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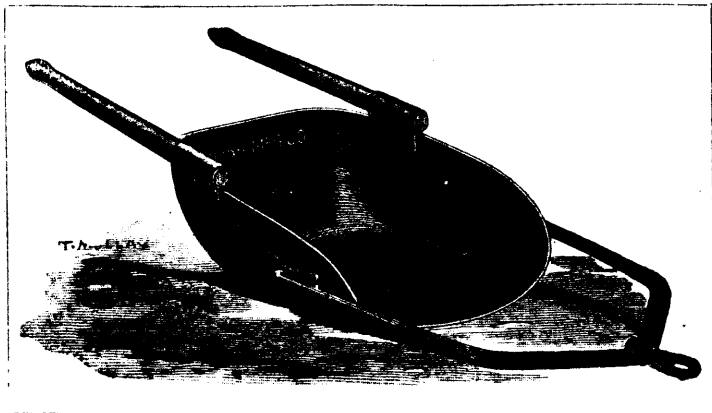
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# THE Railway and Shipping World

Devoted to Steam & Electric Railway, Shipping, Express, Telegraph & Telephone Interests.

VOL. I., No. 5.

TORONTO, CANADA, JULY, 1898.

\$1 A YEAR.

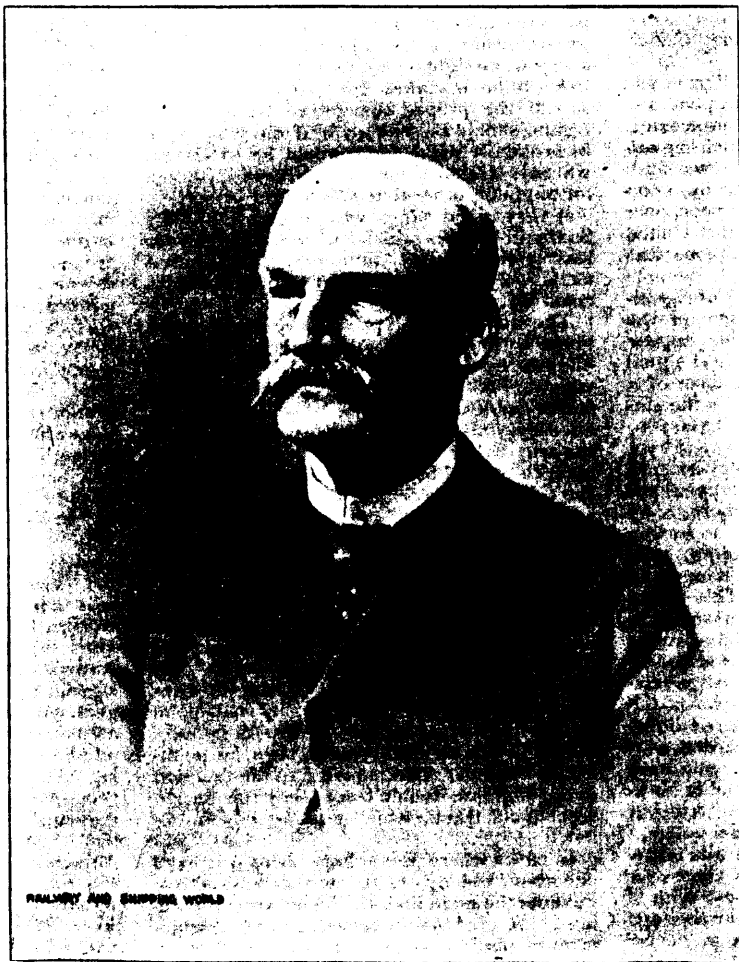
## The Deputy Minister of Railways.

Collingwood Schrieber, C.E., C.M.G., was born in England, Dec. 14, 1831, his father being the late Rev. Thos. Schrieber, of Bradwell Lodge, Essex, & his mother a daughter of Admiral Bingham. Having been educated in England he came to Canada in 1852, & obtained a position on the engineering staff of the Hamilton & Toronto Ry. until its completion in 1856. He was in private practice in Toronto with Sandford Fleming & Thos. Ridout, in the firm of Fleming, Ridout & Schrieber, until 1860, when he entered the service of the Northern Ry. as Superintending Engineer of Construction under Sandford Fleming. On the completion of this work in 1863 he became Division Engineer for the Nova Scotia Government on the Pictou Ry. & remained in charge of the works up to their completion in 1867. In 1868 he entered the service of the Dominion Government as a district engineer in connection with the survey & construction of the Intercolonial Ry. In 1869 he took charge of the Eastern Extension Ry. as Superintending Engineer, & was afterwards Superintending Engineer & Commissioner's Agent for the whole road. Subsequently he associated himself with E. R. Burpee as a contractor for the construction of the Prince Edward Island Ry., the Springhill Branch & the Springhill & Parrsboro Ry. In 1873 he was appointed Chief Engineer of the Dominion Government Railways in operation & in 1880 he succeeded Sandford Fleming as Chief Engineer of the survey for the C.P.R., the duties of both which positions he discharged for a considerable period. He was admitted a member of the Canadian Society of Civil Engineers in 1887; was a member of the Royal Commission on Railways in 1886, & was appointed Deputy Minister & Chief Engineer of the Department of Railways & Canals Nov. 30, 1892, which position he still holds. He was created a Companion of the Order of St. Michael & St. George, June 3, 1893. In religion he is an Anglican. He married a daughter of the late Lieut.-Col. A. H. Maclean, of H.M. 41st Foot. She died in 1892. His residence is Elmsleigh, Argyle Avenue, Ottawa.

Sir Wm. Van Horne, who returned from England at the end of June, paid a visit to Minneapolis & St. Paul in the middle of July.

## An Era of Railway Building.

At the recent annual meeting of the Bank of Commerce shareholders in Toronto, the President, Senator Cox, in the course of his address, said:—It is evident that we have entered upon an era of railway building & of great increase in our ocean carrying trade. After the building of the Intercolonial & Canadian Pacific railways it was but natural that a young country like Canada should pause,



COLLINGWOOD SCHRIEBER, C.E., C.M.G.

a little exhausted by its effort; & there were those who, therefore, thought that we had ended our day of railway building on a large scale, whereas we have but commenced. Many things have happened lately which should cause us to take stock of our country afresh, & estimate from a wider point of view its future possibilities & its immediate wants. In Manitoba the branch roads & local systems feeding the main lines are prospering, & new communities of settlers are being created, the people are awakening to the great value of new districts which were not discussed a few

years ago, & the feeling that the railway must be the pioneer—must go in advance of settlement—is greatly strengthened by the success of some recent efforts in railway building of that kind. Gradually we are making it possible for pioneers in farming to get into that more northerly country in the Northwest, which so attracted the early travellers that they called it the "fertile belt" at a time when the prairie country west of the Red River Valley was accounted worthless. Further west along the foothills it is clear that railways must be built northward, & when built we shall wonder at the possibilities of cattle ranching thus opened to the world. In British Columbia the need of railways is even more evident to the most careless observer. In the southern part where mining is being developed much has been done & much remains to do. But looking northward everything is yet to do. We have all been discussing freely the needs of the Yukon district, partly because it has become a political question, & partly because it has been so suddenly thrust upon our attention. But the Cassiar & the Cariboo districts require aid also, & there can be little doubt that before long a railway system will serve all these, touching at some Canadian port on the Pacific, & eventually reaching down to the main line of the C.P.R. On the Pacific a great ocean traffic is being created, & while much of it is merely coastwise & carried on mainly by U.S. vessels, when the first rush of the mining excitement is over I feel sure that of the steady trade that remains we shall have a considerable share. In the traffic with Asia there is a great increase, of which we get a fair share. On the Atlantic our traffic is rapidly increasing, & whether the proposed fast line service is carried out by the present projectors or not, the need of it is more evident than ever before.

On retiring from the C.P.R. service recently, after being Roadmaster of the Owen Sound branch for 30 years, John Gordon was presented by the sectionmen with an easy chair, a bookcase & Secretary, some handsome books, a gold-mounted stick & an address.

J. M. Herbert, recently appointed to the General Superintendency of the Eastern Division of the G.T.R., came from the Wabash under the new management. He first went to Island Pond as Trainmaster, & in June was removed to Belleville, whence he has gone to Montreal.

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TORONTO, CANADA, JULY, 1898.

### THE OFFICIAL ORGAN.

At a Meeting of the Canadian Freight Association, held at Montreal, July 7, 1898, it was unanimously resolved:

"That THE RAILWAY & SHIPPING WORLD, the only publication in Canada exclusively devoted to the interests of Transportation, will be recognized as the Organ of this Association."

### MODERN SIGNALLING AND INTERLOCKING.

By P. F. Hodgson, Signal Engineer, G.T.R.

In taking up the subject of signalling, I will try to point out the most important phases in the growth & development of this science. Some idea of the perfection to which signalling has been brought may be gathered from the following figures. Out of the 957,000,000 passengers carried during one year, over the 20,000 miles of railway in the United Kingdom, only 1 person in 53,000,000 was killed, & 1 in 1,930,935 injured.

In looking back over the history of signalling during the last 60 years, some of the earlier methods of working trains appear as very crude & primitive. The earliest signal of which we have record took the form of a rushlight placed during the night in the station window whenever it was necessary to stop a train. This was followed in 1834 by a system of signals & a corps of signallers. In the day-time the signalman—usually a policeman—acted as a human semaphore, & by means of extension of the arms, or by the waving of flags of different colors, telegraphed: allright, go on, caution, danger, or stop, to an advancing train. This same style of signalling is still in use for shunting operations. For night, warning hand lamps with bullseyes of different colors were used for signalling allright or danger, as the white or red glass was turned towards the coming train. In the absence of a red light, any light waved violently was regarded as a signal of danger. As late as 1841 the only station signals used on the Liverpool & Manchester line were flags which ran up & down a mast by means of a rope through a pulley.

The first mechanical semaphore was introduced by Sir Charles Gregory in the same year, & consisted of a vertical post with a movable board or arm pivoted near the top, capable of being moved to a right angle by means of a lever fixed at the bottom of the post. A lamp was also provided somewhere about the same position on the post as the arm, the light being made to revolve so as to exhibit different colors to an approaching engineer. At first 2 handles were supplied to these posts, one to move the arm up & down, & the other to make the lamp revolve. This arrangement was subsequently modified, & one handle only was used for working the arm & simultaneously revolving the lamp. This was done by means of bevel wheels connected with the rod between the lever & the arm. This semaphore worked to 3 positions, indicating to engineers allright, caution, &

danger. In process of time the caution signal was dispensed with in England, although it is still retained in this country; & the allright signal, instead of hanging vertically, was indicated by the arm being placed at an angle of 45 or 60°, the latter being preferable, as it ensured a more decided signal, being displayed under all circumstances, notwithstanding variations in length of connections.

On some railways the semaphore arms are pivoted in the centre of their length on special brackets attached to the post; the allright signal in this case consists in the arm being turned to a vertical position, but unlike the old semaphore arm it is not concealed by the post, but appears to the approaching engineer to be held out from the post at a distance of about 3 ft. Instead of the old arrangement of lamp turning round, we now have in the new semaphore a fixed lamp, in front of which spectacles work up & down, so that when the semaphore arm is horizontal, viz., danger, a red glass is in front of the lense, & when the arm is lowered to 60° the allright position, a green glass takes the place of the red.

A great deal has been said in the United States about the use of a white light for allright, & it would take too long to go into all the arguments pro & con. My experience is, that a distinct light is necessary, such as green, owing to the fact that there are so many white lights about a railway which are liable to be mistaken for semaphore lights, should the proper semaphore lamp be out. Again, should the red glass of the semaphore be broken a white light would be exhibited, whereas green is not liable to be mistaken for anything other than what it is.

A very good lamp was invented by Mr. Saxby in 1858, in which the interior revolved, leaving the exterior stationary. This is used exclusively by the London, Brighton & South-coast Ry. to this day.

The most recent type of mechanical semaphore is that now used by the G.T.R., & adopted by it as its standard. The arm is weighted both by the means of the spectacle which carries the colored glass, & by a balance lever attached to the post, thus ensuring the arm flying to danger under all circumstances should breakage occur in any part of the connection working the same, also preventing possibility of the arm being lowered by an accumulation of snow upon its face.

At junctions it is often necessary to have several semaphore arms on the one post, either fixed one above the other, or side by side. Thus we often have one post with several arms on each side of it, but these are distinguished by the direction in which they point. The American rule is that all arms controlling the approaching trains shall point to the right, while on the G.T.R., & in England it is exactly the opposite, the arms pointing to the left. This is owing to the fact that in the U.S., on double track, they run on the right hand track, while here we run on the left.

In cases where semaphore arms are fixed one above the other, the top arm as a rule governs the main line, the lower arms the sidings. A great improvement on this arrangement of placing one arm above the other, & one which will, I think, come more into use as it is better known, is to have the arms side by side, & to fix the mainline arm higher than the others. To do this several short posts are fixed on a cross-tree, supported by one main stem, & each of the short posts carries a semaphore arm & lamp. This is what is called a bracket signal. Engineers can readily understand in which direction they are about to be turned. For instance, supposing an engineer is approaching a junction & the track upon which he is travelling diverges into 3 tracks, on either of which he might be switched, a bracket signal with 3 arms would be placed at the point of junction, each of

the 3 posts on the bracket signal would carry 1 semaphore arm. If, therefore, the left hand arm is lowered the engineer will know that he is being switched to the left hand track. If the middle arm is lowered he would know he is switched to the middle track, & so on.

Semaphores in Canada are divided into 3 classes, distant, home & station. The distant signal arm is notched, or fish-tailed, & is fixed 1,200 ft. from the home signal, & is used to denote the position of the home signal at the junction or crossing. In yards which are interlocked it is very important that the switch targets or pot signals should be as low as possible to avoid the possibility of their being mistaken for the allright signals. This is more particularly necessary at night, when the lights are apt to be confused one with another. In many cases the pot signal is attached to and works with the switch, so as to move whenever the switch is moved, but the best arrangement is for them to be worked by separate levers & interlocked with the other signals in the yard, so that the switches can be moved without disturbing the signal, which can afterwards be worked as required.

A very important point in signalling is to ensure getting the best possible location for the signal, taking great care that there shall be no dark background or anything to intercept the view of the approaching engineer. For this reason signals should be made various heights to suit the location, for it must be remembered that these signals are the means by which instructions are given to the engineer to regulate his progress through a crowded yard or junction. It is, therefore, of the utmost importance that these signals be unmistakable, & that they shall always indicate such instructions as ought to be observed & obeyed, so as to ensure the safety of the trains. For some time it was contended that it was quite unnecessary to inform the engineman in which direction the signalman was about to send him, but this has long been recognized as a mistaken notion, & it is now a generally conceded fact that it is necessary for a driver to clearly understand the direction in which he is about to be turned, as in the event of the signalman making an error through mistaking him for another train, & turning him into a wrong direction, he will have an opportunity of discovering it & pulling up his train in time.

In the early days semaphore arms were usually worked by means of levers fixed at the bottoms of the posts, but as distant signals came more generally into use they were worked by means of pullover levers or drums fixed in some convenient position near the stations, these levers being connected to the signals by means of wires. The next progressive movement in signalling was rendered necessary by the increased traffic & complication of tracks, to facilitate the working of which the switch & signal levers were brought together at one central point, so that they might be handier to the operator & save him running about from switch to switch. Although being more convenient for working, this was found to be very unsafe, owing to the signalman being able to pull over the wrong lever. It was to obviate this danger that Mr. Saxby in 1856 devised and patented his first system of interlocking points & signals. Since this date various modes of interlocking levers have been invented. The fundamental principle established by Mr. Saxby remains the same, viz., that it shall be impossible for a signalman to give any conflicting signals either accidentally or otherwise, or to work signals contradictory to the position of the switches. The switch & signal levers being concentrated & brought together in a signal cabin, were readily worked by the signalman, & by means of a mechanical connection between the switch & signal levers made it impossible to move them in a contradictory manner.

In 1860 the system of locking, which consisted of slide bars with hooks or locks, was moved to & fro by the action of the levers themselves. It was then found that when the parts became worn a lever which was supposed to be locked could be moved part way. To overcome this difficulty, the spring catch handles which were used to keep the lever in its vertical or back position, similar to that attached to the reversing lever of a locomotive, were utilized in order to set in motion the locking gear, so that before a lever could be moved the spring catch must be lifted, thus locking other levers, & when fully moved over & the spring catch lowered into notch, releasing other levers. This improvement was made in 1867. It also had the advantage of making the locking much less cumbersome, an arrangement which was found to be of increasing advantage as the number of levers multiplied.

At the present time as many as 280 levers have been placed in one cabin at the London Bridge terminus on the London, Brighton & South Coast Ry. We have in Toronto yard one cabin containing 66 levers, which will give some idea of the growth of the interlocking system.

I will now pass on to the switches & their connections. Switches are worked by means of rods, bellcranks, &c., connected to the levers fixed in the signal cabins. In 1870 it was found that in many cases where switches were worked from the signal cabins accidents were liable to happen, owing to the signalman moving the switches whilst trains were passing over them, thus causing what is commonly known as the splitting of trains. It then became evident that the switches must be held perfectly closed & firm until the whole train had passed over them. This led to the invention of what is commonly called "the facing point lock." This apparatus not only effectually prevents the possibility of the points being moved while the train is passing over them, but also, by means of the bolt lock connected to & worked with the detector bar, ensures the switch being completely closed before the signal to pass over it could be given. The detector bar is made about 3 ft. longer than the longest wheel base of a car in use on the particular railway. On the G.T.R., for instance, the length of the bar is 45 ft. This bar has to be lifted to the top of the rail, so that it is absolutely impossible for the signalman to move his lever without lifting the train, & he must move this lever before he can alter the position of the switch.

As the speed of the modern express trains increased it became at once seen of what vital importance it was that the switches over which the trains ran should be perfectly closed & securely locked in position before the signal could be lowered, & also to notify the signalman in the event of any of the rodding or other gear connected with the switches becoming broken or out of order. For instance, suppose the switches are set for the main line & the signalman wishes to reverse them so as to set them for a branch line. To do this he would pull over the lever connected to the switch. Should the rods to the switch be broken, the switch would remain set for the main line. The signalman, thinking he has set the switch for the branch line, proceeds to lower the branch signal, thereby endangering the safety of the train. To overcome this difficulty a contrivance was invented called a signal detector. The form of detector most generally adopted is as follows: A rod connected to the switch tongue passes through a cast-iron box placed in line with the signal wires. In this rod a notch is cut, & in the signal wire a slide is inserted which will pass through the notch in the rod if the switch point is perfectly close. If on the other hand the switch tongue is the least way open the notch in the rod will not be opposite the slide in the signal wire & the signal cannot possibly be

lowered. This was called the detector because it detects whether or not the switch is properly set.

To reduce the cost of the interlocking plants a device was invented by which the switch & detector bar were worked by one & the same lever. This is known as the economical facing point lock, & is greatly in favor in the U.S., although in England a separate lever-facing point lock is preferred.

Another contrivance for reducing the expense of an interlocker is an invention called the selector, by means of which 2 conflicting signals are worked by 1 lever. The action of the setting of the switches selecting which signal shall be lowered, of course only 1 signal can be lowered at a time. This effects a saving, not only of a lever in the cabin, but also one line of connection from the cabin to the signal. The action of the switch moving to either position sets the mechanism in the selector, so that the slide working the signal for that route is free to be pulled, while the slide working the conflicting signal is locked.

Owing to the switches being at considerable distance from the signal cabins, the levers were found very hard to work. To reduce as far as possible the friction on the rods working these switches, anti-friction rollers were brought into use. These not only revolve on their own axis, but are also suspended in curved links. These are specially adapted for the working of the rods on curved lines.

In order to facilitate the working of these long distance switches so as to retain the control of the yard in the hands of 1 man instead of having 2 or 3 cabins, Geo. Westinghouse, Jr., invented his pneumatic, interlocking machine, thus giving the signalman much greater power. To this, later on, he added the electric attachment, & we now have the electro-pneumatic system, very fine installations of which are in operation at the Boston & Maine depot in Boston, & at St. Louis Union Terminal Station.

In addition to the working of switches & signals, gates or barriers are often worked from the signal tower, & interlocked with the signals, so as to ensure the gates being against street traffic before the signal can be lowered for a train to pass.

Another system for working long distance switches is the hydraulic system which is largely in use in Europe, but has not as yet been introduced in this country. The principal hindrance to the working of the hydraulic system in this country is the liability of the freezing up of the liquid. This has been overcome by the mixture of glycerine with the water, which has been found to withstand the extreme cold of Russia.

I now come to the block systems, of which there are two kinds, the manual block & automatic block. The manual block differs from the automatic in that the former depends entirely upon the vigilance of the operator, & is worked in the following manner. The line is divided into sections of various lengths, one train not being allowed to enter the section until the preceding one is reported by telegraph as having reached the block station ahead. In order to check the vigilance of the operator a scheme was devised by means of which the train on entering the section passed over a treadle which put the signal to danger behind it, locking it in that position until the train was clear of the other end of the section, when it passed over another treadle, which released the signal behind it so that the operator was permitted to lower it to admit another train into that section. This was found to work allright in sections where trains were not liable to break in two, but was a source of danger in the event of a train breaking loose & the front portion getting clear of the section & passing over the releasing treadle while the rear part of the train was still left in the section, in which case the operator could lower the signal for a follow-

ing train owing to the fact of the first part of the train having released his instrument.

The automatic block, which has been successfully operated in the U.S., is worked by means of an insulated rail or track circuit. The train on entering the circuit puts the signal to danger behind it & locks it in that position until every wheel of that train is clear of the circuit, when the signal returns to the all-right position. In the same way in the event of an open switch or a broken rail the signal goes to danger & remains in that position until the line is again secure.

I will now pass on to the various means of communication between the different signal towers. The simplest system is by means of telephones, which are very handy, but are not altogether reliable. The system which I now describe to you is for recording the departure & arrival of trains at the various cabins. For example, we will call the right-hand instrument A, & the left hand B. A wishes to send a train to B, & to notify B of this fact he places the little peg or pin in the hole opposite the section on which is recorded a description of the train he wishes to send. The dials on B's instrument are similar to those of A's. Having placed the peg in the required hole A pulls out the knob which sets the machinery of the instrument in motion, when the same indication is repeated on B's instrument by means of electricity. B then acknowledges receipt of the message by placing the pin of his instrument in the hole opposite the section on which the corresponding description is written. When both pegs are removed from the instruments they return to their normal position & are ready for another message to be sent. Another means of communication is by the ordinary telegraph instrument.

Before leaving this subject I would say that electricity is of great use in controlling the action of the signalmen by means of electric locks operated by the trains themselves.

### Grand Trunk History.

The most important feature of the 4th of July festivities at Portland, Me., was the celebration of the semi-centennial of the G.T.R., the original Atlantic & St. Lawrence Ry. from Portland to Yarmouth, Me., having been opened for traffic just 50 years ago. The G.T.R. was represented by General Traffic Manager G. B. Reeve, who, in the course of his speech, said:

The Grand Trunk was the pioneer in the railway field in Canada, & the line between Portland & Montreal was opened in 1853, having taken about 6 years in building, the openings of the several portions taking place as follows:—Longueuil to St. Hyacinthe, in the spring of 1847; Longueuil to Richmond, in the autumn of 1850; Longueuil to Sherbrooke, in Aug. of 1852; Longueuil to Island Pond, in July, 1853.

From the Portland end of the line the building of the road was also in operation, & the several sections were inaugurated as follows:—Portland to Yarmouth, July, 1848; Portland to Danville Junction, Dec., 1849; Portland to Mechanic Falls, Feb., 1849; Portland to South Paris, Jan., 1850; Portland to Bethel, Mar., 1851; Portland to Gorham, July, 1851; Portland to Northumberland (Groveton), July, 1852; Portland to Island Pond, Feb., 1853; thus connecting the two portions joining Longueuil & Portland with railway facilities. Longueuil was then the western terminus of the system. Owing to this fact, there were consequently many inconveniences, trouble & expenses incurred in reaching the Canadian metropolis, as the river is 2 miles across at this point, & freight & passengers had to be transferred by boat in summer & by teams across the ice in winter. These difficulties, however, were soon overcome by the



construction of the Victoria tubular bridge, which was built at the enormous expense of \$7,000,000, & which, at the time of its opening, 1860, was considered a marvel of engineering achievement, & among the wonders of the world.

The construction of the present piers of the Victoria Bridge was an undertaking that was beset with many serious difficulties. The contractors had to contend with a roaring rapids 2 miles wide, intense "shoves" of ice, sometimes several feet thick, with a pressure of millions of tons, & without any of the modern means now used in sinking piers. The total weight of the piers is given as about 222,000 tons of blue limestone, & reaching a height of 60 ft. above the water line.

On Aug. 25, 1860, the laying of the last stone & the driving of the last spike by the Prince of Wales was accomplished & the celebration was an event long remembered. Since then, in addition to its large & ever-increasing Canadian business, its through traffic between the Atlantic seaboard & Western points has developed to such an extent as to necessitate the re-construction of this bridge, & in its place a magnificent open work steel bridge is being erected, with double tracks, & on each side of the immense structure will be carriage ways & walks for foot passengers.

From the time when the line between Portland & Montreal was completed, the Co. has extended its rails to vast proportions, from a mileage of 292 miles in 1853, to a total of 4,186 miles at the present day, tapping all the principal centres of the States of Maine, New Hampshire & Vermont, & the provinces of Quebec & Ontario, & the States of Michigan, Indiana & Illinois & rightly claiming for itself the "Commercial Highway" from the Atlantic Ocean to the West. In the early days of the road's history the Co. had almost insurmountable difficulties to beset them, especially during winter, & at a time when the modern ideas of railway management were unknown. Rail communication with Montreal was, however, made during the first winter of the completion of the road, & after the close of navigation in 1853, screw steamers ran between Liverpool & Portland with passengers & goods, thus opening up for the first time an entire winter route for Canada; & notwithstanding the deficiency of engine power & the defective state of the new line, the traffic of these vessels was conveyed with a dispatch that gave general satisfaction.

The traffic receipts of the early days compared with 1897 are interesting, & illustrate the growth of the Grand Trunk:—1854, traf-

fic receipts, \$835,577, mileage, 388; 1897, traffic receipts, \$23,624,191, mileage, 4,186. The rolling stock & equipment has increased in like proportion, as the following figures demonstrate:

	1854.	1897.
Locomotives.....	64	1,019
Passenger Cars.....	66	885
Freight Cars.....	935	22,075
Snow Plows.....	14	72
	1,079	24,701

During 1856 the total number of passengers transported amounted to 686,924, while for 1897 the figures roll up to over 8,000,000. Likewise the increase in freight tonnage has been something enormous, comparing the figures of 1854, which amounted to 619,990 tons, with those of 1897, which totalled 11,769,657 tons.

The branch line from Richmond to Quebec was completed in 1854, the main line from Montreal to Toronto in 1856, & the Sarnia Division in 1858. In the extension of the G.T. System to the westward, the importance of through international connections was considered, & with this end in view, the Co. in 1875 acquired the Chicago & Lake Huron Ry., thus gaining a direct connection with Chicago. The large through business between Chicago & Portland & the Atlantic seaboard controlled by the G.T.R. has amply justified the wisdom of the extension. The Co. later added to its mileage & business by acquiring numerous other lines; & on Aug. 12, 1882, the original G.T.R. was consolidated with the Great Western Ry., & with the company thus formed was united on Jan. 24, 1888, the Northern Ry. Co. of Canada, & its leased line, the Hamilton & North Western Ry., the amalgamated system taking the present style of the G. T. Ry. Co. of Canada. Several other railways having been acquired, the G.T. division, embracing 2,174 miles, with the Great Western division (including the Hamilton & North Western), embracing 1,338 miles, brought the mileage of this system up to 3,512 miles, exclusive of the Chicago & Grand Trunk, the Detroit, Grand Haven & Milwaukee, & the Toledo, Saginaw, & Muskegan railways controlled by the Co., & the Cincinnati, Saginaw & Mackinaw Railroad operated by it, all of these lines now being operated under the title of the G.T.R. System, with an aggregate, as stated, of 4,186 miles. The G.T.R. System is laid, throughout its entire length, with heavy steel rails, while with its steel bridges, solid masonry & most improved modern structures, it is in no particular behind the great trunk lines of the United States.

**RAILWAY APPOINTMENTS, &c.**

**Canadian Government Ry.**—The position of General Traffic Manager at Montreal held by A. H. Harris having been abolished, the offices in the Board of Trade Building were closed on July 19, when the services of the following were dispensed with by General-Manager Pottinger: T. H. Underwood, Chief Clerk; T. R. O'Dell, Secretary; T. E. Dodd, clerk; J. A. Ryan, Messenger.

The staff which remains in Montreal is as follows: J. Hardwell, Divisional Freight Agent; F. H. Thompson, Chief Clerk; R. E. Perry, clerk; A. McKinnon, Jr., S. A. McQuestin, City Canvasser; J. B. Lambkin, Divisional Passenger Agent; T. H. Blair, City Ticket Agent; P. DesLauriers, clerk, N. McAlpine, office boy.

T. H. Blair, the present Ticket Agent, will be transferred elsewhere in the service, & H. J. Scriver, formerly Agent of the G.T.R. at Hemmingford, Que., & son of J. Scriver, M.P. for Huntingdon, will take his position.

The published rumors of changes in the divisional superintendents & promotion of other officials are said to be without warrant. The only changes in the Train Despatcher's office are the transfer of J. E. Rhind from the New Glasgow office to Truro; of A. Dunn, from Truro to Moncton, & of B. Ward from Moncton to be Chief Train Despatcher at New Glasgow.

**Canadian Pacific.**—The C.P.R. lines west of Toronto on the Ontario & Quebec Divisions, which since the removal of W. K. Thompson to the Atlantic Division have been under one Superintendent, T. Williams, with headquarters at Toronto, have again been divided. Mr. Williams will again have his office in London, & will have under his jurisdiction all the lines west of Toronto except the Owen Sound, Orangeville & Teeswater branches, which will be in charge of A. Price, at present Chief Despatcher & Car Distributor at Toronto, who has been promoted to a superintendency. J. G. Willson, Chief Clerk in General Superintendent Leonard's office, will probably succeed Mr. Price as Car Distributor.

**Grand Trunk.**—A. B. Atwater, Superintendent of the Western Division, having resigned to become Assistant General Superintendent of the Michigan Central, the following changes & appointments took effect July 12:

W. Cotter, Superintendent of Eastern Division, at Montreal, to be Superintendent of the

<p><b>MADE IN THE</b></p> <p><b>FOLLOWING WIDTHS</b></p> <p>24, 27, 32, 36, 50 &amp; 72 inches.</p> <p><b>STANDARD</b></p> <p><b>SHADES</b></p> <p><b>ALWAYS IN STOCK.</b></p>	<p><b>PURE MOHAIR</b></p> <p><b>VELVET</b></p> <p><b>"LISANGO"</b></p> <p><b>REGISTERED-PATENTED.</b></p> <p>Always Stamped "Lisango," and Lister &amp; Co., Ltd., Manningham.</p> <p><i>Every yard on the selvages.</i></p>	<p><b>THE IDEAL FABRIC</b></p> <p><b>FOR FURNISHING</b></p> <p><b>PURPOSES</b></p> <p>Specially Suitable for Upholstering, Railway Cars and Steamship Saloons.</p>
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**"LISANGO" is very strong, durable, and altogether the richest velvet extant.**

**MAY BE HAD OF ALL LEADING WAREHOUSEMEN.**

Western Division at Detroit, Mich. Mr. Cotter came from the Wabash to the G. T. with the new management.

J. M. Herbert, Trainmaster at Belleville, to be Superintendent Eastern Division at Montreal. F. W. Egan to be Trainmaster 6th & 7th Districts, at Belleville.

R. P. Dalton, Trainmaster 4th and 5th Districts, which extend south to Rouse's Point & west to Belleville, to be also Superintendent of Montreal Terminals. Office at Bonaventure Station, Montreal.

J. Irwin to be Trainmaster, 3rd District, also that portion of the 2nd District between Richmond & Island Pond; headquarters Richmond, Que.

J. Munday to be Acting Trainmaster, 1st District; headquarters Island Pond, Vt.

The appointment of J. T. Gill as Air Brake Instructor is confirmed. He will have charge of air brake construction car 81, & his instructions, given in the car, & when passing over the road, to those engaged in the operation, maintenance & adjustment of air brakes, must be complied with.

J. W. Ryder, City Passenger & Ticket Agent, Quebec, has been appointed to a similar position in Toronto, in place of W. Keating. C. E. Tenny, Ticket Agent at St. John's, succeeds Mr. Ryder in Quebec.

#### Personal Mention.

General Manager Hays, of the G.T.R., spent some time in Penetanguishene in July.

Edw. McDade, who recently died in the Klondike district, was at one time engaged in C.P.R. construction work.

Wade Chance has been appointed Treasurer of the New York & Ottawa, with office at Ottawa, Ont., vice H. T. Nash.

W. Bell, of Montreal, has been put in charge of the C.P.R. sleeping car branch at Toronto in place of H. C. Sheffield.

A press item states that F. R. F. Brown, Ex-Mechanical Superintendent of the Government Railway, has gone to England to claim a considerable legacy left him by a relative lately deceased.

R. Peard & A. W. Hodgson, heretofore acting chief train dispatchers for the C.P.R. at Winnipeg & Fort William respectively, have been appointed chief train dispatchers at those points.

W. Keating, ex-City Passenger Agent of the G.T.R., in Toronto, is now attached to the C.P.R.'s Toronto ticket office. Mr. Keating represented the Grand Trunk in Toronto since the death of P. J. Slatter.

G. F. Diekroeger has been appointed Contracting Agent of the C.P. Despatch & C.P.R. at St. Louis, Mo., in place of F. H. Cooke, who succeeds C. M. Hunt as Contracting Agent of the Merchants' Despatch.

D. B. Worthington, City Freight & Passenger Agent of the C.P.R. at Buffalo, N.Y., will also represent the Niagara Falls Park & River Ry. there. He was General Passenger Agent of the Gorge electric line for a time.

The position of Roadmaster of the eastern division of the Dominion Atlantic has been abolished, D. J. Murphy, of Yarmouth, heretofore Roadmaster & Engineer at Yarmouth, being appointed Track Superintendent for the whole line.

H. Roberts, formerly Master Mechanic of the G.T.R. at Ft. Gratiot, Mich., has been appointed Superintendent of Motive Power of the Norfolk & Southern, with headquarters at Berkley, Va., vice G. R. Joughins, who recently became Mechanical Superintendent of the Intercolonial.

Mr. & Mrs. James Ross, of Montreal, who have been spending a few weeks at the seaside, have taken their departure for Scotland, where Mr. Ross has taken a shooting box in

Ross-shire. They intend to remain till the autumn & entertain a succession of guests during the shooting season.

Michael Kennedy died in Penetanguishene recently aged 80 years. He was contractor & corporation overseer in Newmarket for a number of years, & afterwards superintended the construction part of the Northern Ry. from Holland Landing to Barrie, also the Belle Ewart switch. He also worked on the Welland Canal for a number of years.

Divisional Freight Agent Arthur White, of the G.T.R. at Toronto, was recently granted 6 weeks' leave of absence. For some time he has not been enjoying the best of health, & found it necessary to take a short vacation. He is spending the time at Caledonia Springs. During his absence J. E. Dalrymple, of Montreal, Assistant to the General Traffic Manager, will attend to Mr. White's duties.

Lord Masham, the owner of the patents under which the power loom is made in England, has announced that he will give \$200,000 for the purpose of founding a memorial hall in Bradford in honor of Dr. Cartwright, the original inventor of the power loom. Lord Masham is the senior partner of the great firm of Lister & Co., of Manningham, Eng., whose advertisement appears on page 116 of this issue.

J. F. Stevens, Chief Engineer of the Great Northern (U.S.), recently resigned on account of ill health. He has been in railway service since 1876, becoming Chief Engineer of the G.N. in 1895. At one time & another he served the C.P.R., the Duluth, South Shore & Atlantic, the Spokane Falls & Northern & the Denver & Rio Grande. He has taken an interest with Mann, Foley Bros. & Larsen in the contract for the C.P.R. branch from Robson to Midway, B.C.

Lord Strathcona & Mount Royal has leased Knebworth House, Hertfordshire, Eng., the ancestral seat of the Earls of Lytton, together with the shooting privileges over the estates, which are near Brocket Hall, Lord Mount Stephen's seat. Lord Strathcona is well off for houses, having one in Cadogan Square, London; another at Glencoe, Scotland; still another at Juniper Hill, Dorking; & he can sleep beneath his own roof when he visits Montreal, Winnipeg, or Pictou, N.S.

H. C. Boggs, who died at Springhill, N.S., recently, was born at Halifax 80 years ago. About 50 years ago he went to Joggins Mines & conducted business there & managed the collieries for the General Mining Association. He afterwards purchased the property, which he retained until it was sold to a St. John company. He was also largely interested in lumber & shipping property. Of late years he has been Paymaster of the Dominion Atlantic Ry. & in the audit office of the I.C.R. at Moncton.

Almon B. Atwater, recently appointed Assistant General Superintendent of the Michigan Central, was born in Sheffield, O., & entered railroad service in 1864, as a telegraph operator on the Cleveland & Erie RR. He afterwards entered the engineering service on the Jamestown Division of the C. & E. When the Canada Southern was being built he was appointed a resident engineer. He afterwards became Assistant Engineer on the Port Dover & Lake Huron, now a part of the G.T. System, & later Chief Engineer on the Stratford & Huron, also absorbed by the G.T. He served as Superintendent of the Port Dover & Lake Huron, & later as General Superintendent of the Georgian Bay & Lake Huron Division of the G.T., & as Chief Engineer of the Chicago & Grand Trunk. In June, 1885, he became Superintendent of the G.T. lines west of Detroit, including the Chicago & Grand Trunk & the Detroit, Grand Haven & Milwaukee. He has held that position up to the present. He is 53 years of age.

#### FINANCE, MEETINGS, &c.

##### C.P.R. Earnings & Expenses.

The gross earnings, working expenses, net profits & increases over 1897 from Jan. 1, 1898, are as under:

	Earnings.	Expenses.	Net Profits.	Increase.
Jan. . . . .	\$1,672,372.04	\$1,156,744.45	\$515,627.59	\$142,284.49
Feb. . . . .	1,494,596.98	1,070,929.62	423,667.36	38,844.28
Mar. . . . .	2,079,479.06	1,326,245.55	753,233.51	233,020.67
April. . . . .	1,958,461.88	1,241,371.19	717,090.69	89,973.35
May. . . . .	2,252,999.16	1,326,336.85	926,662.31	51,092.47
	\$9,457,909.12	\$6,121,627.66	\$3,285,188.99	\$555,215.26

The approximate traffic earnings for June, 1898, were \$2,124,000 against \$1,999,000 in June, 1897, an increase of \$125,000.

##### C.P.R. Land Sales.

	Acres.		Amount.	
	1898	1897	1898	1897
Jan. . . . .	22,044	9,443	\$72,924.00	\$33,872.00
Feb. . . . .	20,650	8,163	66,399.00	27,573.00
Mar. . . . .	33,421	8,727	109,010.00	29,080.00
April. . . . .	43,145	10,785	140,275.00	37,145.00
May. . . . .	43,148	15,802	137,835.00	51,508.00
June. . . . .	49,113	18,964	160,199.00	63,160.00
Totals. . . . .	211,521	71,884	\$686,642.00	\$242,338.00

##### Grand Trunk Earnings.

These figures include the G.T. of Canada, the Chicago & G.T., & the Detroit, Grand Haven & Milwaukee Rys.

	1898	1897	Increase.	Decrease.
Jan. . . . .	\$1,916,332	\$1,639,614	\$276,718	.....
Feb. . . . .	1,674,453	1,522,246	152,207	.....
Mar. . . . .	2,048,970	1,803,279	245,691	.....
April. . . . .	1,918,477	1,776,840	141,637	.....
May. . . . .	1,940,980	1,774,802	166,178	.....
June. . . . .	1,880,402	1,912,185	.....	\$31,783
	\$11,379,614	\$10,428,966	\$982,431	\$31,783

##### Financial Notes.

**Calgary & Edmonton.**—The net earnings for May were \$14,614.27, as against \$6,803.70 for May, 1897.

**Central Vermont.**—An answer has been filed at Boston by the Central Vermont Railroad to the bills for foreclosure under the 1st & deed mortgages by the American Loan & Trust Co. The allegations in the bills of the Trust Co. are generally denied. The cancellation & delivery of the \$7,000,000 of bonds & mortgages of the railroad to the Trust Co., as well as its authority to make the mortgages & bonds, & especially the authority of the Vermont & Canada to join in the mortgage, is denied, & it is claimed that the bonds & mortgages have run out & are void. The answer asks that E. C. Smith, Annie B. Smith, & Ann E. B. Smith, owning \$250,000 preferred stock; & \$150,000 common stock of the Consolidated Railroad of Vermont, be made party defendants of the bill. Of the \$2,500,000 of floating debt \$1,500,000 is a preference debt, in equity, & entitled to be a first lien. Of this amount the G.T.R. claims \$500,000 for balances, growing out of the interchange business. Those before-mentioned persons claim \$433,000 of this debt as a preference claim in their favor, on account of bonds which they let the Central Vermont have in part for material purchased & labor performed. They ask that these claims be judicially established before any decree is given.

**Dominion Atlantic.**—The receipts for the 6 mos. to the end of June were \$214,493 as against \$201,019 for corresponding period.

**Duluth, Superior & Western.**—This line, formerly known as the Duluth & Winnipeg, has been bought by the Eastern Minnesota Ry., which is controlled by the Great Northern Co., for, it is said, \$378,400. The line, which is 124 miles in length, will, it is said, form part of the new Fosston line from the Red River Valley to the head of Lake Su-



perior. Heretofore it has been under the management of W. F. Fitch, who is also General Manager of the Duluth, South Shore & Atlantic, one of the subsidiary lines of the C.P.R. The following extract from the last annual C.P.R. report is of interest in connection with this transaction: "Arrangements, permanently assuring the traffic interests of the Duluth, South Shore & Atlantic Ry., west of Duluth, having been made, the amount advanced to that Co. for the acquisition of the Duluth & Winnipeg Ry. has been returned to your treasury."

**Erie & Huron.**—A rumor that this line is to be leased to the Lake Erie & Detroit River Co. cannot be confirmed. There is no doubt the L. E. & D. R. people have been looking into E. & H. matters, but it would appear that nothing definite has been decided on.

**Great Northern.**—Quebec City Council has decided to take \$200,000 of the capital stock of this Co. provided the Co. establishes its workshops in Quebec city & completes the line so that through trains can be run between that city & Parry Sound, Ont.

**London & Southeastern.**—At the annual meeting of this Co. at London, June 28, the following directors were elected: President, W. J. Reid; Vice-President, T. H. Smallman; Sec.-Treas., J. W. Little; M. Masuret, J. Campbell, C. S. Hyman. The L. & S.E. R. is leased to the Michigan Central & the annual meetings are simply held formally for the purpose of keeping the Co. in existence.

**New Westminster Southern.**—The annual meeting called for New Westminster, B.C., for July 5, was adjourned for a month.

**New York & Ottawa.**—The State Board of Railway Commissioners at Albany, N. Y., has been requested to grant authority to the New York & Ottawa Ry. Co. to increase its capital stock from \$1,480,000 to \$3,000,000, in order to enable it to acquire the stock of the Ottawa & New York Ry. Co. of Canada & of the Cornwall Bridge Co. When these corporations are absorbed, it will form a line through to Ottawa shorter by about 57 miles than the present route from New York. When completed the line is to extend from

Ottawa, via Cornwall, to Tupper Lake, N.Y., where connection is made for New York City with the Adirondack Ry. of the Delaware & Hudson Canal. S. D. Trask & Co., New York City, are among the financial backers of the road.

**Nickel Steel Co. of Canada.**—The Act incorporating this Co., passed at the last session of the Dominion Parliament, provides that it may, with the consent of the Governor-in-Council, lease or purchase the Bay of Quinte, Central Ontario, & Irondale, Rancroft & Ottawa Rys.

**Ontario, Belmont & Northern.**—The annual meeting of this Co. was called for June 11 at 103 Bay St., Toronto. The President, J. T. Sills, promised to supply us with a report of the proceedings, but changed his mind, absolutely refusing any information. This Co. was incorporated by an Ontario Act in 1891. In 1896 Dominion aid was granted it for the construction of a line from the Belmont iron mines to Marmora, & from Marmora to the Ont. Central Ry. This was paid in the following year to the extent of \$30,720 for 9.60 miles. The directors of the Co. recently made a call of 10% on the unpaid shares, payable July 25.

There is no truth in the report that the O. B. & N. Ry. is to be taken over by the Central Ontario Ry., which is operating the O. B. & N. under lease. (Official).

**Pontiac & Pacific Jet.**—The fact that the P. & P. J. Ry. & Gatineau Valley Ry. employes are some 9 months behind in their pay was recently brought to the attention of the Minister of Railways, who said he would get the Deputy Minister to look into it & see what could be done. P. Heney, of these companies, states that no employe of the roads can truthfully say his pay is 9 months in arrears. It is true, he says, that some employes are not fully paid, but they all receive pay every month, either in cash or orders, which are invariably honored. In reference to the financial condition of the roads & the extent of their present business, he says both are improving, & that their condition to-day is 25% better than a year ago.

The Quebec Government has issued execution against the Pontiac & Pacific Jct. & Gatineau Valley roads, in connection with a judgment secured in the Superior Court in 1884. The Co., it is alleged, owes commercial taxes to the Government.

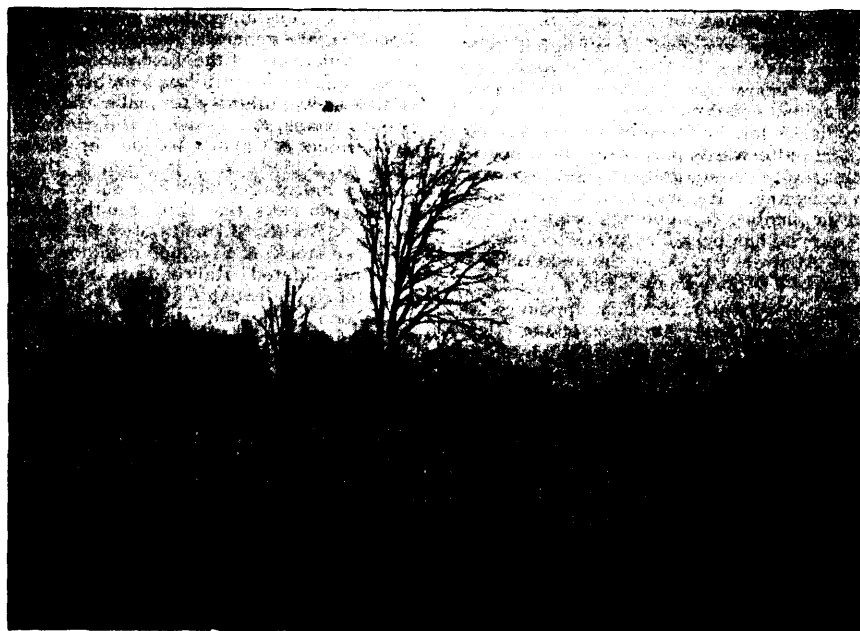
**Pullman Palace Car Co.**—On July 1, the directors declared a quarterly dividend of \$2 & a special dividend of \$20 a share; & recommended that the stockholders at the regular annual meeting, on Oct. 13, declare a stock dividend of 50%, in other words, to issue \$18,000,000 new stock, to represent that much of the surplus assets of the company. The capital stock now amounts to \$36,000,000, & this will increase it to \$54,000,000. The directors recommend that hereafter the dividend be regularly 6% per annum. The stock has been selling at about 211, & it is estimated that after the payment of the three dividends it will be worth 127. The surplus at the beginning of the current fiscal year was \$27,505,959.

**Qu'Appelle, Long Lake & Saskatchewan.**—The net loss in operating for May was \$1,487.35, as against net earnings of \$1,698.21 in May, 1897.

**Quebec Central.**—At the annual meeting in London, Eng., in June, the old directors were re-elected. The gross earnings for 1897 amounted to \$457,643, an increase of \$60,537 over those of 1896. The working expenses amounted to \$309,555, an increase of \$40,761. The net earnings were \$148,088, an increase of \$19,776, to which was added interest on balances, etc., \$2,830, & there had been written off some items amounting to \$2,954, making the available net revenue \$147,964. After paying interest on the prior lien bonds, \$85,166, there remained a balance of \$62,798, out of which a dividend of 1 1/2% had been declared, & paid on the income bonds, leaving \$13,450 to be carried forward.

The receipts for the 5 months to end of May were \$44,462 as against \$57,225 for corresponding period.

**St. Catharines & Niagara Central.**—Pursuant to judgment in the case of Rolls vs. this Co. the railway, about 12 1/2 miles, from



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Railroads, and most of the best farmers of this country, now use Page Coiled Spring Woven Wire Fencing. It is THE fence, because it is proof against all animals large or small; it will not sag because of snowdrifts, or from contraction and expansion; it is everlasting, as it is made of hard spring steel wire; and it is as cheap or cheaper than the inferior make-shift would-be competitors. Further information gladly furnished to interested parties. The Page Wire Fence Co., Limited, Walkerville, Ont.

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Sydney, C.B.

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705 Main St., Winnipeg.

St. Catharines to Clifton, where it connects with the Michigan Central, was offered for sale in June, subject to vendor's liens. The road has been in the Receiver's hands for some time, & latterly, according to statements made by parties interested, it has only paid the expense of running the cars, leaving nothing for the repairs necessary. The road is bonded for \$240,000, which, with accrued interest, makes up a debt of \$350,000, the chief creditor being the City of St. Catharines, which holds two-thirds of the bonds, amounting to \$160,000, & has an additional claim of \$50,000. It is said the whole value of the road, that is, structure, rails, bridges, & right of way, is not more than \$25,000. It is stated that in view of the bad shape the road is in it would cost \$100,000 to put it in proper running order. Before the Master in Ordinary at Toronto, June 28, there were 4 offers made for the purchase of the railway, as follows: F. W. Wilson, \$20,000; R. Cameron, \$22,000; G. M. Neelon, \$25,990; J. A. MacMahon, \$31,800. These were not regarded by the Master as high enough, & it was decided to adjourn the matter. Shortly afterwards, however, MacMahon raised his offer to \$34,000, which was accepted. Neelon protested against the sale, contending that the matter had been adjourned. It came up again July 4, when MacMahon's counsel objected to a re-opening on the ground that his client,

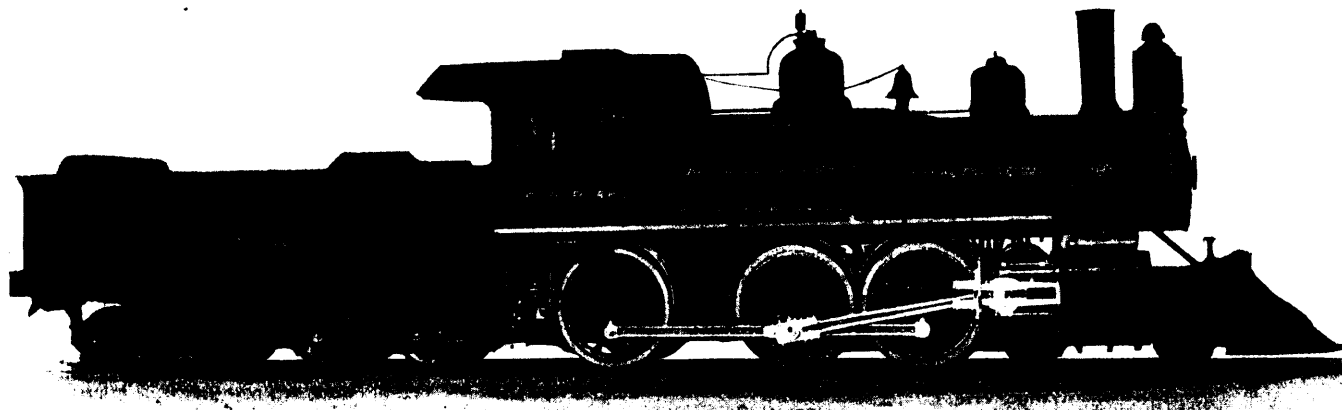
& on the Canadian side, as the Red Mountain, 11 miles, a total of 17 miles. It was persistently asserted that both the C.P.R. & the Northern Pacific were after the system, & then it was stated that the Northern Pacific had secured it. It turns out that it has been bought by the Great Northern (U.S.), & that it will be operated as part of that system. The road has, ever since the mining development of the Kootenay district began, done a large passenger & freight business, & should be on a paying basis. It has, however, probably seen its best days, as the C.P.R. Crows' Nest Pass line will cut into the whole of its territory north of the Boundary Line. It is more than likely that Mr. Corbin's failure, during the last Dominion Session, to secure power to extend to the Boundary Creek district, had much to do with his decision to sell out. The system has a bonded indebtedness of some \$3,500,000.

**Toronto Belt Line Ry.**—A writ has been issued by the Scottish, Ontario & Manitoba Loan Co. against the G.T.R. Co., W. S. Lee & Sir Casimir Gzowski, in connection with the Toronto Belt Line Ry. The original company acquired about 4½ acres of land in Rosedale from the plaintiffs, & it is claimed the financial obligation was not liquidated. Messrs. Lee & Gzowski are included in the writ because they are trustees for the bondholders. An application is made for the ap-

## EQUIPMENT.

### A Nova Scotia Industry.

During a recent visit to the Maritime Provinces the Editor of THE RAILWAY & SHIPPING WORLD had an opportunity of looking over the works of Rhodes, Curry & Co., at Amherst, N.S. This establishment, which is certainly one of the largest & most enterprising of all the Maritime Province industries, covers 7 acres of ground. The wood-working shop is 60 x 160 ft., 2 stories high, the lower story being used for preparing wood-work for freight cars, the upper story for passenger & street cars. The general foundry is 70 x 100 ft., with a capacity of 20 tons of castings a day. The wheel foundry is 70 x 90 ft., with a capacity of 44 car wheels, or 13 tons in weight per day. The machine shop, 70 x 80 ft., is equipped with all necessary plant for car building & general machine work. The blacksmith shop, 70 x 80 ft., is equipped with 12 forges, 3 furnaces, forging & bolt heading machine, steam hammer, shears, etc. The erecting shop is 80 x 360 ft. with four tracks. Power is supplied by 2 boilers 250 h.p., & 3 stationary engines, aggregating 250 h.p. In addition to the above there are connected with the car shops the usual store-houses, dry kilns, pattern shops, etc.



A C.P.R. COMPOUND TEN-WHEELED TYPE LOCOMOTIVE.

believing he had purchased the line, had made contracts to the extent of several thousand dollars for which he would be held liable. The Master decided to reopen the sale, announced a tender of \$35,000 from Neelon, & again adjourned till July 12 to let MacMahon raise the bid if he so desired. On July 12 the Neelon tender of \$35,000 was accepted, subject to the question of any claim of the Riordan Co. An agreement was produced between the Railway Co. & the Riordan Co., made in 1894, by which a siding was put into the latter's paper mills, subject to being removed on 3 months' notice. The Riordan Co. gave notice to the Receiver last year, & was taking steps to remove the siding. It is said the business of the Riordan Co. amounts to 25% of the Railway Co.'s receipts, & that in future it will be given to the G.T.R.

**Spokane Falls & Northern.**—Rumor has been busy for some time past with the Corbin System, consisting of the Spokane Falls & Northern, running from Spokane, Wash., to the International Boundary, 140 miles, & thence, under the name of the Nelson & Fort Sheppard Ry., to Nelson, B.C., 60 miles, a total of 200 miles. From Northport, on the Columbia River, 18 miles south of the Boundary, a branch runs to Rossland, B.C., under the name, on the U.S. side of the line, of the Columbia & Red Mountain, 6 miles in length,

pointment of a receiver & an injunction commanding the G.T.R. to take up the rails.

**Vanderbilt Lines.**—The following dividends were declared in June:—Semi-annual in Lake Shore of 3%; Michigan Central, 2%, & Canada Southern 1%. The rate on New York Central was 1% quarterly.

A. H. Harris, ex-General Traffic Manager of the Government Railways, is spending the summer at Murray Bay, Qué. He was connected with the G.T.R. from 1874 to Nov., 1897, during which time he held the positions of Secretary to Traffic Manager, Assistant General Freight Agent through traffic at Buffalo, N.Y., General Freight Agent through traffic at Detroit, Mich., District General Freight Agent Southern Division, & District General Freight Agent in charge of all lines east of Belleville, Ont., having been appointed to the last-named position in May, 1892. He was appointed to the Government lines in Nov. 1897.

A. C. LITTLE, Superintendent Orford Mountain Railway, Eastman, Que., in remitting his subscription to THE RAILWAY & SHIPPING WORLD, says: "Your paper fills a much needed want as a supply of information that should be in the hands of every railway man in the Dominion."

Rhodes, Curry & Co. are now engaged turning out 50 box cars for the Intercolonial Ry.; 20 box cars for the Quebec & Lake St. John Ry.; 150 coal cars for the Dominion Coal Co.; 10 coal cars for the General Mining Association; also electric cars for Halifax & Sherbrooke, Que.

In addition to the above-mentioned plant the firm has a large factory for the manufacture of building materials, & also owns & operates saw-mills.

### Canadian Government System.

An appropriation of \$600,000 for Intercolonial rolling stock was made at the last Dominion Session. It is probable that some 15 or 20 freight locomotives, 12 passenger coaches & 400 box cars will be procured, tenders for which will shortly be invited.

A passenger coach is being added to the equipment of the Prince Edward Island Ry. this year, following the practice of building one at Charlottetown each season. Seven stock cars are also being built. The locomotives are being generally overhauled, & new fire-boxes are being put in.

The Wagner cars, 6 sleepers & 3 diners, mentioned in our June issue, pg. 102, as having been placed on the Intercolonial Ry., have not been purchased by the Government,

but have been leased for a limited period. It is probable that a similar number of sleepers & diners will be built for the line, to be owned by the Government, & run on the through express trains between Montreal & Halifax.

The combined dining & restaurant cars placed on the Intercolonial, as described & illustrated in our June issue, pg. 91, have not proved a success, their operation having shown that there was no general demand for lunch counter meals to be served on board, as it was anticipated there would be when the dining stations on the line were closed. Two of the combined cars have been altered by extending the dining-room accommodation, & the other is being kept as a spare car to be used in case of emergencies.

Towards the end of June a press despatch from Montreal stated that A. M. Peterson, of Colborne, Ont., had concluded arrangements with the Minister of Railways for the use on the Government Railway System of the Cleveland cylinder for locomotives, a Canadian invention which, it is claimed, will develop a high rate of speed. Mr. Peterson has since written us stating that he has made such an arrangement. A subsequent enquiry from this office to the Mechanical Superintendent of the Government System at Moncton elicited the information that he had not been advised of any such action. On taking the position recently he found that an engine fitted with a Cleveland cylinder had been running between Moncton & St. John for some months, & it was claimed it had given satisfaction, but no tests had been undertaken & it was very likely these would be made in an exhaustive manner before such a change would be generally adopted.

Speaking to a press representative recently Mr. Peterson stated that the main features of the device are a double piston, large central exhaust & the application of the suction or inductive principle to the nozzle. Each cylinder has 2 piston heads on 1 rod, & consequently the cylinder is longer than that ordinarily in use on a locomotive. Near the centre of the cylinder a groove is cut in its wall, of sufficient area to afford an ample exhaust under any conditions. As the piston passes over this point the exhaust assumes the characteristic of an explosion rather than anything else, opening as it does into the chamber between the 2 pistons, which are in constant communication with the smoke stacks. As the piston passes back on the return of the stroke & covers the main exhaust port, the valve or supplementary exhaust passes out through the nozzle in such a way that the main exhaust operates to create a vacuum in the cylinder. The valve & valve motion of the ordinary engine can be used in the device.

#### Grand Trunk Passenger Cars.

The 20 passenger coaches recently built at the Pullman shops, Chicago, have all been delivered at Chicago, & are ready for service. The cars are 62 ft. long, fitted with wide Pullman vestibules, 6 wheeled trucks, 33 in. steel tyred solid disc wheels, Westinghouse quick action triple brake & air signals. Sixteen cars, numbered 807 to 822, are fitted with patent drawbars & buffers, & 4 cars, numbering 823 to 826, are fitted with the interchangeable drawbar, to work in harmony with the M.C.B. or Miller drawbar by changing the knuckle, & are intended for the Portland Division. Each car is fitted with wrecking tools. The cars have high-back walkover pattern seats, with seating capacity for 64 passengers in the body of car & 8 in smoking-room, 72 in all. The cars are fitted up in mahogany, lighted by 7 Acme, no. 121, two-burner lamps, heated by steam, & have roller blinds. There is a strip of carpet in the centre aisle. Ladies' dressing-room at one end of car, with flush closet & washbasin. Wash-

basin at the smoking end of car & flush water-closet for men. They are painted & ornamented G.T. standard color outside. Average weight of car 89,550 lbs.

The 6 cars recently built at the Co.'s shops, Montreal, numbered 801 to 806, are the same length & style generally, no vestibules, ordinary platforms, patent drawbars & buffers, brass hand railing, lighted by gas, 7 four-burner lamps, roller blinds. Three of these have gone into service & balance will be out almost immediately.

#### Canadian Pacific Items.

A considerable force is engaged in the C.P.R.'s Winnipeg shops placing Westinghouse air brakes on the freight cars. About 2,000 cars have already been fitted with these brakes there.

The compound 10-wheeled type locomotive illustrated on page 121 one of 13 received by the C.P.R. in the latter part of last season from the Baldwin Locomotive Works. The general dimensions were given in our April issue, pg. 34.

The first of the 10 magnificent sleeping cars which are being built at the C.P.R. shops at Hochelaga is ready for service. These cars are exceptional in design & finish, & will be the handsomest & costliest cars on the Co.'s tracks. Each car will be finished in Louis XV. style, with Watteau decorations, richly upholstered, & most comfortably furnished. The natural woods used in the wood-work are especially fine. There will be no oil lamps, electric lighting taking their place. Two electric lights will be suspended from each berth rod bracket. In each seat, or compartment, a reading light will be attached to the side of the car, to be turned on or off at the wish of the occupant. The smoking compartments have been made 2½ ft. larger than the ordinary sleeping car smoking room. It has been the object of the management to build 10 little palaces on wheels that shall be unexcelled by anything on the continent in workmanship, & it has succeeded.

The extent of the Westinghouse Mfg. Co.'s business is well illustrated by the change in their advertisement in our current issue. When we first published their advertisement in March last the number of freight cars on which the Westinghouse air brake was in successful operation was 520,000; to-day it is in operation on 650,000 freight cars. At a recent stockholders' meeting of the Westinghouse Co. it was decided to increase the capital stock to \$11,000,000.

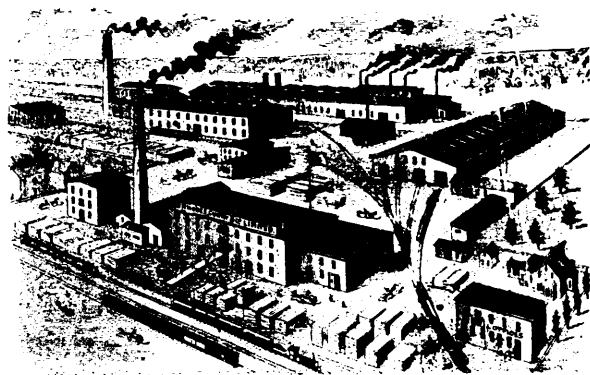
A London, Eng., cable says: "The North-Eastern Ry. has just completed a locomotive which, it is hoped, will soon gain the world's record. It is triple expansion, weighs 80 tons, & will drag a heavier load than any locomotive now on the rails in any country. At all events, that is what the builders claim. With an ordinary passenger train no doubt it is felt that it will maintain a speed of 80 miles an hour for hours at a stretch. But this engineering marvel has not yet been seen outside the North-Eastern Ry.'s works at Gateshead.

#### OPERATING.

#### G.T.R. Air Brake System.

The employes of the G.T.R. are not only being instructed in the new code of signals, but the brakemen are getting special instructions on the air brake system. A special car is fitted out with a complete outfit, with an instructor in charge, who gives lectures several times each day & in the evening. In the car there is represented an air brake train of 20 cars. In explaining the manner in which the brake is operated from the engine & the coach, the instructor points out the meaning of various colors representing different pressure. The method of turning on the air in case of an emergency & otherwise is demonstrated in a clear & intelligible manner. In the engine department are located 2 pumps & 2 large main reservoirs, with a capacity of 4,000 cubic inches. The new system is known as the automatic, which will replace the old straight air brake. Formerly when a train broke in two the air brake was useless, but the new brake remedies that fault, as it applies immediately to the train with rapidity & force. The first pump compresses the air & is stored in the reservoir located on the engine in a convenient place. The air passes from there into the train pipe through the engineer's brake valve located in the cab of the engine, then from the train pipe through a triple valve into the auxiliary reservoir.

The train is then charged for a journey. The brakes are applied by a reduction of train line pressure. Then the triple piston & slide valves go to the applied position & allow the pressure to pass from the auxiliary reservoir to the brake cylinder, which applies the brake. To release the brakes an increase of train line pressure is applied. In the main reservoir on the engine there is more pressure than that carried in the train line. The pressure, which is called excess pressure, is derived by an automatic feature of the brake valve. When the brakes are released the engineer throws that excess pressure into his trainline,



## Rhodes, Curry & Co.,

Ltd.,

### Railway and Street Cars

of all descriptions.

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

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

which forces the piston & slide valves to release their position, lets the air out of the brakes, & releases them. The signal line, which is used for the conveyance of signals from the train to the engineer, is operated by compressed air. This system replaces the old bell cord.

### C.P.R., Ontario & Quebec Division.

In connection with the changes in the superintendencies, &c., west of Toronto, referred to on page 116, General-Superintendent Leonard has issued the following circulars, taking effect August 1. T. Williams, Superintendent, will have charge of the London & Windsor sections, & the Ingersoll & Guelph branches, with office at London; & A. Price, Superintendent, will have charge of the Owen Sound & Hamilton sections, also Orangeville, Elora, Teeswater & Wingham branches, & Toronto Terminals, with office at Toronto, & time checks will be issued by them accordingly under the usual regulations. J. G. Wilson is appointed Car Distributer west of Smith's Falls Junction; office at Toronto.

G. S. MacKinnon, Master Mechanic Ontario & Quebec Division, Toronto, has issued the following circular to engineers & firemen: "The position of travelling engineer is abolished, & the following are appointed road foremen of locomotives: John Scott West & North of Toronto; D. Linahen, between Toronto & Montreal; F. O'Dell, lines East of Montreal. Road foremen of locomotives shall supervise, under the Master Mechanic, the working of locomotives on line, taking cognizance of & reporting on their condition in every respect when turned out for & in service. They have authority to instruct in all such matters, & will report neglect of any description on the part of engineers or firemen. In serious cases they have authority to request locomotive foremen to suspend any engineer or fireman guilty of conduct warranting such action, in such a case advising the Master Mechanic by wire & sending full report by first train. Engineers being responsible for the conduct of their firemen will govern themselves accordingly. Road foremen of locomotives are especially charged to watch & direct the consumption of fuel & stores, the record of which, on their respective sections, will show the manner in which the same are handled. They are expected to be on the line night or day, when & whenever their services may be most needed, sending to the Master Mechanic report of every locomotive they ride on, or examine, on Form 1630. They will also carry out any special instructions given them by the Master Mechanic."

### Operating Notes.

An acetylene gas plant has been installed on the government car Cumberland.

F. G. Hunter, who had charge of the brass finishing, tool & Westinghouse air brake work at Moncton shops, has been appointed Acting Locomotive Foreman, in place of G. Hall.

A new code of whistling signals has gone into effect on the Intercolonial. Formerly on approaching road crossings & stations 1 long continuous whistle was sounded; now 2 pretty long & 2 short ones are given.

The C.P.R. Operating Department, Western Division, has taken over from the Construction Department the portion of the Crow's Nest line between Lethbridge & Macleod, 39 miles. It now appears in the time bills as part of the Lethbridge section, which is 146 miles long from Dunmore Junction to Macleod, Alberta.

Early in July the section men on the Canada Atlantic struck. They were getting \$1, & had been trying to get \$1.10, but the management

refused to treat with them as a body. On striking they demanded \$1.25. A committee of drivers & conductors acted as intermediaries, & after being out a few days the men went back to work, on being advanced to \$1.10.

Two C.P.R. trains, an express & a freight, were brought to a standstill between Ottawa & Carleton Place, Ont., recently by caterpillars which covered the track, & being crushed, rendered the rails so slippery that locomotion was impossible. The caterpillars were of the tent variety & formed a column two miles long. Every vestige of foliage along their route was eaten up. The rails had to be swept & sanded before the trains could proceed.

F. W. Jones, Assistant to the Manager C.P.R. Western Lines, has issued the following circular to passenger trainmen: "Complaints have reached me of the distressing noise produced by the slamming of doors in passenger cars. There is a good deal of truth in this, as I have noticed that many trainmen seem to be always testing the strength of doors & seeing how hard they can slam them. A little care in the closing of doors will remove all cause for complaint."

The Montreal & Ottawa Ry., Vaudreuil to Ottawa, was transferred to the Operating Department of the Eastern Division July 20 & placed under the jurisdiction of Superintendent H. B. Spencer, at Ottawa. It is expected to commence through train service between Montreal & Ottawa on Aug. 1, & to make the trip of 111½ miles in 3 hours, with only 3 stops on the way, Vaudreuil, Vankleek Hill & Caledonia. There will likely be one fast train each way daily, & a local each way for general business.

The Train Dispatchers' Association of America convention was held in Montreal in June, the report showing a membership of 437. The G.T.R. gave the members a trip to Vaudreuil & Beloeil, & to inspect the Victoria Jubilee Bridge, & the C.P.R. took them on a special to Quebec. The following officers were elected:—President, H. B. Ware, B. & M.R. Ry., re-elected; Vice-President, F. N. Shultz, G.R. & I. Ry., re-elected; Secretary-Treasurer and Editor, J. F. Mackie, C.R.I. & P. Ry., re-elected. The next convention will be held at Milwaukee, Wis., June 3, 1899. E. Kettle, of the G.T.R., Detroit, Mich., was elected a member of the executive committee. None of the present officers or members of committees reside in Canada.

At Niagara Falls June 22, owing to a misunderstanding of the signals, G.T.R. train no. 12 collided with an engine of the Erie Railway & driver Geo. Jack, of the latter, was pinned between the locomotive & tender & killed. Jack is supposed to have taken the signals given by the G.T. signalman to stop, for those of his Co., which are American standard, to come ahead, & the sun being low, shone brightly in his eyes, preventing him from seeing the approaching train until too late. The jolt threw the throttle wide open, & the Erie engine dashed across the bridge at a high rate of speed, & tore through the city yards, until reaching the Tunnel District Jct., where the telegraph operator, having been advised of its coming, ditched it. This accident shows the emphatic necessity for uniform rules.

T. Tait, Manager C.P.R. Eastern Lines, has issued this circular:—"The following instructions must be carried out in releasing the Lindstrom brake on the wide vestibule cars in order to prevent brake lever striking & damaging wood work, & injuring the hands of party releasing brake. The lever should be held firmly with both hands, while small ratchet on floor is set free by steady pressure from foot. (This ratchet should never under any circumstances be kicked off.) The lever should then be pulled forward to release the dog, & then be allowed to go back slowly under

control until the ratchet strikes the cam & releases the brake. If lever is not held firmly & controlled, it will, as soon as ratchet is set free, & dog on lever released, fly back against wood work of vestibule with great force."

The time record on the Intercolonial was broken recently by special trains between Newcastle & Moncton & Moncton & St. John. F. C. Ayer, of Bangor, Me., a passenger on the Maritime express, desired to make connections with the Boston express, which leaves St. John at 16 30, & in order to do this he chartered a special from the Intercolonial. The special took Mr. Ayer in charge at Newcastle. The Maritime express reached there at 12 55, & the special, made up of engine 156 & 1st class car, left Newcastle at 12 58, & reached Moncton at 14 22, a distance of 78 miles. The special was detained 5 minutes at Chatham Jct. & 5 minutes at Rogersville. On arrival at Moncton Mr. Ayer was transferred to another special, engine no. 59, & left for St. John at 14 25. One stop was made at Sussex for water, & the special arrived at St. John at 16 12, the distance covered being 89 miles. Mr. Ayer, who paid in the vicinity of \$135 for the train, probably never had a faster ride for the same distance in his life.

### Telephone Items.

The following were crowded out of pg. 140, where other matter relating to telephones will be found.

Letters patent of incorporation have been granted to the People's Telephone Co., of St. Thomas, to operate the general business of a Telephone Co., the incorporators being, A. E. Wallace, E. A. Smith, F. M. Griffin, S. Chant, W. H. Murch, D. McLarty, T. W. Duncombe, J. Campbell & A. McCrimmon, of St. Thomas, & H. C. Walters, & R. H. Evans, of Detroit, Mich. The capital stock is \$60,000.

The appeal of the Bell Telephone Co. v. the City of Hamilton has been allowed. The city wanted to tax the poles, wires & other equipments of the Co. at \$27,000, on the basis of its prospective value as a going concern. The Court of Appeal held that the poles, etc., could only be taxed for their abstract value as raw material, \$3,488.40. The Board of County Judges, to whom the Co. first appealed, settled the assessment in the Second Ward, where the Co.'s property chiefly is, at \$13,940, but the Court of Appeal has done \$10,000 better for the Co.

A very interesting telephone case has recently been decided in Sweden. A business man in Stockholm had entered into a commercial arrangement with a banker, the affair having been arranged through the telephone. As the business did not pay the profit expected, the dealer absolutely refused to come to settlement, & was sued by the banker. When the case appeared in court the dealer insisted that the bank had no written security from him, & no witnesses to prove the transaction. It was, however, shown that the telephone at the bank was provided with two receivers, & everything transpiring through the telephone could therefore be heard & legally proven. The dealer lost his case.

More than a year ago the Bell Telephone Co. applied to the Dominion Government for power to increase its rates. The application was heard by Mr. Blair, Sir Henri Joly, & some other members of the Cabinet. Nothing came of the matter, & the interested parties have been waiting ever since for a decision. Recently, Sir Louis Davies & Messrs. Fielding, Fisher & Patterson were appointed a committee to consider the application, & they held a meeting in Ottawa, discussing the question at length, but it is said no decision has yet been arrived at.

## CONSTRUCTION &amp; BETTERMENT.

## News of Various Lines.

**Atlantic & Lake Superior.**—This Co. is building an extension from its eastern terminus at New Carlisle, Que., to Paspebiac, 3 miles, for the purpose of reaching a deep water port, said to be open all the year round. It is said wharves, &c., will be built at Paspebiac. (Unofficial.)

**Canadian Yukon.**—It was announced in our June issue, pg. 98, that Mackenzie & Mann had stopped work on this line & withdrawn their outfit, & it seemed to be generally recognized in British Columbia that the project had been abandoned, partly as a result of the threatened competition of the White Pass & Yukon Ry. via Skagway, & partly as the result of the failure to obtain in addition to the promised subsidy of \$1,600,000 from B.C. a large land grant from the Dominion Government.

However, Premier Turner, addressing his constituents shortly before the recent general election in B.C., said: "The Teslin Lake Railway project has not been abandoned. On the contrary, the contract has been signed for the construction of the road from Telegraph Creek to Teslin Lake, & the plant & materials partially removed from the North are being shipped back from Vancouver, so that active construction may begin at once. Ten or 20 miles will be completed this fall, & I may say that as a guarantee the Co. has made a deposit to build through to the Lake, taking its chance of securing the subsidy from the Dominion at some later day. In the meanwhile the wagon road is going through to relieve the congestion & provide work for the men on their way to the river, & we have accurate reports of the navigability of both Teslin Lake & the Hootalinqua. The Dominion engineer confirms Mr. Hamlin's verdict that one can get on boat or steamer at the lower end of Teslin Lake & go through without interruption to Dawson or anywhere below."

On the other hand, D. D. Mann, during his recent visit east, said there was no intention of going on with the railway at present.

A dispatch from Telegraph Creek, dated July 12, to the Globe, said: "Mackenzie & Mann's agent at Telegraph Creek received orders on June 27 to proceed at once with the work of making the Teslin trail road, & to widen the road bed to 4 ft. & put at least 150 men at work if necessary. The first 45 miles have already been completed, & the road is in excellent condition for that distance. It is wide enough for narrow-built vehicles, & all the miners are loud in their praises of this action, which is believed to be among the arrangements made with the contractors by the Provincial Government. Miners & others are now enabled to pass over the ground easily & take in their supplies on handcars. One hundred men are now at work. The extra ones will be put at work in the Murkey County, beginning 40 miles east of Teslin Lake, & they expect to finish the trail in 6 weeks at the furthest. The Mackenzie &

Mann men understand their business & are now pushing on the work in good shape. The weather is favorable for the prosecution of the work, & a much better feeling prevails now than was the case a few weeks ago. Having gone up the trail a considerable distance & personally examined it, I believe all that Mr. Robinsor, Manager for Mackenzie & Mann, has stated concerning the whole undertaking."

**East Richellon Valley.**—This line is being built from Iberville to St. Thomas, Missisquoi County., Que., 24 miles. It is said track-laying is going on & that connection will be made with the Canada Atlantic Ry. shortly. (Unofficial.)

**Lake Manitoba Ry. & Canal Co.**—Work on the extension of this line from Sifton Jct., Man., towards the Saskatchewan has been somewhat delayed by unusually wet weather, but steady progress is being made.

**Midland of Nova Scotia.**—Work is in progress on this line, which is to run from Truro to Windsor. Z. J. Fowler is Chief Engineer. W. G. Reid, of Montreal, has the contract for the whole line & has sub-let it to Fitzpatrick, Bros., of New Glasgow. M. J. O'Brien, of Renfrew, has the 1st 20 miles of grading from Windsor to Riverside Corner or vicinity. R. L. & D. R. McDonald, of Pugwash, have the contract for the masonry of the St. Croix River bridge. Truro has voted \$30,000 bonus towards the line on condition that it be built via Clifton. The Co. has decided to issue mortgage bonds. (Unofficial.)

**Montford Colonization.**—This line, which runs from Montford Jct. on the St. Jerome branch of the C.P.R. to Arundel, Que., 33 miles, is being changed from 3 ft. to standard gauge. (Unofficial.)

**Nelson & Bedlington.**—This line & connections, which will be built by the Great Northern (U.S.) will run from the G.N.R. at Bonner's Ferry, Idaho, through the valley of Kootenay River to Kuskanook, the point at which the C.P.R. Crow's Nest Pass line strikes Kootenay Lake. Tenders have been invited & it is expected construction will be commenced at an early date. There will be tributary to the line a mining district nearly all the way. The Kootenay Valley lands are well adapted to fruit raising, which has been commenced to quite an extent. N. D. Miller is Chief Engineer.

**Newfoundland Northern & Western.**—This line having been completed, the 1st through train left St. John's, the eastern terminus, June 29, arriving at the western terminus, Port Aux Basques, 548 miles, in 24 hours. At Port Aux Basques the ferry steamer Bruce, with a speed of 17 knots, takes passengers aboard for Sydney, C.B., landing there in 6 hours & connecting with the railway systems of Canada. This service gives Newfoundland a tri-weekly connection with Canada. Track has been laid for 25 miles on the extensions from Brigus, Nfld., to Tilton, & from Harbor Grace to Carbonær. The Co. is making

further extensions from Sandy River to Coalville, from St. John's to Dunville, & to Burnt Bay.

**Northern Pacific.**—Work on the branch from Belmont to Hartney, Man., is being pushed as rapidly as possible, though it has been somewhat delayed by wet weather. The western terminus has not yet been definitely decided on. (See June issue, pg. 99.)

**Ottawa & New York.**—The following statement of the progress of work was furnished us July 4.—The road between Cornwall & Ottawa is ballasted to within 4 miles of the Canada Atlantic Jct. Grading between C. A. Jct. & the connection with the C.P.R.'s Montreal & Ottawa branch at Rideau River will be completed this week. Grading is complete between Cornwall & Moira, N.Y., except the crossing of the O. & L. C. at Moira, & the erection of the 2 steel bridges at St. Regis & Raquet River. Track laying will begin at Helena this week. On the St. Lawrence Bridge the masonry in the south channel is all completed, & one span erected. On the north channel, the metal work of the north viaduct & the draw span is completed, & the south viaduct is now going up. The foundations for the 2 last piers in this channel are above water, & there is nothing now to delay the erection of metal to a finish. (Official.)

**Pembroke Southern.**—This line, now under construction from Pembroke, Ont., southwesterly to Golden Lake on the Ottawa, Arnprior & Parry Sound Ry., is 21 miles in length. The grading has been about completed & track is being laid. The contractors are Russell, Poulin & Co., of Pembroke, who practically control the road, which the town of Pembroke has bonused with a view of getting more direct connection with Toronto. The completion of a link between Golden Lake & the eastern terminus of the Ironclade, Bancroft & Ottawa line would give almost direct communication between Pembroke & Toronto. The Pembroke Southern will open up a very fine agricultural country. (Official.)

**Restigouche & Western.**—This Co. was incorporated by the New Brunswick Legislature in 1897 to construct a line from Campbellton on the I.C.R. to the St. John River, at or near Grand Falls. Construction of the first 20 miles has been commenced by Malcolm & Ross, contractors, who will own the line. It will be about 100 miles long, 70 miles of which will be through heavily timbered country. The projectors consider they have good prospects in making connections with at least 5 different roads, the I.C.R., C.P.R., Atlantic & Lake Superior, Temiscouta & Bangor, & Aroostook C. L. B. Miles is Chief Engineer. (Official.)

**Vancouver, Victoria & Eastern.**—In addition to what we stated in our June issue, pg. 100, it may be said that, on June 17, the B.C. Government passed an Order-in-Council granting a subsidy of \$4,000 a mile to this Co., the leading spirits in which are Mackenzie & Mann. The subsidy covers the line from Vancouver by way of New Westminster to the south side of the Fraser River, where a

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junction will be formed with the line running westerly to English Bluff, or thereabouts, & thence easterly through Surrey, Langley, Matsqui, Chilliwack, & across the Coast Mountain range, through the Similkameen country, to Penticton, at the foot of Okanagan Lake, from which point a start is to be made at once on the line eastward to the Boundary Creek district to meet the line being built west from Robson by the C.P.R. Engineers are to be placed at once upon the route from Abbotsford to Chilliwack, & the line will be permanently located, & this done, work on construction will be begun. From Penticton westward, engineers have been in the field making a preliminary survey of the route, & it is believed there will be no insurmountable difficulties encountered excepting the Coast Mountain Range, which extends from Chilliwack to Hope. The building of the line will be undertaken in sections; the first will be known as the eastern section, & will extend from Penticton to Boundary, the distance being in the vicinity of 100 miles; the next, that from Abbotsford to Chilliwack, will possibly be known at present as the central, the distance being about 35 miles. This will be followed by the laying out of a road from Vancouver & the coast to Penticton, & which of course will include the Chilliwack division. (Unofficial.)

**White Pass & Yukon.**—Work is said to be progressing very favorably on this line, some 1,000 men being employed. It is intended to have the 1st 20 miles of the road, which will take it from Skaguay to the summit, completed by September. The statement referred to in our June issue, pg. 98, that the charter of the British Yukon Ry. Co. had been secured by the Pacific & Arctic Ry. & Navigation Co., of West Virginia, is incorrect. The latter Co. was merely formed for the construction of the portion of the line which is in territory now in the possession of the U. S. It is merely an auxiliary company formed for the purpose of assisting in the construction of the railway. The construction of the portion of the line to be built in Canada will be undertaken by a company formed in England, & the whole line will be built by British capital. Close Bros. & Co., of London, Eng., & Chicago, are the financial agents of the Co., & S. H. Graves, of that firm, is the principal representative of the Co. on this side of the Atlantic. The engineer in charge is Mr. Hawkins. (Official.)

**Winnipeg & Southeastern.**—It was intended to build 80 miles southeasterly from Winnipeg to Whitemouth Lake this season, but it is now said only 40 or 45 miles will be completed, there having been considerable delays owing to wet weather. Arrangements have been made with the C.P.R. for temporary terminals in St. Boniface, where construction material, &c., will be received. Engineer Bruce is now making a survey around the southern end of Lake of the Woods to Rainy River. Another line will be run across the Narrows of the Lake of the Woods entirely through Canadian territory & on the result of these surveys the Manitoba Government will decide which route to adopt. See June issue, pg. 100. (Unofficial.)

#### Canadian Government System.

A large amount of ballasting has been done on all parts of the Intercolonial Division this season. About 3,000 tons of 67 lbs. rails have been laid, replacing 57 lbs., between Truro & Stellarton. All the main line from Quebec to Halifax & St. John is now laid with 67 lbs. steel. Some 6 bridges between Moncton & Truro are to be replaced this season & tenders have been asked for the steel structures.

The construction of the deep water terminus at North Sidney, referred to in our June issue, pg. 99, is well under way & is expected to be completed in September.

The station at Moncton, described in our June issue, pg. 99, has been completed.

At Halifax a wharf 600x150 ft., with a 150 ft. dock on each side, is to be constructed. A large freight shed will be built on the wharf with 2 tracks inside & 2 out. The wharf will be built of creosoted piles & Georgia pine timber. Money has also been voted for elevators at Halifax & St. John, but contracts have not yet been let.

On the Prince Edward Island Division a mile of track is being built between Colville & North Wiltshire, which will save  $\frac{1}{2}$  of a mile in distance, reduce the curvature from  $9\frac{1}{2}^{\circ}$  to  $4^{\circ}$  & save about 2 miles of snow fencing. Part of the work is across a ravine, necessitating some 100,000 yards of earth work. The cost altogether will be between \$20,000 & \$25,000. Several other bad curves will also be taken out this season & the North Wiltshire station-yard will be improved.

The steel rails for the Intercolonial & P.E.I. Divisions, advertisement inviting tenders for which appeared in our June issue, are to be delivered in June, 1899, instead of April, 1899, as originally intended. For the Intercolonial there will be 5,000 tons of 2,240 lbs. of 80 lbs. rails with 300 pairs of angle fish plates, & 5,000 bolts & nuts to be delivered at St. John, N.B. For the P.E.I. Division there will be 1,000 tons of 2,240 lbs. of 50 lbs. rails without fastenings, to be delivered at Summerside. (Official.)

#### Grand Trunk Work.

A daily press telegram from Montreal July 20 stated that the management announced that extensive terminal facilities were to be provided at Sarnia & Port Huron, & with that object in view architects were figuring on the cost of round-house & machine shops for these places, the estimated value of which would be \$70,000 each. In reply to an enquiry from Mayor Johnston, of Sarnia, General-Manager Hays wired that the statement was incorrect.

The Co. will build a brick round-house 331 ft. diameter, with flat gravelled roof, at Sarnia Tunnel. (Official.)

Work on the Victoria Jubilee Bridge at Montreal is progressing very satisfactorily, the erection of 24 spans being almost finished, & it is expected that the new structure will be brought into service in the autumn. (Official.)

The Co. is putting in full interlocking & derailling apparatus at the crossing of its lines by the C.P.R. at St. John's & St. Constant, Que. (Official.)

It is said that the bridge near London, Ont., is to be enlarged & double-tracked. (Unofficial.)

The laying of the 80 lbs. rails on the southern division between Windsor & Niagara Falls is being gone on with.

There is a hitch between the Co. & the Montreal City Council in reference to the site for general offices. The City Finance Committee provided in the agreement that none but local labor should be employed in the construction of the buildings, that if the Co. should ever remove from the site it should revert to the city, & that if the Legislature would not permit the city to convey the land with a clear title to the Co. the latter should make good to the city any loss from rental or otherwise thus occasioned. The Co. will not accept these conditions, & the matter is still unsettled.

W. J. Singleton has returned to Montreal from his leave of absence & has resumed his duties as Superintendent of C.P.R. terminals there.

The underground railway in London, Eng. was the most expensive to construct in the world. Some parts of it cost as much as 1,000 guineas per yard or £30 for every inch.

#### Canadian Pacific Work.

**Montreal Terminals.**—The freight yard facilities at the Montreal terminals—Hochelaga, Quebec Gate, Mile End, & Outremont are being largely extended & improved. The Hochelaga yard is being remodelled & its capacity increased by about 4 miles of additional tracks. At Mile End a new yard is being built, & about a mile of track is being laid. At Quebec Gate the freight accommodation is being increased to the extent of about a mile of track. At Outremont an extension of the yard is being graded, & about 2 miles of track are being laid. (Official.)

Tracks are being laid into the Place Viger passenger station, Montreal. The combined station & hotel are nearing completion & are expected to be opened early in August. (Official.)

A double track is being laid between Outremont & Montreal Jct., 7 miles, & will be completed this month, forming a complete double track between Windsor Street & Place Viger station,  $15\frac{1}{2}$  miles, & making almost a belt line round the city of Montreal. (Official.)

A passenger station is being built at Outremont. (Official.)

**The Montreal & Ottawa Ry.,** which was fully described in our May issue, pg. 64, is about completed, & is expected to be opened for traffic Aug. 1. (Official.)

**Eastern Division.**—The rebalasting & improving of the main line between Carleton Jct. & Chalk River is well advanced,  $\frac{3}{4}$  of the distance being done. The ballasting, etc., west of Chalk River to Fort William & Sault Ste. Marie is well under way. On the main line 80 miles are being laid with 73 lbs. steel, replacing 60 lbs. Of this 50 miles is on the Lake Superior section, the balance east. A number of wooden structures are being replaced by permanent work & open culverts are being replaced by permanent culverts & filling. Some 50 will be completed this season. (Official.)

**Winnipeg Station.**—Plans have been prepared for an extension at the east end of the building to accommodate the express office, so that the space now occupied by the Dominion Express Co. could be utilized for a private ladies' waiting room. It is not likely the work will be gone on with this season. (Official.)

**Stonewall Branch.**—This line is to be extended this season from Stonewall to Foxton, Man., some 15 miles. (Official.)

**Branch from Hartney.**—It was stated in our June issue, pg. 97, that the Co. would likely build a branch of about 20 miles from Hartney east, which would for that distance parallel the Belmont-Hartney branch now building by the Northern Pacific. Surveys have been made, but nothing definite can be learned as to construction. (Unofficial.)

**Pipestone Branch.**—This line, which runs from Monteith Jct., on the Souris section, to Weston, 31 miles, is to be extended west this year. (Official.) It is said this year's extension will be 30 miles, & that 50 miles more, extending to the Moose Mountain country, will be built next year. (Unofficial.)

**Crow's Nest Line.**—Up to July 29, track had been laid 182 miles west from Lethbridge to the crossing of the Kootenay River. For the balance of the distance 80% of the work has been completed, & the balance will be done by the middle of September. For the present connection between Kuskanook & Nelson will be carried on by means of a steam car ferry. (Official.)

There is said to be no foundation for the report that the Co. does not intend to complete the portion of the line between the south end of Kootenay Lake & Nelson. (Unofficial.)

R. C. Clute, barrister, of St. Catharines,



Ont., who has been appointed a Commissioner by the Dominion Government, is investigating the death of the two Nova Scotians, Fraser & Macdonald, who died of diphtheria in a Crow's Nest construction camp last winter.

**Whitewater Extension.**—A party in charge of H. B. Walkem, C.E., is making a final location of this line in the Slocan district. It is said construction will commence as soon as the survey is completed. (Unofficial.)

**Western Lines Steel Bridges.**—No less than 14 steel bridges are being built on the lines west of Fort William this season, all but one of them being on the Pacific Division. They are as follows, the figures before each giving the mileage from Vancouver:

119. White's Creek, 2 steel spans, 100 ft. each, deck, replacing trestle.

167. A 150 ft. steel truss deck, replacing 150 ft. wooden truss.

179. Nicola River, 150 ft. steel truss thro' replacing 2 wooden spans 80 ft. each.

335. Sicamoose Narrows, steel swing replacing wooden swing.

407. 11th crossing Illecillewaet, 100 ft steel truss deck replacing 100 ft. wooden span.

410. 8th crossing Illecillewaet, 100 ft. steel truss deck, replacing 100 ft. wooden span.

410. 7th crossing Illecillewaet, 100 ft. steel truss thro', replacing 100 ft. wooden span.

414. 5th crossing Illecillewaet, 100 ft. steel truss deck, replacing 100 ft. wooden span.

419. 2nd crossing Illecillewaet, 80 ft. steel truss deck, replacing 70 ft. wooden span.

429. Cascade Creek, 2 steel trusses 60 ft., 1 thro' & 1 deck, replacing trestle.

438. Mountain Creek, 1 steel truss, 125 ft., on steel towers, replacing wooden span 150 ft.

457. 1st crossing Columbia, 2 steel trusses, 125 ft. each, replacing 2 wooden spans of 150 ft. each.

400. Moose Creek, 1 steel truss, 60 ft. thro', replacing trestle.

On the Western Division, at the 3rd crossing of Devil's Head Creek 1 steel truss 60 ft. thro' is replacing a trestle.

At mileage 163 from Vancouver, an 80 ft. stone arch is replacing a 125 ft. wooden truss. (Official.)

**Columbia & Western.**—On July 15 a contract was let to Winters, Parsons & Boomer, for standardizing the gauge of the 15 miles of this line between Trail & Leroi, 2 miles beyond Rossland. This firm built the standard gauge section of the line between Trail & Robson, when it was under Mr. Heinze's control, & have lately had a heavy contract on the Crow's Nest line. Their outfit has been brought in from Montana, & it is expected the work will be completed by Oct. 20. The steel will be laid by the C.P.R. Co., but W. P. & B. will furnish the ties. It is said the whole work will cost about \$120,000. F. P. Gutelius, Superintendent of the line under the Heinze regime, is in charge of the work for the C.P.R. Much of the line will be entirely reconstructed, to get a better location. The proposal to do away with the Tiger switchback by the construction of bridges & loops has been abandoned, although the grade will be made much easier. (Unofficial.)

In our June no., pg. 97, we announced the letting of a contract for the construction of 100 miles of line by the C.P.R. under the Columbia & Western charter, from the south end of Lower Arrow Lake to Midway, in the Boundary Creek country. The firm of contractors is known as Mann, Foley Bros. & Larsen. W. Mackenzie's name does not appear, but it is believed he is interested in it with D. D. Mann. W. F. Tye is Chief Engineer of Construction & is in control of the whole work. The new line starts from Robson, the present northerly terminus of the C. & W. R., but the construction headquarters are a few miles west, at Brooklyn. From

Robson the 1st section of the line will run along Dog Creek, through the McRae Pass to Christina Lake & on to Cascade City, a distance of 38 miles. The tote road to Cascade City is well under way. (Unofficial.)

### Canadian Freight Association.

At the regular meeting at Montreal, July 7, there were present: G. M. Bosworth, J. N. Sutherland, E. Tiffin, W. B. Bulling, Jr., W. A. Kiltermaster, C.P.R. J. W. Loud, J. J. Cunningham, F. J. Watson, S. Hopkins, J. Pullen, J. H. Hanna, M. C. Sturtevant, J. E. Dalrymple, G.T.R. J. J. Wallace, J. Hardwell, Intercolonial. C. J. Smith, W. P. Hinton, Canada Atlantic. W. Macmillan, Michigan Central. W. Woollatt, Lake Erie & Detroit River. F. H. Brown, Central Vermont. A. Lalond, Boston & Maine. H. Upton, United Counties. W. C. McCullough, Delaware & Hudson. A. C. Lytle, Orford Mountain. F. Conway, Kingston & Pembroke. G. Collins, Central Ontario. F. F. Backus, Toronto, Hamilton & Buffalo. G. W. Hardisty, Northern Pacific. D. DeCooper, Lehigh Valley. J. D. Seeley, Seeley Packet Line. J. Earls, Sec.-Treas.

President C. J. Smith presided. The following were elected active members: T. Jenkins, Toronto, of Tilsonburg, Lake Erie & Pacific Ry.; C. Cameron, Collingwood, of Great Northern Transit Co.; M. Burton, Collingwood, of North Shore Navigation Co.; C. W. Graves, Toronto, of Great Northern Ry. (vice H. McMicken).

The Classification Committee reported a number of additions & amendments, which were approved on the understanding that those which could be promulgated as "Rulings of the Committee" would be printed & distributed as soon as possible. The other items, together with all amendments & additions to date, to be embodied in a new book & issued as effective on Jan. 1, 1899, if previously approved by the Governor-General-in-Council.

It was decided that the minimum weight of articles carried under 5th & 6th class carload rates in the Canadian Joint Freight Classification be established at 24,000 lbs., & the Classification Committee was instructed to adopt this arrangement at the earliest possible time. The Committee was also instructed to make an exception in respect to articles which it may be considered should not be established on the basis of 24,000 lbs., & to note such exceptions in the classification.

The Weighing & Inspection Bureau report for March, April & May showed these gains, as per inspector's correction in weight: 1,517,649 lbs., revenue gained, \$3,595.60; in classification revenue gained \$4,579.32; live stock in lbs. 5,779,200, revenue gained, \$11,048.26; total gain, \$19,223.18. The live stock weighed at Montreal was: G.T.R. 1,314 cars, average weight 22,882 lbs; C.P.R. 455; cars, average weight 22,687 lbs. In accordance with previous authority J. Brayley has been appointed inspec-

tor at St. John, N.B., & the Committee recommended that in view of the favorable results already apparent he be continued for the present, subject to a month's notice, & that in future he alternate between Halifax & St. John.

The cash account showed \$201.47 to the credit of the Association.

The car service report for quarter ended May 31 was as follows:—cars reported inwards & outwards, 41,539; cars on which car service accrued 868; collections, 2,499.

The report of cars released & time occupied after arrival for the same period was, loaded cars reported inward, 35,972. Released after arrival, 3 days, 18,422; 4 days, 6,919; 5 days, 4,436; 6 days, 2,341; 7 days & over, 3,854. The committee reported that the Manager's reports & these statistics, also reports from Inspector Perry, indicate an improvement in the handling of cars since this department was organized. The cars held under load 7 days & over appears largely to be in consequence of want of sufficient track delivery room at large places, where frequently the volume of business is greater than some of the railways can promptly provide for. The question of the railways concerned increasing their accommodation at such points is earnestly recommended to the favorable consideration of the general managers & traffic officers of the roads affected, so that the serious delays to cars from this cause may be largely avoided or entirely removed. J. B. Morford, per W. MacMillan, M. C. Sturtevant, G. S. Cantlin, W. P. Hinton, A. White, per J. E. Dalrymple, committee. John Earls, Chairman.

The report on car service claims for the same quarter showed that 172 were presented, involving \$1,763.25, of which \$992.50 was refunded, \$770.75 being retained.

After consideration of a letter from the National Board of Fire Underwriters, New York, it was resolved that, in the opinion of this Association, all packages of Carbide of Calcium should bear a conspicuous label in large type, reading, "Carbide of Calcium. Dangerous if not kept dry," & that the Secretary communicate with shippers of this article requesting them to take immediate action to comply with this resolution.

It was resolved that at any station at which the railway companies undertake to perform a cartage service the additional charge for cartage will be, on 1st, 2nd, 3rd & 4th class freight 1 1/4 c. per 100 lbs., & on 5th class freight 1 c. per 100 lbs., but on no single consignment shall the charge for cartage be less than 10c. This to be effective on & after Aug. 1, 1898.

Attention having been called to THE RAILWAY & SHIPPING WORLD, published in Toronto, it was resolved that THE RAILWAY & SHIPPING WORLD, the only publication in Canada exclusively devoted to the interests of transportation, will be recognized as the organ of this Association.

The question of the advisability of having all forms of contracts with shippers made uniform, printed in the classification & approved by the

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Governor-in-Council, was discussed, & left over for further consideration. In the meantime the Secretary was requested to communicate with the Canadian roads, to obtain copies of the forms now in use.

The question of the adoption of a joint notice of reminder to consignees when cars were not unloaded promptly was considered, & it was the sense of the meeting that such notices, if used, should be issued by each road concerned, if thought advisable, & not issued as joint notices by two or more roads.

#### Liability to a Free Passenger.

In the High Court of Justice of Ontario, Trial Court, at Toronto, July 23, Justice Rose gave judgment in *Bicknell vs. G.T.R.*, an action tried with a jury at Napanee, brought by R. F. Bicknell, a cattle dealer, to recover \$30,000 damages for injuries received by him while travelling on a freight train from Napanee to Montreal by reason of a collision. The defendant admitted that the plaintiff was rightfully where he was at the time of the accident, & that the injury to him was caused by negligence of its servants, but alleged that the plaintiff was being carried in pursuance of the terms of his contract with the Bay of Quinte Ry. & Navigation Co., & that the defendant was entitled to the benefit of such terms & was exonerated from liability. The contract between the plaintiff & the Bay of Quinte Co. was for the carriage of 23 cattle from Ernisville station on the Bay of Quinte line to Montreal, the greater part of the transit being by defendant's line. The plaintiff accompanied the cattle for the purpose of superintending their loading & unloading & conveyance. By the 17th clause of the agreement between the plaintiff and the Bay of Quinte Co. it was provided that "when free passes are given to persons in charge of animals it is only on the express condition that the Railway Co. is not responsible for any negligence, default or misconduct of any kind on the part of the Co. or its servants or of any other person or persons whomsoever causing or tending to cause the death, injury or detention of any person or persons travelling upon any such free passes, & whether such free passes are used in travelling on any regular passenger train or any other train whatsoever, the person using any such pass takes all risks of every kind, no matter how caused." Held, that this clause was by its terms expressly confined to the agreement between the plaintiff & the Co. *Grand Trunk R.W. Co. v. McMillan*, 16 S.C.R., 143, followed. *Hall v. Northeastern R. W. Co.*, L.R. 10, Q. B. 437, distinguished. Nor upon the evidence did the plaintiff authorize the Bay of Quinte Co. to make any arrangement with defendant which would free it from liability. It was not necessary for the plaintiff to prove a contract; the onus was on the defendant to prove exoneration. Judgment for the plaintiff for \$5,000, the amount found by the jury, with costs of action. Entry of judgment stayed for 30 days. *Aylesworth, Q.C.*, for plaintiff. *Osler, Q.C.*, for defendant.

#### Advance in Transcontinental Rates.

Transcontinental rates went up about 10% on June 25, as the result of a decision arrived at between the interested lines, including the G.T.R. & C.P.R. These rates have been in an unsatisfactory condition for some time & the decision to advance them was reached by mutual consent. The tariff is a bulky affair & of the usual intricate nature. It supersedes tariff no. 1b, of Dec. 15, 1897, & states that through rates will be arrived at by the addition of arbitraries as authorized by tariff F. T. 49 to the rates from Chicago to Seattle.

In order to give an idea of the character of the increase of rates it may be stated that all

are based on the Chicago rate to the Pacific, the difference between here & that point being added. As an instance of the increase it may be stated that the freight on nails will hereafter be 75c. per 100 lbs., instead of 66. Bar iron will be the same. That rate refers to commodities. The class rate is somewhat different. In the Canadian Joint Classification the numbers run from 1 to 10, & in the Western Classification it runs from 1 to 5 & then from A to E, or 6 to 10; In class 1 the increase is from \$2.40 to \$3.00 per 100 lbs.; class 2, from \$2.15 to \$2.60; class 3, from \$2.00 to \$2.20; class 4, from \$1.70 to \$1.90; & class 7 from \$1.10 to \$1.25.

These new rates do not apply to any intermediate points, being only applicable to points on the Pacific Coast.

#### Freight Notes.

Cold storage cars have been provided on the Prince Edward Island Ry. to accommodate the export produce trade.

Both the G.T.R. & C.P.R. have made special arrangements for refrigerator car service from points in Ontario & Quebec to Montreal to carry dairy products for export to Great Britain.

The Dominion Government is paying the Alaska Transportation Co. \$300 a ton for carrying the Yukon military expedition freight from Seattle, Wash., & Victoria, B.C., to Fort Selkirk, Yukon.

Manager Whyte, of the C.P.R. western lines, has issued the following circular:—"Commencing with this year's crop the C.P.R. Co. will furnish cars to producers of grain to be loaded direct from waggons or teams, provided there be no unreasonable delay about loading the cars."

The Southern Pacific recently announced that it would put into effect a tariff of 50c. per 100 lbs., car load lots, for canned salmon from San Francisco to New York, Boston & other Atlantic ports, the previous rate being 75c. At a meeting of the northern transcontinental lines, including the C.P.R., Great Northern & Oregon Ry. & Navigation Co., at Portland, Ore., a lake & rail rate of 65c. was agreed on.

Circulars giving the new joint east-bound & freight tariffs on lumber, ashes, bran & mill feed, etc., have been issued. The tariff affects traffic for the Eastern States only. The rate sheet shows a special rate made on lumber, other than pine or hemlock, of 23¼c. per 100 lbs., this rate being made in competition with the lake & rail route via Buffalo. The rate does not apply to intermediate stations.

The boats on the lakes do not appear to be making much money, judging from the low rates at which they are carrying wheat. This grain is being taken from Fort William to Prescott for 2½c. a bushel, the lowest rate ever known. Sales of Manitoba wheat are reported at Prescott at 96c. The Fort William price is 95c. From Prescott to Montreal the water rate is 2c., making 4½c. from Fort William to Montreal.

The freight traffic departments of the G.T. & C.P. Rys. have received word of a cutting in grain rates which had been going on among the roads, & in which, of course, the Canadian lines have to participate at the end, & that through the efforts of the Joint Traffic Association a new basis of rates has been made. The new tariff reduces the rates from Chicago to New York, a haul always used in the creation of standard rates, from 20 to 18 cents per 100 lbs. The rate from Chicago to Montreal, the latter being an export point, is also affected, being made 16c., or 2c. lower than the rate to New York.

Under the Act granting a subsidy to the C.P.R. for the Crow's Nest Line, provision was made for the reduction of certain freight

rates in the West. Some of these went into effect at the beginning of the year, & it was provided that there should be a reduction in the rates on grain & flour from all points on the Co.'s lines or connections west of Fort William to Fort William & Port Arthur & all points east, of 3c. per 100 lbs., 1 1-2c. on or before Sept. 1, 1898, & 1 1-2c. on or before Sept. 1, 1899. The Co. recently decided to put the 1st reduction in effect on Aug. 1, a month earlier than it was required to.

The C.P.R.'s transportation facilities have become so complete in the Kootenay district of B.C., that there was recently witnessed the arrival on Smelter hill of through cars from Toronto. The freight goes to Arrowhead, is placed on a barge, & is taken to Robson, where it is run on to the C. & W. Ry. In view of this convenience the C.P.R. has made the C. & W. a part of its system with a general reduction of freight rates to Rossland & common points. The idea in this reduction is to place the C. & W. on the same basis as the other portions of the C.P.R. in the district. Heretofore it has been operated as a separate & distinct system.

A correspondent of the New York Sun gives this doleful account of Canadian railway competition: "Canadian railways earned for the year ended June 30, 1898, not less than \$20,000,000 in carrying State-to-State traffic. Our own roads are hauling east and west empty cars constantly, & therefore could carry this traffic with very little additional cost. In other words, the traffic earnings which are now diverted from U.S. lines by Canadian roads would be nearly all profit to U.S. roads. Within 25 years Canadian railways, if the bonding regulations continue in force as at present, will divert \$50,000,000 of traffic earnings from our own roads annually. This represents interest at 4% on \$1,250,000,000. Why should the U.S. contribute this enormous sum to sustain railways under an alien flag?" The answer is easy. It would cost the forwarders of freight probably ten millions a year more to ship around by U.S. railways. The Canadian routes to the sea are the shortest & cheapest.—Globe.

#### Interstate Commerce Complaint.

The Michigan & Ohio Car Ferry Co. has filed a complaint before the Interstate Commerce Commission against the Michigan Central Ry., in which it alleges that it is a common carrier engaged in the transportation of railway cars & their contents between Sandusky, O., & Detroit, Mich.; that at Sandusky it connects with the Baltimore & Ohio Ry., & under contract with that Co., forms part of a through line between Detroit & all points in Ohio, Pennsylvania, Indiana & other States reached by the Baltimore & Ohio Ry. & its connections; that it receives from the Baltimore & Ohio at Sandusky inter-State traffic for transportation to Detroit, there to be delivered to consignees or to the Grand Trunk Ry. System or other railways for further carriage to destination points beyond Detroit; that freight traffic from Baltimore & Ohio points to Detroit, part of which is now transported by the complaining Ferry Co., is also forwarded via Toledo over the Lake Shore & Michigan Southern Ry. & other lines, including the Michigan Central Ry. from Toledo; that the established switching charge made by the Michigan Central for delivery to industries & private sidings on its line in & around Detroit is \$2 a car, with free return of the empty car to the connecting company from which the loaded car had been received, & that this would be the switching charge exacted by the Michigan Central on a carload of freight originating at a point on the Baltimore & Ohio Ry., & consigned to an industry on the defendant carrier's line in Detroit, pro-

vided such carload was forwarded all rail; that defendant also performs such switching service for local industries or manufacturers in the city of Detroit at the same charge of \$2 a car; that the defendant carrier has refused to accept from the complainant the established switching charge of \$2 a car for switching cars containing inter-State traffic transported by the complainant & turned over to it for delivery to industries on its line, & has demanded & exacted from complainant \$5 a car for this service; that in making such discrimination the defendant, the Michigan Central Ry., directly violates the provisions of sections 1, 2 & 3 of the Act to Regulate Commerce.

#### NEWS OF THE LINES.

**Atlantic & Lake Superior.**—Negotiations are pending for the purchase by this Co. of the Montreal & Sorel, or South Shore Ry., which runs from St. Lambert on the G.T.R., 6½ miles from Montreal, to Sorel, 45 miles. It is said the Government refused to subsidize the A. & L. S.'s projected independent line between Montreal & Sorel, & that without the Montreal & Sorel line could be acquired the project of a continuous system between Gaspé & Montreal would have to be abandoned. On the other hand, an official of the A. & L. S. states that unless the M. & S. line is purchased, the A. & L. S. will build from Longueuil to Levis, without going round by Sorel. Of course it would be an advantage to the A. & L. S. to get 45 miles of completed line which could be utilized immediately, although it would make a longer route. It is stated on excellent authority that the question as to price is the only remaining one to be settled. The A. & L. S. is said to have made an offer of \$350,000, while the M. & S. people ask \$400,000. It is also said that if the present deal can be consummated, the capital to push the whole of the Atlantic & Lake Superior scheme to conclusion can be obtained in England, & one of the immediate results will be the beginning of work on the long projected Longueuil Bridge across the St. Lawrence between Longueuil & Montreal. (Unofficial.)

**Canada Eastern.**—A report was recently sent out from Montreal to the effect that the visit of the Minister of Railways, Mr. Blair, to England was in connection with the Canada Eastern Ry., & his desire to acquire it as part of the Canadian Government system, it being added that the line is largely in the hands of Farnworth & Jardine, of Liverpool, & that the Minister wanted to get an option on the road at \$1,500,000.

This line runs from the C.P.R. at Fredericton to Loggieville, N.B., 125 miles, crossing the Intercolonial at Chatham Jct., 17 miles from Loggieville. At the last Dominion session an Act was passed authorizing the Co. to convey its railway to the Alex. Gibson Ry. & Mfg. Co. The share capital is \$1,000,000 fully paid up, & the bonded debt \$1,854,754.60. It received the following aid: Dominion Government, \$366,839.04; New Brunswick Government, \$400,000; municipal aid, \$20,000; & capital from other sources, \$320,525.21. Its total capital subscribed is \$3,961,539.65 & paid-up \$2,087,365.05, floating debt \$13,534.19, total cost of railway & rolling stock \$2,087,365.05. These figures are taken from the returns made June 30, 1897. Its gross earnings for the year ended June 30, 1897, were \$127,735.48, net earnings \$44,541.14.

**Cobourg, Northumberland & Peterboro'.**—Referring to the information given in our June issue, pg. 100, respecting this line. The contractor is F. A. Bowen, of Cobourg, not C. H. Bower, as there stated. We are informed that the issue of 1st mortgage debentures, of which we gave particulars, has been successful. (Official.)

**Manitoba and Northwestern.**—Last winter it was announced that a majority of the bonds of this line, which were held in Great Britain, had been sold through brokers to persons whose names were withheld. It is now said that the sale was made to a syndicate, of which E. B. Osler, M.P., of Toronto, a director of the C.P.R., is the principal member, & that this syndicate has since secured the interest of the Allan family, of Montreal, in the line, thus getting complete control of the property. It is impossible at present to get any information as to the intentions of the purchasers, but it is surmised they will either sell or lease the line to the C.P.R., & that it will be operated as a branch of that system. For several years past it has been in the hands of receivers, & has been the cause of a large amount of litigation. The coupons on the bonds due June, 1893, & since, have not been met. Of the total of £540,000 of the bonds, about £490,000 was deposited with a committee, who, early in 1898, as above mentioned, negotiated a sale of the certificates issued against bonds, & practically all the certificates have come in under this agreement. The certificate holders have received 50% of the nominal amount of their holdings, & are to receive 35% on October 1 next, with land certificates for their interest in the lands to which the bonds were entitled. Bonds that were not deposited with the committee retain their original position.

The line runs from Portage la Prairie, 55 miles west of Winnipeg, northwesterly to Yorkton, Assa., 223 miles, with a branch of 11 miles from Binscarth, to Russell, Man. The Co. also operates a leased line, the Saskatchewan & Western, from Minnedosa to Rapid City, Man., 15 miles. The late Sir Hugh Allan was at one time President of the Co., & a large amount of money was invested in the line by the Allan family. The present President of the Co. is Andrew Allan, of Montreal; H. M. Allan being Vice-President. The General Manager is W. R. Baker, who resigned the Local Treasurership of the C.P.R. at Winnipeg some 15 years ago to take the position of General Superintendent of the M. & N. W.

Following are particulars of the Co's capital as at June 30, 1897, the last statement published: Ordinary share capital, authorized \$12,000,000; subscribed & paid up, \$5,837,500. Bonded debt, authorized \$4,700,000; issued & sold \$3,824,100; rate of interest 5 & 6. Provincial government aid paid \$649,934.27; municipal aid paid \$215,600. Total capital subscribed & paid up \$10,527,134.27. Floating debt \$1,374,919.76. Total cost of railway & rolling stock, including Saskatchewan &

Western Ry. \$3,712,467.43. The Co. also received a large Dominion land grant. The gross earnings for the year ended June 30, 1897, were \$314,298.06, working expenses \$241,169.29, net earnings \$73,128.77. The line traverses a magnificent agricultural district, & has for years been a valuable feeder to the C.P.R. (Unofficial.)

**Ontario & Rainy River.**—In Toronto recently Justices Rose & McMahon gave judgment in the case of Allen vs. the O. & R. R. Ry. Co., on appeal by the defendants, Gorham & Mitchell, from the judgment of Chancellor Boyd, who tried the action without a jury at Port Arthur & Toronto, in favor of the plaintiff for the recovery of \$600 for work done & services performed by the plaintiff in the promotion of the railway of the defendant company by means of an advocacy in Port Arthur at one time conducted by the plaintiff. The judgment is against the defendant company with a direction for the payment out of a fund belonging to the appellants & others of the defendants. The appellants contend there was nothing in the evidence to fix the liability upon the company. The appeal was dismissed with costs.

Some reference to this line appears on page 129 of this issue. Since it was written we have been placed in a position to state that 20 or 25 miles of the eastern end of the line will be built this season, starting from some point on the P. A. D. & W. (Official.)

#### PASSENGER MATTERS.

##### The Rate Cutting Continues.

During the past month there has been practically no change in the rate cutting, which has gone on as before, though its effects have been plainly discernible in the decreased traffic receipts of both the leading Canadian lines. The novelty of low rates has worn off, & travel has got back nearly to a normal condition.

A new feature, however, is the decision of the Interstate Commerce Commission to meet in Chicago Aug. 1. The notice calling the meeting states that it has come to the knowledge of the Commission that there exists a contest in passenger rates between the C.P.R., on the one hand, & certain U.S. lines & their connections, including the Grand Trunk, on the other hand; that it is charged by the U.S. lines that the C.P.R. has been, & is, in open violation of the act to regulate commerce, making unreasonably low rates between various points in the U.S., not as a measure of legitimate competition, but as a means of exacting certain unreasonable de.

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mands upon its part, & that such illegal action on the part of the C.P.R. will result, if persisted in, in the utter demoralization of passenger rates over a large portion of the U.S., & incalculable damage to the interests of the U.S. lines, all of which is either denied or justified by the C.P.R. The document further states that it seems advisable that the Commission should be fully informed of the whole situation in respect to passenger rates, as affected by the C.P.R., with a view to determining what relief, if any, should be applied.

A report that the C.P.R. had decided to abandon its claims to differentials on transcontinental business was recently emphatically denied by Vice-President Shaughnessy.

Sir Wm. Van Horne visited St. Paul, Minn., about the middle of July, & the daily press at once assumed that he had been in conference with President Hill, of the Great Northern, respecting the rate cutting. On returning to Montreal Sir Wm. said to a reporter: "It was not the so-called rate war, but other business, that took me west. I know nothing of any settlement. We are quite content as matters stand. The enemy pays."

On the same subject President Hill said: "The rate war is no nearer a settlement now than it has been for 6 months. The report that President Van Horne & myself have reached a settlement of the differences between the roads is absolutely without foundation."

### C.P.R. Mountain Guides.

That the exceptional beauty of the scenery is attracting even more & more attention in the older parts of the world is demonstrated by the continuously increasing number of U.S. & European tourists who invade the Dominion, summer by summer. The latest & most significant evidence of this fact is a move just made by the management of the C.P.R. It is announced that the Co. has sent an official to Switzerland to engage a number of Alpine guides, who will be brought over to Canada to act as guides for tourists in the Rocky Mountains. In a short while, accordingly, it will not be surprising to learn that mountaineering is one of the national sports of Western Canada. There are no mountains in the world offering more inducements & opportunities for mountain-climbing than do those magnificent, snowcapped, perilous heights that constitute the Canadian Rockies. They are destined, in time, to become the Alps of America, & that beautiful mountain country that stretches on all sides about Banff will some day become a second Switzerland.

The C.P.R. differs, in one respect, from all U.S. western lines, in the manner in which it goes through the Rockies. The most famous of the U.S. roads, for instance, the Denver & Rio Grande, is built at an elevation of 10,000 ft., going practically over, & not through, the range. The highest elevation reached by the Canadian Pacific is a little less than 5,300 ft., so that the higher peaks still tower 5,000 ft. above the railway line itself. This gives excellent opportunities for the adventurous mountaineer, & does not detract from the sublimity of the scenery. Even when this fascinating sport of mountaineering does become popular in Canada, it is estimated that at least 100 years will pass by before all the many heights of the yet unknown Rockies are climbed & explored. In a few years it will be as commonplace & natural for the Montreal & Chicago man to go mountain-climbing in the Rockies as it now is for the Londoner & the Parisian to go to the Alps to spend their summer.

The Michigan Central & Toronto, Hamilton, & Buffalo have met the cut of the G.T.R. & C.P.R., & made a reduction of rates to competitive points between Hamilton & Windsor, Ont. There is no cut in rates on through business.

### Contract to Carry Passengers.

The Divisional Court of Ontario has given judgment in the case of Clarry v. G.T.R., where the plaintiff was a passenger on defendant's railway under a contract by which he was to be carried from Harrisburg to Stratford via Galt & Berlin. There was a break in the line at Galt, the distance being  $\frac{1}{4}$  of a mile. An omnibus was provided, as advertised by defendants, but a fare of 10c. was demanded. Plaintiff refused to pay this fare, was not permitted to be transported free, failed to make his connection & brought action. He held that he was entitled to be transferred free but should have paid the 10c. and made his connection. The damages were restricted to that sum, but full costs allowed as it was to test a right.

### Passenger Notes.

The G.T.R. did a tremendous 12th of July business in Ontario; on the Northern Division over 12,000 Orangemen were carried.

The G.T.R. has this year, for the 1st time, competed with the C.P.R. in its harvest home excursions. The same rates as the C.P.R. were quoted into Winnipeg, Brandon & Portage la Prairie. The G.T.R. quoted the same rates as the C.P.R. to North Dakota points also.

The C.P.R. authorities are enforcing at Winnipeg the rule that baggage left unclaimed in the baggage room for a longer period than 24 hours will be charged 25c. a piece for the 1st day & 10 cents for every day thereafter. This rule has not been strictly enforced heretofore. Baggage awaiting shipment on local trains leaving only 2 or 3 times a week will be exempt; also settlers' effects under certain conditions.

Travel to Muskoka, Ont., this year shows a considerable increase again, it being estimated by the railway officials that fully a third more people have gone into the district this year than up to the same time last year. The placing of a customs officer at Muskoka wharf has been a great convenience to tourists from the U.S., as it enables them to have their baggage checked right through, & thus do away with the delay in having it examined at Toronto.

Japanese newspapers are eulogistically noticing an artistically-prepared map issued in that country by the C.P.R. Co., showing the various routes across the Pacific & Canada & the Atlantic to England. The map has a beautifully-lithographed picture of the 7 gods of good fortune, 6 of whom are gazing down from cloudland on one of the magnificent white Empress steamships, & the other is depicting in Japanese on the mountain side the information that the C.P.R. is the only road by which passengers from Yokohama can reach New York in 17 days & London in 24. It is a well-conceived idea, & is capably & cleverly worked out.

The G.T.R. through trains to the sea are being largely patronized, the hot weather having whetted the desire to escape the discomforts of the hot city streets. These trains are models of comfort, having buffets & parlor & dining cars, which are fitted up in the most modern style. In fact, they are palaces on wheels, & are designed chiefly for those who can pay for luxuries. The cars are of the vestibule pattern, with cosy nooks & corners for groups of friends who desire to be together; the cuisine is tempting to the gourmand, while the attention which has been given to the smallest detail appertaining to comfort has immediate appeal for every class of patron. These specials are a feature of the G.T.R.'s summer service, which has been increasingly appreciated of late years.

J. E. Quick, General Baggage Agent G. T. R., has again been elected Secretary & Treas-

urer of the American Association of General Baggage Agents, whose convention was recently held at Detroit. While at the convention Mr. Quick read the legal opinions of expert railway lawyers in regard to the handling of excess baggage, & the best methods of collecting the charges on it. There is considerable difference of opinion among baggage agents in regard to this matter. Some agents hold that when checks are issued to travellers the railway can have no further claim for excess. They consider that the passenger should be given notice beforehand of the possibility of being assessed for overweight. The legal opinions read to the convention were not made public. A. D. MacTier, General Baggage Agent of the C.P.R., was at the convention & was appointed a member of the Committee of Arrangements.

### The Apprentice Boy.

As an appendix to the report of the Master Mechanics' Association on The Apprentice Boy, G. R. Joughins, Mechanical Superintendent of the Canadian Government Railway System, wrote a special letter on scientific education, from which the following are extracts:—

It is my conviction that the question of a scientific education is the most important part of our work. I will confine myself to that aspect of the subject. I am particularly interested in it, because I have taught the apprentice boy in science schools for many years, & my experience of the benefits resulting therefrom have been most satisfactory, both to the pupil & the railway company.

My experience has altogether been in favor of educating our boys, not expecting that they will all attain responsible positions, but because even those who are dull will become better workmen, & the few who possess real ability will be separated from the ordinary mechanic & given an opportunity to rise above their surroundings & do better work in the world. If only for the sake of these few & for the good work which they will do in our profession & for our country, we ought to put forth every effort to make it easier to obtain a scientific education, & by largely increasing the number of schools make it more universal than at present. The importance of educating our apprentices cannot be overrated. It is of national importance, the prosperity of our nation largely depends upon it, because educated workmen are the backbone of a manufacturing country, such as ours.

I do not agree with those members of the Association who suggest that each apprentice should pay the full cost of instruction, & that he should depend on his own efforts for an education. That principle is not applied to the education of any one else, no matter what school, college or university he may attend, or what profession he may adopt. I believe it to be absolutely necessary to assist apprentices, & to assist them very substantially, both in school fees & in books. Various ways can be taken to raise money to help them, without making it a serious burden upon the railway companies; it is done at the present time in some places, & could be done in all.

Having persuaded our members & the roads they represent to raise the funds necessary, the Association ought to map out a plan of education. Then at the end of the session examinations should be held at the different schools, using the same examination papers. In this way a system of certificates of acquirements could be issued on a uniform standard, & which would prove of incalculable value both to the employer & employe.

Intimately related to the school question is the establishment of a technical library, which, no matter how small the beginning, could be gradually built up.

The Association should also find out what scholarships for mechanics, mathematics, &c., are given in each province, state or college for which our apprentices might compete, & publish them, special stress being laid upon the existing Master Mechanics' Scholarship at Stevens Institute.

The proposed science schools would not, of course, be confined exclusively to locomotive railroad apprentices. Apprentices from other shops who wished to join should be heartily welcomed on an equitable financial basis. Other organizations might wish to join in the plan of education, & should be encouraged to do so, but in the meantime the Master Mechanics' Association should go forward in the good work, & we, as its committee, should find out what ought to be done, what the railway companies are willing to do, & make the best recommendations within our power to further the highest interests of the apprentice, which no doubt lie in the direction of a scientific education side by side with careful training in the workshop.

### Telephone vs. Railway.

The use of the long-distance telephone has diminished passenger travel on the railroads. The extent of the loss suffered by the railroads is not very well known & the importance of it is not admitted by all; but the newspapers have now & then given certain definite statements from well-informed men, & there can be no question that the value of the telephone is increasingly appreciated. Another bit of significant evidence, reported to us on good authority, is the statement of a railway officer that the business of one of the limited trains between New York & Chicago has been practically ruined by the telephone. This comes from the chief executive officer of "one of the lines interested," & as there are only 4 or 5 roads interested in these trains the reader can perhaps guess where the statement comes from.

This result is not very surprising. One of the definite objects had in view in putting on 25-hour trains between New York & Chicago was the accommodation of brokers & business men of Chicago & the Northwest, who demanded quick time. Their trips to New York were taken on occasions of utmost importance, when a little time meant thousands of dollars. By means of the "Limited" the broker or business man was taken to New York in the quickest possible way. He talked as fast as he rode & made an equally quick return to Chicago. The business man was willing to pay the price assessed for this development in rapid transit.

The patronage of people whose time was less valuable to them was not expected to contribute much to the income of these trains, so that their whole dependence was expected to be, & was, on two classes; the business men aforesaid & pleasure travellers to whom a few dollars extra was not a noticeable item. Then came the introduction of the long-distance telephone. People at first were slow in realizing its benefits. Slowly but surely they have, however, come to appreciate its significance. A broker or grain dealer in Chicago has in mind a "big deal;" he telegraphs to New York asking for certain information & adds: "Call me up by long-distance telephone & give me your answer." The result is that for 15 or 20 dollars a talk is held with the New York man. Having received the telegram he has had an opportunity to concentrate his expressions to the shortest possible statements; he has even jotted them down & at the proper time calls up his man & transacts his business. So it is done every day.

The railway president quoted said that in the past he had found it necessary to spend about 20 days of each month on the road, leaving but 10 days of his time at his office.

But now, by aid of the long-distance telephone, he has reversed matters; but 10 days are required on the road, giving him 20 days in the office. Half-a-dozen grain men who had been in the habit of making frequent trips between Chicago & New York said that for 3 or 4 dollars they could now transact business which formerly required a three-day trip.—*Railroad Gazette.*

### Chapleau as a Railway Man.

Sir Adolphe Chapleau, who died last month, always had a great penchant for railways, & his name will for ever remain closely linked with the history of railways in Quebec. He was instrumental in building the North Shore & its branches, & after administering it for a time made it a part of the C.P.R. Mr. Danseureau, who was intimately connected with him in most of his railway enterprises, says:

"He has been the champion of railways in this country, & his eloquent word it was which revived in the Provincial Legislature the old subsidy to the North Shore Ry. & obtained one for the Northern Colonization Road, thus taking the original steps toward a national railway policy. He had his share in contributing to the success of these, financially, perilous enterprises; & he can boast of having directly brought about the building of 5 lines of railways, the Laurentides, the Pontiac, & the continuation of the St. Jerome, by his active & persistent co-operation, & the St. Eustache & Joliette roads, by his official & personal protection.

"In 1884, when the Ottawa Government seemed determined to refuse the Province of Quebec its just demands, regarding the debt contracted for the building of the North Shore Ry. as part of the C.P.R., almost all the Quebec contingent to the Federal Parliament begged him to take their lead in forcing the Government's hand. He had only a word to say (at least the probabilities authorize the statement) to hold the destiny of the Cabinet in his own hands; but he remained thoroughly loyal to Sir John Macdonald knowing that justice would be done in the end without violence."

Chapleau was very severely criticized for the manner in which he sold the North Shore Railway in two sections to the C.P.R. & to the Senecal Syndicate, refusing a much better offer made at the time by the Allan syndicate. It has been charged that this most valuable asset of the province was sacrificed, but his biographer in defending his act in this respect, says: "He it was who realized for the Province of Quebec \$8,000,000 by selling the North Shore Ry. This act, which has procured for him so many insults, will perhaps be his greatest title to glory, for it is a matter of public notoriety to-day that the C.P.R., which made the purchase, would be disposed to lose some millions upon the original price, could a purchaser be found. It is sufficient to read the reports which he published then as Minister of Railways to see how clearly he foresaw the construction of the Canada Atlantic & the Smith's Falls line of the C.P.R., two rival roads which reduced to a relative insignificance the old Q.M.O. & O. Ry."

### Railways & Prairie Fires.

The most prolific cause of prairie fires, says the *Western Prairie*, published at Cypress River, Man., is the traction engines used for threshing. The burning of large piles of straw is another prolific source, for fire will remain for many days amongst the charred cinders ready to fly before a high wind, when the greatest danger is to be apprehended. The railway locomotives sometimes cause fires, but not very often, considering the number of trains that run at all hours on the various railways, even during the most windy

weather. Hunters, smokers & tramps start fires. There are fires kindled on purpose, fires by accident, & fires by carelessness. Some years ago the C.P.R. Co., knowing the dangerous & inflammable character of the natural covering of the prairie, attempted to have blue grass introduced all along their lines in Manitoba, & large quantities of seed were given free to those whose farms were near the roads. The season chanced to be dry, & the seed did not grow in a satisfactory manner, so the attempt failed. But the Co. was taking the only course that can ever be successfully adopted for the prevention of prairie fires; for until houses, barns, stacks, towns & railways are protected by fields of green grass that will not burn, danger will not be lessened or removed.

### The Empire Route to China.

Sir George Baden-Powell writes: "Across the Atlantic & across Canada we have the straight & short route to China. Mr. Goschen, when Chancellor of the Exchequer, had the patriotic foresight to assist in establishing across the North Pacific an embryo line of British mail steamers connecting China & Japan with Canada. What is necessary now, & in view of the greater opening up of China, is that this service shall be improved into a regular weekly service. By this route already passengers, mails, & light goods pass between England & the far east all the way in British ships & through British territory. The route followed does not, like the Suez route, pass by the arsenals of a long series of possibly hostile Powers. Moreover, the route is a direct 'great circle' all the way in temperate latitudes, & has not to follow the sinuosities of the Mediterranean & Red Sea, or travel as far south as the equator at Singapore. It is calculated that with a 20-knot steamer service on the Atlantic & Pacific, & no more than the present speed on the great Canadian Pacific Ry., that the time of transit between Liverpool & Shanghai need not exceed 20 days. Thus the establishment of a first-class weekly service along this empire route would be of the most crucial value to our securing our fair share of the new development of China."

### Liability to Pack Frogs.

The appeal of the defendants in the case of *Washington v. the G.T.R.* has been dismissed by the Imperial Privy Council. The case was brought by G. Washington, of Hamilton, Ont., who was employed in the Stuart St. freight yard, against the G.T.R. for damages for injuries received while shunting cars. He had his right arm so badly crushed that it had to be amputated. The case was tried before Justice Street & a jury in 1896, & a verdict was given for plaintiff for \$2,500 & costs. It was decided that the defendant had been guilty of negligence in not having the frog, where the plaintiff caught his foot, properly blocked or properly protected. The Court of Appeal reversed the verdict & dismissed the action with costs. Then the case was carried to the Supreme Court, when the decision of the Court of Appeal was set aside, & the verdict of \$2,500 restored. The G.T.R. carried the case to the Privy Council, desiring to have the ruling of the highest court on the liability of railway companies to pack frogs, the same point having been raised in the *Curran* case, in which the plaintiff got a big verdict.

A. H. Harris, ex-General Traffic Manager of the Canadian Government Ry. System, has been appointed Canadian Traffic Agent for the Fitchburg R.R., "The Hoosac Tunnel Route." This Co. operates 457 miles, its longest line being between Troy, N.Y., & Boston. The Fitchburg terminals at Boston are used by the Dominion Line steamships.



## APPLICATIONS FOR INCORPORATION.

**Alaska & Northwestern.**—Gemmill & May, Solicitors, Ottawa, give notice of application to the Dominion Parliament for the incorporation of the Alaska & Northwestern R. R. Co., to build a line from near Pyramid Harbor, on Lynn Canal, or from a point on or near the International Boundary between Canada & the U.S., in the vicinity of Lynn Canal, thence by way of Dalton Trail to at or near Fort Selkirk, Yukon, with various other powers.

**Algoma Central.**—H. C. Hamilton, Solicitor, Sault Ste. Marie, Ont., gives notice of application to the Ontario Legislature for the incorporation of the Algoma Central Ry. Co., to build a line from at or near Sault Ste. Marie, Ont., to at or near the Michipicoten River, thence northerly to the main line of the C.P.R., & southerly to Michipicoten Harbor, Lake Superior. Very extensive general powers are asked, including carrying on mining operations, &c.

**Halliburton, Whitney & Mattawa.**—Gordon & Sampson, Solicitors, Toronto, give notice that application will be made to the Ontario Legislature for an act to incorporate The Halliburton, Whitney & Mattawa Ry., with power to build a railway from at or near the terminus of the G.T.R. at Halliburton, to a point on the Ottawa, Arnprior & Parry Sound Ry., at or near Whitney, thence northerly to at or near Mattawa; & with power to equip & operate the same by steam or electricity; & if the latter, with power to sell the surplus electricity for light, heat & power purposes, & to supply miners, lumbermen & others doing business in the district through which the railway will run, with electricity for their works & operations.

**Ontario Lands & Oil Co.**—A. E. Shaunessy, Sarnia, gives notice of application to the Ontario Legislature for powers to be given this Co., which is incorporated under the Imperial Company's Acts, 1862 to 1890, to carry on various businesses, including the building of tramways, railways, wharves & ships.

**Pyramid Harbor to Fort Cudahy.**—G. W. Kyle, St. Peters, N.S., gives notice of application to the Dominion Parliament for the incorporation of a company to build & operate a railway from Pyramid Harbor, near the head of Lynn Canal, or from the International Boundary Line to Dalton's Post, on the Dalton Trail, thence to Fort Selkirk, thence northerly to the 141st meridian near Fort Cudahy, with various other powers.

## RAILWAY PROJECTS.

**Amherst & Eastern.**—It is said the surveying of a route for the proposed railroad from Amherst, N.S., to the North Shore, via Truemanville & Chapman Settlement, has been decided upon by the A. & E. Ry. Co.

**Brandon & Southwestern.**—This Co. was incorporated by the Dominion Parliament in 1890 with power to build a line commencing within township 1, ranges 23 or 24 west of the principal meridian in Manitoba, at a point at least  $\frac{1}{4}$  of a mile north of the International Boundary, thence running north-easterly to the main line of the C.P.R., near Brandon. The incorporators were D. Hyslop, G. R. Crowe, G. H. Campbell, H. G. Crawford & C. H. Campbell, of Winnipeg, & W. A. Macdonald of Brandon. The Co. was given power to sell or lease to the C.P.R. The same year Parliament voted the Co. a land subsidy of 6,400 acres a mile for 17 miles, from the place of starting, as above mentioned, to Deloraine. The time for construction was extended in 1894 & again in 1896, & it is now required that construction be commenced by Nov. 1, 1898, & completed by Nov. 1, 1901. In response to an enquiry, Robt. Weddell, Trenton, Ont., writes us:—"I have the con-

tract for building the Brandon & Southwestern Ry. from Turtle Mountain coal fields to Deloraine & Waskada, thence to Brandon. The distance is 90 miles. Engineers are locating now. Work may be started next fall. Arrangements are in progress for ties, telegraph poles, fence posts, lumber, rails & rolling stock for active operation in 1899. The railway is to be completed by Nov. 1, 1901."

**C.P.R., Toronto Sudbury Branch.**—The surveys for this line have been about completed under H. Lumsden, C.E., but nothing has been announced in regard to the prospects of construction.

**Central Ontario.**—In our June issue, pg. 98, we stated that the proposed extension from Coe Hill to Bancroft, 18 $\frac{1}{2}$  miles, might possibly be gone on with next season. It is now stated that the road will not be built unless liberal donations are received from the people whose territory it will benefit. (Official.)

**Dominion Eastern.**—This Co. was incorporated by the Nova Scotia Legislature in 1897 to build a line from the terminus of the Nova Scotia Steel Co's. Ry. at Sunny Brae to Country Harbor, with a branch from Upper Country Harbor to Guysboro', about 65 miles in all. The Nova Scotia Legislature has granted a bonus to the extent of \$3,200 a mile & the Dominion Parliament has made a similar grant, to be increased should the average cost of the line be more than \$15,000 a mile. An instrumental survey of the whole line has been made & 10 miles have been located. We have been unable to ascertain anything in regard to when construction is likely to be proceeded with. Jamieson & Baker, contractors, Quakertown, Pa., are said to be interested in the charter, together with some prominent members of the N. S. Steel Co., whose line of 12 $\frac{3}{4}$  miles, which runs from Ferrona Jct., on the I.C.R., 6 miles from New Glasgow, the Co's. headquarters, to Sunny Brae, is under option to Jamieson & Baker, the option having some months yet to run. It is the intention, should the Dominion Eastern go on, to amalgamate the Steel Co's. line with it. (Partly Official.)

**Edmonton District.**—The charter for this line granted by the Dominion Parliament in 1896 empowers the building of a line from Edmonton to South Edmonton to connect with the Calgary & Edmonton line; from Edmonton via St. Albert to the Athabasca River near Fort Assiniboine, with a branch to Stony Plains; & from Edmonton to Fort Saskatchewan, with a branch to Sturgeon River. The incorporators were Dr. Willson & others of Edmonton, Alberta, & W. T., Jennings, C.E., of Toronto. The charter has been sold to people in St. John, N.B., among whom are W. Pugsley, Q.C., G. McAvity, & A. G. Blair, Jr. The two last named recently visited Edmonton & on their return stated that as soon as the railway & traffic bridge over the North Saskatchewan, now being built by the Government, is completed, work will be started on the Edmonton District line, first to connect Edmonton with the C. & E. line at South Edmonton, & then to go on towards the Athabasca River, making the first section of a line to the Upper Yukon Territory.

**The Grand Trunk & Sault Ste. Marie.**—Superintendent Tiffin, of the G.T. Co's Northern Division & Division Freight Agent White, of Toronto, visited Sault Ste. Marie recently. The Express of that place credits Mr. White with saying that General Manager Hays was taking a very active interest in the Co's property there, & was having a survey made from Burk's Falls & Powassen to the Sault. The Express says:—"Mr. White continued as follows: "Mr. Tiffin & myself have just had a discussion with F. H. Clergue, who we freely admit represents the very largest commercial industries in Canada, & after a con-

sultation with Judge O'Connor & other gentlemen as to the business outlook in this part of Ontario, we feel that Mr. Hays will, in connection with Mr. Hill, of the Great Northern Ry., afford to Sault Ste. Marie a G.T.R. & Great Northern connection which will assure the town of competition in the event of any attempt on the part of one road to embarrass the vast trade now established & yet to be established at this point. The Portland export route, which Mr. Hays has put in force, will be 7 steamers a week. That means that the manufacturers of your city will have full & reasonable access to every market in the world."

Enquiry at the G.T.R. head offices has failed to elicit any information on the question.

**Grand Trunk, Ottawa Branch.**—The daily press has been teeming with items lately stating that the G.T.R. was contemplating the construction of a branch line to Ottawa, & that a survey was in progress. There was no foundation in fact for these statements, there being no intention whatever on the Co's part to construct such a line. (Official.)

**The Kootenay Construction Co.** has been registered in London, Eng., with a capital of £100,000, to construct railways & tramways in the Kootenay district of British Columbia.

**Lake Erie & Detroit River.**—It has been decided by the management that the proposed extension from Ridgeway to St. Thomas, Ont., will not be gone on with this year. It is hoped, however, that definite arrangements will be arrived at for the building of the link next year. (Official.)

**McKenzie & Mann's Projects.**—A Winnipeg despatch says:—"It is stated, on what purports to be good authority, that the railway schemes of Mackenzie & Mann contemplate, besides a line to Hudson's Bay, a line to Prince Albert, striking westward from Dauphin, across Gilbert plains into the Saskatchewan valley, & ultimately reaching the Pacific coast, via the Yellow Head or Peace River pass."

**Musquodoboit.**—This Co. was incorporated at the last session of the Nova Scotia Legislature to build a line from Windsor Jet, easterly by Musquodoboit Valley, 40 miles, to Parker's Corner, or from Dartmouth easterly to Musquodoboit Harbor, thence up Musquodoboit Valley to Parker's Corner, with power to extend the line to Halifax or Dartmouth. The provisional directors are: A. Stephen & W. Chisholm, Halifax; A. C. Johnson, Dartmouth; D. W. B. Reid, Middle Musquodoboit; & B. C. Wilson, Waverley. Early this season the Co. applied to the N.S. Government to have a preliminary survey of the route made, the Government agreeing to do the engineering portion of the work, the Co. finding common labor. W. Yorston, C.E., is now making the survey under direction of Provincial Engineer Murphy. (Official.)

**Nipissing & James Bay.**—The Mayor of Toronto recently stated that the promoters of this line were desirous of proceeding with construction from North Bay into the James Bay country at once, but wanted assistance from the city. As the opening of this country was the main object which induced the city to apply for a charter, the Mayor thinks they should be aided.

**Ottawa & Gatineau Valley.**—It is rumored that this Co. contemplates the extension of its line from Gracefield to the Desert River, some 35 miles. At present the line runs from Ottawa to Gracefield, Que., 60 miles. (Unofficial.)

**Ontario & Rainy Riv r.**—T. H. White, recently Chief Engineer of the Canadian Yukon Ry., has been given a similar position on this line by Mackenzie & Mann, & is now in the Mattawan district making a preliminary survey. Some 60 miles from the point of departure on the Port Arthur, Duluth & Western was surveyed by Mr. Turnbull, & the present



survey will likely continue from the end of his work towards Rainy River. Under the terms of the charter, work must be commenced Aug. 1. It is said Wm. Mackenzie has been successful in securing the co-operation of British capitalists, & that 40 or 50 miles are likely to be built this year. (Unofficial.)

**Port Arthur, Duluth & Western.**—The proposed branch from near Stanley to Kakabeka Falls will not be gone on with this year. (Official.)

**Prince Edward Island, Belfast Branch.**—This branch of the Government line is projected from Charlottetown to Murray Harbor, on the s.e. coast. It would necessitate the bridging of the Hillsboro' River at Charlottetown, at an estimated cost of \$800,000, which would provide a combined railway & traffic bridge, in the building of which the Provincial Government is expected to aid. The length of the branch would be about 50 miles, its estimated cost, narrow gauge as is the rest of the line, being from \$7,500 to \$8,000 a mile. The branch would pass through one of the best & most prosperous districts of the Province, & the Hillsboro' River bridge would be a great convenience to people living east of the river, who now have difficulty in reaching Charlottetown when the ferry traffic is interrupted by ice. A preliminary survey of the proposed line was made for the Department of Railways some 5 or 6 years ago, & a more complete one was made last year by H. J. Mackenzie, C.E. Of course nothing further can be done till next session of the Dominion Parliament, & it is by no means certain that it will be taken up then. (Unofficial.)

**Toronto & Hudson's Bay.**—W. T. Jennings, C.E., left Toronto July 7 on behalf of the Toronto & Hudson Bay Ry. Co., to examine the country to the north of the C.P.R. & west to the Temiscaming & possibly to the Abitibi & Moose Factory, thence, as far as circumstances & time will permit, over rivers & inlets at the foot of James Bay, returning by Moose River & a route heretofore unexplored southward to Wahnapitae Lake. The examination of Wahnapitae & Temogami districts will then be taken up. The object of the examination is that an intelligent idea may be formed of the commercial value of the districts between the C.P.R. & James Bay, with the view of the immediate opening up & advancement of those districts as far as found practicable. Mr. Jennings took with him City Surveyor Sankey, of Toronto, & a sufficient number of canoe men & packers, who know the country, & will, therefore, be able to carry the expedition over as rapidly as possible. (Official.)

**Woodstock & Brantford.**—D. A. Middleton, C.E., of Ottawa, is making a survey for a line between Woodstock & Brantford, some 26 miles. It has been persistently stated that the proposed line is to be built by or in the interest of the C.P.R., but prominent officials of that Co. deny any knowledge of the matter.

There are now nearly 200,000 miles of railway in the U.S. They are capitalized at about \$10,000,000,000. They earn \$1,125,000,000 annually & disburse for material & wages \$793,000,000, & have a system of rates for the carriage of freight which is  $\frac{1}{3}$  less than that of the railways of Europe. There are directly in the service of the railways of the U.S. about 800,000 men, & about 2,000,000 members in the families of these employees.

The world's railway mileage at the present time is equivalent to more than 17 times the length of the equator. In more exact figures, the world's railway mileage, according to the latest verified returns, aggregates 433,953 miles, or 38,810 miles more than in 1891. This enormous mileage is distributed among the various subdivisions of the globe in the following manner: America, 299,722 miles; Europe, 115,284 miles; Asia, 26,890 miles; Africa, 8,169 miles, & Australia, 13,889 miles.

## SHIPPING.

### The C.P.R. Stikine Steamers.

The steamer Ogilvie, an illustration of which is given on page 131, is one of the fleet of 12 steamers built by the C.P.R. last winter & spring for the Stikine River, an extended description of which appeared in our April issue pg. 50. She made the round trip from Wrangel to Glenora & back in 44 hours, but was beaten by her sister steamer, the McConnell, which did it in 43 $\frac{1}{2}$ .

The C. P. R. Co's. stern-wheel steamer Schwatka, recently built at Port Blakeley, Wash., for the Stikine River, has been taken to New Westminster, there being nothing for her to do in the northern trade.

Owing to the slump in the Stikine River trade, 2 out of the 3 steel-hull steamers built in Toronto for the C.P.R. & sent to Vancouver in sections will be put on the inland waters of B.C. One is being put together at Nakusp for service on the Arrow Lakes, & the other at Nelson for Kootenay Lake. All the other Stikine River steamers owned by the Co. have been taken off. Some of them may be utilized on the inland waters of B.C., or they may be laid up in the expectation that the business will revive.

In previous issues we have given pretty full descriptions of the C.P.R. Stikine River steamers, but it may be of interest to give the following extracts from the specifications of those built in Toronto with steel hulls, by the Polson Iron Works, as they were a decided departure in river steamer construction:

The dimensions are: length over all 161 ft. 6 ins., length from stern to transom 140 ft., breadth moulded 30 ft., depth moulded keel plate to beam at side 5 ft., ditto at centre 5 ft. 7 1-2 ins.

The hull is of open hearth mild steel, equal in quality to the requirements of English Lloyd's rules.

The keel and bottom tie plates are of  $\frac{1}{2}$  in. plate 12 ins. wide, the former strongly rivetted to lower end of stem, lapped and treble rivetted with  $\frac{5}{8}$  in. rivets, the latter extending the length of longitudinal bulkheads.

The stem is of wrought iron 5 ins. x 1  $\frac{1}{2}$  in. extending well under forefoot & scarping over fore-end of keel plate.

The rudder frame is of forgings 3 $\frac{1}{2}$  ins. diam. and 4 in. no., fitted into bearings at aft side of transoms.

The frames are of angle steel 3 ins. & 2 $\frac{1}{2}$  ins. x  $\frac{1}{2}$  in., spaced 21 ins. centres in after body & 18 ins. centres in fore-body, double at bulkheads.

The reverse frames are of angle steel 2 x 2- $\frac{1}{8}$  ins. rivetted across top of floors & continued to upper turn of bilges.

The floors are of steel channels 7 ins. deep, 9.75 lbs. per foot between longitudinal bulkheads, to which they are rigidly connected with  $\frac{3}{8}$  in. plate. Brackets from the longitudinal bulkheads to the sides are of  $\frac{3}{8}$  in. plate, 7 ins. deep, tapered at one end to size of frame & turned so as to extend up to upper turn of bilge. Floors forward of fore-bulkhead are of  $\frac{3}{8}$  in. plate of sufficient depth to suit frame of vessel.

The centre keelson is a bulb T 6 ins. deep, 15.3 lbs. per foot, extending from transom plate as far forward as practicable.

The main deck stringer plate is 15 ins. wide amidships,  $\frac{1}{2}$  in. thick, diminishing to  $\frac{3}{8}$  in. at ends, lapped & treble rivetted, the rivets being countersunk. The bar is 2 $\frac{1}{2}$  x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  in. worked outside underneath, close-rivetted & caulked.

There is 1 beam to every frame, of 3 x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  angle steel extending 2 ft. 3 in. on each side, fastened to main deck stringer plate & longitudinal bulkhead by angle lugs of sufficient length, supported at centre by 2 $\frac{1}{2}$  in. pipe stanchion having wrot.-forged ends, rivetted to beams and keelson, with alternate

frames. The deck openings are framed out to suit requirements of machinery, etc. Holes are punched for deck bolts.

There is a stanchion to each alternate beam, as described in foregoing paragraph.

The steel plating is of  $\frac{3}{8}$  in. steel extending from main deck springer plate to a distance down the side sufficient to allow the last strake of wood sheathing on bottom being brought up around bilge & finishing on the side planking, & to receive the upper strake of the planking. An angle bar of 2 $\frac{1}{2}$  x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  in. is worked all around the vessel. The butts of the plating are lapped & treble rivetted, all holes being punched fair & holes countersunk outside. The bottom of the vessel was covered with wood sheathing by the C.P.R. Co., at Vancouver, but the bolts for same were furnished by contractors, who have also punched the holes necessary to receive the bolts through the bottom, & the same for the deck.

The diameter and spacing of rivets is in accordance with Lloyds' rules, all plates & bars being punched & sheared from the laying side & all rivetted work is laid up close.

There are two longitudinal bulkheads throughout, placed each 7 ft. apart from centre line, of 3-20 in. steel plate, extending the whole moulded depth, connected to the bottom tie plates & deck beams by 2 $\frac{1}{2}$  x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  angle bars stiffened by double 3-16 in. brackets, one on each side at every floor, one 3-16 in. bracket at each deck beam, & a vertical stiffening bar 2 $\frac{1}{2}$  x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  in. opposite each alternate frame space. The lower bars connecting with the plates are close rivetted for water-tight work. Five athwartship water-tight bulkheads are fitted between double frames formed of 3-20 in. plate, stiffened with 2 $\frac{1}{2}$  x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  in. angle bars 30 ins. apart & strongly attached to longitudinal bulkheads between double bars. A partial bulkhead is fitted two or three frame spaces from transom, arranged so that its upper edge is above the load line level, & is stiffened as required.

Wale bar, a steel angle 3 x 2 $\frac{1}{2}$  x  $\frac{1}{2}$  in., is worked all around beam ends to act as a tie to beams & to receive the wale strake fastenings.

A flanged 3-16 in. bracket is worked & rivetted to each alternate frame head & main deck stringer plate on each side.

A wrot.-iron tiller is fitted to each rudder stock & all connected together by one rod. The necessary sheaves, rods or wire, wheel, chains & fairleaders are furnished by contractors, also a set of deck castings, consisting of 10 bollard heads, 4 warping chocks, 4 side pipes & 1 chain conductor & cap.

Steel coamings are fitted to deck openings.

One coat of paint was given after fitting up at Toronto & another was put on after erecting & riveting at Vancouver.

The work was all fitted up in Toronto & as much of the riveting completed as possible. It was then taken down, placed on cars & dispatched to Vancouver with sufficient materials & tools to re-erect & complete the hull there, by the contractors. The C.P.R. Co. provided suitable premises at Vancouver, with sufficient blocking, staging, &c.

The vessel is efficiently stiffened between decks with a lattice girder or truss; underneath the I-beams carrying the engines, & the beams are also strongly supported by brackets or otherwise outside the transom. A gutter or trough is furnished in deck to receive the swing of pitman rod.

The fire-room floor is covered with  $\frac{3}{8}$  in. steel plating, with holes for piping punched out.

THE BOILER is of the locomotive fire-box type, shell 62 ins. diam., & 14 ft. long. The fire-box ends from 32 ins. to 36 ins. below the shell, & is 5 ft. wide & 7 ft. long on the inside, surrounded by a water space 5" thick.

The boiler contains between 200 & 210

American 2 ins. tubes 14 ft. long, at least  $\frac{3}{4}$  in. apart.

All plates are of steel of required tensile strength to pass Government inspection.

There is a steam drum 30 ins. diam. & 10 ft. long.

The smoke stack is 24 ins. diam., 8 ft. above smoke box, then 34 ins. diam. for rest of length.

The boiler is built for a working pressure of 175 lbs., subject to Government inspection.

THE ENGINES are 1 pair high pressure non-condensing type, 16 ins. bore, 72 ins. stroke, with double piston valves, all parts designed for a working pressure of 175 lbs. to the sq. in. The steel shaft is of sufficient length to allow for a wheel having 18 or 19 ft. buckets. Four wheel flanges are provided for shaft, also an iron wheel rim & 8 wheel stirrups for each of the 17 buckets.

Two outside packed plunger Blake pumps no. 6 are furnished, entirely interchangeable, for feeding boiler, or flushing spark arrester, & fire service.

The vessel to be modelled & constructed with a view not to exceed a draft of  $14\frac{1}{2}$  ft., with all equipments on board, steam up, & 50 tons of coal in the bunkers. The vessel to be tried on the measured mile & over a series of 4 consecutive runs to attain an average speed of  $15\frac{1}{2}$  knots an hour.

To be rigged with 2 pole masts of pitch pine formed in one piece. To have one suit of sails, mutton leg fore sail & main stay sail, jib & main sail.

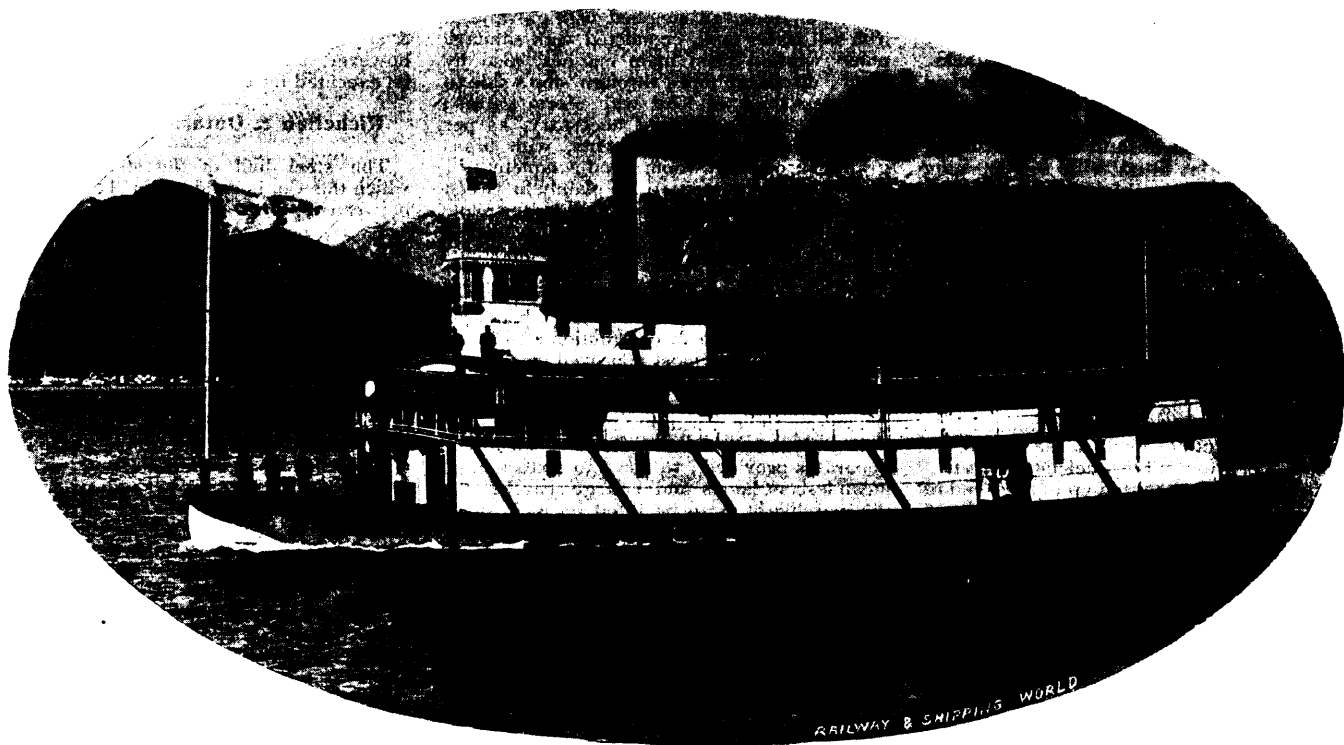
As the vessel is to be built for the purpose of crushing her way through heavy ice fields where the pressure is sometimes very great, the scantlings of the keel, stern, stern-frame keelson, & stringer plates must be increased in proportion as required to give the necessary strength; the stern, stern-frame, & rudder post to be at least  $\frac{1}{2}$  heavier than required by Lloyds' rules. The frames, reversed frames, bulkheads, & pillars to be heavier where required. The spacings of frames to be, forward & in bluff of bow, not more than 15 ins., & widening to 18 & 20 ins. at sides, & 22 ins.

best manner, diagonal stringers riveted to beams as required, on main deck beams, so placed as to give resistance to twisting pressure from side to side.

To have extra hold beams built & fitted where required at & near the load-water line & greatest pressure from the ice. To have centre line & quarter pillars where required.

Plating to be all of the best Siemens-Martin ship steel, & where not otherwise specified to be according to Lloyds' rules, doubled on the bows & under bottom 70 ft. from stern, & to have a belt of doubled plating all 7 ft. deep placed  $\frac{1}{2}$  above &  $\frac{1}{2}$  below the line of deepest draft when after-ballast tank is filled. Oak chocks to be fitted between the side plating & the deep draft stringer, or some other device, if approved, to support the plating at the centre between the frames where required.

To have a cellular double bottom, to run from the forward bulkhead in fore hold under boilers & engines to after bulkhead of engine-room, & to be made 6 ins. deeper than is usual to give better room for cleaning.



THE C.P.R. CO'S STIKINE RIVER STEAMER OGILVIE IN VANCOUVER HARBOR.

### New Winter Steamer for P.E I.

As announced in our June issue, Capt. McElhinney, Nautical Adviser to the Dominion Department of Marine, went to Glasgow, Scotland, some time since in connection with the construction of a steamer to perform the winter service between Prince Edward Island & the Mainland, in place of the Stanley, which is inadequate for the work. Parliament has voted \$180,000 for a steamer & tenders have been invited, but it is not probable that the vessel will be constructed till next year.

The specifications call for a single screw steamer, length between perpendiculars 225 ft., breadth moulded  $32\frac{1}{2}$  ft., depth moulded 21 ft. Following are some extracts from the specifications which will be found of interest.

The vessel to be built under special survey of Lloyds' Register of British & Foreign Shipping, & to be fitted & equipped in all respects to the Board of Trade regulations, & to class in English Lloyds' Register A1. 100. To be constructed throughout of Siemens-Martin ship steel, unless otherwise stated.

aft, as may be required by the Nautical Adviser; scantlings of frames to be increased to get more strength where required.

To have a bar keel. To be a straight stem, forged of best selected scrap iron, size at least  $\frac{1}{2}$  larger than given in the rules, the scarf to keel must be carried well aft under the fore-foot. To have a heavy shield or cutter fitted over face of stem & ends of plates, as directed, securely riveted.

Stern-frame & rudder post of best selected scrap iron forged in one piece, with the propeller space of sufficient size. The bosses for rudder pintles to be forged on, as also the lugs at sides & upper end, to support the rudder stock & pintles when backing into ice, & to have a strong bearing on it for heel of rudder; pintles & bosses to be bushed with gun metal.

Stringers & keelsons to be fitted with extra stringer plates, knees, braces, girders, & stanchions where required, extra stringer at line of deepest draft with braces where required.

Deck beams to be of bulb plate, spaced as in Lloyds' rules, knees fitted & riveted in the

To have the usually fitted ballast tanks in bottom & under boilers, & to have large trimming tanks aft & forward as required, all to have longitudinal midships partition for trimming to either side, & all necessary filling & emptying pipes, pumps, & attachments.

To have a large fresh water tank constructed with the ship, placed just forward of forward cross bunker, & to have 3 divisions to make it 4 separate tanks. Capacity in all 5,000 gallons.

Main deck to be of steel covered with pitch pine  $3\frac{1}{2} \times 3\frac{1}{2}$  ins. thick, to have teak or oak bindings. 'Tween decks to be steel, all hatches, manholes, coal shutes, & openings of whatever kind in 'tween decks to lower hold to be fitted water-tight & strongly secured to compare with the water-tight bulkheads.

To have 2 cargo ports at forward end of 'tween decks, 1 on each side, open space 6 ft. high by 3 ft. wide, to close with 2 doors strongly made, & hung with proportionately strong hinges, & protected by heavy guards outside, strong fastenings.

Water-tight bulkheads, 1 collision, 1 fore

end of main hold, 2 in & separating lower holds, 1 after end of main hold, 1 after end of engine-room, & 1 at stern pipe stuffing-box, 7 in all; also partition of sufficient strength for coal bunkers, & a partition between engine & boilers, with all necessary sluices, valves, tunnels, doors, & slides, fitted complete to B. of T. requirements.

Shaft tunnel to have water-tight sliding-door from engine-room, large enough to admit engineers to attend to shafting, stools for shaft-bearing blocks to be carried down & connected to ship's floors; thrust stool to be immediately abaft the bulkhead, & to be heavy plated & closely riveted. The tunnel to be made strong & water-tight on account of the after ballast & trimming tank running at each side & over it, & to be roomy as possible for handling the extra heavy shafting, & fitted with all necessary appliances for lifting the tail shaft.

Platforms for two small guns, 1 forward & 1 aft, to be properly arranged on deck.

Deck house to be built of  $\frac{1}{4}$  in. steel plate with iron angle frame, hardwood door casings & doors. The deck to be of narrow white pine  $1\frac{1}{2}$  in. thick, tongued & grooved, put together with white lead, covered with heavy cotton duck, fastened on with copper tacks. Frames on each side where required to extend to the rail & form skids for boat chocks, to have scuppers on each side of 1 in. lead pipe running inside wood finish to deck. Inside of deck house to be fitted with saloon, state rooms, engine-room, stokehold entrance, galley, pantry, steward's room, purser's office, engineers' & officers' rooms, mess-room, lavatory & w.c.'s, also aft of engine room a purser's room, lamp room, & smoking room. The top of the deck house to project over sides or eve 1 ft., to prevent the water dripping in over doors & sidelights. House to extend from the fore hatch as far aft as may be required to give the required accommodation. To have strong-hinged glass sidelights of heavy plate glass. To have galvanized iron railings round top of deck house where required. Wood top rail on account of frost.

Smoking room to be fitted up in after end of deck house, with door on each side. Seats round sides to be cushioned and strongly upholstered. Copper heating pipes all round under seats, & radiator in centre.

Bridge house and pilot house to be on forward end of deck house abaft the bridge; to have heavy plate-glass look-out windows all round forward & aft; to be finished in hard wood, & as large as the space forward of funnel will allow, with room for steering wheel, steering compass, 2 engine rooms, telegraphs, signal code, chart table, & officers' lounge; also steam heating pipes; to be fitted with doors on each side to reach the bridge shortest way, and a stairway to saloon without going out to main deck; to have brass hand rail where required. Captain's cabin to be in after end of pilot house.

The officers' bridge to be strongly built of galvanized angles, with necessary ladders; bridge to extend from side to side over top of deck house, with brass railing over same and around pilot house, the whole to be well secured to deck house & deck. House to be built of oak or teak.

Accommodation for seamen & firemen, separate, to be arranged under fore-castle deck, space for 24 men, finished in a good strong manner, with berths & lockers for each, one folding table on each side, a sufficient number of side lights, fitted, to be of strong brass, having hinged cast-iron galvanized plugs, glass of best plate, 1 in. thick, as many as required, handles & double screws, a w. c. & urinal on each side, all to be well ventilated as required; also fitted with steam heating pipe on both sides.

Six pairs of strong davits to be placed where required. Four boats with equipments, etc., complete to B. of T. requirements.

To have steam & hand-steering gear placed as required; steam steering engine to be fitted forward of engine room. Particular attention to be given to have the steering gear, in every detail, made in the best possible manner to secure strength. Engine to be large size approved.

Saloon & staterooms to be in the forward end of the deck-house. Saloon to forward of amidships in deck house, from side to side of house. A ladies' cabin to be arranged & neatly furnished, on the port side, forward of the ladies' cabin, to have a large clean linen locker, & 3 staterooms on port side. On the starboard side next to saloon to be an extra fitted stateroom for bridal parties, then 2 staterooms, staircase to captain's room, linen locker, & 2 more staterooms. All staterooms to have 2 berths & cushioned seat full length of room, neat cabinet washstand to close up.

Messroom to be neatly finished and fitted. Pantry to be fitted up in the best manner. Galley to be supplied with cooking range & utensils large enough to cook for 75 persons.

Two closets for crew fitted forward, 2 for officers on main deck, & 2 closets fitted aft, 2 urinals on deck, all supplied with galvanized iron salt water tank, connected with sanitary pump worked from main engines, also by hand; discharge pipes through ship's side to be extra thick of lead with storm valves; scuppers supplied where necessary, as per Board of Trade requirements, with brass gratings; one bath-room fitted complete.

After cabin to be fitted up plainly in 'tween decks aft; rooms, berths & seating for pilot, carpenter, boatswain, watchman & others; entrance by stairway at after end of smoking-room in deck house.

All steam & heating pipes to be made of copper, all pipes to have sufficient bends to allow for expansion & contraction; all joints to be made on the most approved plan, to be arranged & carried inside as much as possible away from the weather & frost.

The ship to be wired throughout for electric light; dynamos & all necessary electrical apparatus provided; to run 150 sixteen c. p. incandescent lamps and 1 large searchlight; the searchlight is to be fitted on main deck forward.

The heating arrangements of the cabins, officers' rooms, pilot house, & captain's cabin to have double the capacity usually furnished to steamers in the coasting trade; all steam pipes to be copper, & exhaust connected to tank in stokehold.

Engines to be direct-acting, surface-condensing, tri-compound engines, with 3 inverted cylinders fore & aft over crank shaft secured to sole-plate by 3 strong cast iron columns at back & polished wrought-iron columns in front, with all the latest improvements, & of sufficient power to maintain a speed of 15 knots at sea in ordinary weather.

Crank shaft of Siemens-Martin steel, of sufficient increased size to give the required strength. To be built & made in parts, all interchangeable.

Tunnel and propeller shafts to be made of the best selected scrap iron, of the increased size required; tunnel shaft rough turned all over, solid couplings truly faced & bolted with 6 heavy bolts each, sufficient bearings provided, built extra strong, blocks to have white metal strips cast in them. Propeller shaft to be of proportionate size, lined in wake of stern bush & gland with gun metal  $\frac{3}{4}$ -inch thick, to have suitable feather & nut, to secure propeller boss.

An evaporator to be fitted up in engine-room of sufficient size to supply not less than 15 tons a day.

Propeller to have cast steel boss, & 4 portable blades of Forsyth & Miller's cast malleable iron annealed, to be carefully fitted & firmly secured to boss with longitudinal key & Muntz metal studs & brass-capped nuts with safety bolts to approved plan, 4 spare

blades & a full spare set of nuts & bolts, all fitted to boss. The propeller to be of sufficient diameter & suitable pitch to drive vessel the guaranteed speed,  $15\frac{1}{2}$  knots. End of shaft to be capped, & all bolt-ends & nuts to be carefully covered with cement.

To have 2 double-ended cylindrical return tubular boilers to be fired in the latest & most approved manner. Plating & stays of Siemens-Martin steel, & boiler to be of such dimensions as to supply a constant full pressure of steam, at 160 lbs. a square inch, & to give the vessel & maintain the required speed; back combustion chambers to have back plates and water spaces. The boilers throughout to be constructed in the best manner, according to & to comply with B. of T. rules, & to be tested with cold water to twice the working pressure.

Donkey boilers fitted in stokehole. To be larger than usual, so much steam being required for heating purposes, & to have all required connections.

The engines & boilers, & entire machinery, to be upheld for 3 months from date delivery is taken. Any defect in material or workmanship during that time to be made good by & at the expense of the builders. Such cost, however, not to exceed what the work could be executed for on the Clyde.

### Richelieu & Ontario Navigation Co.

The steel hull of the steamer Toronto, which this Co. is building in Toronto, to run between Toronto & Prescott, was launched June 21, being christened by Mrs. Forget, wife of the President of the Co. The launching was witnessed by a large number of guests on the steamer White Star. The following is a detailed description of the steamer, as she will appear when completed.

The hull is of open hearth steel, & of the following dimensions: Length over all, 278 ft.; length, keel, 270 ft.; beam, moulded, 36 ft.; beam, over-guards, 62 ft.; depth, moulded, 14 ft. The engines are of the triple expansion, inclined jet condensing type; cylinders, 28, 44 and 74 ins. by 72 ins. stroke. The feathering paddle wheels are 22 ft. outside diameter, &  $10\frac{1}{4}$  ft. face of bucket. The air & feed pumps are attached to & worked from main engine. The boilers are 4 in number & are of the return tubular type, 11 ft. diameter, &  $11\frac{1}{2}$  ft. long, over heads. Each boiler has two  $41\frac{1}{2}$  ins. outside diameter, suspension furnaces. The boilers are fitted with the hot draft, & are designed for a working pressure of 176 lbs.

Spacious & elegant passenger accommodations are provided, 140 staterooms, including 4 parlor rooms & large Pullman sleeping cabin, furnish sleeping accommodation for 430 passengers. The dining room, placed on the upper deck, has seating capacity for over 100.

The interior finish & decorations of the spacious halls & deck saloons are most elaborately executed, the main & gallery saloons being finished in Francis I. Renaissance style, with the dining rooms in Louis XVI. The entrance hall is decorated in Neo Grec, with modern Renaissance details, with the smoking room in Oriental treatment. The refreshment & writing rooms will be in Elizabethan panelling of prima-vera, natural wood finish. The main staircases are in Honduras mahogany, with wrought metal balustrades, in hammered leaf work, finished in antique bronze, the main newels carrying bronze figures supporting electric torches.

A 700-light electric light plant, with ornamental electrolliers, in carbons, furnishes light throughout the steamer.

The upper works & machinery are now being rapidly proceeded with & it is said the vessel will be ready for her trial trip during August, though it is hardly likely she will be put on the route this year.

The officers will be Capt. H. Esford; Engineer, W. Black; Steward, F. M. Hepburn.

At a meeting of directors, July 13, it was decided to build a sister vessel to the Toronto, precisely similar for the same route, to be ready next year.

The Co's steamer Caspian, plying between Clayton, N. Y., & Montreal, ran into the Twin Islands, opposite Thousand Island Park, in St. Lawrence River, July 7. She was taken to the Kingston dry dock, when it was found that about 6 ft. of her forefoot was damaged. The damage was very slight, considering the force with which she ran on the shoal. The Caspian, formerly called the Passport, was built in 1845.

The Corsican, with about 135 passengers on board, had a trying time in the Lachine Rapids July 8. She passed Lachine at 6.35 p. m., with the intention of running the rapids, but in a few minutes a storm came on in full force. The Captain & Pilot, when near the head of the rapids, decided not to run them & the boat was turned round in the strong current, under full steam. It was with great difficulty she was kept in position for nearly an hour owing to the storm, but finally was got back to the landing-place at Lachine. The Corsican runs between Kingston & Montreal, & the Pilot, Alfred Ouellet, who had charge of her from Cornwall down, said it was the worst storm he ever had to contend with. The lifeboats were displaced by it, & several chairs were blown from the deck where passengers had been sitting a few minutes previously.

The Co. has returned to the 4 days a week service on the Saguenay River, instead of the daily service, the reason stated being that the Government has withdrawn the extra subsidy for a daily mail service. Boats now leave Quebec Tuesday, Wednesday, Friday, & Saturday.

Capt. T. J. Craig has been appointed Superintendent of the Thousand Island district, & will have the management of the steamers Columbian & Caspian.

On July 1, just after the steamer Corsican had cleared the Long Sault Rapids, about 12 miles above Cornwall, the iron tiller of her rudder broke & the crew lost control of the steamer. The anchors were quickly hove overboard, & holding well, the vessel swung round with her head up stream. The hand-steering gear was rigged, & with this the boat proceeded to Cornwall under half steam.

The double service between Montreal & Kingston has been withdrawn. Heretofore two steamers left Montreal daily for the western port, but now there is only one, this being considered sufficient for the business.

The Co. has restored the rates between Montreal & Toronto. When the season opened the rate was made \$4.50, including meals & berths, in order to compete with the railway rates. As no difference was noticed in traffic, as compared with previous years, the rates have been restored, & now they are as follows: From Montreal to Toronto, with meals & berth, \$8. From Toronto to Montreal, not including meals & berth, \$10; round trip, including meals & berth, westward, only \$16.70. The fare by the steamer Hamilton will remain for the present at \$4.50.

The Owen Sound Times recently stated that it had been decided to transfer the management of the C. P. R. Upper Lake steamers from Montreal to Owen Sound, & that Lincoln Smith, chief clerk in the office of the Superintendent of Steamships in Montreal, A. Piers, had been appointed Manager. There is not the slightest truth in the statement. Mr. Piers has simply transferred the book-keeping department of the lake steamers from Montreal to Owen Sound in charge of Mr. Smith, who will do his work at Owen Sound instead of in Montreal.

### Thousand Island Steamboat War.

On July 15 the Richelieu & Ontario Navigation Co. declared war against the American Line & started competing boats to cut rates in the Thousand Island district. The R. & O. Co. took the Columbian & Caspian from the Montreal-Kingston route & put them on the Thousand Island route, which had hitherto been left to the American Line. The cut in rates amounts to about 75 per cent.; for instance, the R. & O. put into effect a rate of 25c. from Kingston to Alexandria Bay, calling at Gananoque, for which run the American rate was 75c. The new service will extend from Kingston to Ogdensburg, N. Y., including all intermediate points in the Thousand Islands, & it is said that if the R. & O. Co. finds it necessary it will carry passengers free. The R. & O. Co., in meeting the competition of the American Line, did not desire to cut the rate from Kingston to Montreal, as that would mean a reduction in the rate between Toronto & Montreal, on which route it has about all the business it can handle. It was decided, therefore, to go into the territory hitherto occupied almost exclusively by the Folgers, and cut the rates between Kingston, Ogdensburg & local points in the Thousand Islands.

The American Line was organized last year by the Folgers, of Kingston, who are said to be the principal parties behind it, although they are supposed to have some backing from the New York Central Ry. At first there was only one boat, the America, running between Clayton and Montreal. This season, however, it was decided to extend the operations of the line, & give a daily service between the points mentioned. Two boats were placed on the route, the United Empire & the New York. The latter was formerly called the Shrewsbury, but was rebuilt in Buffalo last winter, & renamed. The American Line has a traffic connection with the New York Central, which issues through tickets via the American Line to Montreal.

The General Manager of the R. & O. when asked for an explanation respecting the move said: "Self protection alone has compelled us to take this step. The American Company, not satisfied with its own territory, invaded ours. It attempted by every means to steal our business. The time has arrived for us to strike back. We will maintain the best service between the two points, & will call at other points, including Clayton & Alexandria Bay."

Another director of the same company said: "The American line is really owned by the Folgers, the monopolistic owners of steamboats in the Kingston district. For a period they respected our territory & we respected theirs. Last season, however, they ran boats twice a week between Alexandria Bay & Montreal. This year the Co., still further enraged by our refusal to buy 2 of their boats offered to us, began a daily service. Their experiment of running their boats ahead of ours proved a great failure. We make better speed, & our boats reach here at a more reasonable hour. Last night, for instance, their boat carried 9 passengers to Montreal, while ours numbered 141. Our captains in the new competing territory in the Kingston district have been instructed to accept business even if at a sacrifice. The district in the summer time is one of excursions, & we are bound to secure all of them even if we have to carry the passengers for nothing."

At the recent annual convention of the American Society of Railway Superintendents at Alexandria Bay, Mr. Folger in speaking said: "On an occasion of this character it is fitting that something new should be told you, and so I will announce here for the first time that a company has already been formed by the strongest men of this country to carry the shields that we bear to Quebec & the

Saguenay, & to furnish a service there as we have here, to make the hearts of the tourists rejoice; & I wish it understood by this assemblage & their association that our hospitality to it will be as broad & as long as our route."

In reference to this the General Manager of the R. & O. Co. said: "The Saguenay project of our rivals is easier said than done. Talk is cheap. To become our competitors in the lower river traffic would require an investment of at least a million dollars. The capital represented by the American line in the Kingston-Montreal service does not exceed \$30,000. The boats were bought for a song, & the only improvement has been the addition of some interior fittings. We are having a daily walk over in the carrying of tourists from the Thousand Islands to Montreal. Yesterday, for instance, the Columbian left an hour behind our rival, the Empire State. We overtook them before Brockville was reached, and got out of Prescott 10 minutes ahead. We reached Montreal at 6.20, beating them by an hour. Our passengers all succeeded in making connections with the Quebec boat."

### OCEAN, LAKE & RIVER.

#### British Columbia & The Yukon.

The Secretary of the U. S. Treasury has appointed Capt. G. Whitney Inspector of Steam Vessels & Hulls, & C. F. Lehnrs Inspector of Boilers for the district of Alaska.

The river steamer Casca was thrown against the walls of the Stikine canyon as she was returning to Wrangel on her first trip. Her stem was smashed & a big piece of her guard broken off.

A press item to the effect that the C. P. R. Empress steamers are to be managed from Vancouver is without foundation. The management will remain in Montreal in the hands of Superintendent Piers.

The Bennett Lake & Klondike Navigation Co. has had 3 steamers built at Bennett, under the direction of W. H. T. Olive, of Victoria, & is running them between Lake Bennett & Dawson City, Yukon. One of them makes the trip from White Horse to Bennett, 120 miles, against the current, in 10 hours. Each boat has capacity of 60 passengers & 40 tons of freight.

The Polson Iron Works Co., Toronto, is building for the C. P. R. 2 fore & aft compound jet condensing engines with Clyde boilers, to be placed in tugs which that Co. is building on the Kootenay Lakes. One of the engines has cylinders 10 x 22 ins. x 16 ins. stroke; boiler, 7½ ft., diameter; 10 ft. long. The other engine has cylinders 12x26 ins. x 18 ins. stroke; boiler, 8 ft. 4 ins., diameter; 10 ft. long.

The C. P. R. steamers Athenian & Tartar have been withdrawn from the Vancouver-Wrangel route, owing to the collapse or cessation of the Yukon rush. It is probable the Tartar will be placed on the route between Vancouver & Japan & China, the business on which has increased to such an extent as to require the service of another boat in addition to the three Empresses. The disposition of the Athenian is not yet announced.

Up to July 7 only 4 river steamers had come down the Yukon. The May West left Dawson June 19, & arrived at St. Michael's July 3, with 225 passengers. The steamer Hamilton left Dawson June 24, & the B. B. Weare June 25, both arriving at St. Michael's July 5, the Hamilton being in tow of the Weare, having broken her chains. The Hamilton had 109 passengers & the Weare about 15. The Yukon is unusually low this season, & boats that are already at St. Michael's have slight chances of reaching Dawson. When the Bella came down she passed 3 steamers stuck in

the mud at Fort Yukon. The water in the river is not deeper than 3 feet in many places.

There is no foundation for the rumor that the C.P.R. Co. intends putting on a steamer between Vancouver & Victoria, but it is probable that the Co. would have done so had not the Canadian Pacific Navigation Co., in which the C.P.R. Co. has no interests, decided to do so. The present service between the two principal cities of B.C. is quite inadequate, & what is required is a fast boat to carry only passengers, mail & express matter, & not to be loaded down with freight as is now the case. The C.P.N. Co. has, it is said, opened negotiations with builders in Great Britain for the construction of a 1st class 21 knot steamer, which will be 270 ft. long, 34 ft. beam & 14½ ft. hold. A speed of 21 knots would enable her to make the trip between the two cities mentioned in less than 4 hours.

The experience in towing-stern wheel river steamers oceanwards to St. Michaels, Alaska, has proved a very unfortunate business, several having been lost. Early in July the stern-wheeler Marquis of Dufferin, built at Vancouver for the British American Corporation, at a cost of \$30,000, & which was being towed by the steamer Progress, went to pieces & sank between Cape Flattery & Cape Beale. The steamer Victorian, which is owned by the Canadian Development Co. of Victoria, started from Wrangel in June, in company with the river steamers Canadian & Columbian, consorted by the steamer Tordenskjold. A short distance north of Wrangel the river steamers put into a village for water. While there the tide went out & the Victorian settled down on the rocks, which came up through her hull. When the tide rose she was floated & after being temporarily patched taken to Wrangel for repairs, & the Tordenskjold & the other two vessels continued their voyage to St Michaels.

Pickford & Black's steamer Alpha, referred to in our June issue, pg. 106, reached Vancouver, July 7, from Halifax, N.S. She is capable of running 11 knots an hour & is very comfortably fitted up, the saloon being amidships, with comfortable cabins off each side. She can carry 40 first & 20 second class passengers, and 100 in the steerage, while her freight capacity is 800 tons, & has been engaged in the service between Halifax & the Bermudas. A. H. B. McGowan is the local agent, but Mr. Black, of the owning firm, went to Vancouver to inaugurate the service, which will include the steamer Fastnet,

sent out by the same firm. As foreshadowed in our June issue, on her first trip to St. Michaels, Alaska, the Alpha took in tow the Yukon & Hootalinqua Co's. stern-wheel steamer Reindeer, which was built at Victoria. Her dimensions are: length 120 ft., beam 22ft., depth of hold 5 ft. Light she draws 22 ins. of water, & when loaded with 150 tons of freight draws only 6 inches more. On her trial trip she developed a speed of 17 knots. From St. Michaels, in addition to her own cargo, she is intended to tow a loaded barge up the Yukon.

#### The Maritime Provinces.

The Marine railway, which forms part of the plant of the Halifax Graving Dock Co., is to be rebuilt.

The S.S. Damara from St. John, N.B., to London, Eng., via Halifax, recently took 300 tons of pulp valued at about \$12,000.

The North German Lloyd steamer Ems ran down the schooner Gypsum Princess of Parrsboro', N.S., June 12. Six were drowned.

The Avon Tow Boat & Ferry Co., & the Wm. Weatherspoon Tow Boat & Ferry Co., both of Hantsport, N.S., have been incorporated.

The N.B. Government has issued supplementary letters patent increasing the capital stock of the Deer Island & Campo Bello Steamboat Co., from \$7,000 to \$15,000.

G. W. Churchill, of Hantsport, N.S., & 4 other members of the Churchill family have been incorporated by Dominion letters patent as the Ship British-America Co.; capital, \$2,000; headquarters, Hantsport; powers, to acquire ships & carry on business as ship owners & common carriers by sea.

The S. P. Benjamin Co. has had a steel steam tug built to tow lumber barges. She is 60 ft. long, 15 ft. beam & 7 ft. hold, & as it will be necessary for her to tow under 3 bridges on the Avon, her smokestack is removable, & when so trimmed she measures only 7 feet from her water to her top line.

The annual general meeting of the Chignecto Marine Transport Railway Co. was held in London in June. The old directors were re-elected, but no other business of importance was transacted. The Co. pays a heavy tax on their property in the shape of school & other rates in Cumberland County, N.S.

The steamer Mayflower, which has been laying idle for nearly 2 years at Port Hawkesbury, N.S., & which was sold to a company a short time since, has been thoroughly overhauled & fitted. She has been engaged by the government for the ferry service on the Strait of Canso in place of the S.S. Mulgrave, which has been laid off for general repairs.

J. T. Hamilton, H. Mc. Hart, G. Musgrave, C. W. Outhit, R. T. Braine, T. Dixon, W. J. Butler, F. J. Phelan, L. Hart, W. N. Wickwire & J. A. Johnson, of Halifax, are applying for Dominion Letters Patent to incorporate them as The Acadia Steamship Co.; capital, \$60,000; headquarters, Halifax. The first three named applicants to be the provisional directors.

Under the Nova Scotia Joint Stock Companies' Act letters patent of incorporation have been granted to G. W. Churchill & 4 other members of the Churchill family, of Hantsport, for the following companies: The W. M. Weatherspoon Tow Boat & Ferry Co., capital \$2,000; the Avon Tow Boat & Ferry Co., capital \$2,000; & the Chester Tow Boat & Ferry Co., capital \$2,000.

The question of a direct steamship service between St. John, N.B., & the West Indies has been discussed a good deal of late. There is a feeling that with a faster service more trade could be done, & that a local business would be supplemented by a growing western trade with the islanders through the port of St. John. The St. John board of trade has declared in favor of a direct line, & the city council has appointed a committee to co-operate with the board of trade in considering the subject. In this they will have the hearty support of the C.P.R., which is anxious to develop trade between the West Indies & points in Western Canada.—Maritime Merchant.

The steam ferry Chebucto, built in Great Britain to run between Halifax & Dartmouth, N.S., reached Halifax June 27 from the Azores, where she put in for shelter about a year ago, since which it was found almost impossible to get any captain to attempt to bring her the balance of the distance. Her voyage is probably the longest ever made by a ferry boat, without being towed, & altogether unaccompanied. The cabin windows were boarded, the cabins & gangways shored and braced to prevent straining, & she was boarded across the ends in a sloping manner to shed the water. The voyage from the

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Azores was made in less than 20 days, under Captain Crockett, formerly of the Anchor Line Scotia on the Mediterranean route, with a Glasgow crew. She is under 150 ft. long, but is one of the most up-to-date ferries extant, with compound engines, a propeller at each end & a line of shafting running fore & aft. The cabins run fore and aft, with no break such as side wheels produce. Her cost was about \$70,000.

### Ontario & the Great Lakes.

The Victoria, a \$30,000 steamer, capable of making 18 miles an hour, has been launched at Pembroke for the Pembroke Navigation Co.

Letters patent of incorporation have been issued under the Ontario Act to the Georgian Bay Navigation Co., with a capital stock of \$20,000.

The steamer Algonquin made a fast trip between Kingston & Toledo last month, covering the return trip in 5 days & 22 hours. She carried 70,000 bushels of corn.

The lighthouses on the Great Lakes are having their supplies taken in this year by the Collins Bay Rafting Co's steamer Saturn, not the Sequin, as previously stated erroneously. The charter price is said to be about \$3,750, a little less than last year.

The steamer Rosedale, which was badly damaged through stranding on one of the shoals of Lake Ontario last fall, but released, is again in commission, & is a competitor for the limited amount of business that is now offering for the general freighters.

The Department of Railways & Canals has decided upon an arrangement for the utilization of the canals on Sunday, as a sort of compromise between the demands of the Sabbatarians & the forwarders. The canals will be open to navigation until 6 a.m., & will remain closed until 9 p.m. On the one hand the Department was urged to allow the navigation of the canals continuously, while on the other a protest was entered against operating the locks between midnight Saturday & midnight Sunday.

The Canadian steamer Tecumseh struck on Ripley's Rock, in the lower Marquette harbor, Mich., June 27. Her crew attempted her release by the use of a line, but the steamer stuck all the harder & finally broke her shoe & wrenched her rudder. A bad leak was started, & during the afternoon the leak increased & the steamer filled until finally she slid off the rock part way & settled down with her forward decks awash & her stern high in the air. An attempt was made to hold her with the schooner Georgia, but the lines were not strong enough & parted. The bridge & light upper works of the steamer were torn away by the steam when she sank. The officers & crew escaped in the yawl & on rafts & saved most of their personal property.

The steamer Shrewsbury, purchased by the Folgers, of Kingston, last year for the American Line, between Clayton, N.Y., & Montreal, underwent extensive alterations and improvements at Buffalo, N.Y., last winter, & is now known as the New York. She is about 180 ft. long & 44 ft. beam. Aft on the main deck is a handsome dining room, enclosed by large observation windows, with mirrors between. The dining room is supplied with small individual tables. Forward the main deck is also enclosed by observation windows, & is arranged for lounging & smoking. On the promenade deck is a large saloon cabin, on each side of which is a row of state rooms, each containing a double lower & double upper berth. Forward of the saloon cabin is a broad promenade. It is said that on her

trial trip the New York made 20 miles an hour. Capt. C. Hinckley is in command.

To the G.T.R. belongs the honor of handling through its elevator at Midland, Ont., the largest cargo of grain that has ever been loaded in a single vessel on fresh water. The steamer Superior City loaded at South Chicago with 266,505 bushels of corn for Midland. This cargo is 34,550 bushels in excess of any that has hitherto been handled on the lakes, its net weight being 7,462.9 tons - equivalent to 443 carloads. A prominent official of the G.T.R. says: "On the completion of the G.T.R.'s elevator at Midland, which is in course of construction, it is expected that even the extent of this cargo will be exceeded, as vessels are now being built, to be operated on the lakes, whose capacity is larger than that of the vessel above referred to, & with the new & improved facilities at Midland, it is expected the handling of grain at that point will be performed more expeditiously than at any other port on the lakes."

No. 81 of the Standard Oil Co. boats went through the Welland Canal early in July. She is a large tow barge, 258 ft. long on the water line, 41 ft. beam, & when loaded draws 18 ft. of water. She was being taken to Boston to carry fresh water for the U. S. navy. Her capacity is 900,000 gallons. On account of her size a novel way was adopted for getting her through the locks. Being too large to tow by horses, two tugs were brought into requisition. These fetched her to the head of the locks, where she was securely snubbed. The tugs were then locked through & snubbed outside the foot gates. A line was then put out & fastened to the tugs, & she was pulled in by means of her own donkey engine, thus necessitating a double lockage each time. While in tow of the tug Rival going down the St. Lawrence, & running the Cedar Rapids, she ran ashore on Hog Island & was reported to be in a very bad condition.

The first general meeting of the shareholders of the Brockville Navigation Co. was held July 8. N. Cossitt, O. K. Fraser, R. Bowie, T. Wilkinson & W. S. Buell were elected directors. N. Cossitt was elected president, & W. S. Buell, Managing Director & Secretary-Treasurer. The Co's steamer Brockville, recently built in Toronto, arrived at Brockville July 9, & will run between Brockville & Union Point, 7 miles, making 4 trips a day & calling at the various summer resorts en route. She is 105 ft. long, 21½ ft. beam & 7 ft. deep, & licensed to carry 375 passengers. Her draught is only 5 ft. & the contract calls a speed of 14 miles an hour. The engines were built by the Polson Iron Works, & are compound fore & aft, with cylinders 9 x 18 & 14 ins. stroke. She is fitted with an incandescent light plant, with a large searchlight on the top of the wheel house, which will show the localities of the river by night.

Judge McDougall, of Toronto, has given judgment in the Admiralty case of the steam tug Fern against the schooner Porter. The case was tried at Windsor, Ont. During the season of 1897 the Fern was engaged in raising the wreck of the Grand Traverse, which lay in the middle of the channel over a mile north of the Colchester reef light on Lake Erie. The wreck was known to ship captains & the fact that the Fern was raising her was also known. On Sept. 2, 1897, the Porter, Capt. McDonald, on her way light from Buffalo to Detroit, ran into the Fern. The Porter had all sail set & was going about 4 miles an hour. Captain Herminger entered suit for \$252 damages, & Judge McDougall awards that amount. The evidence given at the trial was contradictory. The Porter's crew swore that there was no light on the Fern, while the latter's crew swore that the top light was burning brightly. They were corroborated by the keeper of the lighthouse, who saw the light burning.

### A Nova Scotia Steamer.

The Yarmouth Steamship Co.'s latest acquisition, the Steamer Express, has been brought out from England, & is now on the South Shore route between Halifax & Yarmouth, N.S. She is of the low & rakish type, with a splendid hull & fine lines, resembling in some respects the D. A. R. liner Prince Rupert.

The Express was built for the Morecambe, Llandudno & Isle of Man passenger service, & was popular on that run. Her dimensions are: length, 202 ft; beam, 24 ft; depth moulded, 11 ft; across the paddle-boxes she measures 50 ft. Her engines are of the disconnecting type, the high pressure cylinder being diagonal & the low pressure oscillating. They indicate 1,200 h. p., being capable of driving the vessel 14 knots. Steam is supplied at a pressure of 100 lbs per square inch.

When in the Channel service she was fitted with fore-castle & bridge deck erections only, but since being taken over by the Yarmouth S. S. Co. she has been built up fore & aft, & covered in with a flush hurricane deck. On this 2 deck houses have been erected, 1 forward & 1 aft. The forward house contains accommodation for captain & officers, a smoking room & forward saloon companionway. On top of this is the pilot house.

The companion leads down to the forward saloon, along both sides of which are fitted very comfortable sleeping berths, settees being arranged where convenient. Below this again is a lower saloon, the forward part of which is fitted with a men's cabin, & the after part is fitted with berths. Below deck is the after saloon, a long apartment containing the staterooms, & at the forward end of the saloon galley. Along the sides are ranged settees, & a centre table is fitted abaft a large lower deck opening. The cabins, staterooms & upper saloon are decorated in white & gold & the upholstery is in maroon plush & American cloth. Baths, lavatories & the usual sanitary arrangements are provided for the several large apartments. The staterooms are all fitted with tip-up lavatories.

The dining saloon on the lower deck, with accommodation for 25 passengers, is a handsome apartment, finished in whitewood & cherry, fitted with 2 beautiful electric chandeliers. The sides of the saloon are adorned with panel landscape paintings. The Express is fitted throughout with electric lights, bells & telegraphs & has accommodation for over 200 passengers.—Halifax Chronicle.

### The St. Lawrence Canals.

The Deputy Minister of Railways & Canals, who recently inspected the construction work upon the St. Lawrence canals, reports that operations are progressing rapidly. The contractors for the deepening of the channel below Prescott are taking out 500 cubic yards of earth & 500 yards of rock per day, & the output will shortly be doubled. At the increased rate of progress the channel will be ready for 14-ft. navigation next spring. On the contract for the Cardinal section of the Galops Canal, 8,000 cubic yards of earth are being taken out each day. On the Larkin & Sangster contract the rock & earth work are advancing towards completion. The masonry work on the lock is in progress & a large quantity of cut stone has been deposited on the ground. The work of the Canadian Construction Co. at Farran's Point is being energetically pushed forward. Two steam shovels & 3 dredges are constantly in operation, & the equipment will be increased by 2 more dredges in a few days. The masonry is well under way & cut stone is arriving from the quarries daily. Everything possible is being done to expedite the construction work on the Soulages Canal.



## NOTICES TO MARINERS.

## By the Dominion Department of Marine.

All bearings, unless otherwise noted, are magnetic & are given from seaward, miles are nautical miles, heights are above high water, & all depths are at mean low water.

**No. 28, June 2.—Parthia Shoal, Fairway Marks, Brocton Point.**—An open triangle, with sides 6 ft. long, painted white, has been placed apex uppermost on the eastern or back range mast at Brocton Point (see Notice to Mariners, no. 21 of 1897), so that the 2 masts may be more readily differentiated. This affects Admiralty charts 922, 1922 & 2689, & B. C. Pilot, 1888, pg. 138.

**2.—Spar Buoy, Burrard Inlet, B.C. First Narrows.**—A spar buoy, painted red, has been moored in 3 fathoms off the spit on the southern shore of First Narrows, Burrard Inlet. The following sextant angles fix the position of this buoy: Tangent of Brocton Point & East Beacon, 78° 50'; east Beacon & tangent Prospect Bluff, 82° 24'. This affects Admiralty charts nos. 922, 1922 & 2689, & B. C. Pilot, 1888, pg. 138.

**3.—Reef off Gibson Landing, Shoal Channel.**—Pending the construction of a beacon, a small spar buoy has been temporarily placed on the outer rock that dries 3 ft. 2¼ cables eastward of Gibson's Landing, Shoal Channel. (See Notice to Mariners, no. 16 of 1897.) This affects Admiralty charts 579 & 585, & B. C. Pilot, 1888, pg. 169.

**4.—Welcome Point Shoal.**—A spar buoy, painted red, has been moored in 6 fathoms water, off Welcome Point, eastern entrance to Welcome Pass, Seechelt Peninsula, to mark the extent of the shoal ground off that point. For a distance of 1 mile eastward of this buoy & the same distance as the buoy is from the shore the average depth is 5 fathoms, shoaling shoreward to 4 & 3 fathoms. The water is very deep close southward of the buoy & also west of it. The shoalest spot, which is awash at low water, is about ½ cable N. E. by N. from the buoy. Angles for Welcome Point Buoy:—Northerly tangent Merry Island & tangent Thormanby East Island, 29° 24'; Northerly tangent Merry Island & tangent Welcome Point, 46° 00'; tangent Welcome Point & tangent east shore trend westerly point of S.E. bay, 127° 48'. This affects Admiralty charts 579 & 1917, & B.C. Pilot, 1888, pg. 174.

**No. 29, June 10.—Reef in Blinkinsop Bay, B.C.**—An uncharted reef has been located by J. T. Walbran, Master of the D.G.S. Quadra, extending west south-westerly about 1¼ cables from Point Tuna, at the entrance to Blinkinsop Bay, Junction Strait, Lat. N. 50° 28' 34", Long. W. 126° 1' 37". The reef is marked by kelp & the middle is awash at low water spring tides. This affects Admiralty charts 581 & 630 & B.C. Pilot, 1888, pg. 211.

**No. 30, June 10.—Derelict between Nova Scotia & Newfoundland.**—Captain Jorgensen, of the Norwegian barque Svea, reports that on May 29 he passed a wrecked schooner apparently of 200 or 300 tons, in Lat. 46° N. & Long. 57° 3' W. This derelict may prove dangerous to vessels crossing between N. S. & Newfoundland or entering the Gulf of St. Lawrence.

**No. 31, June 10, Nova Scotia—1. Hand Fog-Horn at Page Island Light Station.**—A hand fog-horn is being supplied to the light station at Page Island, Port Latour, which on and after June 20 will be sounded during thick & foggy weather in answer to signals from vessels. This affects Admiralty charts 340 & 730, & Canadian list of lights & fog signals 148.

**2.—Hand Fog-Horn at Pubnico Light Station.**—At the same time a similar horn will be established at the light station at Beach

Point, on the east side of the entrance to Pubnico Harbor. This affects Admiralty charts 339, 352 & 2537, & Canadian lists of lights & fog-signals 138.

**3.—Canso Harbor Fairway Buoy.**—The Government has established a fairway buoy off the northern entrance to Canso harbor, in Chedabucto Bay, on the south-easterly coast of N. S., Lat. N. 45° 21' 45"; Long. W. 60° 59' 45". The buoy is an iron can, painted in black & white vertical stripes, moored in 13 fathoms water, 1½ miles N. ½ E. from Hart Island light, & is intended as a fairway buoy to guide vessels into Canso Harbor by the northern entrance, & between outlying shoals. It will be maintained during the season of navigation & taken up for the winter. This affects Admiralty charts 729, 2163 & 2517.

**4.—Beaver Island Shoal buoy.**—The shoal extending easterly from the eastern extremity of Beaver Island, Halifax county, on the southern coast of N. S., has been marked by an iron can buoy, established by the Government. The buoy, which is painted black, is moored in 7 fathoms water, ½ mile E. from Beaver Island light & ⅜ mile from the eastern extremity of the island, Lat. N. 44° 49' 45"; Long. W. 62° 19' 35". It is to be left on the port hand by vessels bound into Beaver Harbor or Salmon River. It will be taken up at the close of navigation for the winter. This affects Admiralty charts 2396 & 2663.

**No. 32, June 27.—New Brunswick.—Improvement in Preston Beach range lights.**—The masts, from which range lights were shown on Preston Beach, on the south shore of Miramichi Bay, have been replaced by lighthouse towers. The front tower stands on the top of a sand ridge which follows the shore of the bay, & is 68 ft. N. 18° W. from the former range light mast. Lat. N. 47° 4' 47"; Long. W. 64° 54' 58". The tower is a wooden building, square in plan, with inclined sides, surmounted by a square wooden lantern, & is 29 ft. high from the ground to the vane on the lantern. It is painted white, with the lantern red. The light will be, as heretofore, fixed white, elevated 47 ft. above high water mark, & should be visible 10 miles in the line of range & also eastwardly down the bay approximately between the bearings of N. W. & E. S. E. The illuminating apparatus consists of a single wick lamp strengthened by a pressed glass lens. The back tower is erected on the south side of the high road, 804 ft. S. by E. ⅜ E. (S. 40° 30' E. true) from the front tower. It is a skeleton steel frame work, square in plan, with sloping sides, surmounted by a wooden lantern & light room. The height from the ground to the vane on the lantern is 59 ft. The lantern & ironwork are painted red; the enclosed upper part of the tower is painted white. The light is a fixed white light elevated 58 ft. above high water mark, & visible 10 miles in the line of range & also eastwardly down the bay. The illuminating apparatus is similar to that of the front light. The two lights are in exactly the same alignment as the old lights & in one lead vessels entering Miramichi Bay from the Bar buoy up through the ship channel east of the Lump buoy. This notice affects Admiralty charts 435, 2034 & 2187.

**No. 33, June 29.—British Columbia.—1. Beacon at Gibson's Landing.**—A small stone beacon, surmounted by a wooden staff & lattice work ball, the whole painted black, & showing 9 ft. above water, has been erected by this Department on the northern portion of a rock 2¼ cables east of Gibson's Landing, Shoal channel, Howe Sound. Lat. N. 49° 24' 10"; Long. W. 123° 31' 2". This beacon replaces the buoy described in part 3 of Notice to Mariners no. 28 of 1898. This affects Admiralty charts 579 & 585, & B.C. Pilot, 1888, pg. 169.

**2.—Rock in Shoal Channel.**—An uncharted danger in Shoal Channel, entrance to Howe

Sound, near the conspicuous cone shown on plan 585, has been located by J. T. Walbran, Master of the D.G.S. Quadra. The danger is a narrow shoal running S.S.E. from a point on the west shore where a slate spit extends 160 ft. south from high water mark. No depth of more than 2 fathoms is found on the shoalest spot, a rock awash, at a distance of 1 cable from the shore. A depth of 4 fathoms is found ½ cable south of this spot, outside of which the water rapidly deepens. From the rock awash Gibson's Landing wharf bears S.S.W. (S. 45° 45' W. true) distant 1½ miles; the north Shelter Island, S. E. (S. 21° 45' E. true) distant 7 cables, & the trend of the shore northwards bears N. ¼ E. (N. 26° E. true.) This affects Admiralty charts 579 & 585, & B.C. Pilot, 1888, pg. 169.

**3.—Rocky Patch off Cole Bay.**—Notice has been received from the Commander-in-Chief of the Pacific station of the location by the officers of H.M.S. Pheasant of a rocky patch off White Rocks, Cole Bay, Saanich Inlet. Lat. N. 48° 37' 47"; Long. W. 123° 29' 40". The patch lies in a N.E. by S.W. direction with the westernmost of the White Rocks bearing N. 57° E. magnetic, distant 2 cables. It is about ½ cable in extent & has at least a depth of 8 ft. The following sextant angles will locate the position of least depth: Village Point, 0; Hatch Point, 87½°; Coal Point, 22½°; Western White Rocks, 76°; Senanus Island, 109½°; Village Point, 64½°. This affects Admiralty charts 1917, 2689 & 2840, & B.C. Pilot, 1888, pg. 72.

**4.—Shoal Southeastward of Mitlenatch Island.**—Information, dated April 21 last, was received by the British Admiralty from Commander M. H. Smith, H. M. surveying vessel Egeria, of the existence of a shoal, now named Sentry Shoal, lying to the southeastward of Mitlenatch Island. The shoal within the limits of the 10-fathom line runs N.W. & S.E. 1½ miles, the least depth found being 5 fathoms, from which the summit of Mitlenatch Island bears N. 30° W., distant 2½ miles. Shoal water also appears to extend ½ mile from the north side of Mitlenatch Island. Approximate position of 5-fathom patch: Lat. N. 49° 55' 0"; Long. W. 125° 1' 30". This affects Admiralty charts 580 & 1917, & B.C. Pilot, 1888, pg. 182.

**5.—Rock in Schooner Passage.**—Capt. Roberts, of the steamer Princess Louise, has reported that his vessel struck on an unknown rock in Schooner Passage, Rivers Inlet. The rock is about 70 yards from the western shore & is awash at extreme low tide. A mid-channel course will clear the danger. Approximate position on Admiralty chart 1923b: Lat. N. 51° 33' 17"; Long. W. 127° 36' 30". Capt. Roberts also reports that the rock shown on the chart on the eastern side of the southern entrance to Schooner Passage dries at an extreme low tide. This affects Admiralty chart 1923b, & B. C. Pilot, 1888, pg. 360.

**6.—General Information Respecting Work Channel.**—The following summary of a report by Capt. Walbran has been published in U.S. Notice to Mariners, no. 24 of 1898: Work Channel, the entrance to which lies close northward of Point Maskelyne, is a nearly straight arm stretching about 30 miles to the southeastward, the head reaching within 2 or 3 miles of the Skeena River. There is good anchorage in 9 fathoms in a small cove, known as Trail Bay Cove, situated on the west side of Trail Bay. Trail Bay is situated on the western shore of the inlet & 5½ miles from the entrance. Two miles eastward of Grace Point, the entrance to Trail Bay, is a dangerous pinnacle rock situated nearly in the middle of the inlet. The rock just dries at an extreme low tide. It is surrounded by deep water, there being a depth of 130 fathoms close to it. The shores of this inlet are bold & compact & the whole of this channel is surrounded by high & precipitous

mountains. About 8 miles from the head a narrow arm branches off to the northward for about 3 miles & then turns to the southeast & eastward for 8 miles. Indifferent anchorage may be found at the head of the main inlet, between the 2 small streams in the south-western bight, in 35 fathoms, 400 yards from low water mark. There is also anchorage, for a small vessel, in 9 fathoms in the cove to the northward of the bight & off the entrance to the salt water lake, steadying her with a hawser to the trees. The tidal stream in the entrance of Work Channel runs about 3 knots per hour. This affects Admiralty charts 1923a & 2430, & B.C. Pilot, 1888, pg. 428.

**No. 34, June 30.—Ontario—1. Private Lights in River St. Mary**—A fixed white light has been established by Jos. Rouleau, pilot, to mark the southern edge of the dredged curve opposite the beacon in the upper entrance to the Canadian Canal, at Sault Ste. Marie, Ont. The light is shown from a buoy or float moored near the black spar buoy maintained by the Government. Two range lights have been established by Mr. Rouleau on Big Point, on the U.S. side of the river, in the same alignment as the lights on the Canadian side, to show the axis of the dredged channel above the canal from the U.S. side to the turning point at the beacon. These lights will be maintained by the pilots & the Canadian Government assumes no responsibility in connection with them. This affects Admiralty charts 320 & 324, & the substance of it should be entered in the Canadian List of Lights after no. 1115.

**2.—Shoal off Gros Cap.**—The Department of Marine is advised that several vessels, drawing 17 ft. or more, have struck an uncharted shoal in the upper or Lake Superior entrance to River St. Mary, between Gros Cap & Point Iroquois. One master states that the shoal is about 1½ mile above Point Iroquois. The shoal is on, or a little to the eastward of, the alignment of the private lights known as Bernard's Range. Masters are advised to keep the range open a little to the westward until abreast of Point Iroquois. This notice affects Admiralty charts 320 & 324.

#### By the U.S. Hydrographic Office.

**Lake Huron—Georgian Bay Entrance—Current off Cove Island Light**—Capt. McAllister, of the C.P.R. steamer Alberta, furnishes the following information (Capt. McAllister has had 12 years' experience on the one route between Owen Sound & Fort William):

After passing Grand Manitoulin Island, bound to the southward & eastward, opening up the entrance to Georgian Bay, between Hungerford Point & Cape Hurd, the effects of a current are immediately felt. This current is variable in both force & direction, setting from Georgian Bay into Lake Huron & vice versa with great irregularity. At times this current is so strong that in thick weather it would be hazardous to attempt an entrance into Georgian Bay unless the fog horn could first be heard & its direction established.

#### Ottawa River Navigation.

A correspondent writes: "Not many years ago the C.P.R. project was regarded as chimerical. But, where its opponents claimed the railway would never earn axle-grease, it is now paying dividends. The system comprises to-day over 7,500 miles of railway, & steamship lines on the Great Lakes & the Pacific, & last year its earnings were \$24,000,000. And now the great development of the Northwest due to it is enlarging its sphere of action daily. Lately it has been found necessary to add to the facilities for handling grain at Fort

William by the erection of a steel elevator. It is safe to say that, even with this addition, the existing capacity will soon have to be again increased.

"Just as the C.P.R. has made this western expansion possible there seems reason to believe that, on the opening of the Ottawa River to through navigation, history will repeat itself, & a new era of development in Central Canada will follow. Railways are imperfect colonizers where not aided by waterways. Had the C.P.R. been all along paralleled by a cheap water route from Lake Superior westward, the Northwest would have to-day five times its present population & the railway more & better paying business. And cheap water carriage will do even more for Northern Ontario than it could for the prairies. To the grain traffic it would be a great advantage, to lumber & minerals it is an absolute necessity.

"The Ottawa route will do for this part of Canada what no other waterway project can—open new territory for occupation. In the Nipissing & Temiscaming districts in Ontario & the Upper Ottawa agencies of Quebec are several million acres of lands, equal to any in Ontario, awaiting settlers. The increase in value of these alone, owing to their being brought on a main line of traffic, should repay the entire cost of opening navigation, lands now held at 50c. an acre becoming immediately worth at least 10 times that sum. Sturgeon Falls alone is said to be the shipping point for forests estimated to contain about 2,000,000 cords of spruce. On every cord of this from \$1 to \$2 would be saved to the producers as the direct result of the opening of the waterway. About the head of Temiscaming & northward is an inexhaustible supply of the same material, tributary to the Ottawa River. The manufacture of this should employ numerous mills. Water-power is abundant. Mr. Clarke, past President of the American Society of Civil Engineers, says: 'I can unreservedly state that I know of no other place in any manufacturing country, Niagara Falls not excepted, where there is such an amount of water-power as this scheme can make available.' The amount incidentally to be developed he places at upward of 500,000 h.p. This should be worth at least from \$2,000,000 to \$3,000,000 a year when fully taken up.

"As a through route it has the advantage of directness. From the Sault to Montreal is practically an air line. The Ottawa route must undoubtedly share in the enormous through traffic to the coast & Atlantic states, which is growing with wonderful rapidity. Mr. Clarke estimates that grain can be carried from Chicago to Montreal via the Ottawa at 2¼c. a bushel. Provided the questions of feasibility & cost can be satisfactorily settled, the Ottawa waterway should be a success, & do for Ontario's 'New North' what the C.P.R. has done & is doing for the Northwest. It is a matter of provincial & national importance that the resources of that part of the Province which has contributed in the past so large a share of the provincial revenues should be developed. As to the feasibility of the project in question there seems no difficulty. If further steps are necessary to ascertain its cost these should be taken. If not too costly, the commerce created, the water-power utilized, the through traffic carried, & the general increase in land, timber & mineral values in the vicinity of the route should soon repay the outlay for construction of all necessary works."

#### Stikine River Navigation.

L. La Coste, engineer of the Public Works Department, who has been directing the movements of the snag boat Sampson on the Stikine River, says he found the Stikine a better navigable river than he had expected from report, & that the canyons are not as

difficult nor is the current as rapid as those of many mountain rivers. The sandbars are the worst phase of the navigation, since by virtue of the kind of soil these are constantly shifting. Dredging would be of no permanent use, & it is almost necessary for pilots to learn the channel fresh each year.

He states that one of the difficulties of the present season has been that the river boats, save in one or two instances, have not had sufficient power. All Stikine River vessels should develop 500 h.p. or 200 lbs. steam in order to make the up trip without lining. Coal must be burned instead of wood. With plenty of power, & a captain who has thorough knowledge of the river, there should be no difficulty in making the trip on schedule time, except during the spring freshet, when the driftwood coming rapidly through the canyon is dangerous. The current, Mr. Coste asserts, occasionally reaches 10 miles an hour, but the average is little over half that. The rise and fall of the river reaches as high as 16 ft. On May 26 the water rose 7 ft. in one night at Glenora.

The Sampson has cleared the snags from two of the worst bends in the river. The snag boat not having power to stem the current above the 75-mile canyon, a crew was forwarded in small boats with 500 lbs. of dynamite to blow out the snags further up the river. On the road down the men cut off all dead cottonwood trees upon the banks. These trees are in abundance in this region. They grow to good height and girth, but they are surface rooted, die quickly, & when dead fall under slight pressure, adding largely to the floating driftwood.

#### B.C. Freight & Shipping Report.

R. P. Rithet & Co. say, under date of June 30:—It is reported from San Francisco that no spot grain charter has been effected there for more than 2 months & in the north matters have been but little more lively. There has also been very little forward business & that too confined to northern ports. The war has indirectly given something of a fillip to coast freights in consequence of the U.S. Government withdrawing a number of steamers to act as transports. From the same cause a very animated demand has arisen for coal, both at San Francisco & the Hawaiian Islands, & the vessels in these trades are getting considerably higher rates. In the lumber market the tonnage offering is still limited, but the enquiry also is light, so that freights are steadied & changes during the month have been unimportant.

We quote freights as follows: GRAIN: San Francisco to Cork f. o. nominal; Portland to Cork f. o., 38s. 9d.; Tacoma to Cork f. o., 31s. 3d. LUMBER: British Columbia or Puget Sound to Sydney, 42s. 6d. to 45s.; Melbourne or Adelaide, 52s. 6d. to 55s.; Port Pirie, 50s.; Fremantle, 57s. 6d. to 60s.; Yokohama, 43s. 9d. to 45s.; Shanghai, 45s. to 50s.; Tientsin, 57s. 6d. to 60s.; Valparaiso f. o., 47s. 6d. to 50s.; U. K. or Continent, 65s. to 67s. 6d. Rates for lumber are more or less nominal owing to the scarcity of tonnage.

The Trade & Commerce Department is informed that the present season's shipping totals are the highest in Canada's history. The Montreal liners are all busy, both in the passenger & freight lines; & at St. John, N. B., & Halifax the summer trade is very heavy. From the Maritime ports this is especially true of the West India trade. Shipments have been so heavy to the West Indies this season that a new boat had to be put on a short time ago, in addition to the regular fortnightly service. The consignments of flour have assumed unprecedented proportions, & it is evident Canadians can capture that trade with a chance of retaining it.

## ELECTRIC RAILWAYS.

## British Columbia Lines.

**B. C. Electric Ry.**—D. A. Shiles, the Co.'s agent at New Westminster, has been appointed traffic manager to succeed C. Aird, resigned. The Co. has issued a guide for visitors & tourists to Vancouver and New Westminster. It contains a colored map of the entire electric car system & views of many places of interest in & around the twin cities.

**The Mount In Tramway & Electric Co.** was incorporated at the last session of the B.C. Legislature.

**Nelson.**—C. S. Drummond, who is said to represent the British Electric Traction Co., of London, Eng., has applied to the Nelson town council for a 30 year charter for an electric street railway. The corporation clerk was instructed to reply that the council was favorably disposed towards the application, which would likely be granted if terms could be agreed on.

## The Maritime Provinces.

**The Charlottetown, P. E. I., Light & Power Co.** held its first general meeting recently. L. L. Beer was chosen President; W. A. Weeks, Vice-President; & A. E. Ings, Secretary; the other directors being B. Heartz & W. C. Pitfield. H. R. Lordly, C.E., was appointed Engineer & Manager. After he has completed the surveys & the remodelling of the gas plant, it is said he will be sent to England to consult with parties who control a new electric motor, to be used for street cars.

**Halifax Electric Tramway Co.**—R. C. Brown recently resigned his position as Superintendent to become Assistant Chief Engineer of the Metropolitan Traction Co. of New York, & has been succeeded by F. A. Huntress, who was his assistant. When Mr. Brown's resignation was accepted the directors adopted a resolution reciting that his management had "resulted in the installation of a system of electric lighting & tramway service in the highest degree efficient, which efficiency is due in a very large measure to the ability & competency of Mr. Brown," & the President & Secretary were appointed to present him with a testimonial on behalf of the Co.

It is said this Co.'s Stock, Halifax Tram, as it is known in speculative circles, is to be listed on Toronto Stock Exchange. It is listed on the Montreal Exchange, & has been an active speculative stock. It was listed in Montreal at par, & has since touched 142 3/4. It pays 4 quarterly dividends of 1 1/4%, so that it is a 5% stock. There is a rumor that a bonus of 1% will be paid with the next quarterly dividend, payable Oct. 1. The statement of earnings given out by the Co. for the first 4 months of the present year shows gross earnings of \$58,388.15, against \$55,616.38, an increase of \$2,771.77 for this year. The capital stock is \$800,000, & \$600,000 of bonds have been issued. The last annual statement shows its assets to be \$1,492,958.88, including cash on hand of \$76,845.10. After paying dividends of \$32,500 & all fixed charges last year, there was a surplus on hand of \$27,308.77, & \$20,000 was placed to the credit of the reserve fund. The directors are: Hon. D. MacKeen, President; J. Y. Payzant & W. B. Ross, Vice-Presidents; B. F. Pearson, Secretary; & A. Haley, J. Ross & A. Kingman.

**St. John Ry**—One of the St. John, N.B., city councillors wants the city to apply to the Provincial Legislature for power to expropriate the property, privileges & franchises of the Co., "with a view of running the same in the interests of the citizens & taxpayers."

## Ontario Lines.

**Berlin and Waterloo St. Ry.**—There is no truth in the report that the G.T.R. has secured an option on this line, & G. T. officials deny any knowledge of the rumored extension to Preston. (Official.)

**Guelph St. Ry.**—The ladies of Guelph are to be permitted to "man" the street cars for one day, the proceeds to go towards the funds of the Guelph General Hospital, the railway only deducting the average day's receipts.

**Hamilton Radial.**—A writ has been issued on behalf of the Township of Saltfleet against this Co. to compel it to carry out the provisions of a by-law passed by the Township Council, requiring the Co. to water the road along the Beach.

**Hamilton St. Ry.**—Hamilton ratepayers will, on July 27, vote on these questions:—Shall the city now purchase and operate the Hamilton St. Ry? "If the city do not now purchase the Hamilton St. Ry., should the Council extend the franchise of the company for 15 years, that is, until 1928, when the other existing franchises of the local city electric railways expire?"

**The Niagara Falls Park & River Ry.** having completed laying its tracks on the upper steel arch bridge, the first car was run over it July 1. During the summer cars will run over the bridge every 5 minutes.

**Ottawa Electric Ry.**—The conductors recently demanded \$1.50 a day, for 9 hours' work. The Co. refused the demand & compromised on \$1.35, or 15 cts. an hour for a 9 hour day.

A movement is on foot in Ottawa to secure a citizens' vote on the question of operating the street railway on Sundays.

**St. Thomas Electric Ry.**—A. Bingham, Manager of the Bell Telephone Co. at St. Thomas, has resigned, to take the management of the electric railway.

**Toronto & Mimico.**—This Co. recently appealed to the Toronto City Court of Revision against the assessment of its wires, poles, rails, & buildings. J. Bicknell, for the Co., based his appeal mainly upon the contention that the properties were not assessable. The court could not see things from this point of view, & Mr. Bicknell consented to a confirmation of the assessment, & will appeal to the County Judge. The assessments disputed are as follows: \$103,005 on poles, wires & rails in the city, \$18,000 on buildings in the city, \$8,070 on poles, etc., of the Mimico line, \$1,350 on buildings of the Mimico line.

Our June issue, pg. 108, contained an extended report of the Sunday car case, which was decided by County Judge McDougall, of Toronto, in favor of this Co., a motion for a reserved case being afterwards granted. The terms of the reserved case have since been settled, the question which is reserved by Judge McDougall being: "Was I right in deciding that the conviction should be quashed?" The appeal will come on for hearing before the Divisional Court of the High Court of Justice at its next sittings, in September.

**Toronto Ry. Co.**—The gross earnings of this Co. are as follows:—

	1897	1898	Increase.
Jan.....	\$74,545.55	\$86,562.36	\$12,016.81
Feb.....	69,744.61	82,402.19	12,657.58
Mar.....	78,801.45	92,818.12	13,426.67
April.....	73,756.38	86,808.83	13,142.45
May.....	82,461.51	92,670.35	10,208.84
June.....	91,533.44	94,119.32	2,585.88

The T. Ry. Co. declared a dividend of 1% for the quarter ending June 30.

An office for the transfer & registration of the stock of the T. Ry. Co.'s stock has been opened at the office of the Montreal Trust & Deposit Co., Montreal.

The appeal of the T. Ry. Co. against the assessment on its poles, wires, etc., was dismissed by the County Judge. The decision was agreeable to both parties, the Co. having no objections to offer. A reduction of \$7,000 in the assessment was formally ratified.

Regarding the resolution of Toronto City Council calling upon the T. Ry. Co. to provide vestibules on the rear end of motor cars, Manager Keating has written the City Engineer expressing doubt whether the act requires the Co. to do so. He claims that these vestibules would interfere seriously with the proper control & management of the trolley rope, & could not fail to be a hindrance to the proper operation of the service; would also prevent ready access from motor to trailer & be sure to increase liability to danger & accidents. He adds he has not heard of any public demand for them, nor does he believe that such has ever been made or that there is any necessity for them, & the conductors have not made any request for them. It would be a mistake & source of danger to provide them.

## Province of Quebec.

**Chateauguay & Northern Ry.**—At the recent annual meeting of shareholders the old directors were re-elected with W. D. Harris as President; J. J. Butterworth, Vice-President, J. P. Mullarkay, Managing Director.

**Montreal's Electric Railways.**—Electrically, Montreal is beyond doubt the most attractive city in the Dominion. There are 3 distinct systems of electric railways, the Montreal S. Ry., Montreal Park & Island Ry., & Montreal Belt Line Ry. Six years ago the M. St. Ry. was changed to electric traction, & the Co. has now in operation over 80 miles of road. The rolling stock consists of nearly 300 motors & trailers. The power house on William St. is 290 x 233 ft. In the engine & dynamo room are located 12 Edison generators of 200 k. w. capacity each; 6 multipolar generators of 300 k. w. capacity, & a 4,500 h.p. engine installed last summer. This engine replaced 6 compound engines of 600 h.p. each. An interesting feature of this installation is the switchboard, which is 60 ft. long & 11 ft. high, constructed of terra cotta lumber. The entire equipment is very complete & interesting. F. L. Wanklyn is general manager.

The Montreal Park & Island Ry. affords the means of visiting the many beautiful suburbs of Montreal, passing through a most picturesque country. The power station is located at Mile End, but it is intended to build a larger generating station when all the proposed lines of the Co. have been completed. C. A. E. Carr is general manager.

The system of the Montreal Belt Line Ry. comprises 13 miles of track. It is intended to serve the lower part of Montreal Island. The line leaves the C.P.R. at Hochelaga, passes through the municipalities of Maisonneuve, Longue Pointe, & Point aux Trembles, & following the course of the St. Lawrence River, reaches Bout d'Isle, where the cars are connected by a steam ferry with the town of Charlemagne & other points. The power-house is built near the centre of the line, & contains 2 generators of 200 to 325 kilowatt, 3 compound condensing engines, aggregating 700 h.p., with necessary boilers & other equipment. The cars comprise 9 open & 4 closed, in addition to an electric freight locomotive. The manager of the road is J. P. Mullarkay; J. Rowley is superintendent, R. Welsford, engineer; & C. H. Wright, electrician.—Electrical News.

**Montreal Park & Island Ry. Co.**—To satisfy a claim of \$711, costs taxed against this Co., in its suit against C. C. McArthur, in which it was unsuccessful, it is probable that the entire property of the Co., plant, lines &

rolling stock, will come under the hammer. The line will continue to run as usual. A writ of execution was recently issued & placed in the hands of the bailiff, who immediately commenced the work of taking an inventory of the Co's. belongings. These include a number of fine cars, lines to St. Laurent, Cartierville, Sault au Recollet, Cote des Neiges, & Lachine, etc. It is the present intention of the directors to allow the sale to proceed, as a judicial sale will free the line of many incumbrances. The public will not be in any way inconvenienced by these proceedings.

The M. P. & I. R. is issuing tickets, giving 3 hours continuous ride on any of its lines. These are specially intended for those wishing to take an enjoyable airing, and are just the thing for nurses with children. Good only up to 6.30 p.m.

As some confusion has arisen respecting the Montreal Island Belt Line Ry. Co. & the Chateauguay & Northern Ry. Co., it may be stated that they are two separate & independent corporations, though the capital stock of both companies is owned by the same parties. The C. & N. Co. built the section of the line between Montreal & the end of the Island & sold it to the M.L.B.L.R. Co. It is said that certain extensions are contemplated, but no information can be given in regard to them at present. The Co's stock is not yet listed.

**Montreal St. Ry.**—The gross earnings are as follows:

	1897.	1896.	Increase.
Oct. ....	\$116,292.09	\$109,110.38	\$7,182.71
Nov. ....	110,929.60	100,818.57	10,111.03
Dec. ....	113,128.91	103,116.02	10,012.89
	1898.	1897.	
Jan. ....	110,140.83	89,620.55	10,520.28
Feb. ....	102,625.49	89,951.68	12,673.81
Mar. ....	114,677.91	99,441.87	15,236.04
April ....	110,819.37	103,045.93	7,773.44
May ....	123,508.09	116,537.03	7,171.06
June ....	133,104.61	130,676.78	2,427.83
	\$1,035,287.90	\$952,118.81	\$83,169.09

The M. St. Ry. has opened a cross town route to be known as the Park Avenue to River Front line. It traverses Park Avenue, Bleury, Craig, McGill & Commissioners St. to junction of Commissioners & Youville streets, then return by Youville, McGill, etc., giving a direct cross town line from Pine Avenue to the river side every 5 minutes.

The M. S. Ry. Co. has appealed to the Supreme Court from the judgment of the Court of Appeal in its dispute with the M. P. & I. Ry. Co., concerning the destruction of some cars at the Exhibition grounds fire.

At the Montreal City Council's last meeting Ald. Martineau drew attention to the matter of the taxation of the poles, wires, rails, etc., of the M. St. Ry. Co., which have hitherto gone unassessed.

The inhabitants of Longueuil are expecting to have an electric car service connecting with Montreal as soon as the Victoria Jubilee bridge is finished.

**The Quebec, Montmorency & Charlevoix Ry. Co.** has taken over the electric railway system of the Quebec District Ry. Co. The bonds of the amalgamated concerns, amounting to \$1,500,000, were sold to Hanson Bros., of Montreal, who have paid for some \$1,150,000 of the issue. The remaining \$350,000 of the bonds have been lodged with the trustees, the Montreal Trust & Deposit Co., & the proceeds of the sale of these are to be used for further extending the present city electrical system, & electrifying the steam system of the Q., M. & C. Ry. Co., so that in the near future pilgrims & others will be able to visit the shrine at St Anne de Beaupre by electric cars. A cheque for the \$1,150,000 of bonds was handed over by Hanson Bros. to Mr. Strathy, representing the Trust Co., which undertook to see to its proper disbursement to the old bondholders, creditors, etc., of the two concerns.

Investigation by the Rapid Transit Commission in New York has revealed some interesting facts as to the revenue & taxation of street railways. For the year ended June 30, 1897, it appears that the Metropolitan Co. paid in percentage & license fees about \$266,000, & for taxes on real estate \$384,000, a total of about \$650,000. During that time it carried about 178,000,000 passengers, & its gross earnings were \$8,888,000. Thus it paid about 7 1/3% of its gross earnings in taxes, or about 1/3c. for each passenger. The taxation of the Manhattan Co. was about \$609,000, its gross receipts were \$9,163,000, & it carried 183,000,000 passengers. The taxation thus was about 6 2/3% of its gross earnings, & 1/3c. per passenger. On a much smaller business the Third Avenue road paid about 28-10% of its gross earnings, or 1/3c. per passenger.

TELEGRAPHS & CABLES.

The Pacific Cable.

The Hong Kong Press says: The development of events in the Far East & the addition of We-hai-wei to the list of British posts on the Pacific lend special interest to the renewal of activity with regard to the construction of swifter means of communication between the scattered British communities. The Australian premiers in conference have agreed that if Great Britain & Canada will contribute two-thirds of the cost of a Pacific cable, Australia should contribute one-third. In Canada an influential deputation has waited on the Premier & laid before him a proposal that a Pacific cable trust should be created under authority of the parliaments interested in the scheme, with power to raise the necessary funds & proceed to the construction of the cable. In this country it is understood that as soon as the Australasian & Canadian colonies shall agree in manifesting a strong desire for the construction of the line, any proposal which they may make to that effect will receive at least favorable consideration. The question with which the Imperial & Colonial Governments are playing is whether that Pacific cable shall be in British or in foreign hands. Japan has passed through an industrial second birth. Russia is pushing industrial enterprise on the northern Asiatic coast. France has not shrunk from heavy cost to establish a commercial footing on the south. Germany has made her latest move in the interests, we are asked to believe, of the protection of her commerce. Thus, north & south & east & west, the ocean is surrounded by rival nationalities. In presence of these waiting powers indications are given that the immense commercial field of China is about to be thrown open. Instantly the waters of the Pacific are alive. The military & political movements which have taken place are but the forerunner of intercourse. The trunk line of cable once established branch lines can easily be constructed to connect it with important points. One terminus under British protection in Australasia & another in Canada, one branch, if necessary, to join the San Francisco connection with Hawaii & another to Japan & the China ports would create a British network of cable communication which would for a long time to come meet the principal commercial needs of the Pacific. The matter might, indeed, be safely left to the operation of private interest but for the fact that in the present somewhat exceptional condition of affairs, when all ears are turned to the Far East, time may become a question of importance.

Both the C.P.R. & the Western Union telegraphs now have call boxes in the hotels & business houses of Victoria, B.C. The C.P.R. use the messenger service boxes, while the Western Union has put in boxes of its own.

G.N.W. Telegraph Changes.

OPENED.—Ampersand, N. Y.; Ausable Chasm, N.Y.; Bluevale, Ont.; Cacouna, Que.; Caledonia Springs, Ont.; Childwood Station, N.Y.; Frontenac, N.Y.; Grand View House, Lake Placid, N.Y.; Grimsby Park, Ont.; Hotel Champlain, N.Y.; Hotel Childwood, N.Y.; Hotel Douglas, N.Y.; Hotel Ruisseau-mont, Lake Placid, N.Y.; Kushaqua Lodge, N.Y.; Lake Side Rest, Saranac Junction; Loon Lake House, N.Y.; Mountain View, N.Y.; Murray Isle, N.Y.; Pond View House, Gale, N.Y.; Port Sandfield Ont.; Roberval Hotel, Que.; Sandy Creek, N.Y.; Stevens House, Lake Placid, N.Y.; St. Lawrence Park, N.Y.; St. Placide, Que.; Thousand Island Park, N.Y.; Whiteface Inn, Lake Placid, N.Y.

CLOSED.—Chesterville, Ont.; Dunham, Que.; Etchenin Mills, Que.; St. Lin, Que.

Telegraph & Cable Items.

The directors of the Commercial Cable Co. recently declared the usual quarterly dividend of 1 3/4% payable July 1.

The largest telegraph office in the world is in the general post office building in London, Eng., over 3,000 operators being employed.

There are 41 ships engaged in the ocean cable telegraph service. The total capital invested in the submarine lines is estimated at \$200,000,000, & the number of lines is 1,305, of which 37 are over 1,000 miles long & 93 over 500 miles.

The C.P.R. Co. is building a telegraph line from Nelson, B.C., to Kuskonook, the point at which the Crow's Nest Pass Railway reaches the Kootenay Lake, & which will be the western terminus of the railway pending its completion to Nelson.

The total length of the world's telegraph system is not much under 5,000,000 miles. This is exclusive of 1,814,000 miles of submarine cables. This mileage is apportioned as follows: America, 2,500,000; Europe, 1,765,000; Asia, 311,000; Africa, 100,000; Australia, 218,000.

The new copper wire of the C.P.R.'s telegraph line from the coast to Vancouver was completed between Montreal & Winnipeg June 17, the first message over the new wire being from Mr. Hosmer, manager of telegraphs, to Mr. Shaughnessy, Vice-President of the Co., who was then in Winnipeg.

Hon. Dr. Lanctot, of St. Henri, Que., & others give notice that they will apply for incorporation under the name of 'La Compagnie d'Electricite de Soulanges,' to operate telegraph & telephone lines in the County of Soulanges, with a capital stock of \$10,000, & principal place of business at Coteau Landing.

At the annual general meeting of shareholders of the Dominion Telegraph Co. in Toronto, July 6, the directors were re-elected as follows: T. Swinyard, President; Sir F. Smith, Vice-president; T. T. Eckert, C. A. Tinker, A. G. Ramsay, H. Pellatt, H. Mackenzie, T. F. Clark, T. R. Wood & F. Roper, Secretary & Treasurer.

The committee representing the C.P.R. dispatchers, agents & operators on lines west of Fort William concluded their deliberations with the management in Winnipeg early in July. They report having secured a liberal set of rules & regulations governing their branch of the service, in addition to an advance in wages. The committee speak very highly of the courteous & fair treatment shown by the management.

A firm of timber contractors in New Westminster has received an order for poles for the telegraph line to be built between Vancouver & New Westminster, B.C., by the Western Union Co. Work will be pushed simultane-

ously between New Westminster & Blaine, along the line of the Great Northern Ry. From Blaine the line will run via Fairhaven to Wooley, Wash., where connection will be made with existing Western Union lines. See June issue, pg. 111).

The Minister of Public Works, Mr. Tarte, recently visited Father Point, Que., & promised to have the signal station placed in direct telegraphic communication with all the lower signal stations, & thus remove the grievance that is so loudly complained of by steamship owners, captains & pilots, & which is the cause of so much detention to steamers. Father Point, though the most important station of the system, is cut off from direct telegraphic communication with the other stations, an anomalous & absurd state of things, & no news is obtainable there for passing vessels. The Minister expressed surprise at the existing state of affairs & promised immediate action that would place Father Point station in a position to be able to obtain & supply mariners with all the latest necessary information regarding shipping.

### EXPRESS.

#### Dominion Company's Notices.

W. A. Whitaker represents this Co. at Liverpool, Eng., vice T. B. Evans, deceased.

W. J. Kirby has been appointed Route Agent, with headquarters removed to Vancouver, B.C., & will have charge of all territory west of Revelstoke, B.C., including State of Washington, vice A. W. Lee, transferred to agency at Seattle, Wash.

A. Devitt, Route Agent, with headquarters at Revelstoke, B.C., has charge of the following territory: All offices on main line of C.P.R., west of Moose Jaw, Assa., to & including Revelstoke, B.C., Edmonton branch, Lethbridge branch, McLeod branch, & all offices in Kootenay District.

H. F. Maley has been appointed Acting Route Agent, with headquarters at Winnipeg, Man., & will have charge of all territory between Moose Jaw, Assa., & Fort William, Ont., inclusive, & all branch intermediate lines.

Agents at exclusive offices of this Co. will Way-bill all matter for Pacific Express offices in Canada, also matter for Buffalo, N.Y., & Niagara Falls, N.Y., to St. Thomas, Ont., for transfer to Pacific Express.

### Rates To Alaska:

Following are the rates between Seattle, Wash., & Dawson City, via Alaska Pacific Express Co. On merchandise when valued \$50 or under:

Weight	Minimum charge, \$2.00
Over 2 lbs. & under 3 lbs.	2.25
Over 3 lbs. & under 4 lbs.	2.50
" 4 " " 5 "	2.75
" 5 " " 7 "	3.00
" 7 " " 10 "	3.50
" 10 " " 15 "	4.00
" 15 " " 20 "	4.50
" 20 " " 25 "	5.00
" 25 " " 30 "	6.00
" 30 " " 35 "	7.00
" 35 " " 40 "	8.00
" 40 " " 45 "	9.00
" 45 " " 50 "	10.00

Over 50 lbs., 50c. a pound, or \$20 per 100 lbs.

When value of shipments is over \$50, charge in addition to the above, 2% for valuation. Marine insurance cannot be effected beyond St. Michael's, & the present rate is 1½%, which is subject to change at any time. All charges must be prepaid.

General Manager Stout, of the Dominion Express Co., has been making an extended inspection trip extending as far west as the Pacific Coast.

The express companies have established an uptown office in St. Catherine's Street, Mon-

tréal, for the accommodation of residents & shopkeepers in that part of the city.

The management & accommodation of the B.C. Express Co., one of the longest stage lines in America, has always kept up prompt connections with Cariboo & Lillooet, & often under great disadvantages. To make a 280-mile trip, regardless of weather or roads, in 4 days, is good work. The stage leaves regularly on Monday mornings, & but few times since the railway was built has it failed to bring in Cariboo mail, express, & passengers by 6 on Tuesday evenings.—Ashcroft Journal.

On June 6 the Pacific Express Co. opened offices at the following points in Ontario, reached over the Detroit-Buffalo line of the Wabash Railroad, operating over the Southern Division of the G.T.R.: Aylmer, Belle River, Bothwell, Canfield, Cayuga, Chatham, Corinth, Courtland, Delhi, Fort Erie, Glencoe, Jarvis, Jennett's Creek, Lawrence, Lewisville, Middlemiss, Nelles Corners, Newbury, Nixon, Port Robinson, St. Thomas, Simcoe, Stoney Point, Tecumseh, Thamesville, Tilsonburg, Walkerville, Welland, Windsor.

### TELEPHONES.

#### London People's Telephone Co.

The People's Telephone Co., of London, Ont., has been incorporated under the Ontario Joint Stock Companies' Act, with a capital stock of \$100,000, to carry on in London & the County of Middlesex a general telephone business. The incorporators are R. H. Evans & H. Walters, of Detroit, Mich., & R. A. Bayly, T. H. Purdon, M. Masuret, R. Fox, F. B. Leys, T. H. Smallman, J. Milne & J. R. Minhinick, of London. The Company made application to the city council for a franchise, offering to provide a day & night service & a Sunday service, with modern appliances, including metallic circuits & double-battery, long-distance instruments, the whole system to be in operation by Jan. 1, next. The rates offered are these: For unlimited services under 5-year contracts for offices or business houses, \$26 a year; for unlimited services under 5-year contracts for private dwellings, \$18 a year, & \$42 a year for offices & residences combined. In the case of very large users, whose calls exceed 10,000 conversations a year on the average, the Co. reserves the right to make an extra charge or to compel the subscribers to use & pay for 2 or more lines in the place of one. The Co. agrees to keep the top cross-arm of all poles for the use of the city fire alarm wires, & to make no claim against the city for damages on account of the interference with the service or property (unless caused by an agent or servant of the city), or by reason of the wires being injured by firemen while working at fires. It is also stipulated that if the Co. fails to supply an efficient service, the city may, at its option, put an end to the agreement, by giving a month's notice, all rights & privileges then ceasing. The council has given the Co. a 15 years' franchise to operate in the city.

#### Bell Telephone Co.'s Assessment.

Last year the plant of the Bell Telephone Company in Hamilton was assessed by that city. The assessment was disputed on various grounds, among others, that a wrong principle of valuation had been adopted. It was contended by the city that the poles & wires in a certain ward should be valued as part of the plant as a whole, considered as a going concern. The Co. contended that the plant in a certain ward should be valued for what it was worth as material to be used by a purchaser in any way he thought fit, but must be valued without regard to whether it belonged to the Bell Telephone Co. or not, or

whether it was part of a going concern or not. The assessable value would be what the plant would bring when sold in the open market, without regard to whom its present owner happened to be, or for what purpose it was at present used. The case was carried to the Court of Appeal by the Telephone Co. In Toronto an agreement was arranged this year between the Co. & the Assessment Department whereby, in view of this pending case, the assessment against the Co. should be held over until the latest date, in the hope that in the meanwhile the Court of Appeal would render judgment, which would be of value in making the assessment upon the proper principle. The Court of Appeal recently gave judgment in favor of the Bell Co.'s contention, reducing the Hamilton assessment to the amount admitted by the Co. there as proper & reasonable.

### Telephone Items.

At the recent annual meeting of the St. Martins, N.B., Telephone Co., the former board of directors & officers were re-elected.

It is said at Vancouver, B.C., that English capitalists have secured the controlling interest in the New Westminster & Burrard Telephone Co.

The Central Electric Light Co., Portage la Prairie, Man., is said to have under consideration the equipment of a telephone exchange, in opposition to the present company.]

The People's Telephone Co., of Windsor, Ont., the incorporation of which was reported in our June issue, pg. 112, has been granted a 20-year franchise by the Windsor City Council.

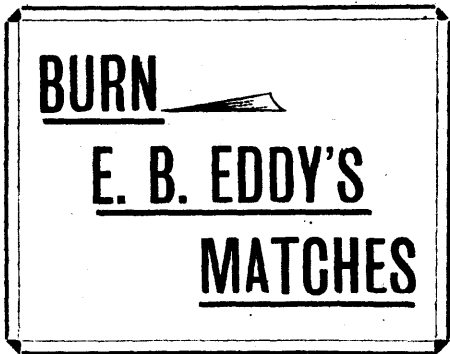
The Spokane Falls & Northern Telephone Co. expects to have its line completed to the International Boundary Line almost immediately. At that point the line will be connected with that of the Nelson & Vernon Co., which has consented to construct a line from the Boundary Line through Cascade City, Grand Forks & Greenwood to Midway, B.C.

The New Brunswick Telephone Co. recently elected the following directors: Hon. A. G. Blair, President; F. P. Thompson, Managing Director; J. L. Black, Vice-President; W. E. Smith, Secretary-Treasurer; Dr. A. A. Stockton, Chas. Fawcett, C. F. Sise, W. T. Whitehead. The directors have decided to replace the wire on the trunk system between Fredericton & St. John & Amherst, N.S., with copper wire.

Some experiments were recently made with the telephone circuit between Manchester, Eng., & Brussels, by putting the operators at the two cities in direct communication with each other. Additional interest attaches to the experiments from the fact that land & sea wires had to be utilized, the wires running from Brussels through Coutrai & Lille to Calais, where they were connected with the London-Paris telephone cable under the Straits of Dover. The experiments were successful, the conversations being distinctly heard.

At the annual meeting of the Canadian Telephone Co. at Sawyerville, Que., June 27, the following were elected directors: J. Laroche, Sawyerville; A. Adam, Paquetteville; J. Lemieux, St. Malo; P. A. Barbeau, Cookshire; J. Hunt, M.L.A., Bury; F. F. Willard, Angus; E. Roberge, Notre Dame des Bois; N. P. Tanguay, Weedon; & M. Matheson, Lake Megantic. H. Laroche was re-elected President, J. Lemieux General Manager, & J. Fournier Secretary-Treasurer. A dividend of 5% for the past year was declared. The report stated that the Co. had built during the past year 60 miles of poles, with 114 miles of wire, & owned 220 miles of poles & 347 miles of wire. The Co. has 12 exchanges, with 322 subscribers.





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For doors, etc., 23 x 3 1/2 inches, blue letters and border on white ground, carried in stock with following lettering.

Waiting Room	Ladies' Toilet	Private Office	Dining Room
General Waiting Room	Men's Toilet	Freight Office	Lunch Room
Ladies' Waiting Room	Baggage Room	Ticket Office	Smoking Room
Men's Waiting Room	Agent's Office	Telegraph Office	No Admittance

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Railway numbers for bridges, mile posts, signal houses, etc.; single figures on plates 8 1/2 in. high.

These signs last practically for ever, they never fade or tarnish, they are ever bright and attractive, they are absolutely impervious to heat or cold, they are the only signs that will withstand the effects of weather in all climates.

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 29 Melinda Street, Toronto, Canada.

BRANCH OFFICES—197 Lombard Street, Winnipeg—S. A. Erskine, Resident Agent; Inns of Court Building, Vancouver, D. T. Lees, Resident Agent.

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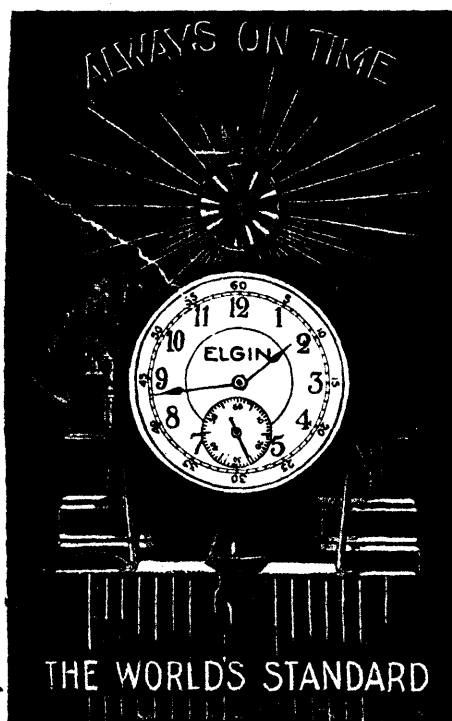
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