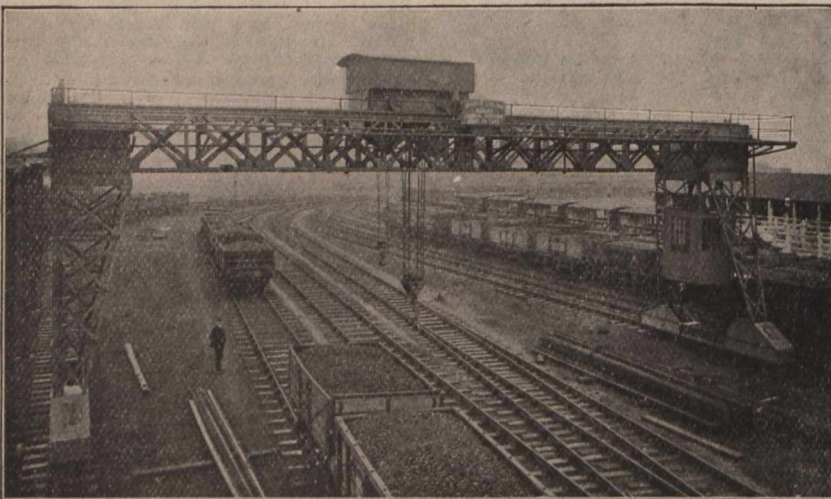
This notice is given pursuant to the provisions of Section 361 of The Railway Act.

C. C. PANGMAN,
Secretary, St. Maurice Valley Ry. Co.
Dated at Montreal, the 16th day of November.

Capt. S. F. Mackenzie, of the Mackenzie Steamship Co., was entertained to dinner by a number of business men at Vancouver recently, and presented with a gold locket, on his leaving the Pacific coast for a prolonged holiday in Scotland.

- Couplers, Car and Locomotive**
 Canadian Car & Foundry Co...Montreal.
 McConway & Torley Co...Pittsburg, Pa.
 Montreal Steel Works, Ltd...Montreal.
 Taylor & ArnoldMontreal.
- Couplers, Steam**
 Consolidated Car Heating Co., Albany, N.Y.
- Cranes**
 Brown Hoisting Machinery Co..Cleveland.
 Northern Engineering Wks..Detroit, Mich.
 Williams & Wilson, LtdMontreal.
- Cranes, Electric**
 Babcock & WilcoxMontreal.
 Dominion Bridge Co.Montreal.
 Mussels, LimitedMontreal.
 Northern Engineering Wks, Detroit, Mich.
- Cranes, Locomotive**
 The Males Co., Cincinnati, O.
- Cranes, Wrecking**
 Mussels, LimitedMontreal.
- Crowbars**
 B. J. Coghlin & Co.....Montreal.
- Curtains and Fixtures, Car**
 The Holden Co., Ltd.....Montreal.
 Preston Car & Coach Co..Preston, Ont.
- Cuts**
 Acton Burrows, LimitedToronto.
- Cylinders**
 American Vanadium Co...Pittsburg, Pa.
- Derricks**
 M. Beatty & SonsWelland, Ont.
 Mussels, LimitedMontreal.
- Diaphragms, Vestibule**
 Guilford S. Wood.....Chicago, Ill.
- Dies**
 Butterfield & Co.Rock Island, Que.
 A. B. Jardine & Co.Hespeler, Ont.
- Ditchers**
 M. Beatty & SonsWelland, Ont.
- Diving Outfits**
 John DateMontreal.
 Mussels, LimitedMontreal.
- Doors, Steel Rolling**
 Mussels, LimitedMontreal.
- Door Signs**
 Acton Burrows, LimitedToronto.
- Draft Gear**
 The Holden Co., Ltd.....Montreal.
 McCord & Co.Chicago, Ill.
 Standard Coupler Co.....New York City.
 T. H. Symington & Co.....Baltimore, Md.
- Draughtsmen's Supplies**
 John A. Hart & CoWinnipeg.
- Dredges**
 M. Beatty & SonsWelland, Ont.
 Polson Iron Works, Ltd.....Toronto.
- Drills, Air**
 Canadian Rand Co.....Montreal.
- Drills, Flat Twisted**
 Cleveland Punch & Shear Wks., Cleveland.
- Dry Goods**
 The Hudson's Bay Co.....
- Dump Cars, Contractors'**
 F. H. Hopkins & Co.....Montreal.
 Peteler Car Co.Minneapolis, Minn.
 Western Wheeled Scraper Co..Aurora, Ill.
- Dump Cars, Hand**
 Meaford Wheelbarrow Co., Ltd., Meaf'd, Ont.
- Dynamos**
 Northern Electric & Mfg. Co....Montreal.
 Vandeleur & NicholsToronto.
- Dynamo and Electric Castings**
 Am. Brake Shoe & F'dry Co., Mahwah, N.J.
- Economizers**
 Babcock & Wilcox, Ltd.....Montreal.
- Electric Apparatus**
 Allis-Chalmers-Bullock Ltd.Montreal.
 Chapman & Walker, Ltd.....Toronto.
 Northern Electric & Mfg. Co....Montreal.
 Vandeleur & NicholsToronto.
- Electric Car Route Signs**
 Acton Burrows, LimitedToronto.
 Preston Car & Coach Co..Preston, Ont.
- Electric Light Plant**
 Allis-Chalmers-Bullock Ltd.Montreal.
- Elevators, Grain**
 John S. Metcalf Co.Chicago, Ill.
- Enameled Iron Signs**
 Acton Burrows, LimitedToronto.
- Engines, Automatic**
 Robb Engineering Co., Ltd..Amherst, N.S.
 Polson Iron Works, Ltd.....Toronto.
 Russel Wheel & Fdry Co..Detroit, Mich.
- Engines, Corliss**
 Allis-Chalmers-Bullock Ltd.Montreal.
 John Inglis Co., Ltd.Toronto.
 Robb Engineering Co., Ltd..Amherst, N.S.
- Engines, Gas**
 Allis-Chalmers-Bullock Ltd.Montreal.
 Vandeleur & NicholsToronto.
 Williams & Wilson, LtdMontreal.
- Engines, Gasolene**
 Canadian Fairbanks Co., Ltd..Montreal.
 Ontario Wind Engine & Pump Co. Toronto.
 Vandeleur & NicholsToronto.
- Engines, Hoisting**
 Allis-Chalmers-Bullock Ltd.Montreal.
 M. Beatty & SonsWelland, Ont.
 John Inglis Co., Ltd.Toronto.
 I. Matheson & Co.....New Glasgow, N.S.
 Polson Iron Works, Ltd.....Toronto.
 Russell Wheel & Fdry. Co..Detroit, Mich.
 Williams & Wilson, LtdMontreal.
- Engines, Pumping**
 John Inglis Co., Ltd.Toronto.
- Engines, Stationary and Marine**
 John Inglis Co., Ltd.Toronto.
 I. Matheson & Co.....New Glasgow, N.S.
 Polson Iron Works, Ltd.....Toronto.
 Robb Engineering Co., Ltd..Amherst, N.S.
- Engines, Steam**
 Allis-Chalmers-Bullock Ltd.Montreal.
 Vandeleur & NicholsToronto.
- Explosives**
 Standard Explosives, Limited ..Montreal.
- Express Office Signs**
 Acton Burrows, LimitedToronto.
- Fencing**
 Owen Sound Wire Fence Co., Ltd., O'n S'd.
- Fenders for Electric Cars**
 J. M. Moorhouse.....Winnipeg.
- Ferro-Vanadium**
 American Vanadium Co. ..Pittsburg, Pa.
- Fire Appliances**
 Missouri Lamp & Mfg. Co., St. Louis, Mo.
- Flags**
 The Hudson's Bay Co.....
- Flour**
 The Hudson's Bay Co.....
- Forgings**
 Edgar Allen & Co., Ltd.Montreal.
 American Vanadium Co. ..Pittsburg, Pa.
 Canadian Car & Foundry Co..Montreal.
 Cleveland City Forge & Iron Co., Cleveland.
 Crossen Car Mfg. Co.....Cobourg, Ont.
 Hamilton Steel & Iron Co., Ltd., Hamilton.
 Nova Scotia S. & C. Co., New Glasgow, N.S.
 Pittsburg Forge & Iron Co., Pittsburg, Pa.
 Standard Steel Works Co., Philadelphia, Pa.
- Foundry Appliances**
 Goldschmidt Thermit Co.Toronto.
 Ont. Wind Eng. & Pump Co., Ltd., Toronto.
- Frames, Steel for Cars**
 Canadian Ry. Equip't Co., Welland, Ont.
- Frogs**
 Canadian Ramapo Iron Wks.Niagara Falls.
 Peteler Car Co.Minneapolis, Minn.
- Furnaces, Corrugated**
 Continental Iron Works...Brooklyn, N.Y.
- Furnaces, Oil**
 Railway Materials Co.New York.
- Furnaces, Shop**
 Railway Materials Co.New York.
- Fuse Batteries**
 Standard Explosives Limited...Montreal.
- Fuse Detonators**
 Standard Explosives Limited...Montreal.
- Fuses, Electric**
 Standard Explosives Limited...Montreal.
- Gaskets**
 Franklin Mfg. Co.....Franklin, Pa.
 The Holden Co., Ltd.....Montreal.
 McCord & Co.Chicago, Ill.
- Gates**
 Owen Sound Wire Fence Co., Ltd., O'n S'd.
- Gates, Crossing**
 The N. L. Piper Ry. Supply Co..Toronto.
- Gauges, Locomotive**
 Taylor & ArnoldMontreal.
 Utica Steam Gauge Co.....New York.
- Gears**
 American Vanadium Co. ..Pittsburg, Pa.
- Generators, Electric**
 Northern Electric & Mfg. Co....Montreal.
- Grates, Shaking**
 Babcock & Wilcox, Ltd.....Montreal.
 Polson Iron Works, Ltd.....Toronto.
 Vandeleur & NicholsToronto.
- Groceries**
 The Hudson's Bay Co.....
- Hammers, Cast Steel**
 American Brake Shoe & Fdry Co.Mahwah.
 James Smart Mfg. Co.....Brockville, Ont.
- Handcars**
 Canadian Fairbanks Co., Ltd..Montreal.
 Crossen Car Mfg. Co.....Cobourg, Ont.
 F. H. Hopkins & Co.....Montreal.
 Mussels, LimitedMontreal.
 Rice Lewis & Son.....Toronto.
- Hardware**
 The Hudson's Bay Co.....
 Rice Lewis & Son.....Toronto.
- Headlights**
 Commercial Acetylene Co.....Toronto.
 The N. L. Piper Ry. Supply Co..Toronto.
 Pyle National Elec. Headlight Co..Chicago.
- Headlinings**
 Crossen Car Mfg. Co.....Cobourg, Ont.
- Heaters, Feedwater**
 Robb Engineering Co., Ltd..Amherst, N.S.
- Heaters, Oil-burning**
 Tate, Jones & Co. Inc. Pittsburg, Pa.
- Heating, Car**
 Canadian Gold Car H'g & L'g Co..Montreal.
 Consolidated Car Heating Co., Albany, N.Y.
 Safety Car Heating & L'ting Co.New York.
- Holts, Pneumatic**
 Taylor & ArnoldMontreal.
- Hollow Staybolt Iron and Steel Bars**
 Edgar Allen & Co., Ltd. Montreal.
- Hoppers, Car, Wet or Dry**
 Duner Co.Chicago, Ill.
- Hose, Air Brake and Steam**
 Guilford S. Wood.....Chicago, Ill.
- Hydrants**
 Canadian Fairbanks Co., Ltd..Montreal.
 Kerr Engine Co.....Walkerville, Ont.
- Illustrations**
 Acton Burrows, Limited.....Toronto
- Injectors**
 T. McAvity & SonsSt. John, N.B.
- Inspections**
 R. W. Hunt & Co.....Montreal.
- Insurance, Accident**
 Can. Casualty & Boiler Ins. Co...Toronto.
 Canadian Ry. Accident Ins. Co...Ottawa.
 Imp. Guarantee & Acc. Ins. Co..Toronto.
 London Guar. & Accident Co., Ltd.Toronto.
- Insurance, Boiler**
 Can. Casualty & Boiler Ins. Co..Toronto.
- Interlocking Plant and Signals**
 Montreal Steel Works, Ltd.....Montreal.
 Railway Signal Co. of Canada...Montreal.
 Saxby & Farmer, Ltd.....Montreal.
- Iron, Pig**
 Nova Scotia S. & C. Co., New Glasgow, N.S.
- Iron Signs**
 Acton Burrows, Limited.....Toronto.
- Iron Staybolt Bars**
 Falls Hollow Staybolt Co.Cuyahoga Falls.
- Jacks**
 Canadian Fairbanks Co., Ltd..Montreal.
 H. & E. Lifting Jack Co..Waterville, Que.
 F. H. Hopkins & Co., Ltd.....Montreal.
 Montreal Steel Works, Ltd.....Montreal.
 Mussels, LimitedMontreal.
 A. O. NortonCoaticook, Que.
 James Smart Mfg. Co...Brockville, Ont.
 Williams & Wilson, LtdMontreal.
- Japans**
 The Dougal Varnish Co., Ltd..Montreal.
- Journal Bearings**
 Canadian Bronze Co.Montreal.
 Crossen Car Mfg. Co.Cobourg, Ont.
 Kerr Engine Co.Walkerville, Ont.
 Jas. W. Pyke & Co.Montreal.
- Journal Boxes**
 The Holden Co., Ltd.....Montreal.
 McCord & Co.Chicago, Ill.
- Lager Beer, &c.**
 E. L. DrewryWinnipeg.
- Lagging and Covering, Locomotive**
 Franklin Mfg. Co.Franklin, Pa.
 Taylor & ArnoldMontreal.
- Lamps, Arc**
 Northern Electric & Mfg. Co....Montreal.
- Lamps, Incandescent**
 Canadian Westinghouse Co..Hamilton, Ont.
- Lamps and Lanterns**
 The Hudson's Bay Co.....
 The Hiram L. Piper Co.....Montreal.
 The N. L. Piper Ry. Supply Co..Toronto.
- Lamps, Switch**
 The N. L. Piper Ry. Supply Co..Toronto.
- Lathes**
 John Bertram & Sons Co....Dundas, Ont.
 Williams & Wilson, LtdMontreal.
- Lighting, Car**
 Canadian Gold Car H'g & L'g Co.Montreal.
 Safety Car, Heating & L'ting Co.New York.
- Lights, Contractors' and Wrecking**
 F. H. Hopkins & Co., Ltd.....Montreal.
 Mussels, LimitedMontreal.
- Locomotives, Compressed Air**
 Baldwin Locomotive Works..Philadelphia.
 Canadian Locomotive Co..Kingston, Ont.
 International Marine Signal Co...Ottawa.
 Montreal Locomotive W'ks (Ltd.)..Montreal.
- Locomotives, Electric**
 Baldwin Locomotive Works..Philadelphia.
 Montreal Locomotive W'ks (Ltd.)..Montreal.
- Locomotives, Logging**
 Baldwin Locomotive Works..Philadelphia.
 Canadian Locomotive Co..Kingston, Ont.
- Locomotives, Rack**
 Baldwin Locomotive Works...Philadelphia.
 Canadian Locomotive Co..Kingston, Ont.
 Montreal Locomotive Works....Montreal.
- Locomotives, Steam**
 Baldwin Locomotive Works...Philadelphia.
 Canadian Fairbanks Co., Ltd..Montreal.
 Canadian Locomotive Co. ..Kingston, Ont.
 J. T. GardnerChicago, Ill.
 The Males Co., Cincinnati, O.
 Montreal Locomotive Works....Montreal.
 Vulcan Iron WorksWilkesbarre, Pa.
- Lorries, Tracklaying**
 Crossen Car Mfg. Co.....Cobourg, Ont.
 F. H. Hopkins & Co.....Montreal.
- Lubricators**
 McCord & Co.Chicago, Ill.
 Taylor & ArnoldMontreal.

- Lumber
 - Parry Sound Lumber Co.Toronto.
- Machines and Plant, Contractors'
 - M. Beatty & SonsWelland, Ont.
 - Canadian Fairbanks Co., Ltd...Montreal.
 - J. T. GardnerChicago, Ill.
 - F. H. Hopkins & Co.Montreal.
 - Mussens, LimitedMontreal.
- Machines and Tools, Prospecting
 - The American Well Works...Aurora, Ill.
- Machines and Tools, Well Drilling
 - The American Well Works...Aurora, Ill.
- Machines, Boring and Turning
 - John Bertram & Sons Co....Dundas, Ont.
- Machines, Car Shop
 - John Bertram & Sons Co., Ltd.Dundas, Ont.
 - Cincinnati Punch & Shear Co., Cincinnati.
 - Greenlee Bros. & Co.Chicago, Ill.
- Machines, Cement
 - James W. Pyke & Co.Montreal.
- Machines, Drilling
 - John Bertram & Sons Co. ..Dundas, Ont.
- Machines, Earth and Stone Handling
 - Western Wheeled Scraper Co...Aurora, Ill.
- Machines, Hoisting
 - Brown Hoisting Machinery Co..Cleveland.
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 - Russel Wheel & Fdry. Co..Detroit, Mich.
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 - Long & Allstatter Co. Hamilton, Ohio.
- Machines, Slotting
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- Machines, Straightening
 - Cleveland Punch & Shear Wks.Cleveland.
- Machines, Tire Welding
 - Long & Allstatter Co. Hamilton, Ohio.
- Machines, Track
 - Greenlee Bros. & Co.Chicago, Ill.
- Machines, Tracklaying
 - F. H. Hopkins & Co.Montreal.
- Machines, Wood and Iron Working
 - Canadian Fairbanks Co., Ltd...Montreal.
 - Williams & Wilson, LtdMontreal.
- Machine Tools
 - John Bertram & Sons Co. ..Dundas, Ont.
 - Pratt & Whitney Co.Dundas, Ont.
- Manhole Frames and Covers
 - American Brake Shoe & F'dry Co.Mahwah.
 - Canada Iron Corporation, Ltd...Montreal.
- Marine Repairs
 - Goldschmidt Thermit Co.Toronto.
- Marine Supplies
 - Rice Lewis & Son.....Toronto.
- Metal, Babbit
 - Tallman Brass & Metal Co., Hamilton, Ont.
- Metals
 - Goldschmidt Thermit Co.Toronto.
- Metal Work, Structural
 - Canadian Bridge Co....Walkerville, Ont.
 - Dominion Bridge Co.....Montreal.
 - Montreal Locomotive Works.....Montreal.
 - Jas. W. Pyke & Co.Montreal.
- Milepost Numbers
 - Acton Burrows, Limited.....Toronto.
- Motors
 - Canadian Fairbanks Co., Ltd...Montreal.
 - McCord & Co.Chicago, Ill.
- Motors, Electric
 - Allis-Chalmers-Bullock Ltd.Montreal.
 - Canadian Crocker-Wheeler Co.Montreal.
 - Chapman & Walker, Ltd.....Toronto.
 - Northern Electric & Mfg. Co.....Montreal.
 - Vandeleur & NicholsToronto.
- Motor Generator Sets
 - Allis-Chalmers-Bullock Ltd.Montreal.
 - Chapman & Walker, Ltd.....Toronto.
 - Vandeleur & NicholsToronto.
- Motors, Turntable
 - Taylor & ArnoldMontreal.
- Nickel
 - The Orford Copper Co.New York.
- Nickel for Nickel Steel
 - The Orford Copper Co.New York.
- Numbers
 - Acton Burrows, LimitedToronto.
- Nut Locks
 - Positive Lock Washer Co. ..Newark, N.J.
- Nuts, Clevis
 - Cleveland City Forge & Iron Co.Cleveland.
- Nuts, Square and Hexagon
 - Montreal Rolling Mills Co.....Montreal.
- Oakum
 - The Hudson's Bay Co.....
- Office Fittings
 - Can. Office & Sch'l Furn. Co...Preston.
- Office Signs
 - Acton Burrows, LimitedToronto.
- Oils
 - Galena Signal Oil Co..Franklin & Toronto.
- Packing
 - Anchor Packing Co. of Can., Ltd.,Montreal.
 - The N. L. Piper Ry. Supply Co..Toronto.
- Paints
 - R. F. Johnston Paint Co., Cincinnati, Ohio.
- Pile Drivers, Railway
 - F. H. Hopkins & Co.Montreal.
 - Mussens, LimitedMontreal.
- Pinch Bars
 - The N. L. Piper Ry. Supply Co..Toronto.
- Pipe, Culvert, Cast Iron
 - Gartshore-Thompson Pipe Co...Hamilton.
- Pipe, Gas, Cast Iron
 - Gartshore-Thompson Pipe Co...Hamilton.
- Pipe, Sewer, Cast Iron
 - Gartshore-Thompson Pipe Co...Hamilton.
- Pipe Stocks
 - Butterfield & Co.Rock Island, Que.
 - A. B. Jardine & Co.....Hespeler, Ont.
- Pipe, Water (Cast Iron)
 - Gartshore-Thompson Pipe Co...Hamilton.
- Planers
 - John Bertram & Sons Co. ..Dundas, Ont.
- Platforms, Steel
 - Standard Coupler Co.New York City.
- Ploughs, Contractors'
 - Meaford Wheelbarrow Co., Ltd., Meaf'd, Ont.
 - Mussens, LimitedMontreal.
- Porter
 - E. L. DrewryWinnipeg.
- Powder, Blasting
 - Standard Explosives, Limited ..Montreal.
- Preservative for Hose
 - Guilford S. Wood.....Chicago, Ill.
- Printing
 - Southam PressToronto.
- Propellor Wheels
 - W. Kennedy & Sons, Ltd., Owen So'd, Ont.
- Pumps
 - Canadian Fairbanks Co., Ltd...Montreal.
 - S. F. Bowser & Co., Ltd.....Toronto.
 - Ontario Wind Engine & Pump Co..Toronto.
 - James Smart Mfg. Co....Brockville, Ont.
 - Vandeleur & NicholsToronto.
- Pumps, Centrifugal
 - The American Well Works...Aurora, Ill.
 - M. Beatty & SonsWelland, Ont.
 - John Inglis Co., Ltd.Toronto.
- Pumps, Deep Well, Steam and Power
 - The American Well Works...Aurora, Ill.
- Pumps, Fire Pressure
 - The American Well Works...Aurora, Ill.
- Pumps, Irrigating
 - The American Well Works...Aurora, Ill.
- Pumps, Reclamation
 - The American Well Works...Aurora, Ill.
- Pumps, Sprinkler Systems
 - The American Well Works...Aurora, Ill.
- Pumps, Underwriters' Fire
 - The American Well Works...Aurora, Ill.
- Punches and Shears
 - Cincinnati Punch & Shear Co., Cincinnati.
 - Cleveland Punch & Shear Wks., Cleveland.
 - Long & Allstatter Co. Hamilton, Ohio.
 - Williams & Wilson, LtdMontreal.
- Rail Benders, Roller
 - F. H. Hopkins & Co.Montreal.
 - Montreal Steel WorksMontreal.
- Rail Drilling Machines
 - A. B. Jardine & Co.Hespeler, Ont.
- Rails, new
 - Dominion Iron & Steel Co....Sydney, N.S.
 - Drummond, McCall & Co.....Montreal.
 - J. T. GardnerChicago, Ill.
 - J. J. GartshoreToronto.
 - F. H. Hopkins & Co.Montreal.
 - Peteler Car Co.Minneapolis, Minn.
- Rails, for relaying
 - F. H. Hopkins & Co.Montreal.
 - J. J. GartshoreToronto.
 - Mussens, LimitedMontreal.
 - Provincial Steel Co., Ltd. .. Cobourg, Ont.
 - Jas. W. Pyke & Co.Montreal.
- Rail Joints
 - Goldschmidt Thermit Co.Toronto.
 - The Rail Joint Co. of Canada...Montreal.
- Rails, Re-rolled
 - Provincial Steel Co., Ltd. .. Cobourg, Ont.
- Railway Supplies
 - Canadian Fairbanks Co., Ltd..Montreal.
 - Franklin Mfg. Co.Franklin, Pa.
 - T. McAvity & SonsSt. John, N.B.
 - The Hiram L. Piper Co.....Montreal.
 - The N. L. Piper Ry. Supply Co..Toronto.
 - Rice Lewis & Son.....Toronto.
 - Russel Wheel & Fdry. Co..Detroit, Mich.
 - Williams & Wilson, LtdMontreal.
- Reamers
 - Butterfield & Co.....Rock Island, Que.
 - Cleveland Punch & Shear Wks.Cleveland.
 - A. B. Jardine & Co.Hespeler, Ont.
- Replacers, Car and Locomotive
 - Alexander Car Replacer Mfg. Co.Scranton.
 - The Holden Co., Ltd.....Montreal.
 - F. H. Hopkins & Co.Montreal.
- Rivets, Boiler, Bridge and Structural
 - Montreal Rolling Mills Co.....Montreal.



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