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Graphic Production Control.

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In the management of any industrial plant, the author has become convinced, through plain experience, that apart from the personality of the management directing affairs, and the regular accounting system, there is a great necessity everywhere for the placing of facts in such a manner that the condition of affairs today can be quickly seen in their true relation to the policy of the management. We are all more or less accustomed to seeing statistics shown graphically. Their value to show what has happened is unquestioned. We are able to see at a glance for instance how our expenditure on a certain class of output compares with last year, and if we plot on the same sheet the amount of our output we are able to see how the cost has varied with the output. Such a diagram is a familiar one and needs no explanation (sample shown in fig. 1). Endless combinations are made like this, but they all tell you what is done. I wish to emphasize this point because upon it hinges the purpose of this paper.

I ask those who are departmental heads, do you not on receiving statements, whether in figures or by diagram, often feel that you have been "let down," so to speak. Let us suppose you have received a statement showing departmental expenses, or a statement of output in which an item shows lower than your expectations or the average. You see a condition that if you had known it was happening, you could have done something, but you didn't, and all you can do now is to investigate and make such changes as your judgment dictates.

After you have received an explanation, called your man down or perhaps replaced him, what guarantee have you that you will not look at an even worse condition next month? The only guarantee you have is your confidence in the man in charge. This confidence I do not for an instant depreciate, because it is your main stay with the most perfect of systems, but consider, in this age of specializing, would you not be better off and would not the individual departmental heads or foreman be better off if you were to supply him with such information on expenses or where he stands on this output, or other details that are "up to the day of looking at it," so that he can control the situation to give you what you want. The natural question becomes, can it be done? It can if you organize to do it. To organize to do it, means that you must assist that executive or foreman by training specialists to perform functions that are at present part of that foreman's duties, to do them better than the foreman can, by reason that these specialists concentrate on one particular object only.

Specializing needs no introduction, on our machines and operations we know a specialist can produce more than an all round man on work adaptable to specializing. We no more think of having the same boilermaker that puts a patch on a boiler, roll in tubes, than we would

ask a tuber to put on a patch even if they do get the same rate. Therefore, I say, for the reason that specializing cuts costs, so it applies in management questions.

Without further discourse on the principles involved, I propose to give a few concrete examples of how graphical production methods permit a specialist to perform functions that assist the executive by supplying information that is "up to the day of looking at it," that show "What is causing delays," or "What will cause delays." The diagrams I have made are for obvious reasons of size and data made so as to show the principle. Colors are used on actual forms in order to create striking contrast.

Locomotive or Passenger Car Repair Schedule—Example 1 is a shop repairing locomotives. The methods apply equally to a passenger car repair shop. Our object is to assist all foremen to plan their work so that delays to output are min-

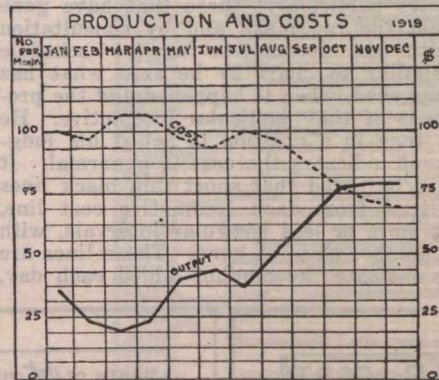


Fig. 1. What HAS happened.

imized. Analyzing the situation, we find we have about 30 departments, all of which receive some part of each locomotive or car to repair, and on all of which rests the responsibility of having it ready at a certain time, when the process of erecting demands it. Based on the road report, and a preliminary inspection our specialist, the scheduleman, in conjunction with the general foreman of the shop, determines that it will require so many days to complete. This period is determined by adding together the time required on all the various detail jobs known. From past experience we have on this work developed a series of schedules from 9 to 30 days each, one of which is applied to each locomotive or car as the case may be, as the work demands. The locomotive repair schedules are practically all based on one 18 day schedule, in that on all locomotives the operations for the first 5 days are practically the same, and for the last 7 days also, they are the same; the space in between being taken up by the department having the excessive or special work to do.

We now come to our first chart which we call a master schedule (fig. 2). The master schedule forms have detailed

down the left side all the controlling detail operations or parts listed in the sequence in which they are required completed. At the top of the vertical columns we enter the locomotive or car number as each is taken in the shop, and then by the application of the particular schedule, on which each locomotive or car is to follow, we enter opposite the operation or part the date it is required completed or delivered. When this is done we take our second form called a date schedule (fig. 3), which is identical with the master schedule, except that instead of locomotives or car numbers at the top of the vertical column, we have all the days of the month, and we insert in the column for the date as entered on the master schedule the locomotive or car numbers opposite the operation.

This is done as soon as the locomotive or car is taken in the shop. By a four color code we record on both charts every day exactly what has happened, whether "on time," "shop late," "material delivery late," or "drawings late," in black, green, red or yellow, respectively. This is done as follows: Each day, at a certain time, the schedulemen make a check of all shops, after which they mark up the master and date schedules. Following this they make out from the date schedule for each departmental foreman, a list of operations due completed tomorrow, and include on it, especially marked, all items that are late. This daily order of work sheet is delivered to each foreman the night before the day it covers, so that they can plan their work to cover every item. Incidental to this a list of all late items in all shops is prepared for the general foreman and superintendent's use in order that they may use their influence to prevent further delays.

Summarizing this example, we provide each departmental foreman with a list of work which must be done tomorrow; we provide a list of late operations and material so that delays may be investigated and something can be done early in the progress. We have before us a graphic record of each locomotive or car's progress, showing each delay, as it occurs, and we have a graphic record of each day's progress, from which weak points can be seen at a glance. The result of this performance is that we get a co-operative effort, because each department, being familiar with the process, realizes that the management knows what is going on and can measure each man's effort. It makes it unnecessary for foremen to leave their shops to trace material, this being part of scheduleman's duties. Changes that occur when extra work is found necessary, causing a set back to the original date of delivery are automatically taken care of by the production department. The net result is a shorter number of days in the shop per unit, time between jobs reduced and lower costs.

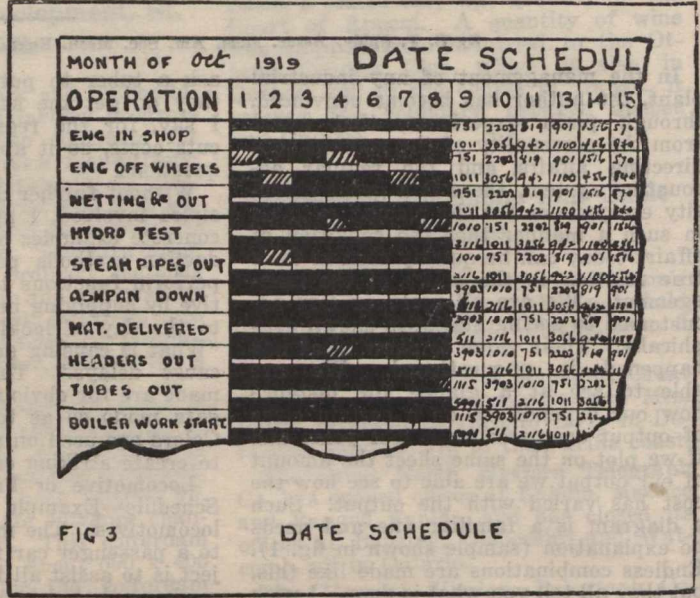
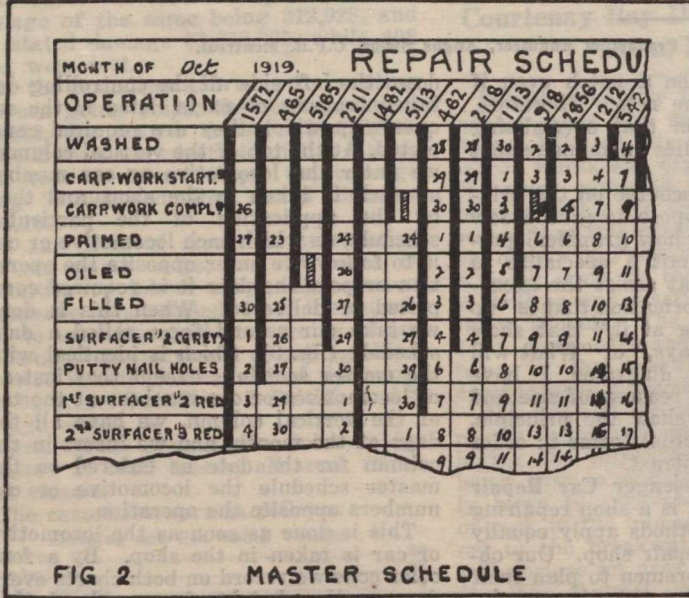
Locomotive or Passenger Car Repair Costs—Example 2 may be considered a

continuation of the first example in that it concerns costs. It is important that we know certain detail costs at current periods. Costs do the shop little good if they come when the job is complete and away from us. Our proposition then is to keep track of locomotive repair expenditure in order to keep the cost right. The method is suitable for all classes of

In each locomotive cost column, a red cross line is drawn at a point opposite the estimated cost of the job. An estimate is made for each locomotive based on an average in the case of straight repairs, as soon as inspection is complete, and which includes extra allowances in the case of extra or special repairs. Now, when an executive looks at the chart, he

lyzed and acted upon before the question is asked.

Cost of Manufactured Material—Example 3 concerns the efficiency and cost of detail manufactured material. Our desire is to know the efficiency and cost of each order up to date, during its progress through the shops. The method described is used by manufacturing con-

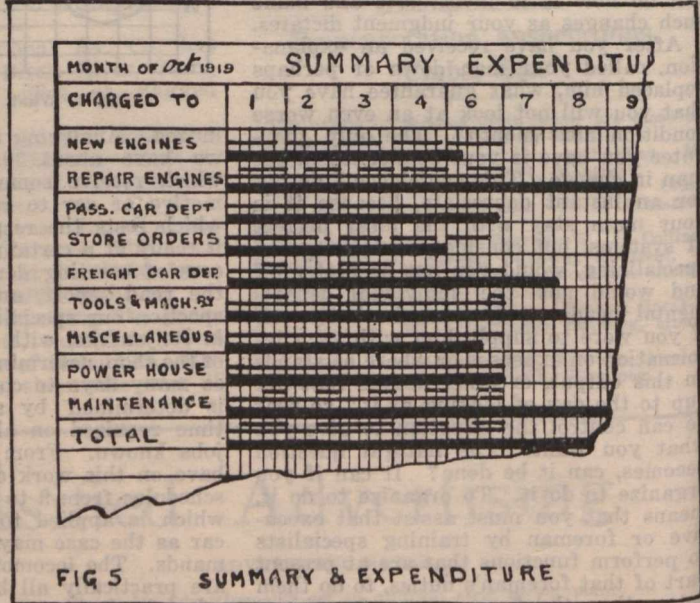
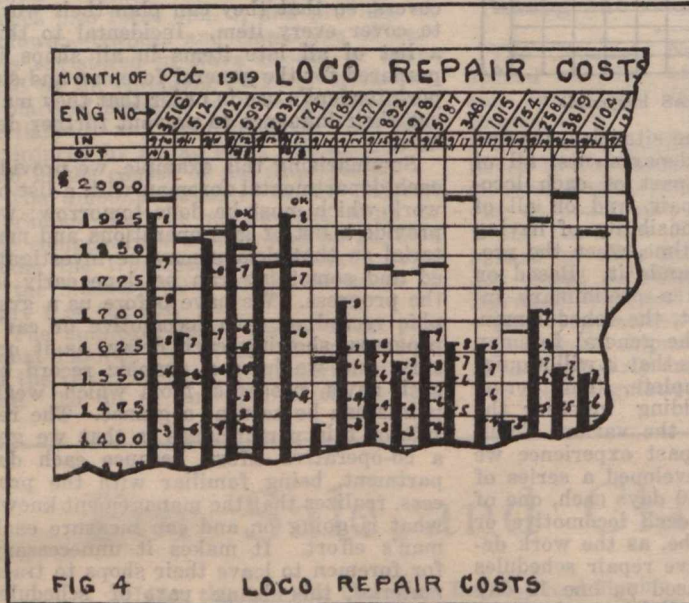


work where average costs are maintained and used as a base for expenditure. It is not recommended in this form for manufacturing of a small, multitudinous, or varied nature.

The chart shown in fig. 4 is a graphic representation of current locomotive repair costs. The method here also would apply to passenger equipment costs. On the left is a scale of dollars large enough to cover the anticipated range. Each vertical column is headed with the locomotive number, the date it came in the

notes particularly those that have gone past the red mark and by consultation with the locomotive master schedule (similar to chart 2) he sees what has happened, when it happened and the progress of that particular locomotive. He is then in a position to act if his judgment indicates the cost is abnormal. It will be noted that short thin black lines extend from each locomotive cost line, at more or less irregular intervals, with a number close at hand. These lines are to indicate the amount added each day,

cerns which have found that the way to control costs is in the shop while the job is in progress. It is applicable, in a form adapted to railway back shop manufacturing, and is a real way to keep these costs right. It consists of a job cost sheet, and is kept and entered up in the shop office. These sheets are kept in loose leaf book form, and the duties of the cost clerk are to enter in the proper column, from the daily time cards, the costs incurred the previous day. Thus by noon the cost of each order, up to the



shop, and the class of repair it is getting is also inserted small for reference. By arrangements with the cost department these daily costs are given a preference, and are supplied the second day after they are incurred, on a special form for the purpose, and on the cost chart a black line is extended under each locomotive daily, to show total cost to date.

and the number represents the date. We can thus see whether the labor expended has been irregular, or whether it is a steady growth. This is a clear indication of good or bad organization in the shops. Very great use can be made of this chart. It shows poor distribution of labor in detail and enables conditions that bring about high costs to be thoroughly ana-

previous evening, should be entered. On each sheet is detailed the standard method of doing the job and the standard time allowed for each operation. This information is obtained from the production department, which develops the correct method, in conjunction with the shop engineer and foreman of the department, who, at the same time, recommend such

special jigs and tools as may be deemed necessary. When the order is a special one, that is, unusual, or rare enough not to warrant making standards for further use, a summary estimate is made up for each operation by the production department, in order that a daily check may be kept on the job. The duty of the cost clerk is to call the attention of the foreman, or party concerned, when the cost exceeds the allowance up to the point in the progress the order has reached. We thus have a means of keeping our foreman posted up to date on the cost of each job, at all points of its progress, not when it is done and too late for him to do something.

Major Account Expenditure—Example 4 is a form that we use to show us graphically our unit and summary expenditures on major accounts. It was developed by the late H. L. Gantt and used effectively to record progress of airplane and munition manufacture, also many other items in his work for the U.S. Government during the war. We want to know how our daily expenditure on each account compares with the allowance for the day, also how our total expenditure to date compares with the total allowance to date on each account. The chart, fig. 5, contains one vertical column for each day of the month, over which the date is inserted. On the left hand side the name of each account is inserted. We then calculate the allowance for each working day of the month and enter it for reference on the right hand side of the chart. Now in making up the chart it must be understood that the distance horizontally between each date column represents 100%, or the allowance figure for the day, on the right, and as your actual expense figures are received, you make a line across that space equal to the amount actually expended. If less than the allowance, this line will not cover the space, if more than the allowance, an extra line over the one covering the space shows how much. Directly under this line, representing the daily expenditure, is a thicker line, that represents summary cost to date. This line is merely extended daily, by the same amount as entered under the daily cost column, except that it, being no respecter of dates, it shows by its total length, whether the account is over or under expended to date, the comparative point being always the line of the date up to which the chart is entered.

While this sounds somewhat complex, it really is extremely simple in operation and we have a complete record on each account of how much, when, and on what account we have over or under expended. The chart is soon readable by anyone and shows immediately how close instructions are being attended to. As may be seen, the idea is one of vast possibilities outside of costs, where unit and summary data are required.

Building New Equipment—Example 5 covers the manufacturing of new equipment, such as locomotives, passenger cars or freight equipment of any description. Here a new element demands first consideration, and that is raw material, the source of which we do not control. It goes without saying that the shops can make no progress without material and drawings. Therefore, we require practically all the items that are not stores stock to be included on our schedule for erection. Material that is regular stores stock requires to be checked at definitely determined periods, before it is required for erection, but by

reason of the number of items it is usually followed on a special chart. It is essential, however, that all castings and all purchased material be listed on our erecting schedule. Our object is to complete so much equipment at a certain date. On the master schedule chart, we list all these parts on the left hand side, and head all our vertical columns, which cover a period of three months, with the date. We insert the completion date at the point, the first unit is required completed, and, working back from that date for each item, we then insert the date each item is required completely machined, ready for erection. Then, from each of these dates, we compute the necessary time for machining each item, which gives us the date raw material must be

resent whether item is "on time," "shop late," "material late" or "drawings late." Black represents "on time" in every case, and green, red and yellow, respectively, represent late on the other items. This color scheme is standard on all charts and a clear indication at all times is available of the general condition of the order. A permanent record is incidentally available, showing reasons for delays, which places the responsibility where it belongs. It also shows much good matter for consideration when future orders are being placed. Its chief value to the shop is that it shows what is due to be done each day, and shows at a glance how the material is coming along, and how dates are being maintained so that the shops can be organized

SHOP CONTROL BOARD

MACHINE	DATE	DEC																										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
TURBINES																												
JL 102																												
JL 205																												
JL 316																												
JL 353																												
JL 133																												
JL 134	Idle																											
JL 135																												
QL 140																												
QL 141																												
QL 142																												
LATHES																												
LE 309	Idle																											
LE 310																												
LE 311																												
LE 408																												
LE 406	Repair																											
LE 416																												
LE 420																												
LE 451																												
LE 450																												
LE 510																												
MILLS																												
BV 460																												
BV 462																												
BV 465																												
BV 469																												
BH 470																												
BH 472																												
GRINDERS																												
QC 810																												
QC 811																												
QC 815	Idle																											
GR 715																												
CR 716																												
GP 718																												
GP 720																												
GS 722																												
GS 750	Repair																											
DRILLS																												
DS 775																												
DS 776																												
DS 780																												
DR 781																												
DR 782																												
DR 783																												
DR 790																												
MISC.																												
PL 910																												
PL 840																												
SH 220																												
WISE 1																												
WISE 2																												
WISE 3																												
WISE 4																												
WISE 5																												

Fig. 7.

available. After this we take into account the necessary time to deliver patterns, and to obtain material from brass, steel or grey iron foundry or other source from which material is obtained, and thus we arrive at the date drawings must be completed. All these dates are marked plainly on the chart and the parties concerned are given a copy of the schedule. The whole form represents what must be done in order that the final completion date be made. It does not matter if material arrives before that date, but a certain time before each item becomes due, our schedule tracers commence to trace the party concerned, in order to prevent avoidable delays. Each day, as it passes, one date column is filled in with the proper color, to represent

accordingly. We are able very definitely to advise the management months ahead, that, for the reasons shown, a change in programme may be necessary. The necessity of prompt action is also shown vividly when delays in initial stages have occurred. We use this system on all our new equipment programmes with very good results.

Detail Operation Schedule—Example 6 is a method used by the author to plan the work for every productive man and machine in a department. The object is to provide the shop foremen with information as to the "next job" for every man. Fig. 7 is a photograph of a shop control board, which consists of a board containing a separate slot for every man or machine, the identification being down the

left hand side. As each order is received by the production department, a ticket is made out for every operation, equal in length to the time allowed for each operation. The tickets are made on 20 to the inch profile paper, each division representing one hour. The board is black, and white lined vertically at weekly intervals. In the top slot is located the date strip, showing days of the month covering the period covered on the board. All the work for the shop is represented on the board, each operation being located in the proper slot. When material is available, each operation, from the first to the last, is located in the respective slots at the date, so that time between operations is at a minimum, taking into account also the continuity of work in each machine. Simultaneously with the making of the control board tickets, a job card is made for the shop foreman's office board. This board contains a compartment for each man, and the cards are arranged to correspond with the master control board with the "next job" card always in front. As each man nears completion of his work in hand, his gang boss goes to the board, and takes the next job ticket, and gets the material to the machine, together with the necessary tooling equipment. The card stays with the work, and then goes to the inspector, who, after inspection, passes it to the cost department. This system plans the work in great detail for the foremen. It shows when machines are overloaded, when idle due to breakdown, man absent, or out of work, all points of vital interest where costs and delivery are of prime importance. The scope of this paper does not allow of going into the detail of this system more elaborately, but it is a point to be noted particularly, that the most successful commercial concerns of today find that it pays to plan this detail by means of a specialist production department.

In conclusion I want to point out one fundamental principle which you may have noticed in all these methods. In every case a standard or task is set as the object to be attained, and that standard is set at the beginning of the job. All the methods provide a means of knowing whether the standard is maintained at all points in the progress up to the completion of each particular task. You will also note that I have preceded each example with a clear statement as to the object to be attained by each method. This is very important, on account of the multiplicity of detail which has to be dealt with, and which will often lead one off the track unless steadfastly maintained. Last, I ask you to note that while all this looks like so much statistical, clerical and accounting, it is an entirely different thing. The viewpoint is not that of an accountant, nor could it be handled by an accountant, it is distinctly a management engineering proposition for an engineer.

The principles outlined in this paper have been adopted by the C.P.R. management in the creation of a special department, called the production department, attached to the chief executive of Angus shops to develop this work. It is a distinctly new department for railway shops and credit must be given to W. H. Winterrowd, Chief Mechanical Engineer, for recognizing that there was no logical reason why methods of successful business institutions should not be incorporated into railway shops. To the best of my knowledge the Angus

shops are the only railway shops on the continent that have such a department that is operating as a separate department with full confidence and co-operation of the supervising staff, all working for one result. All foremen, general foremen, and other supervisors, realize that one department, acting as a sort of clearing house for all material, can render better service than was possible when they each had to chase their own material from shop to shop. They recognize that when a certain output is required, that the special department can

advise what operations are to be done each day, can advise on all items late, and state what must be done daily, so that the final result is what is required, because it has more complete information than any one department could possibly have or get. In all cases the basic schedules are developed by or with the departmental head concerned so that he feels that it is his schedule and he consequently realizes that he is being helped and actively assisted by the management.

The foregoing was read before the Canadian Railway Club, in Montreal, recently.

Birthdays of Transportation Men in February.

Many happy returns of the day to:—

T. Britt, General Fuel Agent, C.P.R., Montreal, born there, Feb. 3, 1871.

J. S. Byrom, General Superintendent, Sleeping, Dining and Parlor Cars, and News Service, Eastern Lines, C.P.R., Montreal, born at Jersey City, N.J., Feb. 10, 1872.

H. R. Charlton, General Advertising Agent, G.T.R. and G.T.P.R., Montreal, born at St. Johns, Que., Feb. 9, 1866.

R. Colclough, Superintendent, St. Maurice Division, Quebec District, Canadian National Rys., Quebec, Que., born at Bic, Que., Feb. 24, 1871.

R. Crawford, Northwest Agent, Northern Navigation Co., Winnipeg, Man., born at Kingston, Ont., Feb. 21, 1870.

V. A. G. Dey, Engineer, Toronto Terminals Division, Ontario District, C.P.R., Toronto, born at Aberdeen, Scotland, Feb. 4, 1883.

A. J. Donegan, ex-Superintendent, Algoma Eastern Ry., Sault Ste. Marie, Ont., born at Perth, Ont., Feb. 17, 1872.

R. W. Drew, Division Freight Agent, Saskatchewan District, C.P.R., Regina, born at Kingston, Ont., Feb. 17, 1874.

E. A. Evans, Consulting Engineer, ex-General Manager and Chief Engineer, Quebec Ry., Light & Power Co., Quebec, born at Kensington, Eng., Feb. 26, 1855.

Goodwin Ford, General Superintendent Western Lines, Dominion Express Co., Winnipeg, born at Bordentown, N.J., Feb. 23, 1859.

U. E. Gillen, General Manager, Toronto Terminal Ry. Co., Toronto, born at Brooklyn, Mo., Feb. 27, 1867.

L. L. Grabill, General Baggage Agent, G.T.R., Toronto, born at Walkerton, Ont., Feb. 6, 1878.

A. J. Hills, Assistant to President, Canadian National Railways, Toronto, born there, Feb. 15, 1879.

T. C. Hudson, General Master Mechanic, Eastern Lines, Canadian National Railways, Montreal, born at Brockville, Ont., Feb. 20, 1873.

H. Hulatt, Manager of Telegraphs, G.T.R. and G.T.P.R., Montreal, born at London, England, Feb. 15, 1883.

C. Gardner Johnson, Lloyd's Agent for British Columbia, Vancouver, B.C., born at Dunblane, Scotland, Feb. 8, 1857.

A. H. Jones, Assistant Engineer, Canadian Government Railways, Moncton, N.B., born at Liverpool, Eng., Feb. 16, 1884.

John McCraw, ex-General Agent, Central Vermont Ry., New London, Conn., born at Craigvale, Ont., Feb. 6, 1868.

G. L. McCrea, Local Freight Agent, C.P.R., Vancouver, B.C., born at Springtown, Ont., Feb. 9, 1876.

T. McNab, ex-Master Mechanic, Alberta Ry. & Irrigation Co., now of Picture Butte, Alta., born in Scotland, Feb. 16, 1849.

J. K. McNeillie, Superintendent, Susquehanna Division, Delaware & Hudson Rd. (U.S.R.A.), Oneonta, N.Y., born at Toronto, Feb. 23, 1874.

J. D. McNutt, Inspector of Train Dispatching, Canadian Government Rys., Moncton, N.B., born at Stewiacke, N.S., Feb. 8, 1873.

D. C. Macdonald, Assistant General Claims Agent, C.P.R., Winnipeg, born at Elmsdale, N.S., Feb. 9, 1874.

C. S. Maharg, Superintendent, Cranbrook Division, British Columbia District, C.P.R., Cranbrook, born in Dufferin County, Ont., Feb. 4, 1867.

V. J. Melsted, ex-Engineer of Water Service, C.P.R., now of Milton Hersey Co., Winnipeg, born at Gardar, N.D., Feb. 20, 1887.

G. A. Montgomery, Vice President and General Manager, Algoma Central & Hudson Bay Ry., Sault Ste. Marie, Ont., born at Bradford, Ont., Feb. 11, 1871.

A. Z. Mullins, Division Freight Agent, G.T.R., Grand Rapids, Mich., born at Appin, Ont., Feb. 14, 1862.

M. G. Murphy, General Agent, Passenger Department, C.P.R., Detroit, Mich., born at Halifax, N.S., Feb. 26, 1878.

J. E. Proctor, District Passenger Agent, C.P.R., Calgary, Alta., born at Sarnia, Ont., Feb. 17, 1878.

C. T. Ridalls, Car Foreman, C.P.R., London, Ont., born at St. Heliers, Jersey, Channel Islands, Feb. 8, 1864.

W. J. Robider, General Master Car Builder, C.P.R., Montreal, born at Savannah, Ga., Feb. 15, 1869.

A. E. Rosevear, General Freight Agent, G.T.P.R., and Grand Trunk Pacific Coast Steamship Co., Winnipeg, born at Montreal, Feb. 20, 1863.

J. G. Scott, ex-General Manager, Quebec & Lake St. John Ry., Quebec, born there, Feb. 13, 1847.

J. J. Scully, General Superintendent, Algoma District, C.P.R., North Bay, Ont., born at Montreal, Feb. 3, 1872.

G. Spencer, Chief Operating Officer, Board of Railway Commissioners, Ottawa, born in London, Eng., Feb. 21, 1865.

H. E. Suckling, Treasurer, C.P.R., Montreal, born at Gibraltar, Feb. 27, 1851.

A. P. Villain, City Ticket Agent, C.P.R., San Francisco, Cal., born there, Feb. 6, 1891.

F. L. Wanklyn, General Executive Assistant, C.P.R., Montreal, born at Buenos Ayres, Feb. 25, 1860.

J. R. Watson, Assistant Superintendent, Sleeping, Dining and Parlor Cars, and News Service, Eastern Lines, C.P.R., Montreal, born at Morpeth, Eng., Feb. 8, 1873.

A. Williams, Superintendent, London Division, Ontario District, C.P.R., London, born at Mono Road, Ont., Feb. 22, 1872.

Canada's National Economic Problems.

By E. W. Beatty, K.C., President Canadian Pacific Railway.

Our national economic problem is not only to produce much, but to produce cheaply, and not only to produce much and cheaply, but to be so quick and elastic in our marketing arrangements as to be able to sell our goods always in the most profitable of the world's various and constantly changing markets. The right of every Canadian to look forward to prosperity, that is, to plenty of work, and wholesome work, for a return that will maintain a decent standard of living and provide something for the rainy day, is thus related closely to the condition of the railways of this country. For our railways are the means of quick and regular deliveries to market. They are to Canada what an efficient conveyor system may be to a factory which has otherwise no advantage over its older competitor, saving it time and expense in moving material into the receiving rooms, or from one machine to another, or out again to the ultimate consumer. In short, the ability of our railways to handle any possible peak load of traffic, of any character, in any direction, at any time, and cheaply, is something vital to every worker with hand or brain, from the most obscure of farm districts to the largest of our industrial centers.

For example: the apple crop in a well known Nova Scotian valley exceeded the estimate of the authorities by almost 75%. Instead of something over 1,000,000 barrels there were 2,000,000. Frost following close on the harvest reduced the time during which the apples could be moved in ordinary cars. Furthermore, the market for these apples, instead of lying largely in the United Kingdom, as in other years, developed with practically no warning in the United States and in Central and Western Canada. In other words, prices overseas had gone down; American bids were high. The difference between a large profit or a small profit to Canada on the year's work of these Annapolis Valley apple-growers became almost entirely a matter of railway service. In place of a normal crop to be hauled a few miles to the seaboard in ordinary cars, an unprecedentedly large crop had to be hauled in special refrigerator cars to distant cities in the United States and Canada. Details are not necessary. The crop, I may say, is still in process of being moved, but the peak load, which has passed, could never have been handled had the Canadian transportation machine not been the superior organization it is. The apple-growers in this case were served by a small railway company which had never before known a similar crisis. Almost 2,000,000 barrels had to be moved, 225 barrels a car. Through the Railway Association of Canada, that is, the old Canadian Railway War Board, the larger associates of this small railway, the Grand Trunk, Canadian National, and Canadian Pacific, scoured the Dominion to get together a supply of refrigerator cars, already scarce owing to the detention of Canadian refrigerators in the United States, to meet this extraordinary demand. These cars were gathered even from the very ends of the transcontinental lines. They were rushed to the Canadian National at Montreal and by the Canadian National forwarded to the small local carrier to which I have re-

ferred. Instead of recording in the government blue books for 1919 an export of so many dollars' worth of apples, Canada will be able to show an export much higher, due very largely to the efficiency of the railroads.

This is the kind of service the Canadian railways have been giving and are still able to give Canada. There was no breakdown during the war, though every other country had to make radical readjustments. No failure, when the signing of the armistice in Nov., 1918, brought about great changes in the character and direction of traffic. Between Nov., 1918, and Oct., 1919, they handled 271,500 returning soldiers through the ports of St. John, Halifax, and Portland, a movement involving 827 special trains, traversing over 2,427,162 train miles. I may add that a greater degree of comfort was assured each soldier on his homeward journey through Canada than was even attempted by either the United States or Great Britain. The return of commercial confidence after the first uncertainties of peace, and the change in freight traffic back to the lines of development which had been interrupted four and a half years before by the outbreak of war, was met without difficulty. Threatened labor troubles in Mar., 1919, were successfully dealt with by joint action through the Canadian Railway War Board. The settlement involved, it is true, serious but unavoidable outlays by the railways. It was effected about three months ago, but with no corresponding increase in railway rates. A strike of bituminous coal miners in the U.S. had no more serious reflection in Canada than a minor and temporary reduction in passenger train service. Canada, through the foresight of most of her railways in providing large stocks of fuel in advance, was able to avoid the serious freight embargoes which elsewhere were the result of the strike.

So much for the manner in which the transportation machinery of the country is carrying out its obligations to the Canadian producer. Other aspects of the transportation problem are less satisfactory. There are many people who look upon Canadian railways as custodians of magic fortunes which cannot be exhausted. That bookkeeping should be as simple and inexorable in its tale of losses and vanished profits to a railway as it may be to a corner grocer, is to these people unthinkable. It apparently does not occur to them that to no public is it more important than to the Canadian public that the good reputation of its railway securities in the world of thrift and investment should be carefully guarded. To those, however, who understand these things clearly and who view the matter from the standpoint of broad public interest, it is at once apparent that the Canadian public pays a very low rate for the quality of service rendered and that a time is rapidly approaching when, if Canadian railway securities are not to be made less desirable to investors than almost any other kind of industrial security, railway rates will either have to go up, or railway operating costs go down. Such persons recognize that it is not because the situation of the railways is an easy one that certain companies have been able to show net earnings—very low net earnings compared to the

actual cash invested in the industry—but because in the past the shareholders of such companies have been, as they are today, courageous persons willing to supply the means for constructive enterprises in which no one but themselves had faith, and because, too, their officers have been skilled, resourceful and loyal business men, assisted by staffs filled with the spirit of pride and devotion to their work. This, indeed, is the thing which has made it possible for Canada's railways to function successfully during the war, without making anything like the demands that foreign roads, less efficient in serving their community, yet earning the safe rates and paying the same wages, have made upon their public exchequers. I do not believe that this strain upon the railways and this tendency to weaken the general reputation of Canadian railway securities should continue. The servant after all is worthy of his hire and railway capital is not less worthy a servant than other forms of capital whose earnings have not been so consistently depressed.

The net earnings, during the war years, of those companies which showed net earnings, would have been much lower had the Canadian railways been making expenditures for maintenance which circumstances would have justified, but which conditions prevented during that period. These arrears have now to be made up. During 1919 the C.P.R. laid 70,000 tons of steel rail. In place of, say, 2,000,000 ties, worth 44c in 1914, the C.P.R. laid 4,434,000 ties at 85c a tie. The sensational advance in the rate of railway wages is well known. Further advance may be necessary within the very near future, as indicated by discussions in the United States. The price of coal for locomotives was \$3.09 in 1913. Now it is \$4.77. The cost of hauling an average train (freight or passenger) one mile rose from \$1.604 in 1913 to \$2.494 in 1918. It is higher today. The operating expenses of one mile of line in 1915 were \$4,152; in 1918, \$7,046, and today they are even greater. On the other hand, railway rates, taking all classes of revenue together, have advanced scarcely 25%. I venture to say no other industry in the Dominion can show such moderation.

The Flin Flon Mine and Projected Railway—A press report of Dec. 29 stated that Hayden and Stone, of Boston, had withdrawn from negotiations for the purchase of the Flin Flon mining property near Pas, Man., on the ground of the refusal of the present owners to grant an extension of the firm's option on the property for another year. The report added that negotiations had been opened for the sale of the property to the Anaconda Mine Co., Butte, Montana. The construction of a railway to serve the mining area in which the Flin Flon property is situated is under consideration, and the Manitoba Premier has intimated that if the Canadian National Rys. does not undertake it the Manitoba Government will.

The Dominion Atlantic Ry., in conjunction with the Nova Scotia Department of Agriculture is offering prizes for the best acre of potato ground in the Annapolis valley served by its line.

Quebec Provincial Aid to Railway Construction, 1905-1919.

The Quebec Minister of Public Works stated in the Quebec Legislature recently that the total length of railways built or subsidized by the Quebec Government from July 1, 1905 to July 1, 1919, was 2,648.11 miles. The following amounts were paid as subsidies during the period:—

1905-06.....\$80,750.00	1912-13.....\$ 9,652.90
1906-07..... 43,779.61	1913-14..... 8,750.00
1907-08..... 46,558.31	1914-15..... 8,750.00
1908-09..... 23,750.00	1915-16..... 47,890.94
1909-10..... 8,750.00	1916-17..... 750.00
1910-11..... 8,750.00	1917-18..... 750.00
1911-12..... 44,220.56	1918-19..... 750.00

The money grants given to railways, authorized but not exigible, at July 1, 1918, was \$54,602.70; the land subsidies given to railways converted or capable of being converted into money authorized but not exigible at July 1, 1918, was \$3,316.19; the land subsidies granted to railways, not converted into money and authorized but not exigible at July 1, 1918, was 8,701,064 acres.

Motor Car, Hand Car, Velocipede and Push Car Operating Rules.

The Railway Association of Canada issued the following circular Jan. 9:—The following regulations to govern the use and operation of motor cars, hand cars, velocipedes and push cars have been prepared by the association at the suggestion of the Board of Railway Commissioners for Canada, with a view to assisting the establishment and observance of safe practices in the handling of the vehicles mentioned.

No motor car, hand car, or similar vehicle is to be operated on the railway without permission of the proper authority.

No person or persons, except employes in the discharge of their duty, shall be allowed to ride on such cars on the tracks of the railway, unless holding special permission from the proper authority.

The person in charge of the operation of car must inform himself of the movement of trains.

Immediately after starting, brakes must be tested, to ensure that they are in proper working condition. All cars not in actual use must be lifted off track, or otherwise placed clear of passing trains. They must not be left on or near road crossings. When unattended they must be locked.

When approaching railway, street and highway crossings and switches, cars must be under full control, and prepared to stop immediately. Cars must not be run over crossings protected by gates, until the gates are down; or over crossings protected by flagmen, until given "Proceed" signal by flagman.

Cars loaded with rails, frogs, ties, or similar material, must not go on main track without protection, as set forth in the company's rules.

Rails, frogs or similar material must not be carried on motor or hand cars, except in cases of emergency. Water kegs, track jacks, and other tools likely to derail car if they were to fall off, must be carried on side or rear of same.

Motor, hand or push cars must not be attached to a train.

Cars must not be run after sunset, or during foggy or stormy weather, except in cases of actual necessity. In such cases, on single track, a red light must be displayed to the front and to the rear, and on double track a white light to the

front and a red light to the rear. During fogs and storms, flagmen should be sent out in each direction and the car run no faster than these flagmen can walk.

A distance of not less than 500 ft. must be maintained between two motor cars, and between hand cars or velocipedes following a moving train, and of hand cars and velocipedes moving in the same direction on the same track.

Motor, hand and velocipede cars must be run with great caution around blind curves, and must be stopped frequently, so that approaching trains may be heard.

Hand cars, unloaded push cars, and velocipede cars, must be passed from one track to another by lifting cars, instead of turning switches. When necessary to use switches, they are to be turned only under supervision of the foreman, who will be held responsible for seeing that they are left set and locked in proper condition.

In all cases a lookout must be kept in each direction, whether on single or double track.

The above rules do not apply to motor cars operated by train order.

Canadian Pacific Railway Honor Roll 45.

Ackerley, Roger	Clerk	Liverpool	Killed in Action
Armstrong, Andrew	Carpenter	Strathmore	Wounded
Atkinson, Herbert Jno.	Fireman	Brandon.	Presumed dead
Aylen, G. H. S.	Clerk	Calgary	Died of wounds
Barber, C. W.	Fireman	Glacier	Shell shock
Beaver, Wm. Geo.	Fireman	Brandon	Wounded
Beesley, E. C.	Trucker	Toronto	Wounded
Bentley, C. W. S.	Assistant agent	Redcliffe	Wounded
Boucher, W. R.	Clerk	Regina	Killed in Action
Bourdeau, W. J.	Trainman	Kingston	Wounded
Bourns, J. E.	Fireman	Fort William	Presumed dead
Brown, Arthur	Teamster	Strathmore	Killed in Action
Bryant, Jas.	Locomotive fireman	Winnipeg	Wounded
Bulcock, Jim	Checker	Montreal	Wounded
Burgess, Fred	Stower	Winnipeg	Killed in Action
Cairns, James	Waiter	B.C. Coast Service	Wounded
Cameron, S. F.	Wiper	Regina	Wounded
Carmichael, Melville	Rodman	Glacier	Presumed dead
Cartwright, G. H.	Brakeman	Regina	Killed in Action
Colton, John	Assistant agent	Rush Lake	Wounded
Cook, Lionel Stewart	Waiter	Montreal	Wounded
Coulin, Louis Auguste	Clerk	Montreal	Wounded
Currie, Wm. Carmichael	Call boy	Brandon	Gassed
Dale, Edwin	Helper	Strathcona	Wounded
Dalton, Frances James	Clerk	Winnipeg	Killed in Action
Dawson, Chas. Jas.	Checker	Calgary	Killed in Action
Denne, Wm. Charles	Car repairer	Winnipeg	Killed in Action
Doyle, H.	Engineer apprentice	C.P.O.S.	Dead
Drysdale, Arthur	Electrician	Angus shops	Killed in Action
Easterbrook, R.	Boatswain's helper	C.P.O.S.	Killed in Action
Eaton, Jno. Jamison	Clerk	Vancouver	Wounded
Emigh, Lewis Carl	Car checker	Broadview	Wounded
Fairmar, R. W.	Clerk	Toronto	Wounded
Garrow, James	Commissionaire	Glasgow	Wounded
Gibbs, R. J.	Sectionman	Port Hope	Died of wounds
Gilbert, E. H.	Rodman	Strathmore	Wounded
Grist, Jas. Wm.	Brakeman	Regina	Wounded
Gulley, Wm.	Laborer	Smiths Falls	Wounded
Hampson, Fred	Laborer	Ogden	Killed in Action
Harrop, James Lawton	Ice foreman	Moose Jaw	Died of wounds
Heal, Alfred Norman	Waiter	Vancouver	Wounded
Hoare, Henry	Clerk	Moose Jaw	Wounded
Howard, Wm.	Sleeping car cond'r	Montreal	Killed in Action
Hughes, Geo. Bancroft	Clerk	Liverpool	Wounded
Hughes, H. R.	Fifth officer	Empress of Britain	Lost at sea
Kelly, James	Yard foreman	Toronto	Killed in Action
Kirkham, E. D.	Clerk	Montreal	Wounded
Knowles, Harold	Waiter	Montreal	Killed in Action
Livingstone, Herbert	Trainman	Brownville Div.	Wounded
McKelvey, Edwin Robt.	Trainman	North Bay	Killed in Action
McKinnie, H. T.	Watchman	Coquitlam	Wounded
McLean, A. J.	Laborer	Glasgow	Wounded
MacLean, Finlay Gordon	Collection inspector	Calgary	Wounded
McLeod, Roderick	Clerk	Glasgow	Wounded
McPherson, D.	Laborer	Glasgow	Killed in Action
McRae, Alex.	Operator	Winnipeg	Died of wounds
Marriott, Wm.	Shed foreman	Swift Current	Presumed dead
Milne, Hunter Gilson	Brakeman	Edmonton	Killed in Action
Moore, Richard	Laborer	Calgary	Wounded
Murray, J. H.	Engineer	Bankhead	Killed in Action
Olive, Arthur K.	Inspector	Calgary	Wounded
Parsons, A. E.	Cashier	Avonmouth	Wounded
Paton, Robert	Clerk	Sutherland	Wounded
Perry, Geo. Wm.	Clerk	North Bay	Wounded
Potter, Chas. Albert	Clerk	Edmonton	Wounded
Potts, Thos.	Storeman	Montreal	Wounded
Powell, Thos. R.	Fireman	Smiths Falls	Killed in Action
Rak, John	Scrapper	Lethbridge	Presumed dead
Rawlings, Arthur	Clerk	Winnipeg	Wounded
Rodger, Wm. Alex.	Clerk	Vancouver	Presumed dead
Rutledge, Melville	Brakeman	Macleod	Wounded
Saunders, Thos. Percy	Brakeman	Lethbridge	Wounded
Scribner, Harry Tennyson	Checker	West St. John	Wounded
Shee, H. J.	Engineer	B.C. Coast Service	Lost at sea
Slim, Wm. Hy.	Clerk	Calgary	Wounded
Smth, Albert Kingsley	Fireman	Ottawa	Wounded
Still, Geoffrey	Fireman	B.C. District	Died of wounds
Thompson, Geo. R.	Locomotive man	Moose Jaw	Killed in Action
Tidswell, Isaac	Helper	Macleod	Wounded
Walker, John	Constable	Montreal	Gassed
Wallace, James	Engineer	B.C. Coast Service	Lost at sea
Wallace, Walter	Dither fireman	Lethbridge	Gassed
Walmsley, R. T.	Officer	Liverpool	Killed in Action
Watson, J. G.	Cleaner	Pacific Service	Lost at sea
Watts, Dennis Wm.	Cook	Toronto	Wounded
Wilcox, Thos. A.	Cook	Montreal	Died of wounds
Wilkes, Walter Wm.	Locomotive fireman	Schreiber	Wounded
Wilkinson, Chas. McWhinnie	Cook	Moose Jaw	Killed in Action
Wood, Arthur Douglas	Laborer	Calgary	Wounded
Woods, Thos. Soulsby	Oiler	Victoria	Wounded
Young, Edwin	Specialist	Anous	Wounded

Shown on honor lists to Dec. 31, 1919: Killed, 948; wounded, 2,046; total, 2,994.

C.P.R. War and Employment Figures.

The following figures, revised to Dec. 31, 1919, show the C.P.R. employes' war record, and the employment by the company of soldiers discharged from the army:

Total reported as joining army.....	10,875
Dead	1,042
Wounded	2,045
Re-employed in the service.....	6,463
Other soldiers given employment.....	8,137
Total soldiers given employment.....	14,600

Canadian Collieries (Dunsmuir) Reorganization.

The plan for the reorganization of Canadian Collieries (Dunsmuir), which has been under consideration of a bondholders' committee, appointed in 1915, provides for the cancellation of the following securities:—First mortgage gold bonds and all arrears of interest, £2,054,000, second mortgage debenture stock; 3 year notes, £50,000; preferred stock, £3,500,000 (out of £5,000,000), and common stock, £9,900,000 (out of £10,000,000); and for the creation of the following new stocks: £1,027,000 of 5% non cumulative A income debenture stock; £1,027,000 of 5% non cumulative B debenture stock; \$3,400,000 of new preferred stock, and \$1,027,000 of new common stock. Holders of existing bonds will receive for every £100 of bonds now

held, £50 of A debentures, £50 of B debentures, \$100 of preferred stock and \$50 of common stock, and so on in proportion for amounts of less than £100. The holders of the £50,000 three year notes will receive \$250,000 of preferred stock, of which a balance of \$1,096,000 will remain unissued after the bondholders' claims have been satisfied. A new debenture stockholders' committee is to be appointed to issue prior lien securities to an amount not exceeding \$1,500,000 at 10%, and other powers. Subject to approval half of the net earnings are to be applied to redeeming A debentures by annual drawings, and the remainder to paying interest on A and B debentures, while any balance is to be utilized for the redemption of A debentures until paid off, and then to the payment of dividends on the capital stock.

The Transportation Club of Toronto has elected the following officers: President, A. M. Adams, Local Freight Agent, G.T.R.; Vice President, W. A. McIlroy, chief clerk, District Passenger Agent's office, C.P.R.; Treasurer, M. Macdonald, Assistant Superintendent of Weighing, G.T.R.; Secretary, W. A. Gray; committee chairmen, membership, C. E. Horning, District Passenger Agent, G.T.R., entertainment, E. R. Thorpe, City Freight Agent, G.T.R.; publicity, T. Marshall, Traffic Manager, Board of Trade; sick, J. J. Rose, Robert Reford Co.; reception, W. Fulton, Assistant District Passenger Agent, C.P.R.

Grain Inspected at Western Points.

The following figures, compiled by the Dominion Bureau of Statistics, show the number of cars of grain inspected at Winnipeg and other points on the Western Division, for Dec., 1919, and for 4 months ended Dec. 31, 1919 and 1918 respectively:—

C.N.R.	4,178	26,771	27,334
C.P.R.	7,909	44,799	48,491
G.T.P.R.	2,455	12,511	11,044
G.N.R. (Duluth)	42	455	677
Total	14,584	84,536	87,546

Railway Hotels—The Dominion Atlantic Ry. is reported to have taken over the Aberdeen Hotel, Kentville, N.S., and to be preparing it for the summer tourist traffic.

Rails for Roumania—The Dominion Iron and Steel Co. has received an order for 7,500 tons of steel rails, of a special section, to weigh 30 kilos per meter, and to be delivered to the Roumanian Commission at Sydney, N.S., for shipment, about February.

French Railway Rates Advanced—In order to meet an anticipated deficit of 2,400,000,000 francs in the operation of French railways, the government asked parliamentary authority for an increase of rates, which was approved by the Chamber of Deputies, Dec. 31.

The Cornwall Terminal Co., to which reference was made in Canadian Railway and Marine World, Aug., 1919, pg. 440, has been granted supplementary letters patent under the Dominion Companies Act, increasing its authorized capital stock from \$100,000 to \$200,000.

R. F. Richardson, formerly Local Freight Agent, C.P.R., Edmonton, Alta., who has been appointed General Agent, C.P.R., Alaska and Yukon Territory, at Juneau, Alaska, in writing Canadian Railway and Marine World to change his address, says that he does not wish to miss a copy of the paper.

The Canadian Fur Auction Sales Co., which is in formation in Montreal, has among its promoters, Lord Shaughnessy, Chairman of the Board C.P.R.; Sir Herbert Holt, a C.P.R. director, and Lorne C. Webster, President Quebec Ry., Light and Power Co., Webster Steamship Co., etc.

Victoria and Sidney Ry. Liquidation—The Saanich, B.C., Tp. Council is reported to be negotiating with the Victoria and Sidney Ry. liquidator for the purchase of the abandoned right of way from Saanichton northerly to the junction with the Canadian Northern Pacific Ry. It has taken steps to protect the road crossings, the cost of repairs to the same to be recovered from the parties liable, and to protect the township's rights as to taxes, etc., pending the sale of the property.

Detroit River Bridge—A press report of Jan. 13 states that preliminary surveys for the projected bridge across the Detroit River between Windsor, Ont., and Detroit, Mich., have been started and that C. E. Fowler, who is associated with G. Lindenthal, New York, who is designing the bridge, is in charge of the work. He is reported to have stated that the logical site for the Canadian end of the bridge is at the Huron line in Sandwich, where it would serve not only the center of the border population, but also the railway system and the electric railways.

Grain in Store at Terminal Elevators, Interior Terminal Elevators and Public Elevators in the East.

Week ended Jan. 2, 1920.	Wheat. Bush.	Oats. Bush.	Barley. Bush.	Flax. Bush.	Rye. Bush.	Totals. Bush.
Port William—						
C.P.R.	143,135	30,628	78,541	.....	34,032	286,336
Empire Elevator Co.	351,770	228,108	157,078	17,144	27,954	782,054
Consolidated Elevator Co.	568,211	58,118	73,401	36,170	8,562	744,462
Ogilvie Flour Mills Co.	408,861	144,500	85,067	.....	38,850	677,278
Western Terminal Elevator Co.	543,044	57,223	16,525	23,560	6,928	647,280
G. T. Pacific	536,560	272,259	50,108	24,893	23,515	907,335
Grain G'wers' Grain Co.	660,933	368,512	154,915	.....	64,892	1,249,252
Port William Elevator Co.	369,650	324,400	43,393	12,770	8,482	758,695
Northwestern Elevator Co.	548,740	10,085	39,024	43	68	597,960
Port Arthur—						
Port Arthur Elevator Co.	639,081	259,232	141,186	1,019	46,326	1,086,844
Sask. Co-op. Elevator Co.	1,228,539	225,728	45,272	30,924	17,071	1,547,534
Canadian Government Elevator	127,796	76,820	23,109	65,813	12,339	305,877
Thunder Bay	277,024	213,696	93,348	8,165	10,908	603,141
Davidson and Smith	49,710	76,816	10,740	.....	1,081	138,847
Eastern-Richardson	341,092	98,300	38,548	4,942	30,304	513,186
Vancouver Can. Gov't. Elevator.....	1,588	15,530	4,044	.....	.....	21,162
Total public terminal elevators....	6,795,734	2,459,955	1,054,299	225,443	331,312	10,866,734
Saskatoon Can. Gov't. Elevator.....	441,455	423,034	2,338	.....	.....	866,827
Moose Jaw Can. Gov't. Elevator.....	275,977	203,961	6,056	9,086	1,270	499,090
Calgary Can. Gov't. Elevator.....	1,401,680	467,811	36,640	182	5,611	1,913,715
Total Interior Terminal Elevators..	2,199,112	1,094,806	45,034	9,268	11,412	3,279,632
Midland—						
Aberdeen Elevator Co.....	81,155	400,057	189,381	.....	62,857	733,450
Tiffin, G.T.P.	418,728	.....	.....	.....	.....	418,728
Port McNicoll	1,012,862	1,197,078	70,453	.....	31,751	2,312,144
Goderich—						
Elevator and Transit Co.....	856,826	119,200	.....	.....	.....	976,026
Kingston—						
Commercial Elevator Co.....	.....	5,829	.....	.....	.....	5,829
Port Colborne—						
Maple Leaf Milling Co., Ltd.....	757,069	.....	.....	.....	.....	757,069
Montreal—						
Harbor Commissioners No. 1 and 2...	2,989,808	5,806,624	41,204	.....	.....	3,611,636
Montreal Warehousing Co.	1,400,568	35,852	10,622	.....	.....	1,447,042
Ogilvie Flour Mills Co.	859,198	.....	.....	.....	.....	869,632
Quebec Harbor Commissioners.....	399,248	34,416	.....	.....	.....	433,664
West St. John, N.B., C.P.R.	426,225	307,546	381,816	.....	.....	1,115,587
St. John, N.B., Can. Nat. Rys.....	45,509	.....	29,090	.....	.....	74,599
Halifax, N.S.	122,042	.....	50,586	.....	.....	172,628
Total Public Elevators.....	9,366,238	2,680,602	783,586	.....	94,608	12,928,034
Total Quantity in Store.....	18,284,084	6,235,363	1,882,019	284,711	437,332	27,074,409

Orders by Board of Railway Commissioners for Canada.

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

Important traffic orders made by the board are given in full on another page of this issue.

General order 275. Dec. 16.—Ordering form and manner in which railway companies shall file tariffs of all freight, passenger, express, telephone and telegraph and supplements thereto, applying between points in Canada.

General order 276. Dec. 31.—Continuing in effect on and from Jan. 1, 1920, subject to provisions of Railway Act, 1919, tolls of railway companies subject to board's jurisdiction.

General order 277. Dec. 29.—Directing manner of indicating changes in freight, passenger, express, telephone and telegraph tariff schedules.

General order 278. Jan. 3.—Authorizing express companies to charge tolls published in their tariffs filed with the board.

General order 279. Jan. 5.—Disallowing Canadian Freight Association's tariff C.R.C. 19, effective Aug. 20, 1918, giving rate on fresh fruits to Winnipeg and ordering it forthwith to file tariff restoring rates on fresh fruits from Ontario and Quebec points to Winnipeg, Portage la Prairie and Brandon, Man., prescribed in order dated Oct. 10, 1904, as increased by order 212, Jan. 5, 1918, and further increased by order in council P.C., 1863, July 27, 1918, said increases having been continued in effect by general order 276, Dec. 31, 1919.

General order 280. Dec. 23, 1919. Amending order 248, Aug. 19, 1918, by striking out regulation 9, page 2, and substituting therefor: 9.—That a signal of a serviceable type, to be approved by the board, be used to display the signals directed to be provided under rules 3 (b) and 6 (yellow signal) of this order and rule 35 (yellow signal), of the Uniform Code of Operating Rules.

29,145. Dec. 12.—Authorizing Grand River Ry. to increase its standard maximum passenger fare to 2.875c a mile.

29,146. Dec. 12.—Relieving G.T.R. from providing further protection at first crossing north of Milton, Ont.

29,147. Dec. 17.—Authorizing Canadian National Ry. to open for traffic, its Grenville cut-off, near mile 60, west from Joliette, in Lot 359, Range 1 Block C, Chatham Tp., Que.

29,148. Dec. 17.—Authorizing Essex Terminal Ry. to build siding across Shephard Ave., Windsor, Ont.

29,149. Dec. 15.—Authorizing Oshawa Ry. to build second track across Wilkinson and Barrie Aves., and to make changes in location of spur, in Oshawa, Ont.

29,150. Dec. 15.—Approving location and details of Grand Trunk Pacific Ry. station at Vivian, Sask.

29,151. Dec. 16.—Authorizing Canadian Northern Saskatchewan Ry. to build across Assiniboia Ave., Peebles, Sask.

29,152. Dec. 17.—Amending order 29,023, Nov. 15, which authorized Canadian Northern Western Ry. to carry freight traffic over its Hanna-Medicine Hat Branch from Bonar, Alta., by striking out the word "freight."

29,153. Dec. 13.—Relieving Canadian National Ry. and C.P.R. from maintaining signalman on Sundays to operate interlocking plant at crossing at Conquest, Sask.

29,154. Dec. 12.—Approving agreement, Nov. 21, 1919, between Bell Telephone Co., and Donegal Telephone Co., Renfrew County, Ont.

29,155. Dec. 12.—Authorizing G.T.R. to rebuild bridge 88 across the narrows at mile 120.39, near Atherley Jet., Ont.

29,156. Dec. 16.—Authorizing Saskatchewan Government to build highway crossing over C.P.R. station grounds in n.e. $\frac{1}{4}$ Sec. 9, Tp. 37, Range 25, west 3rd meridian.

29,157. Dec. 13.—Authorizing Canadian National Ry. to connect with the International Bridge & Terminal Co.'s tracks and Shevlin-Clarke Co.'s spur at Fort Frances, Ont.

29,158. Dec. 12.—Approving location of C.P.R. Lanigan northeasterly branch from mile 0 to 60.98, Saskatchewan, also authorizing the crossing of 53 highways.

29,159. Dec. 5.—Authorizing Hamilton Radial Electric Ry. to build temporary spur for Firestone Tire and Rubber Co. of Canada, in Barton Tp., Ont.

29,160. Dec. 12.—Ordering Toronto Ry. to pay to C.P.R., \$10,093.98, being 10% of estimated cost of building subway at Avenue Road, Toronto, with interest at 5% on half cost of work during construction and on total cost from completion to date, viz.: \$13,807.01, in all, \$23,900.99.

29,161. Dec. 17.—Dismissing application of O'Reilly & Belanger, Ltd., Ottawa, Ont., respecting trestle accommodation on G.T.R.

29,162. Dec. 17.—Authorizing G.T.R. to build spur for Knechtel Furniture Co., Hanover, Ont.

29,163. Dec. 19.—Authorizing Canadian Na-

tional Ry. to cross trail on River Lot 33, Tp. 46, Range 25, west 2nd meridian, Sask.

29,164. Dec. 19.—Relieving Brantford & Hamilton Electric Ry. from providing further protection east of Echo stop, $2\frac{1}{2}$ miles from Brantford, Ont.

29,165. Dec. 19.—Approving agreement, Dec. 4, between Bell Telephone Co. and Thessalon Tp., Algoma District, Ont.

29,166. Dec. 18.—Approving change of work, specification and plan of culvert to be built under G.T.R. at mile 12.47, Doucets Landing Branch, Que.

29,167. Dec. 18.—Ordering Esquimalt & Nainimo Ry. to appoint station agent at Qualicum Beach, B.C., by Feb. 1, 1920.

29,168. Dec. 18.—Relieving Dominion Express Co. from providing cartage service at Courtright, Ont.

29,169. Dec. 18.—Relieving Canadian National Ry. from providing further protection at crossing at first public road north of Anson station, Ont.

29,170. Dec. 20.—Approving agreement, Dec. 6, between Bell Telephone Co. and Egypt Telephone Co., Ontario County, Ont.

29,171. Dec. 20.—Extending to Jan. 15, 1920, time within which Lake Erie & Northern Ry. may operate over G.T.R. crossing at Brantford, Ont., pending installation of interlocking plant.

29,172. Dec. 12.—Authorizing Toronto, Hamilton & Buffalo Ry. to operate over Hamilton & Dundas St. Ry., on Aberdeen Ave., Hamilton, Ont.

29,173. Dec. 19.—Authorizing Canadian National Ry. to build bridge over Carillon-Grenville canal, Grenville Tp., Que.

29,174. Dec. 20.—Extending to Jan. 15, 1920, time within which Lake Erie & Northern Ry., pending installation of interlocker, may operate over Toronto, Hamilton & Buffalo Ry., in Brantford, Ont.

29,175 to 29,177. Dec. 23.—Authorizing C.P.R. to build its irrigation canal, Taber Irrigation District, across its track in Secs. 27, 14 and 36; Tp. 9; Range 17; west 4th meridian, Alta.

29,178. Dec. 22.—Relieving G.T.R. from providing further protection at first crossing east of Cataqui crossing 2 miles west of Kingston Jet., Ont.

29,179. Dec. 22.—Relieving C.P.R. from providing further protection at the first road allowance west of Minnedosa Subdivision, Man.

29,180, 29,181. Dec. 23.—Authorizing C.P.R. to build irrigation canal, Taber Irrigation District, across its tracks in Sec. 28, Tp. 9, Range 18, and Sec. 28, Tp. 9, Range 17, west 4th meridian, Alta.

29,182. Dec. 9.—Dismissing application of Vancouver and Districts Joint Sewerage and Drainage for order fixing rate on sand and gravel on British Columbia Electric Ry. Lulu Island Branch, from Vancouver Terminals to 24th Ave.

29,183. Dec. 23.—Authorizing G.T.R. to use bridge carrying highway over its main line near Kinesgrove, Que.

29,184. Dec. 22.—Ordering Vancouver, Victoria & Eastern Ry. & Nav. Co. (G.N.R.), to provide proper drainage for water to prevent its flooding Thos. Sheaves' land at Sunbury, B.C., water so collected in railway cuts to be taken out at northern and southern ends of respective cuts.

29,185. Dec. 22.—Rescinding order 10,162, Apr. 14, 1910, re G.T.R. spur for D. G. Cooper, Collingwood, Ont.

29,186. Dec. 19.—Dismissing complaint of residents between Rockland and South Indian, Ont., against alleged unsatisfactory train service by G.T.R.

29,187. Dec. 23.—Ordering that crossing of British Columbia Electric Ry. and Esquimalt & Nainimo Ry., near Russell, B.C., be protected by watchmen between 8 a.m., and midnight only, instead of by day and night watchmen, as required by order 18,733, Feb. 18, 1913.

29,188. Dec. 9.—Rescinding order 21,412, Feb. 24, 1914, which authorized Canadian Northern Ry. to remove rails on siding built for Alberta Agencies, Edmonton, Alta.

29,189. Dec. 27.—Amending order 29,139, Dec. 11, which authorized C.P.R. to divert road allowance in n.e. $\frac{1}{4}$ Sec. 32, Tp. 28, Range 5, west 3rd meridian, Sask., at mile 100.2, by substituting 28 for 38, after Tp.

29,190. Dec. 19.—Authorizing Canadian National Ry. to cross trail on River Lot 33, Tp. 46, Range 25, west 2nd meridian, Sask.

29,191. Dec. 26.—Relieving G.T.R. from providing further protection at crossing on Lancaster St., Kitchener, Ont.

29,192. Dec. 30.—Approving Grand River Ry. standard passenger tariff.

29,193. Dec. 27.—Approving plans of Kettle Valley Ry. standard trestle to be built on its Copper Mountain Branch, B.C.

29,194. Dec. 26.—Authorizing Canadian National Ry. to open for traffic, its Oliver Branch, from Oliver to mile 98.5, speed of trains limited to 15 miles an hour; except between miles 36 and 90, where the limitation is 25 miles an hour.

29,195. Dec. 30.—Authorizing G.T.R. to remove Pilon siding, 3 miles west of Casselman, Ont.

29,196. Dec. 27.—Authorizing London and Port Stanley Ry. to build gauntlet track across Mill Creek bridge and Palm St., with switches and crossover tracks and to rearrange Pere Marquette Rd. tracks to give sufficient clearance for poles for the electrification of the tracks.

29,197. Dec. 27.—Ordering Atlantic, Quebec & Western Ry. to turn the room at present used at Paspebiac, Que., as an office, into a waiting room with one window facing the track and another the end of the building, sufficient space for office purposes to be taken off the freight shed.

29,198. Dec. 29.—Extending to Apr. 30, 1920, time within which interlocking plant shall be installed at crossing of Canadian National Ry. by Fort William Electric Ry., at intersection of Victoria Ave., and Vickers St., at intersection of Franklin St., Fort William, Ont.

29,199. Dec. 27.—Extending to Feb. 27, 1920, time within which C.P.R. shall install distant signals where its line crosses Canadian National Ry. at Bonarlaw, Ont.

29,200. Dec. 26.—Approving C.P.R. clearances at Vancouver Ice and Cold Storage Co.'s warehouse, Vancouver, B.C.

29,201. Dec. 23.—Relieving C.P.R. from providing further protection at Aberdeen Ave., Winnipeg.

29,202. Dec. 27.—Approving Fredericton and Grand Lake Coal and Ry. Co.'s bylaw, authorizing Passenger Traffic Manager and Assistant Freight Traffic Manager to issue passenger and freight tariffs respectively.

29,203. Dec. 29.—Extending to June 1, 1920, time within which G.T.R. shall build farm crossing for A. McGuiness, Lot 31, north range of Con. 1, south of Slash Road, Tyendingaga Tp., Ont.

29,204. Dec. 31.—Suspending order 20,859, Nov. 21, 1913, as amended by orders 28,537 and 28,269, Sept. 12, 1914 and Apr. 28, 1919, respectively, re installation of crossing gates at Whyte St., Edmonton Alta., by C.P.R.

29,205. Dec. 31.—Authorizing Canadian Northern Western Ry. to cross, close and divert north and south road allowance between Secs. 30 and 19, Tp. 20, Range 12, west 4th meridian, Alta.

29,206. Dec. 31.—Authorizing Canadian National Ry. to remove diamond at crossing at Spruce Ave., Edmonton, Alta., and lay straight rail; to be operated for 6 months from date.

29,207. Dec. 9.—Dismissing application of Wawota Village, Sask., for order requiring better train service on C.P.R. Reston-Wolseley Branch, with connections at Wolseley with westbound train.

29,208. Dec. 31.—Approving New Brunswick Government's order in council, passed Dec. 9, 1919, authorizing New Brunswick Coal and Ry. Co.'s Passenger Traffic Manager and Assistant Freight Traffic Manager to issue passenger and freight tariffs respectively.

29,209. Dec. 31.—Authorizing Canadian National Ry. to cross and divert north and south road allowance in n.w. $\frac{1}{4}$ Sec. 9, Tp. 24, Range 27, at Norfolk, Alta.

29,210. Dec. 23.—Authorizing Canadian National Ry. to rebuild bridge over Rideau Canal, at mileage 40.10 from Brockville, North Crosby Tp., Ont.

29,211. Dec. 27.—Authorizing C.P.R. to build spur at grade across Scuzog St., Bowmanville, Ont.

29,212. Jan. 3.—Amending order 29,108, Dec. 6, 1919, re crossing of certain highways in Manitoba, by Canadian National Ry.

29,213. Jan. 5.—Dismissing Appledale Progressive Association's application for order directing C.P.R. to erect shelter and platform at Appledale, B.C.

29,214. Dec. 31.—Approving Canadian Northern Western Ry. location, mile 117.94 to 121.11, St. Paul de Metis, Alta., including location of station and closing and diversion of portion of Center Ave., also authorizing crossing of several highways.

29,215. Jan. 2, 1920.—Dismissing application of Wm. Taylor, Richmond, Que., for order authorizing opening of highway crossing over G.T.R. instead of farm crossing provided under order 27,589, Aug. 27, 1919.

29,216. Jan. 2.—Authorizing G.T.R. to remove electric alarm at Jeffries highway crossing near Richmond station, Que.

29,217. Dec. 27, 1919.—Rescinding order 28,630, Aug. 8, 1919, which disallowed C.P.R. tariff C.R.C. 3,369 in so far as it provided for cartage allowance of $1\frac{1}{4}$ c per 100 lb. to Canada Sugar Refining Co., Montreal.

29,218. Jan. 2.—Authorizing Canadian Northern Town Properties Co. to make highway crossing over Canadian National Ry. in s.e. $\frac{1}{4}$ Sec. 4, Tp. 29, Range 7, west 4th meridian, Alta.

29,219. Dec. 31, 1919.—Authorizing Canadian National Ry. to make crossing over tracks on road allowance between Secs. 31 and 32, Tp. 48, Range 19, near Edam, Sask.

29,220. Jan. 2, 1920.—Authorizing Canadian National Ry. to build highway crossing in s.e. $\frac{1}{4}$ Sec. 9, Tp. 26, Range 17, west 3rd meridian, Sask.

29,221. Jan. 2.—Relieving Canadian National Rys. from erecting fences, gates and cattle guards along its line between Toronto and Ruel, and a number of points on its Muskoka, Sudbury and Ruel Subdivisions, Ont.

29,222. Jan. 3.—Authorizing C.P.R. to build spur for Cambrian Coal Co., Elcan, Alta.

29,223. Jan. 3.—Rescinding order 23,095, Jan. 8, 1915, re Canadian Northern Ry. siding for Sterling Coal Co., at mile 312.16, Calgary Subdivision and authorizing removal of spur.

29,224. Jan. 2.—Dismissing Grand Trunk Pacific Ry. application for authority to remove its station agent at Entwistle, Alta., with leave to renew application six months from date.

29,225. Jan. 2.—Relieving Canadian National Rys. from providing further protection at crossing 9 poles west of mile 4, Winnipeg Subdivision, Man.

29,226. Jan. 2.—Relieving Canadian National Rys. from providing further protection at crossing 6 poles west of mile 50, Riding Mountain Subdivision, west of Birnie, Man.

29,227. Dec. 30, 1919.—Approving agreement, Dec. 15, between Bell Telephone Co. and Otonabee Tp., Ont.

29,228. Jan. 5, 1920.—Extending to May 5, time within which C.P.R. may build extension to spur for Saskatchewan University.

29,229. Dec. 31, 1919.—Extending to May 1, 1920, time within which C.P.R. may build a permanent culvert with opening 20 ft. wide, at mile 37.56, near Golden, B.C., as required by order 28,544, July 4.

29,230. Jan. 2.—Dismissing application of Associated Boards of Trade and Saskatchewan Grain Growers' Association for reduction in rates to stations on C.P.R. Weyburn-Lethbridge line, and for the building of uncompleted portion of the line.

29,231. Jan. 9.—Ordering Canadian Freight Association to reinstate by Jan. 15, 1920, rates to Seattle and Tacoma, Wash., in its tariff on freight for export to trans-Pacific destinations.

29,232. Jan. 5.—Relieving Canadian National Rys. from providing further protection at crossing at Letellier, Man.

29,233. Jan. 8.—Authorizing C.P.R. to build spur for Exchange Orange Products Co., and Eureka Planter Co., Woodstock, Ont.

29,234. Jan. 7.—Authorizing Canadian National Rys. to take certain extra lands for right of way and retaining walls for Athabasca St. subway, Moose Jaw, Sask.

29,235. Jan. 9.—Extending to Feb. 15, 1920, time within which C.P.R. may build spur for Vancouver Ice and Cold Storage Co., Vancouver, B.C., as authorized by order 28,807, Sept. 20, 1919.

29,236. Jan. 10.—Authorizing G.T.R. to rebuild bridge carrying public highway over its track at mile 147 near Huntsville, Ont.

29,237. Jan. 10.—Dismissing complaint of Broadview Ratepayers' Association, Burnaby, B.C., against fares charged by the British Columbia Electric Ry.

29,238. Jan. 12.—Authorizing C.P.R. to build spur for Goodyear Tire & Rubber Co. of Canada, Regina, Sask.

29,239. Jan. 13.—Authorizing Hillcrest Lumber Co. to cross under Esquimalt & Nanaimo Ry. at mile 4.5, Lake Cowichan Subdivision, Vancouver, Island, B.C.

29,240. Jan. 12.—Authorizing G.T.R. to use bridge on Lot 21, Range 8, Markham Tp., Ont.

29,241. Jan. 12.—Recommending to Governor in council for sanction, Algoma Eastern Ry. General Train and Interlocking Rules.

29,242 to 29,250. Jan. 13.—Authorizing Canadian National Rys. to build across highway at 9 points on its Munson to Wayne second track, Alta.

29,251 to 29,253. Jan. 12.—Authorizing G.T.R. to use bridges on Lot 10, Range 5, Markham Tp., Ont.; between Lots 30 and 31, Con. B, Scarborough Tp., Ont., and on line of Bethune St., Peterborough, Ont.

29,254. Jan. 14.—Authorizing Canadian National Rys. to cross road on its Acadia Valley Branch, between Secs. 29 and 20, Tp. 26, Range 28, west 3rd meridian, Sask.

29,255. Jan. 12.—Amending order 28,496, July 8, 1919, re location of portion of C.P.R. Langdon North Branch, Alta.

29,256. Jan. 13.—Authorizing G.T.R. to rebuild bridge carrying public highway over its tracks between Lot 19, Con. 8, and Lot 19, Con. 9, Esquimesing Tp., near Georgetown, Ont.

29,257. Jan. 9.—Authorizing City of Regina, Sask., to build foot passenger subway under C.P.R. on Hamilton St.

29,258. Jan. 13.—Authorizing C.P.R. to build spur for P. Burns & Co., Regina, Sask.

29,259. Jan. 13.—Authorizing Canadian Northern Saskatchewan Ry. to build across 8 highways on its Lampman-Peebles Branch, mile 8 to 22.39.

29,260. Jan. 13.—Authorizing C.P.R. to build spurs for Canada Creosoting Co., Trenton, Ont.

29,261. Jan. 13.—Authorizing Toronto, Hamilton & Buffalo Ry. to build spur for Norton Co. of Canada, and C. S. Anderson, Hamilton, Ont.

29,262. Jan. 13.—Authorizing Canadian National Rys. to build across and divert road between Sec. 36, Tp. 28, Range 20, and Sec. 31, Tp. 28, Range 19, west 4th meridian, Alta.

29,263. Jan. 10.—Approving Fredericton and

Grand Lake Coal & Ry. Co.'s standard tariff of maximum mileage freight rates C.R.C. 84.

29,264. Jan. 10.—Approving New Brunswick Coal & Ry. Co.'s standard tariff of maximum mileage freight rates C.R.C. 51.

29,265. Jan. 3.—Authorizing C.P.R. to take certain lands of H. Bousquet for extending siding and station grounds at St. Rosalie, Que.

29,266. Jan. 2.—Approving location and details of Canadian National Rys. station building at Alfred Center, Que.

29,267. Jan. 13.—Approving agreement, Dec. 30, 1919, between Bell Telephone Co. and Barrie-Angus Telephone Co., Simcoe County, Ont.

29,268 to 29,270. Authorizing Canadian National Rys. to build across highway at 3 points on its Munson to Wayne second track, Alta.

29,271. Jan. 14.—Authorizing G.T.R. to build spur for Beachville White Lime Co., Oxford North Tp., Ont.

29,272. Jan. 10.—Ordering G.T.R. to make such changes in boarding its double deck stock cars as will give 3 or 4 in of air space at top.

29,273. Jan. 16.—Relieving Michigan Central Rd. from maintaining day and night watchmen at crossing of Middle Road, near Ruscomb station, Ont.

29,274. Jan. 16.—Authorizing G.T.R. to build bridge carrying highway over its tracks between Lots 14 and 15, Broken Front Concession, East Whitby Tp., near Oshawa, Ont.

29,275. Jan. 16.—Rescinding order 29,011, Nov. 10, 1919, approving location of Canadian Northern Pacific Ry. Kamloops-Vernon-Kelowna-Lumby Branch, mile 66 to 82.22 east from Kamloops Jct., B.C.

29,276. Jan. 16.—Authorizing Canadian Northern Ontario Ry. to rebuild bridge at Orient Bay, mile 44.1 from Jellicoe, Ont.

29,277. Jan. 16.—Authorizing Canadian National Rys. to carry traffic, temporarily, over its MacRorie Westerly Branch from Glidden mile 105.0 to Eaton, mile 115.0, Sask.; speed of trains limited to 19 miles an hour.

29,278. Jan. 16.—Relieving Michigan Central Rd. from providing further protection at crossing of Middle Road, near Comber, Ont.

29,279. Jan. 16.—Approving detail plan of C. P.R. subway at mile 28.3, MacTier Subdivision, Ont.

29,280. Jan. 16.—Ordering on application of Canadian Manufacturers' Association, on behalf of Canadian General Electric Co., Canadian Westinghouse Co., et al, that rating of twice first class for electric light bulbs shown in Express Classification for Canada 4, be reduced to 1½ times first class; change to be effective by Feb. 1.

29,281. Jan. 16.—Rescinding order 26,363, July 24, 1917, re agreement between Bell Telephone Co. and Heath Head & Grey Telephone Co., Grey County, Ont.

29,282. Jan. 19.—Authorizing Canadian Northern Pacific Ry. to open for freight traffic its line from junction with Patricia Bay Line, mile 1.80 to 26.5, from Victoria, B.C.; speed of trains limited to 10 miles an hour.

General order 281. Jan. 12.—Authorizing railways on application of Railway Association of Canada, to issue free or reduced rate transportation to private secretaries of Dominion Government Ministers and of the opposition leader.

The Prince of Wales on the C.P.R. and Other Canadian Railways.

The following letter, written to E. W. Beatty, President, C.P.R., by the Prince of Wales, from Government House, Ottawa, just prior to his departure from Canada, is only now available for publication:—Dear Mr. Beatty:—I am sending today a signed and framed photograph of myself, which I hope you will accept as a very small acknowledgment of your kindness and care during my tour in Canada. I cannot look back upon my journey across the Dominion and back without the warmest admiration for the wonderful efficiency with which it was organized. I greatly appreciated the comfort and smooth working of the train, the thoroughness of all your arrangements, and, above all, the unvarying forethought and courtesy of the C.P.R. staff which travelled with me. For all this I am very grateful to you yourself and to the whole organization under you. Neither I, nor the members of my staff, will ever forget the very pleasant journey which we made under the auspices of the C.P.R. Believe me, yours sincerely, Edward P.

Towards the close of his Canadian tour, the Prince said:—"I have just left

the magnificent train which has transported me across the Dominion, and in which I have lived in such comfort for the last two and a half months, and I should like to take this opportunity of thanking the Canadian Government for all the admirable arrangements that have been made for the tour. I am also very grateful to all the Canadian railways for the care which they have taken of me and for the consideration they have shown in making my 9,000 mile journey so easy for me. Railways seem to be the subject of quite a lot of excitement at present. I am not going to talk about that, but I do know that I could never have got across to Vancouver and back without the Canadian railways. Far more important still, there would have been no Dominion of Canada today but for them. I know of no country in whose history railways have played so important—in fact, decisive—a part."

Canadian National Railways Earnings.

	1919	1918
January	\$ 6,744,018	\$ 4,696,567
February	6,000,342	4,421,504
March	6,827,491	5,710,660
April	6,909,682	7,165,890
May	7,518,244	6,580,745
June	6,009,585	6,868,864
July	7,657,402	5,738,299
August	8,274,882	8,255,942
September	8,627,268	7,058,351
October	9,889,795	8,480,468
November	8,739,457	7,886,384
December	8,828,482	7,289,969

\$91,625,593 \$80,098,633
 Approximate earnings for three weeks ended Jan. 21, 1920, \$5,106,071 against \$4,255,864 for same period, 1919.

Canadian Pacific Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, from Jan. 1, 1919, compared with those of 1918:

	Gross	Expenses	Net	Increases or decreases
Jan. ..	\$13,028,328	\$11,474,816	\$1,553,512	\$ 385,519
Feb. ..	11,064,167	10,083,051	981,116	390,218
Mar. ..	12,374,182	10,885,138	1,589,044	*1,453,737
Apr. ..	13,108,905	11,020,231	2,088,674	*1,366,765
May ..	13,569,411	10,535,650	3,033,761	*654,015
June ..	13,577,274	10,586,852	2,990,421	178,274
July ..	14,720,362	11,723,659	2,996,703	826,692
Aug. ..	15,283,654	11,505,486	3,778,168	569,534
Sept. ..	17,513,691	13,421,771	4,091,920	970,479
Oct. ..	18,296,653	12,948,871	5,347,782	261,945
Nov. ..	17,366,850	14,517,041	2,849,809	*548,663
Dec. ..	17,025,584	15,343,407	1,682,177	*1,128,835

\$176,929,060 143,996,024 \$32,933,036 \$1,569,351
 Incr. \$ 19,391,362 \$20,960,713
 Decr. \$ 1,569,351

Approximate earnings for three weeks ended Jan. 21, 1920, 09,339,000 against \$8,696,000 for the same period 1919.
 *Decrease.

Grand Trunk Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, from Jan. 1, 1919, compared with those of 1918:

	Gross	Expenses	Net	Increases or decreases
Jan. ..	\$ 4,402,229	\$ 5,118,234	\$ 716,005	* \$1,794
Feb. ..	4,088,028	4,397,953	309,952	660,229
Mar. ..	5,513,593	4,673,298	840,295	762,766
Apr. ..	5,857,537	4,601,550	750,987	92,889
May ..	5,272,060	4,603,411	668,649	*36,495
June ..	4,947,795	4,644,659	303,136	*707,067
July ..	6,021,746	4,886,147	1,135,599	*35,347
Aug. ..	6,719,921	5,043,662	1,676,259	*101,890
Sept. ..	7,004,277	5,611,125	1,393,152	164,047
Oct. ..	7,136,376	5,764,044	1,372,331	189,280
Nov. ..	6,092,603	5,589,730	502,873	*398,214

\$62,556,165 \$54,933,813 \$7,622,352 \$508,404
 †Deficit. *Decrease.

D. B. Hanna on the Canadian National Railways System, Etc.

During the early part of January, D. B. Hanna, President, Canadian National Rys., spoke at several places in Ontario, including Hamilton, London, St. Thomas and the Timothy Eaton Memorial Church, Toronto. In speaking at the Stratford Chamber of Commerce dinner, he said:—

"There is no subject I know of that is of more importance than that of transportation; it is peculiarly a basic subject as far as this Canada of ours is concerned. Canada has an area of 3,729,000 square miles; a population estimated at 8,593,000, which is only equivalent to 2 persons for every square mile. In the United States there is an area of 3,056,789 square miles, and a population of 115,000,000, according to figures I received from the U.S. Consul in Toronto yesterday; so that that great country has an equivalent of 38 persons to every square mile of territory. The last census gives a population to Great Britain and Ireland of 45,400,000, with an area of 120,580 square miles, which is equivalent to a density of 377 persons to every square mile. It will be seen, therefore, that Canada has a long way to go in order to measure up to the U.S., and a much longer road to go to measure up to Great Britain and Ireland. But as regards forests, fisheries, mines, coal and other minerals, Canada is very much in excess of the U.S. In population Canada has only about 7½% that of the U.S., but in railway mileage we are about 12% of theirs. On this basis it might be argued that we have more railway mileage in operation than is absolutely necessary at present, and Canada has probably overdone herself in that regard. It must be remembered, however, that very little new mileage was added during the war, to Canada's total, and much of the intensive construction which was done prior to the war has not added a very great deal to the Dominion's wealth in industries, food production or population. A new era has now developed, and if the same courage and loyalty that permeated Canada in its imperishable war activities is directed to the pursuits of peace, we will make a far greater development than we have done in the past.

"It is not true to say that Canada has more railway mileage than is necessary. That may be true in isolated cases, but it only represents a small percentage of the total mileage constructed, where duplication has been permitted. But think of the country to the north, in both Ontario and Quebec; do not overlook the fact that there are provinces west of Ontario where there are millions of acres of land which has not yet been brought under cultivation. We know that land cannot be profitably cultivated where the haul is 50 miles from the railway, yet, due to the insistent demand for more production during the war, many farmers rose to the heart-breaking task of hauling their products to the railway, in some cases over 50 miles away. That condition cannot always continue, and therefore I say let no one imagine that railway building is over in Canada. On the contrary, I am convinced that in the years to come we are going to have as much additional mileage built as is now in operation. There will, of course, be greater judgment displayed in the building of future lines, duplication will not be permitted, and

inasmuch as there are only to be two companies competing for the new territory, a sane policy will obtain, and the country will be the gainer by it.

"My reason for saying these things is, that Canada is on the world's map as never before; immigration will begin again in a larger volume; and more than ever Great Britain and her allies will depend on Canada for foodstuffs. Thus, trade commissions, boards of trade, chambers of commerce, and other activities regarding industrial operations are beginning to grow, and new enterprises are being established throughout the Dominion. In the years to come we are going to be less dependent on U.S. industries to supply us with goods and manufactured articles, which we will manufacture ourselves. There is too much raw material going out of this country to be manufactured elsewhere and we must find means to correct that condition. With a better understanding between capital and labor, with that spirit governing our joint activities; we cannot but feel that Canada—Canada, the promised land—in the years to come, has a profitable development before her and her people. To me the development of this Canada of ours is a never ending, interesting story, because of what I have seen, particularly in western Canada, during the past 35 years.

"I wish to speak to you about the Canadian National Rys., as I find the Canadian people are not yet fully seized with the importance of these railways to the country, and they have failed to grasp their individual responsibility to assist in the success of the Canadian National Rys. Speaking in regard to my own experience, and particularly in regard to the west, I am always very diffident about using the personal pronoun "I," and yet sometimes one cannot get away from it. Strange as it may appear to you, I am a very humble person, but, I am a Scotchman, and that is one of the characteristics of the race. When I hear laudatory things said about myself, I am always reminded of an incident that occurred in my early railway career, in the old land. As a young lad, selling passenger tickets at a place called Barrhead, where my mother was born, in Scotland, I was carrying on my work in the usual way when an old lady came to the ticket window to purchase a ticket to Glasgow. She looked at me very intently for a moment or so, and said, "They tell me, laddie, you are a son of Janet Blair's." I said, "Yes, I am." She went on "I kent your monther when she was young, and she was a fine, handsome, strapping woman—you are no a bit like her." So, I carry through life that humble spirit, because, knowing the visible truth that, "pride goeth before a fall," probably it is just as well not to tumble into it any more than you can help.

"The Canadian National Rys. System is composed of the Intercolonial Ry., the Prince Edward Island Ry., the National Transcontinental Ry., and the Canadian Northern Ry.; having a total of close to 14,000 miles of lines, and operating in every province of the Dominion. As to the Intercolonial—what need I say? It is there. It was originally built as a military road. It has been performing a service and I do not think the people of this country exactly understand.

Strange as it may seem to a great many people, the Intercolonial Ry. is a very valuable property, and there is a time coming, and not in the distant future, either, when both ends can be made to meet; that is to say, the earnings will pay the expenses; and we will hope a little later to see it make a little bit of profit. It has got an organization which is just as good as any organization anywhere in Canada or elsewhere, for that matter. You know all about the National Transcontinental Ry. It was a subject for political discussion for many years; but it has been built, and, strange to say, it is there, too. There is a development going on which is perfectly amazing; lumber mills are being built in every direction; settlers are going in; industries are being developed; and a through freight and passenger service has been inaugurated that in time to come will be of some advantage to the whole system.

"Do not let us forget that the Intercolonial and the National Transcontinental railways are two assets that can be made in the years to come, much more valuable than they are today, from the standpoint of dollars and cents. Had I time I could tell you what service those railways rendered during the war, and you would be amazed. Prince Edward Island was a contribution to Confederation, and let me tell you that 98% of the arable land of that little province is under cultivation, at one time or other during the year. It is an amazing little island; full of business, although handicapped by being away from the main land.

"The Canadian Northern Ry., is, after all, the mainstay of the system for the time being. In the Canadian Northern you have a property which I know all about. I am exhibit "a" of that property. I turned the first wheel in 1896; and I have seen a little property grow from 100 miles, a single locomotive and 50 cars, to what it was in 1918, when it was turned over to the government. What has it done in all that time? There has been a great deal of loose talk about the Canadian Northern being so much junk, and being pitchforked into the government's hands to be got rid of, and that the government has had to pay for the privilege of taking it over. The Canadian Northern began, as I said before, in a small way. Railway men who are here will appreciate this joke because it requires a railway man to understand it. Time-table 1, which I prize with a great deal of satisfaction, says, 'No. 4 will not leave until No. 3 has arrived.' In those days we had pretty dry times; we were a long way from being flush with money, but I could not help working in a little humor, and of taking advantage sometimes of our richer brother, the C.P.R. In 1895-6 the safety coupler was not what it is today; we used the old link and pin, and I can remember our conductor, old Dad Ritsteen, who is still with us, and is one of the type of conductor who has gone by the board. Dad used to wander into the C.P.R. yard, where we got our freight, and occasionally he would pick up a link and pin, so that he could always keep ahead of his requirements in a fairly life sized barrel that he kept in the baggage car. In fact, it was a physical example of the widow's cruise of oil, because the more

he took out, the more there always seemed to be in that barrel. And the singular thing of all was, to my recollection, I never bought one link or pin. The C.P.R. cannot make a claim on us now, I think it is outlawed, and so I am free to tell the story.

"In those days we had to be very economical. I practically lived on the railway; I was not only general superintendent, but master mechanic, roadmaster, and traffic manager. I looked after whatever lands there were to sell, and did any other thing that nobody else would do. I took a great deal of pride in doing that work, because I was seeing, as so few people had been able to see, how that country would grow. I looked upon it as such a romantic thing, and enjoyed every minute of it, very much to the neglect of my own family. In the spring of 1897 we were bowling along with what they used to call the 'Muskeg Limited,' with 12 or 14 freight cars, and 2 passenger cars in the rear, taking up into the Dauphin country a number of people from Huron and other Ontario counties to locate there, and they are doing well. A stray heifer ran across the track, and the locomotive caught it by the legs and threw it over to one side, but it was not killed. The train was stopped and I went forward with the conductor to see what was the trouble. We found the heifer lying there, the brakeman happened to be a butcher, and on the train was another butcher belonging to the construction department. I got them together and said, 'Let us kill this animal, dress it, and take it to the construction camp.' The passengers got out and stood around while the two butchers tackled the job, and in 16 minutes they had it hanging up in a box car, in quarters. In the meantime the owner turned up, and he was the most wrathful man I ever met in my life, his language was such that I could not repeat it. I told him we would settle his claim and in that way calmed him. We took the carcass along and I sold it to the construction department, and paid the man's claim in full, establishing a principle, probably the first time in railroading, by paying the claim in full without disputing it, and I had \$4 to the good. And so, all during those years, from 1896 to 1902, when I moved from the west to the east, I saw that country grow, particularly the territory tributary to the Canadian Northern Ry.

"When the government took over our property there were between 9,000 and 10,000 miles of railway; we had placed on the map of Canada over 600 towns or villages; we had made it possible to find homes for hundreds of thousands of new settlers. We saw the revenue of that railway grow from \$67,000 during the first full year of operation in 1897, to \$44,500,000, we handled millions of tons of freight in that time; and we performed a service, and I say it from the knowledge that I have, second to none; not even the C.P.R. in the sphere in which we were located. I am a great believer in the C.P.R.; I consider that company is a credit to Canada, we are all proud of it, because it is the biggest thing in Canada, and under the British crown, its organization is all that could be desired, and it has done a service to this Dominion, particularly in the west, that was only duplicated by the Canadian Northern.

"Much of the mileage the Canadian Northern had built was practically completed about the time war came on.

When the war came, immigration ceased, we were taking people out by the tens of thousands, and others were not going to take their places, therefore, that mileage has still to be properly developed, and the day will come when the Canadian Northern Ry. will come into its own. There is no institution in Canada, no government in Canada, that has spent as much money as the old Mackenzie and Mann organization, in getting to know something about that western country. We can tell you all about it. We know, just as well as any government can tell, just how far north you can go and raise grain, and we have proved it; but we are a long way from being finished. That western country is a long way from being developed, notwithstanding the mileage that has been developed. There are lines to the north that are still to be brought into real operation, and when that is done, and that must be done, we are going to have in Canada such operation through that western country that will have its effect in every industry in Ontario and Quebec, and right down to the sea.

"Why do I tell you these things? It is because I want you to understand exactly what you have got. There is not one of you here who is identified with any business interest who has not got personal responsibility in the success of this national railway of ours. I do not mean by that to say we have to ignore the C.P.R. There is plenty of business in this country for both railways, but I want everyone here to know as I have told the people at London, St. Thomas and Toronto, that, just in proportion as the people here and elsewhere realize the responsibility that the ownership of 1,300 odd miles of railway casts upon them, will they lend their support, and be doing something in their own and industrial interests. I want you to feel that in what you are doing you are not doing anything to assist me, but to assist the organization.

"The Canadian National Rys. are very strong in the west. Let me just go back a moment to speak of the Canadian Northern Ry. The layman knows the value of railway property, if he sees two lines of railway running in parallel order; on the one line there is a locomotive of the same standard as on the other line; one hauling 10 cars and making a fuss over it; another hauling 25 cars and doing it with, 'All right, I thank you, we are doing very well.' That is the condition of the Canadian Northern lines in the west, with a grade going through the mountains, with the exception of some 28 miles, of five-tenths of 1%. Let me illustrate what that means. In 1915 the Senators and members of parliament were taken on a trip to the Pacific coast. I have always said, and repeat it, that if they talked less in Ottawa, and did a little more travelling, so as to know something more of the country, we would think a great deal more of them. I think the ignorance of some members of parliament is colossal, in regard to the Dominion as a whole. On that trip we hauled 15 cars, consisting of sleeping cars, dining cars, and a lounge car where they could have enjoyment, speeches, and reminiscences by the old time members of parliament. Fifteen cars were hauled by a single locomotive through the mountains to Vancouver. Consider what that means. How many of you have been to the coast? How many have travelled over the Canadian Northern Ry? (One). You should get

the Victoria Cross for that. Those who have been to the coast have seen how the C.P.R., with 6 or 7 cars, struggled to get up the grades across the Fraser River; whereas we can take 15 cars with a single locomotive. That means that the Canadian Northern Railway comes into its own, as it is going to come into it, as sure as I am standing here. It is but a question of time. We have a line of railway that will do 150% more business than our good friends across the Fraser River and do it at less cost. If we have any faith in our country at all, it is only a question of time when this property of yours can be made a valuable asset to Canada.

"We are strong in the west; we are strong in the east; but we are weak in the centre of the system. That is where the Grand Trunk will fit in to a nicety. I am not going to discuss the why and wherefore of that; it is not my province. I consider the government acted with great wisdom when it made up its mind that no more money was to be advanced to carry on operations with respect to the Grand Trunk and Grand Trunk Pacific, but that it had better take over the property. That is what it has done. It was the logical thing to do; and it is going to mean everything to the Canadian National Rys. system. The Grand Trunk is linked up with all industries of any importance in Ontario, and Quebec, with a continuous roll of traffic both east and west, and when the national system gets the benefit of the long haul you can see where we will be. We are not going to lose much sleep over our friends the C.P.R., that will be their business. Our business is to see that the Canadian National Rys. are considered first. In that you must play your part.

"Here we have a complete system. It means in figures to you that Canada will have an investment of about \$1,000,300,000. What does it get for that? Let me read some figures; 22,375 miles of railway, doing business in every province of the Dominion, and 1,881 miles in the United States; gross earnings, assuming consolidation with the Canadian National Rys., of about \$200,000,000 with 90,000 employees; 3,020 locomotives; 3,200 passenger cars; 120,000 freight cars; and this year would have handled 60,000,000 tons of freight, and 22,500,000 passengers. Now, I submit that is a pretty big property for any man to handle. Yet, after all, it is very simple. There is no earthly reason why the same management cannot be given to this property as the C.P.R. gives to its road. The only way the Canadian National Rys. can be given that management is that there must be no interference. I do not mean from that that the government should not be fully advised; I recognize as any man does the supremacy of the government, it must be advised of everything that is being done with its property; it must know the why and wherefore of certain things, as it has to advance moneys from time to time for capital expenditures. I submit with all deference to my friend Mr. Morphy here, that the fact he is a member of parliament does not give him any sort of privilege to come to me, or to say to any of my directors that this, that, or the other thing ought to be done, or that somebody ought to be appointed to take the place of somebody else, because that person does not fill the bill. I tell you, as far as I am concerned, and so far as the other directors

are concerned, when that situation begins to creep in, we will not creep out, but we will jump out. I am glad to be able to say that after 5 months experience with the present government we have no interference of any kind; on the other hand, it has been most liberal in its approval of moneys required for capital expenditure, and for the general betterment of the government's property.

"There is no serious trick in the operation of railways; the question of large mileage, large revenues, does not so much matter; after all it is organization. I know that on the Intercolonial, the National Transcontinental, the Canadian Northern, and on the Grand Trunk, there are men equal to the best. Their ability is not in question; their loyalty is beyond any doubt; and if governed by a proper board of management it cannot be anything else but a success. It all depends on you, and others, to see to it that the organization is not interfered with, and that the board will be permitted to carry on what they conceive to be proper and in the interest of the Dominion as a whole, not in the interest of any individual part of it.

"In addition to the railways, the Canadian National Rys. are in the steamship business. At present we are operating 23 steamships, doing business to the West Indies, South America, Cuba; across to London, Glasgow and Liverpool. We contemplate another service to the Mediterranean, and have just commenced a service from the Pacific coast to Australia. A year from now we will have over 60 ships, and we will have the largest, by long odds, floating fleet flying the Canadian flag. There will be over 300,000 tons floating, a year from now, in the transport of freight. The principal thing we are concerned about is this, the trade of Canada must be developed, there must be new avenues for its output, and our business is to come in contact with chambers of commerce, boards of trade and manufacturing associations, so that we may know along what channels they are developing their business, and the points they desire to reach. We are not in the benevolent business, by any means. We are not doing something for nothing, that would be strictly against my nationality. We do expect that for every dollar we spend, we will at least get, not only a dollar back, but enough to pay fixed charges for the ships that are operating in the business. In addition to the freight ships we will have passenger ships. We must be properly equipped, and as a national system we must be in a position to not only carry on our business in every province of the Dominion, but we must be able to see to it that on the Pacific coast and north Atlantic we can carry the products of our allies, or of our enemies if need be. We must have a complete system and the only way we can complete it is by having ships going in every direction, carrying freight, and in time to come, passenger ships.

"I have not been talking about what it costs to do these things, so I will tell you something about that 'The laborer is worthy of his hire.' I have often quoted that in my own family, because sometimes I think some get more than they ought without working very much for it. Due to conditions over which we had no control, the Canadian National Rys. system began operations under a cloud, as it were, because we were only in operation for some two months when a gentleman named McAdoo loomed on

the horizon. I am not going to say a word about the rates of wages for which he was responsible. I am a believer in the doctrine that the laborer is worthy of his hire, I am a believer in paying good wages, because I think by doing that we get better service and a better class of employes. However, if we do pay good wages, if we have to pay excess amounts for our coal, and other materials which enter into the operation of a railway, but do not get enough revenue to meet those bills, what is the answer? 'Lift the freight rates.' The other day the wheat board raised the price of wheat 50c a bushel over night. There is not one industry represented here, but, if it finds the cost of operation is so much greater than it was before, will increase the price to the consumer, and I do not blame them, as it is the proper thing to do. What about the railway companies? The fact is that the revenue per ton mile is actually less today than it was in 1907, while wages have gone up in that time, 142%. Now, I submit to you, there is a question for us all to face. Would you rather pay the deficit in taxes, or would you rather make the man who gets the use of the railway pay the bill? It is a simple question, and the answer is very simple, too. There is no country in the world, as far as I know, that has lower freight rates, not even excepting the U.S., than you have here in Canada.

"Sometimes great truths can be brought home to people by homely illustrations. Here is a cigar; say it cost 10c; yet Canadian railways are compelled to haul a ton of freight 12½ miles to earn enough to buy such a cigar. Your chairman, Mr. McDonald, may make a complaint to his railway agent that he is not getting freight in as promptly, or that freight is not going out as promptly, as he would like, and the agent, as a good agent, being enquiries to find out what is the trouble, and he writes a reply on the typewriter, puts it in an envelope and places a postage stamp on the letter, which costs 2c. The Grand Trunk has to haul a ton of freight almost 3 miles to earn the 2c which it cost to put that stamp on the envelope. It is such illustrations that bring home to us exactly what is being done in this country by the railways; yet every time the question of an increase in rates arises, chambers of commerce, boards of trade, and institutions of one kind or another are on their toes, and I do not blame them. The facts must be placed before them, and the fact is that this year the Canadian National Rys. have a payroll of \$21,000,000 greater than it was last year, due to the increase in wages paid to our employes. I am not questioning that, I am glad to see it, I like to see proper wages paid and have stood for that all my life and am too old now to change. I say to you, as I have said to other boards of trade, there must be equilibrium between expenses and receipts, and so the question is bound to come up at a later period. We may not be so jovial as we are tonight when that time comes. Let me say further that the total increases of wages paid by all the railway companies in Canada amounted to \$77,000,000 last year, nearly \$10 per head of the whole population of Canada. Other costs have gone up in proportion. To me, there is nothing so heartrending as to find, month after month, after the work of our organization in regard to the hauling of freight, that when the bills are paid we

are worse off than nothing at the end of the month. Figures in red ink have a very distressing effect on me; and I am hopeful, as I go from place to place and preach the doctrine of national railways, and let all the people know what they have, that they will at least do one thing; and that is, they will remember they have a railway and it is their duty to support it.

"There are many other features about the Canadian National Rys. that I would like to tell you about, but there is not time, this is a social night and we are going to have some more music. I want to say this about Canada as a whole, it is a great subject to me, I have been away in Sydney, Nova Scotia, and in Sidney on the British Columbia coast, I have been identified with railways in this country since 1882; I have seen so much change, and so many developments, that I feel extremely confident that this country is a real promised land, it is a country of great potentialities, and it is up to us, particularly of the younger generation coming along, to see to it that we develop it along proper lines; not only along material lines, but along spiritual lines. If we keep that ideal before us, we may be very sure that wherever we may go outside of Canada, we will be able to hear things spoken well of us.

"The management of the Canadian National Rys. is a very serious thing. There will be some changes when the Grand Trunk comes under the control of the national lines. I do not know what the government's views are in that regard; I do not think it has any views about it; I do not mean that in a humorous way. I mean it probably has other things to attend to; but it is going to have the biggest thing in Canada very shortly, to think about—bigger than the government itself. I do not know what the government proposes to do, whether the Canadian National Rys. will be operated by a board of directors, or by a board of management, or by a commission, or who is going to be in control. Personally, it will be my pleasure to render assistance to any one who may succeed me. I have no expectation that I shall be the head of that organization, I do not expect it. Whoever it is, I shall be glad to render him every assistance possible, because I have unlimited faith in this country of ours. I know that Canada can be developed. I am optimist always, I do not think there is room in this country for a pessimist, if there is, he ought to be railroaded out of the Dominion. Believing what I do of Canada, having seen what it has already done; just as sure as I stand here, the railways are just as important as the nation itself, and the development of one will mean the development of the other; and what you are doing here in your own city, what others are doing elsewhere, is contributing towards the time when that great railway property, the Canadian National Rys., will be considered one of Canada's most valuable assets."

Railway Lands Patented—Letters patent were issued during Dec., 1919, for Dominion railway lands in Manitoba, Saskatchewan, Alberta and British Columbia, as follows,—

	Acres.
Alberta and Great Waterways Ry.....	8.04
Canadian Northern Ry.....	962.00
Canadian Pacific Ry. roadbed and station grounds.....	72.46
Total	1,042.50

Mainly About Railway People Throughout Canada.

W. J. Babe, for several years a Michigan Central Rd. conductor at St. Thomas, Ont., has been appointed Deputy President of the International Brotherhood of Railway Trainmen, and will undertake the work supervised formerly by the Vice President, Jas. Murdock, who was appointed recently to the Dominion Board of Commerce. Until his present appointment, Mr. Babe was general chairman, of the Brotherhood's grievance committee.

W. R. Baker, C.V.O., formerly Assistant to President, and Secretary, C.P.R. Co, returned to Canada early in January, via New York, after an extended visit to Europe. He has been re-elected President, Royal Montreal Golf Club.

E. W. Beatty, K.C., President C.P.R., left Montreal by special train, Jan. 13, for a trip of inspection over the company's western lines. He arrived at Port Arthur, Jan. 18, where he was met by D. C. Coleman, Vice President, Western Lines, who accompanied him to the Pacific coast. Mr. Beatty was expected back in Montreal during the first week in February.

F. Brinkman, Yardmaster, Pere Marquette Rd., St. Thomas, Ont., was elected Mayor of that city, Jan. 1.

Acton Burrows, Proprietor and Editor, Canadian Railway and Marine World, who has been Chairman of the Canadian Press Association's Trade and Class Section for the past four years, has been unanimously elected President of the newly organized Canadian National Newspapers and Periodicals Association.

Sir Geo. Bury, ex-Vice President, C.P.R., now President, Whalen Pulp & Paper Co., Vancouver, was reported in an Ottawa press dispatch of Jan. 5, to have been appointed by the Dominion Government as Canadian representative to advise the British members of the Reparation Commission as to Canada's claims for damages suffered during the war. This report had not been officially confirmed up to the time of going to press.

Hon. J. A. Calder is acting Minister of Railways and Canals, at Ottawa, during Hon. J. D. Reid's absence in Florida.

E. Chandler, Foreman, Bridge and Building Department, G.T.R., Stratford, has retired after 42 years service with the company. On Dec. 31, he was entertained by a number of his associates and presented with a set of chairs.

Mrs. Cochrane, widow of Hon. Frank Cochrane, some time Minister of Railways and Canals, has gone to California, to spend several weeks.

W. J. Cowan, formerly of the Cowan Construction Co., which carried out several contracts on the Canadian Northern Ry. Western Lines, and who died at Cannington, Ont., during the elections for the Dominion Parliament in December, when he was one of the conservative candidates; left an estate valued at \$191,908.09. **R. J. Mackenzie**, a former director of the Canadian Northern Ry., and a son of Sir William Mackenzie, formerly President of that company, and **A. J. Reid**, of the C.N.R. legal staff, are the executors.

Baron Cunliffe, Governor of the Bank of England, who died suddenly in London, Jan. 5, was a director of the North Eastern Railway Co. of England.

Chas. P. Disney, whose appointment

as acting Engineer of Bridges, Eastern Lines, Canadian Northern Ry., Toronto, was announced in our last issue, was born at Montreal, June 11, 1877, and from 1902 to 1905 was bridge draftsman, Dominion Bridge Co., Montreal; 1905 to 1906, steel checker, Locomotive & Machine Co., (afterwards Montreal Locomotive Works), Montreal; 1906 to 1907, taking a course at Institute of Technology, Boston, Mass.; 1907 to 1914, designing and estimating, Bridge Engineer's office, National Transcontinental Ry., Ottawa; Oct., 1914 to Sept., 1915, in bridge department, Intercolonial Ry., Moncton, N.B.; 1915 to 1919, on military service, being for 18 months a sapper with the Canadian Engineers, and then 3 years consecutively, Lieutenant and Captain in the Royal Engineers, his service in France being continuous for four years.

J. L. Englehart, Chairman, Timiskaming and Ontario Ry. Commission, left Toronto Jan. 7, for Santa Barbara, Cal., intending to remain there until May. His resignation has not been accepted by the Ontario Government, but it is said that he will not withdraw it, as he is determined to retire, on account of the state of his health.

Geo. H. Ham, of the C.P.R. headquarters staff, left Montreal, Jan. 13, for the Southern States, expecting to be away about three months.

D. B. Hanna, President, Canadian National Rys., left Toronto Jan. 17, with Mrs. Hanna, and their two daughters, for Miami, Florida, expecting to remain there about three weeks.

Anton Lund Hertzberg, whose retirement from C.P.R. service was announced in our last issue, died at Toronto, Jan. 31, after a short illness. He was born at Horton, Norway, April 30, 1855, and came to Canada early in 1880, since when he was, to 1883, in G.T.R. service. In 1883 he was appointed Chief Engineer, Credit Valley Ry., and Toronto, Grey and Bruce Ry., and when they were taken over by the C.P.R., he remained with that company, as Resident Engineer at Toronto, and was for two years Engineer, Maintenance of Way Department, Montreal, after which he was appointed Engineer, Ontario Division, later Ontario District, at Toronto. He retired from active service Jan. 1, after 37 years of continuous service with the company. The funeral, which took place at Toronto, Feb. 2, was attended by a number of his former colleagues.

Gerald Hiam, District Freight Agent, C.P.R., Cleveland, Ohio, was married at Fort William, Ont., recently, to Miss D. C. Young, daughter of Lt.-Col. S. C. Young.

Miss Dorothy C. Jones, elder daughter of F. W. Jones, of Victoria, B.C., who for many years occupied prominent positions in the C.P.R. service at Winnipeg, was married Jan. 3, to Lt.-Commander D. S. Lambert, R.N., son of the late Major General Lambert, C.B., of Hampshire, Eng.

Zebulon Aiton Lash, K.C., Senior Counsel, Canadian National Rys., died at Toronto, Jan. 24 after an illness lasting several weeks, and culminating in a stroke of paralysis, Jan. 11. He was born at St. John's, Nfld., Sept. 29, 1846, and educated there, at Dundas Ont., and Toronto University and was called to the Ontario bar in 1868, and made a

Q.C., in 1879. He was appointed Deputy Minister of Justice for Canada in 1872, under Hon. Alex. Mackenzie's ministry, resigning in 1876, and has since been a partner in the legal firm of Blake, Lash, Anglin and Cassels, Toronto. He was for many years a director of the Canadian Northern Ry. Co., and its General Counsel, and at the time of the taking over of the railway by Canadian National Rys., he was a director, and Vice President and General Counsel. He was also President, Great North Western Telegraph Co., a director of the Sao Paulo Tramway, Light and Power Co., Mexico Tramway Co., Rio de Janeiro Tramway, Light and Power Co., and a number of other companies, and also of the Canadian Bank of Commerce and National Trust Co., as well as occupying positions on the boards of Toronto University and several other public institutions. He was buried at Forest Lawn Mausoleum, Toronto.

James McGregor, Superintending Engineer, Halifax Ocean Terminals, Canadian National Rys., is visiting in Scotland and expects to spend some time there.

R. Marpole, General Executive Assistant, C.P.R., Vancouver, B.C., and Mrs. Marpole, left there, Jan. 12, to spend some time in Southern California.

Flight Lieut. J. A. Middleton, whose death as a wounded prisoner in Germany, in June, 1917, was reported only recently, was born at Toronto in 1888, and educated in Natal, South Africa, and Edinburgh, Scotland. In 1906 he joined the C.P.R. engineering staff, and was engaged on bridge work in British Columbia at the outbreak of war. He enlisted in Lord Strathcona's Horse, and went to France with that regiment, transferring later to the 7th Cameron Highlanders. Having joined the air service, he served as a pilot with the Royal Flying Corps in 1916 and on March 24 of that year, during a heavy enemy attack, his machine was forced down within German lines. A younger brother, Lieut. A. S. Middleton, who died of wounds after the battle of Loos, in France, was formerly on the Canadian Northern Ry. engineering staff.

R. P. Ormsby, Secretary, Canadian National Rys., expects to leave Toronto early in February, to spend about two months in England.

F. O. Parent, agent, G.T.R., Pembroke, Ont., died suddenly at Rockland, Ont., Jan. 12. One brother, F. A. Parent, is agent, G.T.R., Casselman, Ont.

F. H. Phippen K.C., is expected to return to Toronto, from England, about the middle of February.

J. A. Pratt, station agent, Canadian National Rys., Riviere du Loup, Que., died there suddenly, Jan. 23, aged 64. He was in Intercolonial Ry. service for several years.

Hon. J. D. Reid, Minister of Railways and Canals, and Mrs. Reid, left Ottawa Jan. 23, for St. Augustine, Florida, to be absent about a month.

F. Rioux, formerly Assistant to President, Reid Newfoundland Co., St. John's, Nfld., and who went overseas in 1916 as a second lieutenant in the British Army Service Corps, was released from military service recently and has been visiting friends at St. John's, subsequently returning to Montreal, where he will live in future.

Lieut.-Col. Blair Ripley, C.B.E., D.S.O., whose appointment as Engineer, Ontario District, C.P.R., Toronto, was announced in our last issue, was born at Oxford, N.S., Aug. 29, 1880, and was from 1901 to 1903, Assistant Engineer, Canadian Northwest Irrigation Co., Great Falls & Canada Co., Alberta Ry. & Coal Co., and St. Marys River Ry., in Alberta and Montana, respectively; 1903 to 1905, Chief Engineer of Construction, St. Marys River Ry. in Alberta, and from 1904 to 1905, also Chief Engineer of Construction, Alberta Ry. & Irrigation Co.; 1905 to 1907, Resident Engineer on Construction, Grand Trunk Pacific Ry. in Manitoba and Saskatchewan, and Assistant Engineer on harbor work, G.T.P.R., Prince Rupert, B.C.; 1907 to May 1, 1916, Resident Engineer on grade revision, C.P.R., Maple Creek to Medicine Hat, Alta.; Resident Engineer on field work, Lethbridge viaduct, C.P.R.; Assistant Engineer in charge, Old Man River viaduct, C.P.R., Macleod, Alta.; Assistant Engineer in charge, Outlook viaduct, C.P.R., Outlook, Sask. On the completion of these works he was sent by the C.P.R. to Nova Scotia to report on betterments and improvements for the Dominion Atlantic Ry., and to organize and prepare for the replacement of some large and difficult bridges on the waters of the Bay of Fundy. In 1912 he was appointed Engineer in charge of Grade Separation, C.P.R., North Toronto. In 1916 he was appointed Lieutenant-Colonel of the Canadian Railway Troops 1st Battalion, raised for general railway and bridge construction work at the front. He was given the D.S.O. for services in the field and at the close of the war was made a Commander of the Order of the British Empire.

J. K. L. Ross, director, C.P.R., and who recently retired from the Dominion Steel Corporation's board of directors, has been elected a director of the Consolidated Mining and Smelting Co. of Canada, succeeding the late W. D. Matthews, who was also a C.P.R. director and father of Mrs. Ross.

Hon. N. W. Rowell is acting Minister of Public Works at Ottawa.

W. A. Sibbett, who was engaged by the Colombian Government recently to survey the harbor at Barranquilla for extensive water front improvements, was born at Bracebridge, Ont., Nov. 4, 1890, and educated at Barrie, Ont., and Toronto University graduating with honors in civil engineering in 1911. He qualified as an Ontario land surveyor in 1912, and after spending some time on municipal work was engaged as a surveyor on the C.P.R. at North Bay, Ont. In 1915 he surveyed harbors in British Columbia for the Dominion Government. He enlisted for active service in 1915 and went overseas as lieutenant in the 122nd Muskoka Battalion, just prior to which he qualified as a Dominion land surveyor.

Mrs. Somers, wife of G. O. Somers, died at St. Paul, Minn., Jan. 12, and was buried at Toronto. Mr. Somers, entered railway service at Toronto in 1879 as telegraph operator, Northern Ry., and was subsequently assistant agent, relieving agent, station agent, and clerk to Superintendent of that road; from 1880 to 1882 he was in private business in Chicago, Ill.; 1883 to 1885 successively, clerk in General Freight Department; acting General Baggage Agent, and chief clerk, General Passenger and Ticket Department, C.P.R., Winnipeg; 1886, chief clerk, General Passenger and

Ticket Office, Michigan Central Rd., Chicago, Ill.; 1887, Travelling Passenger Agent, Duluth, South Shore and Atlantic Ry., Marquette, Mich.; 1887 to Sept., 1894, successively chief clerk, General Passenger Department, and Assistant General Freight Agent, Great Northern Ry., St. Paul, Minn. In Sept., 1904, he was appointed General Freight Agent, Great Northern Ry., and later was transferred to a similar position on the Chicago Great Western Rd., which position he resigned in 1912 to enter the Canada Bond Co., Toronto. Shortly afterwards he resigned and returned to the United States and has latterly been in United States Railroad Administration's service.

R. W. Stovel, who was appointed Consulting Engineer, Westinghouse, Church, Kerr and Co., recently, was born at Toronto Feb. 22, 1877 and educated at Upper Canada College Toronto, Ridley College, St. Catharines, Ont., and McGill University. He entered Westinghouse Church, Kerr & Co.'s service in 1898, and all of his work has been in the U.S., with the exception of the design and construction of the C.P.R. passenger terminal and steamship pier at Vancouver, B.C. He enlisted for active service with the U.S. Army in Oct., 1917, and went to France with the Chief Engineer of the Transportation Service, and in Aug., 1918 was appointed Electrical and Mechanical Engineer in charge of the Pier Utilities Branch, Terminal Facilities Division, and in the following month was made chief of that division in charge of all French terminal facilities under the U.S. Army Transport Service's jurisdiction, with the rank of lieutenant-colonel.

Thomas Dennis Utley, whose appointment as Car Foreman, C.P.R., Weyburn, Sask., was announced in our last issue, was born at Leytonstone, London, Eng., Nov. 1, 1890, and entered railway service, Jan. 5, 1907, since when he has been to Mar. 4, 1910, Assistant Inspector, London Tilbury and Southend Ry., London, Eng.; Apr. 4 to May 21, 1911, laborer, May 22 to June 24, 1910, car cleaner, and June 25, 1910 to Mar. 29, 1911, car repairer, C.P.R., Winnipeg; Oct. 20, 1911 to Sept. 28, 1913, to Nov. 16, 1919, Car Inspector C.P.R., Swift Current, Sask. He was for a short while in Grand Trunk Pacific Ry.'s service as car repairer at Rivers, Man.

Hugh B. Walkem, Assistant District Engineer, C.P.R., Vancouver, is on sick leave, spending the winter in Southern California. He was one of the engineers engaged in the original location, and subsequent construction and maintenance, of the C.P.R., and has been in that company's service for nearly 39 years.

L. D. Walker, who has been appointed Waterworks Engineer and Inspector, Canadian Fire Underwriters' Association, Toronto, was, for a time in 1907, engaged as an engineer in the Maintenance of Way Department, C.P.R., at Montreal, and later, entered Grand Trunk Pacific Ry. service, being engaged on the construction at the Fort William terminals and the Lake Superior Branch. From 1909 to 1911 he was in the Chief Engineer's office, G.T.P.R., Winnipeg, and from 1911 to 1913, Assistant Engineer, Algoma Central and Hudson Bay Ry., Sault Ste. Marie, Ont., resigning in 1913, on receiving an appointment under the Dominion Public Works Department at Sault Ste. Marie, Ont.

G. T. Waugh, station agent, G.T.R., York, Ont., retired from active service,

Dec. 31, 1919, after 36 years with the company. On Jan. 5 he was presented with a club bag by the local staff and left for California.

Acceptance of Canadian Money at Par on Michigan Central Rd. in Canada.

We have been favored with copies of the following telegrams:

From John Bridge, President, Western Ontario United Boards of Trade, to Chief Commissioner, Board of Railway Commissioners, Ottawa, Jan. 10. "Dining car and Pullman conductors on Michigan Central between Niagara and Windsor are refusing to accept Canadian currency in payment for meals or other service. Crews are apparently acting in good faith, under misapprehension of instructions from United States Railroad Administration. Hope that prompt measures can be taken to present this injustice on Canadian soil."

From Chief Commissioner, Board of Railway Commissioners, to John Bridge, Jan. 12, "Telegram re Michigan Central received. Am taking energetic measures."

From Chief Commissioner, Board of Railway Commissioners, to D. W. Donahue, Superintendent, Michigan Central Rd., St. Thomas, Ont., Jan. 12. "Complaint just received that your employes, acting under instructions, are refusing to accept Canadian currency for Pullman and dining car service. Please see this is discontinued immediately, and wire me to that effect."

From D. W. Donahue, Superintendent, M.C.R., St. Thomas, Ont., to Chief Commissioner, Board of Railway Commissioners, Jan. 12. "Your wire date. Instructions referred to are addressed to agents, conductors, etc., in the United States. Canadian currency or coin is accepted at par in Canada."

From Chief Commissioner, Board of Railway Commissioners, to John Bridge, President, Western Ontario United Boards of Trade, London, Ont., Jan. 12. "Michigan Central wires Canadian currency is accepted at par in Canada."

From John Bridge, London, Ont., to Chief Commissioner, Board of Railway Commissioners, Jan. 13. "Wires received on Jan. 9 and 10. Pullman and dining conductors Michigan Central west-bound passenger train 23, Buffalo to Detroit, refused to accept Canadian money for services rendered on Canadian soil. Understand now these crews placed wrong interpretation on order issued by U.S. Railway Board."

Railway Employes' Voting — Polls were opened at a number of railway centers prior to Jan. 1, for the municipal elections in Ontario cities. It was reported Jan. 6, in Stratford, Ont., that in the two days the poll was open only 11 votes were recorded, and that the cost of recording them was \$24.

Barsa-Bagdad Ry.—A London, Eng., cablegram of Jan. 1, states that it is expected to have the Barsa to Bagdad railway in Asiatic Turkey completed for traffic at an early date. Construction is reported to be progressing at the rate of 14 miles a day. A daily passenger train is expected to make the trip in 28 hours at the opening of the line, which will be reduced to about 12 hours when the line is got into thorough working order. Freight trains will, it is stated, make the trip in 48 hours.

Railway Rolling Stock Orders and Deliveries.

Canadian National Rys. have received 3 sleeping cars from Canadian Car and Foundry Co.

Canadian National Rolling Stock Ltd., has ordered 80 cabooses from Canadian Car and Foundry Co.

Canada Creosoting Co. has ordered 50 tram cars, and 54 sets of running gear, from Canadian Car and Foundry Co.

The G.T.R., to Jan. 10, received 44 steel fram box cars, 80,000 lb. capacity, from Canadian Car and Foundry Co.

Algoma Steel Corporation has ordered 2 standard gauge car trucks, 80,000 lb. capacity, from Canadian Car and Foundry Co.

Bedford Construction Co., St. John, N.B., has bought one 20 yd. steel dump car from Canadian Car and Foundry Co.

The Grand Trunk Pacific Ry. is having a further 1,500 cars repaired by Canadian Car and Foundry Co. at Fort William, Ont.

The G.T.R. has received 44 box cars and 2 stock cars, and 233 repaired box cars and 138 repaired hopper cars from Canadian Car and Foundry Co.

The Canadian National Rys., has invited tenders to be sent in by Feb. 10, for the following rolling stock,—2,000 box cars, 40 tons capacity; 500 refrigerator cars, 30 tons capacity; 500 general service cars (coal), 50 tons capacity; 350 ballast cars, 50 tons capacity; 20 baggage cars, 73½ ft. long; 18 sleeping cars, 12 dining cars, 30 Pacific type locomotives, and 20 switching locomotives.

Canadian National Rys. have received 6 six wheel switching locomotives from Canadian Locomotive Co., completing an order for 25, placed Jan. 28, 1919, with Canadian Locomotive Co., and illustrated in our last issue. Following are the chief details:

Weight in working car.....	150,000 lb.
Wheel base, engine.....	12 ft.
Wheel base, engine and tender.....	41 ft. 1¼ in.
Heating surface, fire box.....	132 sq. ft.
Heating surface, tubes and arch tubes.....	1449.7 sq. ft.
Heating surface, total.....	1,581.7 sq. ft.
Driving wheel, diar.....	51 in.
Driving wheel, centers.....	cast iron
Driving journals, diar. and length.....	8½ x 11½ in.
Cylinders, diar. and stroke.....	21 x 26 in.
Boiler, type.....	Straight top
Boiler, pressure.....	180 lb.
Tubes, no. and diar.....	157—2 in.
Tubes, length.....	24—5½ in.
Airbrakes.....	12 ft. 5 in.
Packing.....	Westinghouse E.T. 6
Fire brick.....	Metallic
Valve motion.....	Security
Headlight.....	Walschaert
Weight of tender, loaded.....	Steel, wood line
Water capacity.....	10 Pyle National type K, and
Coal capacity.....	15 Schroeder Electric Taylor and Arnold casing
Truck type.....	96,000 lb.
Wheel, diar.....	3,800 imp. gals.
Journal, diar. and length.....	6 tons
Break beam.....	4 wheel arch wire
	33 in.
	Wheel, type.....
	10 Davis C and 15 cast iron chilled
	4¼ x 8
	Simplex

The Jamaica Government Ry. has ordered 7 twelve wheel (4-8-0) locomotives from Canadian Locomotive Co. They are duplicates of an order placed in Oct., 1919, except that the present ones are to be equipped with superheaters.

Following are the chief details:

Weight in working order on drivers.....	110,000 lb.
Weight in working order total.....	140,000 lb.
Wheel base engine, rigid.....	12 ft. 9 in.
Wheel base, total.....	23 ft.
Wheel base, engine and tender.....	50 ft. 2 in.
Heating surface, fire box and arch tubes.....	148 sq. ft.
Heating surface, tubes.....	1,355 sq. ft.
Heating surface, total.....	1,503 sq. ft.

Driving wheel diar.....	46 in.
Driving wheel centers.....	Cast iron
Driving journals, diar. and length.....	8½ in. x 10 in.
Cylinders, diar. and stroke.....	19 x 26 in.
Boiler, type.....	Straight top
Boiler, working pressure.....	190 lb.
Tubes, no. and diar.....	139—2 in.
Tubes, length.....	21—5½ in.
Air brakes.....	13 ft. 4 in.
Packing.....	Westinghouse E.T.
Superheater.....	Metallic
Valve motion.....	Locomotive Superheater Co. type A
Headlight.....	Walschaert
Weight of tender, loaded.....	Electric
Tank capacity.....	94,100 lb.
Tank type.....	3,500 imp. gal.
Coal capacity.....	U shape
Truck, type.....	1,400 lb.
Wheel, diar.....	4 wheel arch bar type
Wheel, type.....	33 in.
Journal, diar. and length.....	C.I. center with steel tires
Break beam.....	4¼ x 8 in.
	Simplex high speed

Belgian Rolling Stock Orders.

The Belgium State Railways have ordered 75 consolidation (2-8-0) locomotives from American Locomotive Co., Schenectady, N.Y. The Belgian railway standard train connections, front and rear, will be included in the equipment, but the general design will be the American Locomotive Co.'s. Following are the chief details:

Gauge.....	4 ft. 8½ in.
Cylinders, diar. and stroke.....	24 x 28 in.
Driving wheel, diar.....	59.84 ft.
Boiler, outside diar.....	68 in.
Boiler pressure.....	200 lb.
Firebox, length and width.....	96 x 60¼ in.
Tubes, no. and diar.....	160—2 in.
	26—5½ in.
Heating surface, superheater.....	564 sq. ft.
Heating surface, tubes.....	1,292 sq. ft.
Heating surface, arch tubes.....	25 sq. ft.
Heating surface, arch tubes.....	25 sq. ft.
Heating surface, firebox.....	150 sq. ft.
Heating surface, total.....	2,031 sq. ft.
Heating surface, superheating.....	510 sq. ft.
Grate area.....	40 sq. ft.
Wheel base, driving.....	19 ft. 6 in.
Wheel base, engine.....	28 ft.
Wheel base, engine and tender.....	54 ft.
Weight, leading truck.....	22,000 lb.
Weight, driving truck.....	164,000 lb.
Weight, total engine.....	186,000 lb.
Weight, tender.....	117,000 lb.
Maximum tractive effort based on 65% boiler pressure.....	35,000 lb.
Factor of adhesion.....	4.7
Limiting weight, per axle.....	42,900 lb.
Tender type.....	6 wheel
Capacity, water.....	6,340 U.S. gal.
Capacity, coal.....	7 metric tons
Superheater.....	Locomotive Superheater Co. fire box tube, type and cross header
Airbrakes.....	Westinghouse, French automatic
Sanders.....	Lambert
Couplers.....	Belgian standard screw link with 2 spring buffers
Brake.....	Belgian standard

London, Eng., press dispatch, Jan. 22.

—The Belgian Minister of Railways is here negotiating for the purchase of 50 locomotives and 3,000 cars from Canadian manufacturers through the Canadian Government. The contracts will be signed as soon as the Canadian Finance Minister consents to an advance of credit. Belgium only had about \$11,000,000 of the \$25,000,000 granted last year. This credit, with others in Europe, expired at the end of December. The total unused amount will be advanced when good propositions are put forward. Belgium hopes to obtain a credit for needed rolling stock amounting to about \$10,000,000.

Ottawa press dispatch, Jan. 27.—It is said here that large United States firms are interested in the fact that the Belgian Government is in the market for 50 locomotives, 18,000 freight cars and a number of passenger cars. Whether they will get any of the business depends on the Belgian Government, which now has the Canadian offer before it to accept Belgian Government 5½%, five year treasury bonds in payment for the

locomotives and cars. Sir Henry Drayton's proposal that the companies themselves should extend five-eighths of the credit and the Dominion Government the balance has been accepted by the companies. A 50-50 basis was originally suggested by the companies.

The Chief Railway Commissioner on Applications for Rehearings.

Hon. F. B. Carvell, Chief Commissioner, Board of Railway Commissioners, at a sitting of the commission in Montreal, Jan. 20, at which the Canadian Freight Association, on behalf of the C.P.R., the G.T.R., and the Canadian National Rys., asked for a rehearing of the joint freight tariffs order of Aug., 1919, is reported to have said: "What interests me in this matter is that nothing this board ever does seems to be accepted as final. Whenever a judgment is made and the railways do not like it, back they come trying to get the case reheard. In this particular matter the board issued an order in August last. Why was it not obeyed? Why this request that the case should be reopened. I have not been long on the board, but since I have been there have been two occasions on which cases have been asked to be retried. If the applicants can show that the board's order took any person by surprise, or is not sound in law why all right, but if it is simply because you don't like the order that you ask to have the case reheard then I do not feel like hearing it again. I find no fault with you for coming back if you think you have a real case, but I find it creeping up all the time that when an order is not pleasing to the railways, they come back to endeavor to have it changed. They seem to want to treat this board as if it was nothing more than a rubber stamp. Every order this board has made has only been made after we have given it the most careful consideration. In fact I have been rather surprised at the amount of work in connection with each case and I have reached the opinion that in what we are doing we are giving you our best well considered judgment. I'll admit that decisions are not reached as quickly as it is thought they should be, but I contend that every case is thoroughly considered in all its phases before an order is made. That being so, you must have very good grounds before you can ask for a rehearing."

New Brunswick Workmen's Compensation Act—The board appointed by the N.B. Government to carry out the Workmen's Compensation Act of 1918, issued on Dec. 29, 1919, a notice containing the rate of assessment to be made upon the pay roll of every concern in the province for the purpose of the act. The amount of the pay roll is to be ascertained under conditions prescribed in the act, and the rate of assessment is set out in a schedule attached to the notice. The operation of steam and electric railways, railway car shops, steel and wooden shipbuilding yards; wrecking and salvaging, towing, express companies' operations, bridge building and a variety of other occupations affecting transportation interests come under the act.

W F. Barry, Commercial Agent, Canadian National Rys., San Francisco, Cal., in renewing his subscription to Canadian Railway and Marine World, writes: "It is a pleasure to continue receipt of your very newsy and useful paper."

Traffic Orders by Board of Railway Commissioners.

Railway Tolls Continued in Effect.

General order 276, Dec. 31, 1919. Re order in council 1863, as amended, and of all tolls and in pursuance of the powers conferred upon the board by sec. 325 of the Railway Act, 1919: It is ordered that, subject to the provisions of the Railway Act, 1919, the tolls of railway companies in effect as of this date, are hereby continued in effect, on and from Jan. 1, 1920.

Regulations Respecting Tariffs.

General order 277, Dec. 29, 1919. Re indicating changes in tolls in freight, passenger, express, telephone, and telegraph schedules; in pursuance of the powers conferred upon the board by the Railway Act, 1919, sec. 324, and upon the Chief Traffic Officer's report and recommendation, it is ordered that freight, passenger, express, telephone, and telegraph tariffs, and supplements thereto, applying between points in Canada, or from a point in Canada to a foreign country, hereafter filed with the board, shall, except as hereinafter provided, indicate advances thereby made by the symbol "A," and reduction by the symbol "R," with the necessary explanatory note, in the following manner, viz.:

1. In schedules which show the rates opposite the station, the proper symbol to be shown against each rate, or each rule or regulation, changed. 2. In schedules in which the rates appear in a table separated from the station list: (a) Unless the station groupings have been varied relatively to their rates; the proper symbol to be shown in the rate table in the manner prescribed in sec. 1 hereof; (b) If the station groupings have been varied relatively to their rates; the proper symbol to be shown against the reference on the station page to the rate table, and against each rule or regulation changed.

Provided that if the columns of rates are so close together as to leave insufficient space for the symbols, and in such cases only, increases shall be printed in full-face type, and reductions in italics, with the necessary explanatory note. Provided, also, that if it is found impracticable to indicate changes in a schedule by either of the methods herein prescribed, application may be made to the board, accompanied by a printer's proof of the proposed schedule, for relief from the provisions of this order in such case. And it is also ordered that the character of the schedule be shown at the top of the title page, thus: "Advance," "Reduction," "Reissue," "New Rate (or rates)" and so on, as the case may be. General order 275, Dec. 16, 1919, is rescinded.

Express Companies' Tariffs.

General order 278, Jan. 3. Re the Railway Act, 1919, Sec. 360, and express companies' tariffs. It is ordered that, subject to such order or orders as the board may from time to time issue, all express companies within the legislative authority of the Parliament of Canada be authorized to charge the express tolls published in their respective tariffs filed with the board.

Fresh Fruit Rates to Manitoba.

General order 279, Jan. 5. Re complaint of Vinemount Orchard Co., Vinemount, against rate on fresh fruits to Winnipeg, as shown in Canadian Freight Association's Special Commodity Tariff

C.R.C. 19, effective Aug. 20, 1918. Upon hearing the submissions of the C.P.R.'s freight traffic manager, on behalf of the railway companies interested herein, at Ottawa, Sept. 16, 1919, the Canadian Pacific, Grand Trunk and Canadian National Railways, the Canadian Freight Association, and the Dominion Department of Agriculture's fruit branch, being represented and upon the board's Chief Traffic Officer's report and reading the written submissions filed subsequently on behalf of the Department of Agriculture's Fruit Commissioner, and it appearing that the tariff contravenes the board's order of Oct. 10, 1904, in the complaint of the Ontario Fruit Growers' Association, and order 8,207, Sept. 27, 1909, dismissing the Canadian Freight Association's application for an order rescinding the order of Oct. 10, 1904; it is ordered that the Canadian Freight Association's Tariff C.R.C. 19, effective Aug. 20, 1918, be disallowed. And it is further ordered that the Canadian Freight Association, in virtue of the authority thereupon conferred by powers of attorney of the railway companies interested herein, forthwith publish and file a tariff restoring the rates on fresh fruits from points in Ontario and Quebec to Winnipeg, Portage la Prairie, and Brandon, prescribed in the order of Oct. 10, 1904, as increased by authority of order 212, Jan. 15, 1918, and as further increased by order in council 1,863, July 27, 1918; the said increases having been continued in effect by general order 276, Dec. 31, 1919.

Transportation for Private Secretaries.

General order 281, Jan. 12. Re application 2, Dec. 30, 1919, of Railway Association of Canada, under the Railway Act, 1919, sec. 345, for permission to issue free or reduced rate transportation to the classes of persons specified in the application. Upon reading the application, and considering what was filed in support thereof, it is ordered that railway companies within the legislative authority of the Parliament of Canada be permitted until further order, to issue free or reduced rate transportation to the following class of persons, viz.: Private secretaries of ministers of the Dominion Government, including the private secretary of the leader of the opposition.

Sand and Gravel Rates From York, Ont.

28,163, Dec. 22, 1919. Re complaint of York Sand & Gravel Co., Toronto, against rates on sand and gravel from York to private sidings and team tracks on G.T.R. in and contiguous to Toronto. Upon hearing the complain in Toronto, Oct. 31, 1919, the complainant, the Canadian Manufacturers' Association, the Toronto Board of Trade, the G.T.R., being represented at the hearing, and upon reading the further submissions filed, and the report and recommendation of the board's Chief Traffic officer, it is ordered that the G.T.R. be directed to publish and file a tariff, which may be made effective Jan. 1, 1920, showing the following rates in cents per 100 lb. on sand and gravel, in car loads, from York, Ont.:

East of Church St. to Coxwell Ave. and Don Valley	2½c
Church St. to South Parkdale and Dundas St. bridges	3c
West of South Parkdale to Swansea, west of Dundas St. bridges to West Toronto.....	3½c
North of Dundas St. bridges to Davenport Mimico, New Toronto and Belt Line beyond	3½c
Davenport to Davisville (Merton St.).....	3½c

That the minimum weight be the marked capacity of the car; except that when cars fully loaded will not contain the marked capacity, the minimum shall be the actual weight, but not less than 60,000 lb.

That the rate to New Toronto be exclusive of delivery on manufacturers' siding at that point.

Grand River Ry. Passenger Tariff.

29,192, Dec. 30, 1919. Re the application of the Grand River Ry. under the Railway Act, 1919, sec. 534, for approval of its Standard Passenger Tariff C.R.C. 14. The said tariff having been filed on the basis permitted by order 29,145, of Dec. 12, 1919, to become effective Jan. 12, 1920, it is ordered that it be approved; the tariff, together with reference to this order, to be published in at least two consecutive issues of the Canada Gazette.

Fredericton and Grand Lake Coal and Ry. Co.'s Tariff.

29,202, Dec. 27, 1919. Granting application of Fredericton & Grand Lake Coal and Ry. Co. under the Railway Act, 1919, sec. 323, for approval of a bylaw, passed Oct. 7, 1919, authorizing the company's Passenger Traffic Manager and Assistant Freight Traffic Manager, to prepare and issue tariffs of the tolls to be charged for carriage of passengers and freight traffic.

New Brunswick Coal and Railway Co.'s Tariffs.

29,208, Dec. 31, 1919. Re application of C.P.R. as lessee exercising franchises of the New Brunswick Coal & Ry. Co. under the Railway Act, 1919, sec. 323, for approval of order in council of New Brunswick Government, passed Dec. 9, 1919, authorizing Passenger Traffic Manager and Assistant Freight Traffic Manager of New Brunswick Coal & Ry. Co. to prepare and issue tariffs of tolls to be charged for carriage of passengers and freight. Upon reading the order in council, and it appearing that the intention is to authorize the officials named therein to prepare and issue tariffs of tolls to be charged in respect of the railway owned by it and operated by the C.P.R., it is ordered that the order in council be approved.

Cartage Allowance to Canada Sugar Refining Co.

29,217, Dec. 27, 1919. Re application of C.P.R. for an order rescinding order 28,630, Aug. 8, 1919, disallowing the company's tariff C.R.C. no. E-3,369, in so far as it provided for a cartage allowance of 1¼c per 100 lb. to Canada Sugar Refining Co., Montreal, in lieu of interswitching by G.T.R. It appearing that the G.T.R. distance from the Canada Sugar Refining Co.'s refinery to the point of interchange with the limitation of 4 miles, as defined in general order 252, and that, therefore, the movement over the G.T.R. is not regulated by the provisions of sec. 15 of said general order, and upon reading what is filed on behalf of the railway company, and the report and recommendation of the board's Chief Traffic Officer, it is ordered that order 28,630, Aug. 8, 1919, be rescinded.

Freight Rates to Seattle and Tacoma for Export.

29,231, Jan. 9. Re complaints of

Riordon Sales Co., the Ha Ha Bay Sulphite Co., and the Canadian Export Paper Co. of Montreal; Grace & Co., the Meishosha Co., and Jardine, Matheson & Co., of New York; and Caldwell & Co., on behalf of Federal Export Corporation, International Trading Corporation, Mitsubishi Goshi Kaisha, Frazar & Co., Mitsui & Co., A. D. de Shubirin & Co., American Trading Co., Pacific Commercial Co., Anderson Meyer & Co., China, Japan and South American Trading Co., A. G. Kidston & Co., Suzuki & Co., and Iwai & Co., of New York, against withdrawal of export rates to Seattle and Tacoma, Washington, by tariff C.R.C. 43, of Canadian Freight Association, published to become effective Jan. 15. Upon hearing the complaints at Ottawa, Jan. 7, the complainants and the Canadian Freight Association being represented and what was alleged, it is ordered that the Canadian Freight Association be required, not later than Jan. 15, 1920, to reinstate the rates to Seattle and Tacoma in its tariff on freight for export to trans-Pacific destinations.

British Columbia Electric Ry. Fares.

29,237, Jan. 10. Re complaint of Broadview Ratepayers' Association, Burnaby, B.C., against fares charged by British Columbia Electric Ry. in Broadview District; upon hearing the complaint at Vancouver, Nov. 21, 1919, the complainants and the railway company being represented at the hearing, and what was alleged, it is ordered that the complaint be dismissed.

Assistant Chief Commissioner McLean gave the following judgment, Dec. 28, 1919: At the board's sittings in Vancouver, Nov. 22, 1919, complaint was made of the rates, particularly those affecting Horne Payne and Crown Ave. stations. As expressed by Mr. Collier, one of the parties applicant: "This has been argued before by the solicitor for the municipality, but the ratepayers' association instructed me to come and make a formal protest before this board as to what we consider an exorbitant increase that was granted the company on this line last June. Previous to that we had a 50c rate ticket in existence. I will mention Horne Payne and Crown Ave. stations. At Horne Payne the rate was 5c a ride, Crown Ave. 6c, buying a book costing \$3. The new rate to Horne Payne is 7c, an increase of 2c, the new rate to Crown Ave. is 9c, an increase of 50%, which we consider is exorbitant. The company in its statement listed the old rate on the basis of a 10 ride ticket, which in the case of Crown Ave. would read 7½ to 57c for a 10 ride ticket. So far as we were concerned, using that station, the 10 ride ticket was practically nonexistent, so that to us the old rate was 6c and the new rate is 9c."

The stopping points particularly referred to are located on the British Columbia Electric Ry.'s Burnaby Lake line, which in terms of its charter, is the Vancouver, Fraser Valley and Southern. The application of the B.C. Electric Ry. for increases in passenger rates on that line was dealt with by the board in its judgment of Nov. 14, 1918. In the increases for which sanction was asked were certain commutation rates. The rates herein involved fall in this class. The following detail sets out the former rate and the rate for which sanction was asked.

Between and	Vancouver			Westminster		
	Miles	Old rate	New rate	Miles	Old rate	New rate
Horne Payne	4.9	\$0.50	\$0.70	9.8	\$1.25	\$1.50
Crown Ave.	5.5	0.90	0.90	9.2	1.25	1.50

The figures as to earnings and expenses were carefully analyzed at the time, and the conclusion was unescapable that the various increases involved were justified; and, accordingly, a sanction which covered the rates herein complained of was given. At the hearing in Vancouver, additional information as to this condition of the line was submitted by the railway. Intimation was given at the hearing by the Chief Commissioner that on the showing made it was improbable that the line could carry on on lower rates. While it cannot be said that there was much, if anything, new in the way of evidence as showing that a lower rate basis was justifiable at present on the line in question, the urgent submissions as to the effect of the rate increases has caused the matter to stand for further consideration. Further consideration, however, in view of the fact that no change for the better in the condition of the line in question has been shown as compared with the date when the original judgment was given simply emphasizes the fact that the increases allowed are still justifiable.

The Chief Commissioner and Commissioner Rutherford concurred.

Fredericton and Grand Lake Coal and Ry.'s Freight Tariff.

29,263, Jan. 10. Re application of the C.P.R., as lessee exercising franchises of Fredericton & Grand Lake Coal & Ry. Co., under sec. 330, of the Railway Act, 1919, for approval of its Standard Mileage Tariff, C.R.C. 34; upon the report and recommendation of the board's Chief Traffic Officer, it is ordered that the said tariff of maximum mileage freight rates to apply between stations on the Fredericton & Grand Lake Coal & Ry. Co.'s line, be approved; the tariff, with a reference to this order, to be published in at least two consecutive issues of the Canada Gazette.

New Brunswick Coal and Ry. Co.'s Freight Tariff.

29,264, Jan. 10. Re application of C. P.R. as lessee exercising franchises of New Brunswick Coal & Railway Co., under sec. 330 of the Railway Act, 1919, for approval of its Standard Mileage Freight Tariff, C.R.C. 51; upon the report and recommendation of the board's Chief Traffic Officer, it is ordered that the said tariff of maximum mileage freight rates, to apply between stations on the New Brunswick Coal & Ry. Co.'s railway, be approved; and that the tariff, with a reference to this order, be published in at least two consecutive weeks of the Canada Gazette.

Express Rates on Incandescent Lamps.

29,280, Jan. 16. Re applications of Canadian Manufacturers' Association on behalf of Canadian General Electric Co., Canadian Westinghouse Co., Solex Co., Northern Electric Co., Dominion Lamp Co., and Toronto Board of Trade for a reduction from double first class to first class rates on incandescent electric lamps carried by express; upon hearing the application at Toronto, Oct. 31, 1919, the applicants, the Express Traffic Association of Canada, and the Dalyle Electric Co., being represented at the hearing, and what was alleged; and upon the re-

commendation of the board's Chief Traffic Officer, it is ordered that the rating of two times first class for electric light bulbs, shown in Express Classification for Canada no. 4, be reduced to one and one-half times first class; the change to be made effective not later than Feb. 1, 1920.

Claim for Loss of Grain.

29,288, Jan. 22. Re complaint of United Grain Growers Ltd., of Winnipeg, that Canadian National Rys. have refused compensation for loss occasioned by delivery to Thunder Bay elevator instead of Paterson's elevator, as directed, car C.N.R. 44,458, grain, ex Deepdale, Man., Dec. 5, 1918, consigned to complainants in care of terminal elevator of Canadian Northern Ry. Co., Port Arthur; upon hearing the complaint at Winnipeg, Nov. 15, 1919, the complainants and the railway company being represented and what was alleged; and upon its appearing that what is involved is a loss and damage claim, in which the board is without jurisdiction; it is ordered that the complaint be dismissed.

Toronto Suburban Ry.'s Freight Tariff.

29,293, Jan. 23. Re application of Toronto Suburban Ry., under sec. 330 of the Railway Act, 1919, for approval of its Standard Freight Tariff C.R.C. 1; upon its appearing that the company's wage schedule is substantially that of the Canadian National Ry. System, of which the said railway forms a part; and in virtue of which the Canadian National Rys. were permitted, by order in council, 1863, to increase their rates, the tariffs submitted for approval being identical with that of the Canadian National Rys. System for similar distances; it is ordered that Standard Freight Mileage Tariff C.R.C. 1 be approved; the tariff, together with a reference to this order, to be published in at least two consecutive issues of the Canada Gazette.

Charge for Lining Cars for Flaxseed.

29,309, Jan. 26. Re application of W. E. Campbell, Secretary, Canadian Freight Association, Winnipeg, on behalf of the railways operating in Western Canada, for an order authorizing them to increase their charge from \$3 to \$4 a car for lining cars used for carriage of flaxseed in bulk; upon hearing the application at Winnipeg, Nov. 15, 1919, the applicant, the North West Grain Dealers' Association, the Canadian National, Canadian Pacific and Grand Trunk Pacific Railways, and certain shippers interested being represented, and what was alleged; and upon the consent of the representatives of the said shippers and of the Northwest Grain Dealers' Association, it is ordered that the said railway companies be authorized to increase their charge for lining cars used for the carriage of flaxseed in bulk from \$3 to \$4 a car, subject to conditions set out in order 23,894, June 2, 1915. Order 25-956, Mar. 28, 1917, made herein is rescinded.

Express Charges on Apples—Virden to Cromer.

On Dec. 13, 1919, the board received the following letter from the United Grain Growers, Ltd., Eastern Division, Winnipeg: "On Nov. 4 we made a shipment of 251 boxes of apples, weight 12,550 lb., Virden to Cromer, via Canadian National Express, which exacted express charges on basis of 55c per 100 lb., which is full tariff rate. We are

given to understand that the railway companies will not allow us a refund or 15c per 100 lb., owing to their maintaining a delivery service at this point, but did not handle this shipment from our elevator to the station. We are also given to understand that a very recent case of this nature was dealt with by your commission. Would you kindly advise status of the commission ruling on this subject?"

The board's ruling was communicated to complainants by letter from the Assistant Secretary, Dec. 19, as follows:—"I am directed to state that a somewhat similar situation was dealt with in the case of the Neal Baking Co. of London, Ont., which was advised as follows: 'Referring to your letter to the Chief Commissioner, I am directed to say that the judgment recites, inter alia: "There are many points, hundreds of them, where there is no wagon service and where the cost of maintaining a wagon service would be entirely disproportionate to the total receipts. Nevertheless these points pay just the same rates as do points where a wagon service exists," and then goes on to provide as to the reductions to be made. Your correspondence raises the contention that where at a cartage point the shipper or consignee performs a wagon service after cartage hours there should be a similar reduction in respect of the shipper or consignee. The intention of the judgment is that the reduction should be limited to points where there is no cartage of any kind whatever performed by the express companies.'

"I am further directed to say that the rates have been checked. The first-class rate between the Virden and Cromer blocks is 85c Cromer is not a cartage point. In accordance with the judgment, there is deducted from the 100 lb. rate 15c, making the net first class rate 70c. The charge for the box of apples graduated on the first class rate of 70c gives a rate of 55c, as charged. Virden is a cartage point. In terms of the letter above quoted the reduction of 15c as referred to applies only at points where there is no cartage service of any kind. Where the express company maintains a cartage service, which the shipper does not see fit to take advantage of, this does not justify the reduction asked for."

Demurrage on Coal at Three Rivers.

The application was set out in a letter of Dec. 4, 1919, from Bureau & Bique, advocates, as follows:—"We are acting for J. H. Giroux, owner of a lime quarry which is situated a short distance from Three Rivers, but some 4 miles from the nearest station on the St. Maurice Valley Ry., running from here to Shawinigan Falls. Under regulations ratified by your board, demurrage is charged after 3 days without unloading. As the pit of this quarry is some 4 miles from the station and the roads are none too good, especially in winter and spring, it is almost an impossibility to unload a car of coal in 3 days. Mr. Giroux would want 5 days without demurrage. Under the circumstances, his request seems fair; as his industry is young, but very important for the district, it seems that no undue expense should be added to his cost of production. The St. Maurice Valley Ry. is operated by the C.P.R. Would you kindly tell us when it would be possible to have this point adjudicated upon by your board?"

The board rules as follows:—"The condition of the highway over which haul-

age of the coal was to be made, and which is referred to as a reason for extension of the free time, is a disability for which the railway is in no way responsible. The free time for unloading as fixed by the board in the Demurrage Rules is of general application, and covers what, after careful consideration, is regarded as a maximum reasonable

term for unloading. In other cases where road disabilities, or lack of facilities on behalf of the applicant, have been advanced as a reason for additional free time, the board has not felt itself justified in granting additional free time. It does not feel justified in granting that an extension should be made in the present instance.

Transportation Appointments Throughout Canada.

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

Canadian National Rys.—F. J. BULLER, formerly Paymaster, Eastern Lines, Canadian Northern Ry., has re-entered the service and has been appointed Supervisor in charge of Local Treasurers and Paymasters, Canadian Northern Railway System. Office, Toronto.

W. A. KIRKPATRICK has been appointed acting Assisting Superintendent, Division 2, Central District, vice D. W. Steeper, assigned to other duties. Office Sioux Lookout, Ont.

G. H. PERLEY, heretofore transitman, New Glasgow, N.S., has been appointed Resident Engineer there, vice R. Montgomerie, resigned on his removal to Scotland.

The positions of Supervisors of Work Equipment, with jurisdiction north, and south, of the St. Lawrence River held by **W. S. Secord**, Toronto and **T. Carroll**, Moncton, N.B., respectively, as announced in our last issue, are new ones. Their duties are to look after the maintenance of work equipment, provide the necessary outfit and operators for its successful operation, and arrange for its distribution, after consultation with the proper officials.

Canadian Pacific Ocean Services Ltd.—H. B. BEAUMONT has been appointed General Agent, Passenger Department, Montreal District, vice W. Webber, promoted. Office, Montreal.

P. D. SUTHERLAND has been appointed General Passenger Agent for the Orient. Office, Hong Kong, China.

W. WEBBER, heretofore General Agent, Passenger Department, Montreal District, has been appointed General Agent, Passenger Department in charge of the handling of passenger traffic at Atlantic ports. Office, Montreal.

Canadian Pacific Ry.—S. A. BROWN, heretofore Assistant Yardmaster, has been appointed Yardmaster, Port Arthur, Ont., vice J. D. Callahan, transferred.

J. D. CALLAHAN, heretofore Yardmaster, Port Arthur, Ont., has been appointed Yardmaster, Medicine Hat, Alta.

R. F. RICHARDSON, heretofore Local Freight Agent, Edmonton, Alta., has been appointed General Agent, Alaska and Yukon Territory. Office, Juneau, Alaska.

D. STEVENSON, who returned recently from active military service overseas, has been appointed Assistant Yardmaster, Port Arthur, Ont., vice S. A. Brown, promoted.

Grand Trunk Ry.—G. H. BROWN has been appointed Commercial Agent, Grand Trunk Ry. lines in Canada, vice J. Waugh, transferred. Office, Minneapolis, Minn.

FRANK FOSTER has been appointed Assistant to Superintendent, Motive Power, Ontario Lines, Allandale, Ont., vice John Vass, assigned to other duties.

C. J. HAIGH has been appointed Commercial Agent, G.T.R. lines in Canada. Office, Philadelphia, Pa.

S. G. WAGSTAFF has been appointed Commercial Agent, G.T.R. lines in Canada. Office, Toledo, Ohio.

C. S. WAINWRIGHT has been appointed Commercial Agent, G.T.R. lines in Canada. Office, Los Angeles, Cal.

JAMES WAUGH, heretofore Commercial Agent, Minneapolis, Minn., has been appointed Commercial Agent, G.T.R. lines in Canada. Office, San Francisco, Cal.

Grand Trunk Western Lines Rd.—W. M. GUY, heretofore Travelling Freight Agent, London, Ont., has been appointed Division Freight Agent there, vice R. W. Youngs.

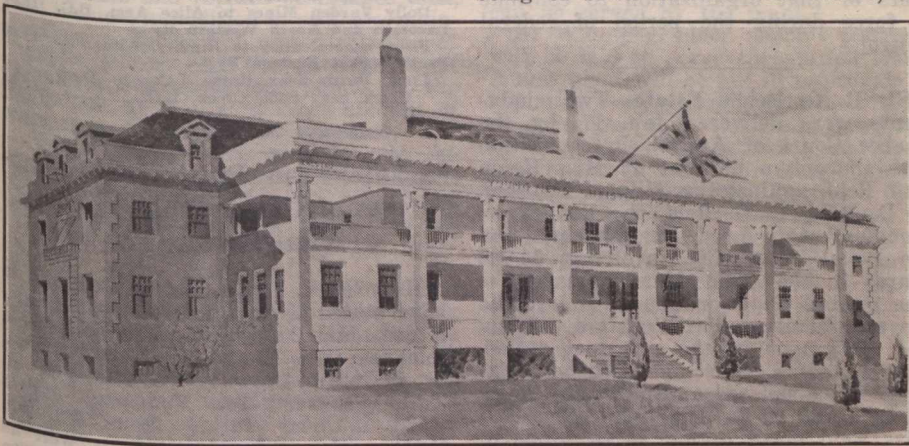
Walford Forwarding Corporation—H. A. YOUNG, formerly Traffic Manager, Canadian Lake Line, has been appointed agent Walford Forwarding Corporation, New York. Office, 53 Yonge St., Toronto.

Telegraph Address Registration—Jas. Richardson & Sons, Ltd., et al, complained to the Board of Railway Commissioners recently against the fee of \$2.50 proposed to be charged by the C. P.R. Co.'s Telegraph and the Great North Western Telegraph Co., for recording a registered address as set forth in a circular letter of Nov. 20, 1919, issued by those telegraph companies. The Chief Railway Commissioner gave the following ruling, Dec. 24, 1919: The board has considered the substance of the application. I am of the opinion that the charge is not a rate under the control of this board, because it is a charge made by the telegraph companies for a service to be performed by the cable companies, over which we have no jurisdiction. In other words, the telegraph company is acting to some extent as an agent for the cable company by devising a means by which one or two words may answer the purpose of half a dozen words which would be charged for individually by the cable company. Therefore, I do not see that we have any jurisdiction to interfere.

Rules for Wires Erected Along or Across Railways—The Board of Railway Commissioners issued the following circular, Jan. 5: Referring to circular 167, June 19, 1918, to the effect that under the provisions of the old act and the amendment of 1911, sec. 7, c. 22, general order 231, May 6, 1918, and the rules thereby adopted and confirmed, applied only to construction across a railway. Sec. 372 of the Railway Act, 1919, is not so limited and applies to construction along as well as across a railway. Where, therefore, the construction, whether along or across the railway, is by consent and in accordance with the Standard Conditions and Specifications set out in the schedule to general order 231, and approved by that order, no further leave of the board is necessary.

Canadian National Railways Construction, Betterments, Etc.

St. John, N.B., Terminals—A. P. Barnhill, one of the C.N.R. directors, in addressing the Commercial Club at St. John, N.B., Jan. 10, is reported to have said the city's interest would be well cared for by the board, and that the port would be given fair treatment. At the next meeting of the board the first appropriations under the present management would be submitted, and St. John will have no cause for complaint when the appropriations are made public, so far as matters within the directors' authority are concerned. The important point for the citizens of St. John is to impress on the Dominion Government that additional terminal facilities should be provided by the government in fulfillment of its several promises to the city. The directors may decide on certain terminal improvements but money must come from the government, and any recommendations by the directors will be subject to revision by the government. The board has under consideration plans, the preparation of which is well advanced, for a new station, and a large appropriation will be recommended for additional yard accommodation.



Canadian National Railways Y.M.C.A. Building at Capreol, Ont.

one of the C.N.R. lines, to give a through connection to Quebec. The L. and B. R. has been acquired by the Dominion Government recently.

Grenville Cut Off—The Board of Railway Commissioners has authorized the opening for traffic of the Grenville cut off on the Lachute Division, Que., from Lot 359, Range 1, Block O, Chatham Tp., near mile 60 from Joliette.

Carillon-Grenville Canal Bridge—The Board of Railway Commissioners has authorized the company to rebuild its bridge across the Carillon-Grenville canal in Grenville Tp., Que.

North Crosby Bridge—The Board of Railway Commissioners has authorized the company to rebuild its bridge across the Rideau Canal, in North Crosby Tp., Ont., mile 40.10 from Brockville.

Capreol Y.M.C.A. Building—The company is erecting a Y.M.C.A. building at Capreol, Ont., at the south end of the yard facing the main line from Parry Sound, the rear elevation overlooking Bloor St. The building has concrete foundation walls, the main exterior walls being of brick finished with stucco, the

alcove is the main staircase, also an entrance from the street. The main or first floor has large open spaces which can be used for meetings and lectures. A simple treatment of stucco beams, with a plain cove cornice mould, and plaster columns, is used throughout the main floor, which is finished with oak; the partitions and trim on this floor are of Georgia pine, stained and varnished. On the second floor there are 18 bedrooms; a sick bay, large lavatory and bathroom and linen closets. There is access to 4 balconies from the corridors and some of the rooms. The balconies are for fire protection and sleeping porches. On the third floor there are 18 single bedrooms and one double bedroom, a large lavatory and linen closets. There is access to the balcony roofs on this floor, also for fire protection, and outside sleeping porches. At the ends of the second and third floors, doors are provided, so that an exit can be obtained to future iron fire escapes. The floors are of wood joists, the main floor being finished in oak, and the second and third floors in birch. The partitions are of wood studs, the whole of the walls and partitions on the main or first and second and third floors being covered with lath and plaster. The trim on the main floor is of Georgia pine, stained and varnished, and on the second and third floors of pine painted. In the basement provision is made for 2 bowling alleys which will be put in later. A boiler room and fuel room are provided in the basement at the rear. Provision is also made for the installation of a public and a private lavatory. One room at the rear can be used for help and if necessary two more rooms can be erected at this end of the basement, between piers, as living quarters for any further help. The building was designed by G. C. Briggs, Supervisor of Buildings.

Fort William Interlocking Plant—A press report states that a contract has been let for the installation of 2 half interlocking plants at Fort William, Ont.

Western Lines Construction, Etc.—We are officially advised that grading and other construction work was done on 16 branch lines in Manitoba, Saskatchewan and Alberta during 1919. Grading on some of these lines had been done in previous years, while on others the grading contracts were only been let in 1919. During 1919 there were 253,95 miles of new grading completed on these lines, and 158.46 miles of track laid, on 7 of the lines, partly on grading completed previously and partly on new grading. In addition 7.15 miles of second track were laid near Munson, Alta. The following table shows the miles of grading and track laying done during 1919:

	Grading, Miles	Track laid
Amaranth extension, Man.....	11.68	
St. Rose du Lac extension, Man.....	9.31	
Alsask southeasterly, Sask.....	1.26	
Eston southeasterly, Sask.....	25.16	
Jackfish Lake line, Sask.....	11.43	
Luck Lake line, Sask.....	16.04	19.75
Melfort-Humbolt line, Sask.....	23.63	0.35
Melfort northeasterly, Sask.....	18.72	
Peebles-Lampman line, Sask.....	17.96	
Swift Current line, Sask.....	22.11	12.96
Thunderhill extension, Sask.....	1.41	17.45
Acadia Valley line, Alta.....	19.33	
Hanna-Medicine Hat line, Alta.....	54.17	48.08
Peace River line, Alta.....	0.48	4.30
Vegreville-Calgary revision, Alta.....	0.44	
Oliver northerly, Alta.....	25.82	55.57
	253.95	158.46

Canada Eastern Ry.—A recent press report states that work has been started on the section of the Intercolonial Ry., known formerly as the Canada Eastern Ry., between McGivney Jct. and Fredericton, N.B., to give the National Transcontinental Ry. direct connection into St. John, over the St. John and Quebec Ry. S. B. Wass, District Engineer, Moncton, is reported to have said in Moncton, recently, that work had been started on a big rock cut near Durham, that this was the beginning of the work of the revision of the line between McGivney Jct. and Fredericton, and that this section of the line is to be brought up to the standard necessary for heavy trains. The report also states that the work will include the construction of a new bridge across the St. John River at Fredericton.

Quebec Station—A press report, Jan 14, states that plans have been submitted to the Railways Department for the building of a station in Quebec on the sit occupied formerly by the Canadian Northern Ry., and the Quebec and Lake St. John Ry. station.

Lotbiniere and Megantic Ry.—A press report states that tenders will be called for shortly by the Canadian National Rys. for building an extension of the line from Fortierville to a junction with

roof is sloped and covered with cedar shingles. An entablature of galvanized iron returns all round the building, the dormer windows of the third floor being just above the cornice of the entablature. In the center of the front elevation there is a portico of 4 piers, 2 stories high and supporting two verandahs. The main entrance doors open off the lower of these and give access to the main hall or rotunda through a vestibule. Just at the left of the entrance from the vestibule is the office and manager's room. The office is provided with sliding sash and counter. Immediately to the right of the entrance is the library, which is also provided with a counter and sliding sash. In the center of the hall and opposite the entrance there is a spacious alcove with a fireplace. To the right, columns divide off the billiard room; a games room being screened off at the back of the billiard room. An open writing room is provided at the back of the main hall between the alcove and the games room. To the left, between two columns, access is obtained to the dining room or cafeteria. If found necessary this room can be partitioned off from the main hall. Entrance through swing doors is provided, between the dining hall and the kitchen at the back of it. At the back of the main hall, between the kitchen and

John Wardrope, General Agent, Natural Resources Department, issued a statement recently in regard to work done on western lines in 1919. In addition to branch line construction, etc., already referred to above, he gave the following particulars: "A number of large stations have been built at country points and loading platforms and stock yards have been extended and provided at points where none previously existed. At Moose Jaw a new station was built, also freight shed and office building. At Vancouver a \$1,000,000 station was completed and put in operation. Commencement was made on terminal facilities at Victoria. Terminal facilities at the following points have been enlarged: Port Arthur, Kamsack, Humbolt, North Battleford, Edmonton, Hanna, Calgary, Big Valley, Kindersley, Prince Albert and Saskatoon. Train service has been placed on the north-easterly part of the Hanna-Medicine Hat line.

Radville to Weyburn, Sask.—A press report states that a survey is being made for a line from Radville to Weyburn, Sask., and that construction will be started this year.

Peebles-Lampman Line—The Board of Railway Commissioners has authorized the Canadian Northern Saskatchewan Ry. to lay tracks across Assiniboia Ave., Peebles, Sask.

Hanna-Medicine Hat Line—The Board of Railway Commissioners has authorized the Canadian Northern Western Ry. to open for traffic its Hanna-Medicine Hat Branch from Bonar, Alta., southerly. This branch was previously opened previously for freight traffic, and the recent order removes the restriction as to the kind of traffic that may be carried. A press report states that 9 stations are being opened on the section of the line referred to for traffic, viz.: Taplow, Sheerness, Honey, Halladay, Kenowall, Carolside, Roope, Cassford and mile 47.

Edmonton Car Shops—A recent report states that it was proposed to erect large car shops at Saskatoon, Sask., and that the present shops at Edmonton, Alta., would be closed, let the Edmonton City Council to arrange on Dec. 30, for a delegation to interview the management in Toronto, and the Minister of Railways at Ottawa. A telegram from D. B. Hanna, President, C.N.R., on Jan. 1, informed the council that there was no foundation for the rumors, but that on the contrary it was proposed to enlarge the plant there as business necessities might require.

Oliver-St. Paul de Metis Line—The Board of Railway Commissioners has authorized the opening for traffic of the branch line from Oliver towards St. Paul de Metis, Alta., to mile 98.5, with limitations as to speed.

Kamloops - Kelowna - Vernon - Lumby Line—We are officially advised that construction is approximately about 40% completed on this line, which includes the main line from Kamloops to Kelowna, 114.55 miles, and a branch from Vernon to Lumby, 15.5 miles. The contractors for the grading, etc., are J. W. Stewart & Co., Vancouver.

Vancouver Island Line—We are officially advised that track has been laid on the line from Victoria to the bridge across the Koksilah River, mile 52.43, and that work is in progress from that point to mile 140, a distance of 87.57 miles. Track laying is being done by the company's own forces.

A press report states that tenders are under consideration for the erection of a locomotive house at the terminal yards on the Songhees Reserve, Victoria. (Jan., pg. 21).

United States Railway Notes.

Howard Elliott, President, Northern Pacific Rd., is reported to have stated recently that \$3,000,000,000 must be spent by U.S. railways within the next few years, to provide first class passenger and freight facilities.

The Baltimore & Ohio Rd.'s President, in addressing the Baltimore Chamber of Commerce recently, said that unless U.S. railways are granted means of getting increased revenues, in proportion to increased cost of operation, when returned to private control, they will have to revert again to government control. He stated the increase in cost of operation since 1916 as being about 70%.

Director General Hines of the United States Railroad Administration, states that a national agreement covering rules and working conditions for railway employes represented by Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employes has been signed between himself and officers of that organization to continue in force during the period of federal control.

Sir R. G. Reid's Estate—Two judgments were delivered Jan. 17, by the Quebec Court of Appeal, in connection with the action brought by Miss Helen Duff Reid, against Sir William D. Reid, H. D. Reid, R. G. Reid, the Reid Newfoundland Co., Lord Shaughnessy and the Royal Trust Co., involving 54,768 shares in the Reid Newfoundland Co. The Quebec Superior Court had ordered the sequestration of the shares pending final judgment in the principal action, and the same court in a second judgment had dismissed an application of H. D. Reid and R. G. Reid, requesting that Miss Reid make option as to which of the several claims in the action she would proceed upon. In the first case the court decided that this was not a case where sequestration should be ordered, and in the second appeal, a majority of the court confirmed the Superior Court's decision that Miss Reid was not obliged to make an option of the several claims in her action.

Another Hotel for Montreal—In connection with the erection of the projected hotel in Montreal by a syndicate which includes Lord Shaughnessy, Chairman, C.P.R. Co., and E. W. Beatty, K.C., President, C.P.R., application was made recently to Montreal City Council for permission to erect a 16 story building, the present building bylaw restricting the height of buildings to 10 stories. A committee to which the matter was referred favorably, and on the council, Jan. 13, by a vote of 11 to 8, authorized an amendment of the bylaw to permit the erection of the hotel.

Dominion Government Acquisition of G.T.R. System—The Dominion Government was reported, Jan. 7, to have approved of the agreement between it and the G.T.R. Co. for acquiring the system, under the provisions of the act passed last session. A meeting of the company's shareholders will be held in London, Eng., Feb. 19, to consider the agreement, and, if deemed advisable, ratify it.

Steam Railway Track Laid in 1919.

The total of new first track laid in Canada on steam railways during 1918 was 121.32 miles, against which the following table, compiled from official returns to Canadian Railway and Marine World, show that 325.77 miles of new track were laid by five companies on 13 different lines, during 1919. The Canadian National Rys., on its Canadian Northern Ry. lines in Saskatchewan, Alberta and British Columbia, laid 202.17 miles of this and the British Columbia Government laid 82 miles of the remainder on its Pacific Great Eastern Ry. The length of track laid in the several provinces was: Alberta, 134.75 miles; British Columbia, 127.84 miles; and Saskatchewan, 63.18 miles. Following are details:

Alberta and Great Waterways Ry. —	
Mileage 276.90 to 283.50.....	6.60
Canadian National Rys. —	
Thunderhill branch, Sask.....	20.15
Swift Current branch, Sask.....	18.03
Melfort-Humboldt line, Sask.....	0.35
Luck Lake branch, Sask.....	19.75
Alsask South Easterly, Sask.....	4.90
Hanna-Medicine Hat line, Alta.....	48.08
Oliver-St. Paul de Metis line, Alta.....	55.57
Peace River line, Alta.....	27.84
Vancouver Island line —	
Mileage 24.59 to 52.43.....	27.84 202.17
Dolly Varden Mines Ry. —	
Dolly Varden Mines to Alice Arm, B.C.....	18.00
Lacombe and North Western Ry. —	
From near Bentley to Rimbey, Alta.....	17.00
Pacific Great Eastern Ry. —	
Lone Butte near Horse Lake to Deep Creek near Soda Creek, B.C.....	82.00
Total	325.77

Saskatchewan Provincial Guarantees of Grand Trunk Pacific Railway Bonds.

Hon. W. F. A. Turgeon is reported to have stated in the Saskatchewan Legislature, Jan. 20, that he had received a telegram from Hon. J. A. Calder, Ottawa, as follows:—"Matter we discussed in Toronto agreed to. You may expect word in near future from Drayton. Settlement will cover past as well as future." This telegram had reference to the question of interest paid by the province in respect of branch line construction. Up to the present the province has paid \$537,000, which the Dominion Government will apparently repay, as well as take over all future liability of Saskatchewan under its guarantees. The contingent liability of Saskatchewan under its guarantees the G.T.R. is \$13,211,000.

Alien Enemy Property in Canada—An Ottawa press report states that it is proposed to convert into cash the \$40,000,000 or more of Austrian and German property vested in the Finance Minister under the provisions of the orders as to alien investments in Canada, and to distribute the same in liquidation of debts in Canada by Austrians and Germans, and for other purposes, under the directions of the Reparation Committee. It is stated that the fund includes \$28,000,000 of C.P.R. stock with accrued dividends.

Reported Merging of Railways and Canals Department and Public Works Department—An Ottawa press report states that there is a probability that the Public Works Department, and the Railways and Canals Department will be merged under one minister. The Department of Public Works, is at present without a minister.

Canadian Pacific Railway Construction, Betterments, Etc.

Appropriations for 1920—We are officially advised that the appropriations for eastern and western lines for this year provide for tie and rail renewals; bridge work, including turntables; ballasting, ditching, tile drains, etc.; tie plates and rail anchors; station and building work; siding and yard tracks; terminal and other improvements; additional coaling plant facilities at Fort William; new station terminal improvements at Moose Jaw; water supply, pipe lines, tanks, etc.; automatic signals and interlockers; fencing, repairs and renewals, British Columbia coast and river steamships, miscellaneous, telegraph work, renewals and improvements.

The cut off from Molson, Man., to Winnipeg, 83.1 miles, will have a second track build. The ballasting, ditching, tile drainage, tie plates, rail anchors and rail renewals will be largely improvements to present track. The siding and yard track work will cover extensions to present tracks at various points. The fencing will include the usual amount of repair work, as well as further tree planting, for snow protection, which was started last year.

Renewals and repairs of bridges, etc., will include, in addition to ordinary maintenance, a number of new turntables at various places, and the putting in of heavier spans at various points on the main line, as well as a large amount of culvert replacements and renewals.

Water supply work will include the renewal of several tanks in steel, as well as the installation of some new tanks and standpipes, at points where they are required owing to exigencies of traffic.

Terminal and other improvements will include the extension of various buildings at Angus ships, Montreal, as well as other important terminals throughout the system; the station and building express buildings, as well as the extension of some of the present stations and express buildings at various points.

The automatic signal will include yard and station protection at several points on both eastern and western lines, and the rebuilding of Hamilton Jct., interlocker.

The telegraph work cover the replacement of some wires on important lines with copper, as well as dispatching and telegraph system between Montreal and Smiths Falls.

The British Columbia coast, lake and river steamship work will include the usual maintenance and repairs, a new station and office building at Victoria, 2 new tugs and a new barge for the B.C. lake and river service.

Western Lines Work—D. C. Coleman, Vice President, Western Lines, returned to Winnipeg, Jan. 15, from Montreal, where he spent some days discussing the appropriations for this year's betterments and construction work. He is reported to have made a statement at Fort William, Ont., Jan. 14, as to the works to be undertaken as follows: "This year's programme of betterments, improvements and extension is the most considerable undertaken since 1913. Given a normal grain yield, we look for the heaviest volume of freight traffic we have been called on to move, and we propose to make such provision for it that the public will continue to receive the best quality of service. The work

of double tracking those portions of the line where traffic is especially dense will be resumed. It is proposed this year to double track the Molson cut off, from Molson to Winnipeg, and to provide for the handling of all through freight and passenger traffic by that route. The increasing volume of livestock traffic will be recognized by the construction of 29 additional stockyards. The housing of employes at isolated points will continue to engage earnest attention and this year 21 additional houses for section foremen and a large number of additional bunk houses for temporary section laborers will be provided. The building of branch lines to promote settlement and to serve farming districts now without transportation facilities will proceed rapidly, but a definite announcement as to what may be completed this year is deferred until the prospects as to labor supply can be gauged a little more accurately.

"At Fort William work will be started on another unit of the coal handling plant on Island 1, which even now is considered the nest on the Great Lakes. The new unit, which will take the best part of two years to build, will practically double the storage capacity which can be served by the plant."

At Winnipeg, block asphalt platforms will be laid to serve the station tracks. A new plant will be put in to provide for the more rapid cleaning and disinfecting of passenger cars, the freight car shop at Weston will be extended, and provision has been made for many improvements in the other facilities there.

At Regina the locomotive house will be extended. A new coaling plant will be erected. A further extension to the station will be erected to provide for the constantly increasing express and mail traffic, and a rearrangement of the main building will be made to provide more waiting room and ticket office accommodation. At Regina Beach, additional trackage will be provided to accommodate excursion traffic.

At Weyburn, a new building will be erected for the Dominion Express Co., and the locomotive house will be extended.

At Saskatoon, the freight shed facilities will be improved, an electric staff system will be installed on the joint section to Harwood, and at Sutherland the car shop will be completed and the locomotive house facilities improved.

At Moose Jaw, the new station and office building will be proceeded with. The platforms will be reached through a subway from the station, and the layout will be of the most modern type. A central steam heating plant will also be built and the engine house extended.

At Yorkton, the track facilities will be greatly increased and a new freight shed of much increased capacity will be built. Extensions will also be made to the locomotive houses at Wynyard, Sask., and Hardisty, Alta.

At Medicine Hat the station facilities will be improved, the locomotive house facilities increased, and an increase in freight yard tracks is on contemplation.

At Calgary a handsome new building for the Dominion Express Co. will be built east of the present Y.M.C.A. building, the capacity of Alyth freight terminal will be greatly increased by additional tracks and the ice houses' facilities will be extended.

At Edmonton there will be a rearrangement of tracks at the station with

a view to increased capacity, and a substantial extension will be made to the freight shed.

At Lethbridge, and at Macleod, there will be considerable expenditure for improvement of present facilities.

At Cranbrook, the locomotive house, machine shops, and the ice house will be replaced by new structures.

At Revelstoke, the locomotive house facilities will be materially improved.

To handle the constantly increasing fruit traffic on Okanagan Lake, an additional tug and an additional car barge will be provided and a new tug will also be placed on the Arrow lakes.

At Vancouver, work on the new ocean pier will be pressed vigorously, and there will be other improvements undertaken to provide for the handling of the growing traffic of that great port.

At Victoria, in connection with the coast steamship service, it is intended to add to the appearance of the inner harbor by erecting a fine office and terminal building.

In addition to the works already enumerated, stations will be built at Lydiatt, Harrowby, and Schwitzer, in Manitoba; at Willows, Corrinne, Insinger, Dafoe, and Rutland, in Saskatchewan, and at Metiskow.

West St. John, N.B.—The new baggage shed at West St. John, N.B., described in Canadian Railway and Marine World previously, was reported to be sufficiently completed for use early in January, about a month ahead of the contract date. The painting of the structure and the installation of the heating plant were said to be the only works uncompleted. Grant and Horne were the contractors.

Rapid progress is reported to have been made with the construction of the passenger camp from the baggage shed to the pier. Permission for the construction of this camp was granted recently by the St. John City Council.

The company is reported to have given a contract to the Fegles Construction Co., Port Arthur, Ont., for the installation of the equipment in the conveyors, connecting berth 15 with the company's elevators at West St. John, at an approximate cost of \$50,000. The conveyors are being built by Grant and Horne, St. John, N.B.

Chateau Frontenac, Quebec—D. H. Mapes, Engineer of Buildings, C.P.R., addressed the Montreal Rotary Club, Jan. 13, on "Problems which face a building engineer," in the course of which he gave details of the projected extension of the Chateau Frontenac. These extensions he said will alter the front of the hotel, the new wing, which will increase the hotel's capacity by 250 rooms, running up St. Louis St. The roof of the addition will provide a look-out for guests.

Aylmer Station—A press report states that an improved station will be erected at Aylmer, Que., during this year; that a new site has been surveyed and that cert ain preliminary work has been done.

London Division—A. Williams, Superintendent, London Division, is reported to have stated that an expenditure of \$245,000 had been approved for betterments on the division; that the work to be done will include a new station at Ayr, at an estimated cost of \$23,000; a new station at Puslinch, at an esti-

mated cost of \$11,000; general betterments at Chatham, at an estimated cost of \$45,000; improvements at Galt, at an estimated cost of \$16,000; improvements to the locomotive houses at London and Windsor; a passing track between Zorra and Woodstock at an estimated cost of \$8,000; that the present oil lights on 65 miles on the division on which the block signal system has been installed will be replaced by electric lights, and that minor works will be done at other points along the division. The installing of a block signal system between Guelph Jct. and Woodstock was completed during 1919, and there is a possibility of the system being installed during this year between Milton and Guelph Jct.

Lanigan Northeasterly Branch—The Board of Railway Commissioners has approved location plans of the branch northeasterly from Lanigan, Sask., mile 0 to 60.98, and authorized its construction across 53 highways. This is a line which the Dominion Parliament at its last session authorized to be built through Melfort into the Carrot River district. A contract for grading the first 50 miles was let in May, 1919, to Stewart and Welch, Calgary, Alta., and we were officially advised recently that 5% of the grading on it had been done up to Dec. 30, 1919. This is evidently the line referred to in a press report which states that the company had made preliminary arrangements for building a line into the Pas district, which would ultimately mean its extension into the Copper Lake and Lake Athapuskow gold mining district. The Carrot River runs into the Saskatchewan River near Pas, and the mining districts referred to north of that place.

Connaught Tunnel—A press report states that a contract has been let to Sidney E. Junkins Co., for putting a concrete lining in the Connaught tunnel in the Selkirk Mountains. The tunnel is 5 miles long and the lining of it will, it is said, be one of the largest concreting jobs ever contracted for. (Jan., pg. 15).

Vancouver Pier Extension—In a statement made at Vancouver, B.C., Dec. 29, D. C. Coleman, Vice President, C.P.R., Western Lines, is reported to have said that the construction of the new pier will be put in hand just as soon as the contract is let, and that it is intended to ask for tenders very shortly. This projected pier is part of a comprehensive plan for the provision of complete facilities for the handling of the company's ocean and coastal ships at Vancouver. The location of the projected pier is to be between two existing piers, and it is to be known as B.C. pier. The work proposed to be put in hand immediately will consist of dredging and filling.

The National Steel Car Corporation incorporated recently under the Dominion Companies Act, has taken over the plant, equipment, business, assets and liabilities of the National Steel Car Co., Hamilton, Ont., under the terms of the agreement, particulars of which were published in Canadian Railway and Marine World. The following are directors: R. J. Magor, New York, President; D. Symington, Baltimore, Md.; H. H. Price, New York; D. B. Dewar, Hamilton. It is reported that other directors will be directed shortly when the other officers will be appointed. The company will continue to manufacture railway cars, for service and will largely increase its motor truck manufacturing department.

Light Railways Projected for Northern Ontario.

In connection with the project for the construction of light railways in Northern Ontario, to which reference was made in Canadian Railway and Marine World for Dec., 1919, pg. 658, we are officially advised that the Canadian Light Ry. Construction Co. Ltd., plans to commence construction of a railway, meter gauge, approximately 39% in. between lakes village and Gowganda town plot, as soon as the snow goes off the ground; that it is proposed to have the material on the ground ready for starting work by that time; that 30 lb. steel rails will be used for the 27 miles of track; that the motive power will consist of gasoline and oil burning steam locomotives and it is expected to have trains running into Gowganda by midsummer.

The company, we are further, advised, proposes to build extensions of the line from Gowganda into the Fort Matchawan and West Shining Tree mining districts respectively, and is working on plans to build on loop line, leaving the Timiskaming and Northern Ontario Ry. at Swastika, going through the Kirkland Lake, Larder Lake, Skead Tp., and Boston Creek areas and connecting again with the T. and N.O.R. at Boston Creek.

In connection with this project articles have appear in local papers comparing Australian railways of Australia with the light railways projected for Northern Ontario. The Canadian Light Railway Construction Co. has issued the following circular letter in this connection: "The railway situation in Australia is that several trunk and main lines have been built on different gauges, which of course has created an unsatisfactory system of railway transportation. The situation in Northern Ontario is that for the past 10 years railway extensions, good roads, etc., have been promised for these districts, or the subject, in some form, has been under consideration by various governments, but very little has been done. The idea of building light railways is to give undeveloped districts immediate transportation facilities. The construction of light railways is only temporary. Their operation will assist development of water power and of the mining industry. When the business increases to warrant it, the light railways can be turned into electric or standard roads and the light rails and equipment can be transferred to new fields, to be used again as a method of assisting development. It is the intention to use light railways to assist the development of new and undeveloped districts. They are cheaper to build and maintain than macadamized roads, and will do the business on short hauls up to their capacity of a standard railway, and their is a commercial and business proposition. The Canadian Light Railway Construction Co. plans only to build branch lines, not trunk lines. Light narrow gauge railways embody three economic principles, low cost of construction, maintenance and operation. In addition they can be quickly laid down and run over almost any kind of country. They proved to be the most economical and successful method of transportation adopted by the allies during the war. Commercially they have been used in France, Belgium, Germany and Russia, for the past 20 years, as feeders to the main railways, and it is proposed to use them in the same capacity in this country. The Canadian Light Railway Construction Co. is

not advocating light railways in preference to government owned standard or electric roads."

A convention of those interested in the development of Northern Ontario was opened at North Bay, Ont., Jan. 21, and among the subjects considered was that of the construction of light narrow gauge railways.

Railway Finance, Meetings, Etc.

Canadian Northern Ry.—A New York press dispatch of Jan. 9, stated that William A. Read & Co., who placed on the market on Jan. 7 an issue of \$7,500,000 Canadian Northern Ry. Equipment Trust 6% bonds, Series D, 1919, had sold nearly the whole issue. The securities maturing June, 1920, to Dec., 1921, were reported to have been sold on a 6¼% basis, and those maturing June, 1922 to Dec., 1929, on a 6½% basis.

Canadian Northern Rolling Stock Ltd.—There was deposited with the Secretary of State at Ottawa, Jan. 22, duplicate original of a lease made by Canadian Northern Rolling Stock Ltd., to Canadian Northern Ry. Co., dated Dec. 1, 1919, to which is attached an assignment to Fidelity Trust Co., Philadelphia, Pa.

Ottawa Terminals Ry.—The directors for the current year, elected at the recent annual meeting, are: H. G. Kelley, President; W. D. Robb, Vice President; Frank Scott, Vice President and Treasurer; J. E. Dalrymple, R. S. Logan, W. H. Biggar and F. L. Bond.

Pacific Great Eastern Ry.—The British Columbia Government has placed an issue of \$2,500,000 of 5 years 5% gold bonds at 97.84, yielding the investor 5½%, the proceeds of which will be used exclusively, the Finance Minister is reported to have said, in Victoria, Jan. 6, for construction of the Pacific Great Eastern Ry.

The Quebec Central Ry.—Accounts for the year ended June 30, 1919, issued recently, show a surplus, after meeting interest charges, of \$274,742, and \$88,249 was brought in making \$362,991. The guaranteed dividend of 5% has been paid; \$80,000 set aside for renewals, and \$25,000 transferred to contingent fund, leaving a balance to be carried forward of \$88,911.

Temiscouata Ry.—A meeting of holders of provisional certificates issued by the bondholders' committee for the 5% consolidated mortgage income bonds was held in London, Eng., recently. J. R. Ball, chairman, informed the certificate holders that if the extraordinary conditions under which the railway was operated were taken into consideration, the results of the operations for the year ended June 30, 1919, should not be considered unsatisfactory.

Timiskaming and Northern Ontario Ry.

	Passenger Nov., 1919	Nov., 1918	Dec., 1919	Dec., 1918
Earnings	\$70,431.12	\$47,399.04	072,803.76	\$52,921.20
Freight earnings	190,159.13	154,931.81	187,715.99	152,800.49
Total earnings	260,590.25	202,330.85	260,519.75	205,721.69

White Pass and Yukon Ry.—The accounts for the year ended June 30, 1919, which were issued recently, show a credit balance of £67,847, instead of a debit balance of £48,427, as at June 30, 1918. This is reported to be due to adjustments made in the company's finances under a scheme of arrangement.

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ADVERTISING RATES furnished on application. ADVERTISING COPY must reach the publishers by the 10th of the month preceding the date of the issue in which it is to appear.

TORONTO, CANADA, FEBRUARY, 1920.

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Index to Canadian Railway and Marine World for 1919.

At the end of this issue is a very complete index to the contents of the volume for 1919 which as in former years, will doubtless be fully appreciated by the large number of subscribers who bind Canadian Railway and Marine World for reference purposes.

Even a casual glance over the pages of closely printed matter will show the tremendous range of subjects covered and the thorough manner in which this paper represents the entire transportation interests of the whole Dominion, steam railway, electric railway, marine shipbuilding, express and telegraph interests, as well as railway and canal and harbor contracting work.

Caraquet and Gulf Shore Ry. Proposed Sale.

Gloucester, N.B., County Council is reported to have passed a resolution asking the Dominion Government to take over the line from the company and make it a Canadian National Ry. branch, or to allow the New Brunswick Act summarized in Canadian Railway and Marine World, January, on pg. 12, to come into immediate effect. The Dominion Government has power to veto acts passed by a provincial legislature within a certain limited time. The Caraquet and Gulf Shore Ry. Co. has petitioned the Dominion Government to veto the N.B. act referred to; another press report states that a proposition may be made under which Gloucester County would issue bonds for the difference of about \$50,000 between the price at which the company is willing to sell, and that which the Dominion Government is willing to give for the line.

A letter signed C. W. White, in the St. John, N.B., Globe, of Jan. 21, referring to the Caraquet and Gulf Shore Ry. says: "This road is under option to a number of New York gentlemen, who will close the transaction during February. R. D. Isaacs, of St. John, who was in Bathurst recently, went over the road with an engineer. It is fully understood that Mr. Isaacs is the purchaser for the New York parties."

C.P.R. Employes Entertained at Montreal.

On New Year's Eve, the President, Vice President and other C.P.R. officers, entertained about 6,000 of its Montreal employes at an at home at the Windsor St. station. The feature of the evening was the conveyance by picture of the season's greetings of the company's chiefs to the employes, each greeting being proceeded by a portrait of the officer sending it.

The principal messages were as follows:

E. W. Beatty, K.C., President: "I wish every officer and employe a very happy new year. In doing so let me suggest that the greatest happiness can be achieved by duties faithfully performed, and that the first duty of a railway officer or employe is an appreciation of the grave responsibilities of his position and the paramount necessity of good service to the public. The high standard of the company's service can be maintained only by unremitting diligence, by courtesy, by friendly co-operation and by

unfailing pride in the company's great traditions. I trust that you will all enjoy a maximum of health and happiness during the coming year."

Lord Shaughnessy, Chairman of the company: "Peace, contentment, happiness in home and occupational life, with all other blessings, be yours in the new year."

I. G. Ogden, Vice President, Finance Department: "May I have as good wishes from you all as I send to all of you for the new year."

E. W. Beatty Urges Thrift.

E. W. Beatty contributed the following to the New York Sun recently: "With every new year we usually resolve to turn over a new leaf. If there is to be any general resolution made by the North American continent for the year, it might well be in the direction of thrift, for the first after-the-war years are causing natural concern to those who remember the financial panics which have always closed similar periods of careless spending. The extravagance noted by every recent visitor from Europe to this continent synchronizes with conditions of actual starvation affecting millions of people in Europe itself, who fought for freedom only to die for lack of food. This extravagance has been made possible, at least in part, by the heavy purchases made under stress of war by European nations on this continent. It represents the expenditure of unexpected profits, which are being dissipated, instead of placed in reserve for a rainy day. In this orgy of extravagance, Canada is just as great a sinner as the United States. In the last few weeks Canadians have been penalized to some extent for their uncurbed purchase of United States made luxuries by an adverse exchange. What the penalty to be paid by the U.S. will be, remains to be seen."

Electrification of Steam Railways.

D. B. Hanna, President, Canadian National Rys., was reported in a London, Ont., press dispatch to have said in a speech there early in January, that within a short time all Canadian railway terminals will be electrified. We are officially advised that Mr. Hanna made no reference to the matter in his speech, but subsequently in conversation with some London business men, he did say that a time would perhaps come when railway companies would be forced to face such a situation. He did not say that the C.N.R. or any other Canadian railway had any present intention of electrifying its railway.

A Toronto daily paper, which has published several apparently fake stories recently about railway matters, stated early in January that the C.P.R. had decided to electrify its whole system, main line and branches. Grant Hall, Vice President, gave a categorical denial to this at once. We are advised that while the C.P.R. management is always looking into the future and has obtained data in connection with the possibility of electrifying various portions of its lines, nothing whatever has been done towards carrying out any portion of the work, nor is their any likelihood of anything being done in the immediate future.

Saxon State Railways Deficits — A Berlin, Germany, cablegram says that the state owned railways of Saxony, show a deficit of 300,000,000 marks.

Electric Railway Department

Electric Railway Employes' Wages, Working Conditions, Etc.

London St. Ry.—Following the adverse result of the plebiscite on the question of an increase of fares by the ratepayers of London, Ont., Jan. 1, the question of what the company would do was at once discussed. C. Currie, President, arrived in London from Cleveland, Ohio, and after going over the situation, it was announced Jan. 5, that the company would continue to pay the increased wages granted, in the hope that the ratepayers would authorize an increase in rates, and would endeavor to recoup itself by reducing the service given. On Jan. 12, announcement was made that there would be a curtailment of service, it being stated that two cars would be taken off the Ottawa line and one each off the Oxford, Normal and Richmond routes on Jan. 16. The service will be maintained as at present on Saturdays and Sundays; 45 cars will be operated during rush hours; "trippers" will be run whenever traffic warrants, but the new schedule cuts down the service during the hours when traffic is light. The London City Council had the matter of the reduced car service before it Jan. 19, when it was referred to a committee for consideration.

Niagara, St. Catharines & Toronto Ry. Wages—A Board of Conciliation has been appointed to investigate the question of wages and working conditions of the Niagara, St. Catharines and Toronto Ry.'s employes, G. D. Kelly, Ottawa, representing the company; J. A. McAninch, representing the men, and County Judge Snider, Hamilton, Ont., being Chairman.

Ottawa Electric Ry.—F. D. Burpee, Superintendent, issued the following bulletin, Jan. 7: "Beginning Jan. 16, the following rules will apply to spare conductors and motormen. A spare conductor or motorman is one who is not booked on a regular, relief or swing run. Spare men must report at the barns or relief points at the following hours, week days, 5.50 a.m., 10 a.m., and 5.25 p.m. Sundays, 8 a.m., 11.40 a.m., and 4 p.m. After reporting they must remain as long as the relief inspector or night barn clerk wishes. They must be properly clothed in uniform and ready to work. Spare men must report also, at times other than the above, when specially ordered to do so by an inspector, night clerk, or other proper authority. If a spare man is not employed after reporting, he will be credited with the full time he is held, which time in any case will not be less than one hour. The Inspector of Reliefs (Mr. Carson) will have charge of all booking. Spare men are entitled to lay off one day in each week of seven days if they wish to do so, but this layoff day must be arranged for with the Inspector of Reliefs. Spare men will not be allowed to lay off on Saturdays, Sundays or public holidays. A spare man who does not report at the regular times mentioned above, or whenever specially ordered, will be charged with a miss for each time he fails to do so. No miss will be charged against any man when he is off duty, by arrangement with the Inspector of Reliefs, or is on leave of absence, or has reported sick. Each spare man who

has no misses charged against him, or who is not away on account of sickness, or who is not on leave of absence (except the weekly day off), will be guaranteed \$37.50 for each pay period of one-half month as a minimum wage. If the time that has been credited to him for working and reporting does not reach that amount, the difference will be paid to him on the regular pay days. Not more than 5 spare conductors and 5 spare motormen must be allowed away on leave at the same time. No leave will be granted for more than 30 days, and only then if the demands of the service permit it. In future when spare men are employed they will be considered as on probation for 6 months. At the end of this probationary period, if their conduct has been satisfactory to the Chief Inspector, they will be taken

requisition upon the council for funds to carry out its duties. The powers asked by the council provide that it may without submitting the same to the electors, pass bylaws for the issue of debentures to cover the purchase of the Toronto Ry.'s property, and for the construction of any new lines or extensions of existing lines, for rolling stock, buildings and other equipment.

Automobile Drivers' Responsibility for Collisions With Street Cars.

The Ottawa Electric Ry. will be the plaintiff in accidents due to collisions with automobiles and other vehicles where such accidents are due to careless and reckless driving of automobiles and other vehicles. F. D. Burpee, Superintendent, O.E.R., in referring to the matter recently, said: "These accidents are becoming too frequent, and so many of them result in damage to the company's cars that we are obliged to take action. Careless driving upon the part of chauffeurs is becoming very serious. There is a class of chauffeur who recklessly rush in from side streets on to the main streets, without regard to results. Many of them have an idea that if a street car is on their left hand they therefore have the right of way. This is a mistake. Streets cars, under the city bylaws, have right of way over all other traffic at all times, but apart from this fact motormen on the cars are in many cases powerless to prevent collisions. The street cars are held to the tracks. Motormen can only go ahead or back up. They cannot turn out. Their instructions from the management to exercise care at all times and to do everything possible to avoid accidents, are strict and frequently repeated. On the other hand, practically every opportunity of avoiding collision is open to the chauffeur. He can approach main streets with caution, and he can guide his automobile in any direction and at any degree of speed. The public generally is vitally interested in this growing recklessness on the part of chauffeurs. Pedestrians, as well as passengers in street cars, are in constant danger. Much can be done to minimize the danger, and to decrease the number of accidents, if the owners of automobiles will warn their drivers, and punish them when accidents occur."

J. B. Bulley, Superintendent, Cape Breton Electric Co.'s Sydney Division, was presented with a set of pipes by motormen and conductors of his division recently.

Assessments of Electric Railways—The Grand River Ry. appealed recently against its assessment in Kitchener and Preston, Ont. The Kitchener court of revision dismissed the appeal against the assessment on the company's battery building, and the company has appealed to the county judge.

Louise Bridge, Calgary—The Calgary, Alta., City Council has under consideration plans for the erection of a new bridge across the Bow River, on the site of the present Louise bridge; the new structure to be of full street width, to accommodate a double track electric railway and the ordinary sidewalk.

Canadian Electric Railway Association.

Honorary President, Lieut.-Col. J. E. Hutcheson, General Manager, Montreal Tramways Co.

Honorary Vice President, Acton Burrows, Proprietor and Editor, Canadian Railway and Marine World.

President, A. Gaboury, Superintendent, Montreal Tramways Co.

Vice President, G. Gordon Gale, Vice President and General Manager, Hull Electric Co.

Honorary Secretary-Treasurer, pro tem, A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Railway Co.

Executive Committee, The President, Vice President, and F. D. Burpee, Superintendent, Ottawa Electric Railway Co.; C. C. Curtis, Manager, Cape Breton Electric Co.; A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Railway Co.; Geo. Kidd, General Manager, British Columbia Electric Railway Co.; M. W. Kirkwood, General Manager, Grand River Railway Co. and Lake Erie & Northern Railway Co.; A. W. McLimont, Vice President and General Manager, Winnipeg Electric Railway Co.; R. M. Reade, Superintendent, Quebec Railway Light & Power Co.; Lt.-Col. G. C. Royce, General Manager, Toronto Suburban Railway Co.; C. L. Wilson, Assistant Manager, Toronto & York Radial Railway Co.

Official Organ—Canadian Railway and Marine World, Toronto.

on as permanent employes. If not satisfactory, they will be relieved from duty."

Preparing for Taking Over Toronto Railway by the City.

Following the carrying of bylaws providing for the city acquiring the Toronto Ry. on the expiration of its franchise in 1921 for the establishment of a transportation commission, and for the operation of the railway by a commission of three persons, without salary to be appointed by the city council, the city council is applying to the Ontario Legislature for the power to establish the Toronto Transportation Commission, consisting of three members, each of whom shall be a resident and a ratepayer, and appointed by the city council for three years, without salary, for the operation and control of all car lines, controlled or owned by the city. The commission's power to include the fixing of fares, so that the income shall be sufficient to make the transportation facilities self sustaining, and to make

Ottawa Electric Railway Proposes Service at Cost.

F. D. Burpee, Superintendent, Ottawa Electric Ry., wrote the mayor of Ottawa, Jan. 21, asking that the city board of control at first opportunity take up the consideration of a service at cost arrangement as a solution of the electric railway problems. He pointed out that with the certainty that the city will not renew the franchise on its expiry in 1923, the company could not be expected to spend money in providing extensions of the service. In connection with this matter, Mr. Burpee issued the following statement Jan. 2:—

“Operating a street railway today, particularly on a 5c fare, is no bed of roses, and most companies are eager enough to have municipalities buy them out. The costs of operation increase directly with the volume of business done, and the price of every item that makes up the costs of operation has nearly doubled since before the war, but the revenue is definitely controlled by the rate of fare. Service at cost contracts are not obstructive to municipal ownership. In fact the most of those in force provide that the city can take over the railway at any time on giving a year’s notice. This clause makes such a contract a stepping stone towards municipal ownership. Ottawa Electric Railway shareholders are not averse to municipal ownership, and if the city desires to purchase in 1923, will do everything possible to facilitate the transfer of the property.

“The normal increase of business which halted during the war, has resumed, and we feel sure that this increase of business will continue. Next year it will be still more difficult to handle, and increasingly so from year to year till the end of the franchise. We are making daily use of our entire plant, and we cannot help but realize that from now on the general efficiency of our plant will be affected, but the demand for constant use will steadily increase. We admit that we cannot adequately serve the Ottawa public today, but we are doing our level best and placing every available car where it will serve the greatest number of people. The mayor stated yesterday that there seemed no good reason why the company should not make the necessary extensions and additions to its assets, as there was apparently little risk that there would be a fall in prices between now and 1923, when the city, under its agreement, is bound to pay for everything the railway has at that time. We have no cash reserves to make such purchases. Our reserves are already invested in cars, power house machinery, barns, etc. As a very large amount would be required to make any material improvement in the system, the shareholders certainly do not intend to try and raise that large amount on a franchise of three years, even if it were possible to do so, which is extremely doubtful. The mayor also stated that any valuation taken today must necessarily be higher than anything we have ever known and that no one can tell how it will compare with future values. Is it not also positive that future values may be considerably higher than they are today, and this may be the case in 1923? Certainly there are no indications of falling prices. Many of the best economists in the world are of the opinion that the present standard of values is a permanent one, and that we

cannot expect ever to return to the old state of things that existed before the war.

“To put a service at cost contract into effect requires a valuation of the property to decide what return shall be made to the owners of it. It makes no difference whether the company is capitalized at one million or ten million, the value is based on what the company actually owns, not on stock certificates. Such a valuation is exactly the same as that called for by our franchise at its expiration in 1923. Why not take such a valuation now, and if prices are expected to change, provide that any time the city decides to take over the property, another valuation should be made? The mayor infers that a service at cost contract will tend to extravagant operation. One of the fundamental principles of such contracts is that all expenditures are absolutely fixed by an independent commission appointed by the public. If the company spends more money on operation than the commission has allowed the excess must be paid out of a guarantee fund which the company is called upon to maintain at all times out of the pockets of the shareholders. Some of these contracts add an extra spur to economical operation by permitting the company and its employees to share to some extent in any surplus that may accrue over and above the costs of operation.

“The promoters of this company were the pioneer electric railway men of Canada, and they naturally have more than a financial interest in the electric railway here. We have our critics, as all public utility concerns have, but it is generally admitted that in the past the city has been well served by its street railway. We are anxious to preserve that good opinion. To relieve a situation that it is clear to us will become a very difficult one in the near future, we have suggested service at cost as an immediate remedy, and have asked the city government to look carefully into it. It is being successfully operated today in a number of cities on this continent to the evident satisfaction of the riding public. We are ready to make a definite proposition after a discussion with the city’s representatives, but at present suggest that the general idea of the plan be looked into, and that the fullest publicity be given to the whole question.”

Toronto Railway’s Snow Removal Appeal.

The Judicial Committee of the Imperial Privy Council has dismissed the Toronto Railway Co.’s appeal against the city’s claim for removing snow from the streets, where it had been deposited by the company, after removal from its tracks. The specific claim was for \$14,000 for clearing snow in 1914. A London dispatch giving a summary of the judgment, states that the correspondence between the company and the city, particularly in 1914-15, showed acute difference between the parties on the subject of snow removal. The company claimed that it had the right to deposit the snow in the same places as used by the city. Local courts decided that the company’s claim was untenable, and stated the company’s duty in the mat-

ter. Later proceedings before the Ontario Railway and Municipal Board had the same result and the board’s orders on the subject were not complied with. The judgment states that the board was practically helpless to enforce its order in this regard, as by the statutes there is nothing expressed or implied, which would give it power to penalize the company for a breach of contract. The judgment considered it the company’s duty not to deposit snow on a street without having first obtained permission of the city engineers and there appeared to be no doubt that the company did so, thereby committing a breach of its statutory duty. Therefore the city is quite within its rights in seeing to the streets being cleared, and the expense so incurred, so far as applicable of the removal of improper deposits by the company, is one which the company is under obligation to pay.

The Hydro Electric Power Commission of Ontario’s Electric Railway Projects.

Toronto Eastern Ry.—The City of Toronto and all the other municipalities concerned in the project for the purchase of the Toronto Eastern Ry. from the Canadian National Railways, and its completion with terminals in Toronto at a cost of \$8,360,794 have passed bylaws approving the agreement, and authorizing the issue of debentures for their several proportions of the cost. The City of Toronto vote on Jan. 1, carried the bylaw by 22,351 to 4,333, and York Township, voting Jan. 17, carried it by 252 votes to 10. Following is a list of the municipalities and the amounts of debentures authorized:

Township of York.....	\$ 381,587
Township of Scarborough.....	892,686
Township of Pickering.....	482,050
Township of Whitby.....	280,304
Township of East Whitby.....	299,943
Township of Darlington.....	429,680
Town of Whitby.....	277,955
Town of Oshawa.....	711,894
Town of Bowmanville.....	216,030
City of Toronto.....	4,328,665
	\$8,360,794

Hamilton-Galt-Elmira-Guelph Line—

Ten of the 17 municipalities interested in the project for the construction of an electric railway from Hamilton to Galt, Elmira and Guelph, voted at the municipal elections early in January on bylaws to raise their several proportions of the total of \$6,530,659, which the line and its terminals in Hamilton are estimated to cost. Eight of the municipalities gave majorities for the bylaws, and in only one case, West Flamboro, was it defeated. Following is a list of the municipalities, the amount of debentures authorized to be issued, and the number of votes for and against where the voting has already taken place:—

	For	Against
Ancaster Tp.	\$ 174,080	425 247
Flamboro West Tp.	82,734	131 225
Beverley Tp.	241,464	323 183
Dumfries North Tp.	157,817	80 65
Dundas Town	168,942	319 82
Waterloo Town	379,487	439 53
Hamilton City	607,173	5,577 1,742
Galt City	1,318,031	1,029 73
Kitchener City	1,053,080	1,174 407
Guelph City	855,239	1,099 248
Waterloo Tp.	557,973	385 211
Woolwich Tp.	283,687	234 27
Puslinch Tp.	38,543	.....
Guelph Tp.	92,549	.....
Elmira Village	91,484	27 2
Preston Town	281,615	317 153
Hespeler Town	146,761	.....
Total	\$6,530,659	

Toronto Railway's Car Shortage Penalty Appeal Allowed by Privy Council.

The Toronto Ry. Co.'s appeal against a penalty of \$1,000 a day for 24 days, imposed by the Ontario Railway and Municipal Board for failure to carry out the board's order of Nov. 9, 1914, for the supply of 100 double truck cars by Jan. 1, 1918, and another 100 by Jan. 1, 1919, was allowed by the Judicial Committee of the Imperial Privy Council, Jan. 20, with costs of the Privy Council and the Ontario Supreme Court appeals. The history of the case dates back for some time before the war. Different orders were made by the board, on the city's application for the provision of additional cars of a type to be approved by the board, and after considerable experimenting by the company, it was practically shown that the type of car desired by the outside parties was more or less of a freak and was impracticable. The orders were then rescinded and a new order made on Nov. 9, 1914, after a special report prepared under an order of the board on the Toronto Ry. traffic conditions, that the company provide 100 additional cars by Jan. 1, 1918, and another 100 by Jan. 1, 1919. In the meantime, war had commenced, and not only the financial condition, but the general industrial condition of the country was upset, owing to the necessity for diverting everything of that nature to war purposes, and it was practically impossible for cars to be built for ordinary uses. The city made various applications to the board to compel the company to carry out the board's order, without having any regard to the conditions prevailing throughout the world, and alleging what amounted to contumacy on the company's part. The matter drifted along until early in 1918, when special legislation was passed by the Ontario Legislature for the alleged purpose of strengthening the board's power to enforce compliance with any order it might make, by providing a penalty not exceeding \$1,000 a day for noncompliance with any such order. This legislation became effective Mar. 26, 1918, and on Apr. 9, on the city's application, the board inflicted a penalty of \$1,000 a day, from Mar. 26 on the company for not carrying out the order to provide 100 cars by Jan. 1, 1918. The company immediately entered an appeal against the penalty order on the grounds that the board had no jurisdiction to make such an order, that the order was not made for the purpose of enforcing compliance with any order, and that under the Ontario Railway Act, the board cannot order a penalty to be paid for any neglect or noncompliance with any order prior to the date of the order providing such penalty; that the company used its best efforts to comply with the board's order, but it was impossible, owing to war and other conditions to obtain cars, and that the order inflicting a penalty was against evidence and contrary to law and the weight of evidence, and also that evidence was wrongfully rejected. The Supreme Court of Ontario's Appellate Division, confirmed the board's orders, both as to the provision of the cars, and the infliction of the penalty, the company immediately entering an appeal to the Imperial Privy Council.

In allowing the appeal, Lord Finlay is reported to have stated that the board is authorized to impose penalties for

noncompliance with its orders, but subject to the condition that such penalties must be "for the purpose of enforcing compliance" with these orders, and this expression points not to the summary imposition of a penalty for a past breach without previous warning, but the imposition of a penalty in advance, for the purpose of procuring obedience to the order, and, in his opinion, it was not the Ontario Legislature's intention that the board should be empowered to impose penalties, except after giving the railway warning that penalties would be imposed, after a specified period, and giving it the opportunity of avoiding such penalties by complying with the order. Accordingly, the order of Apr. 19, 1918, was authorized by the act. He considered that the company was not prevented by war conditions, from supplying cars, and was gravely in default, but even so, was entitled to a notice of penalty and an opportunity of meeting it. The point raised by the company, that by the powers conferred on the board, it must be regarded as a superior court within the meaning of the British North America Act, and that members should be appointed by the Governor General of Canada, and not by the Lieut.-Governor of Ontario, was fully considered by the Supreme Court of Ontario, which decided against the company, and in consequence of the view taken on other points of this appeal it was unnecessary for the Judicial Committee to argue it, and he expressed no opinion on the matter.

Nova Scotia Tramways and Power Co.'s Increased Expenditures.

In connection with the passing of the semi-annual cumulative dividend recently, making one year now in arrears, the company issued a circular to shareholders, from which the following are extracts:—"For the 12 months ended Sept. 20, 1919, gross earnings increased approximately \$237,000 over the corresponding period of 1918, but operating expenses and taxes increased \$296,000. The increase in operating expenses was due to the high cost of labor and materials, to large expenditures needed to place the gas and tramways departments in better operating condition, and to an increase in taxes amounting to almost 35%. The tramway is obliged by the terms of its charter to maintain a rate of fare averaging 4.3c per passenger. Every possible effort will be made at the next session of the legislature to have the charter changed to allow for a proper increase in the rate of fare. With a higher fare and by the use of one-man safety cars which are being installed, the situation should be helped materially. For the 9 months ended Sept. 30, the balance of earnings for reserves, replacements and dividends was \$94,575 and it is estimated that this balance for the 12 months ended Dec. 31, 1919, will not exceed \$116,216. The semi-annual dividend of \$3 per share paid in July, 1919, required a disbursement in cash of \$62,364, thus leaving a balance which would be insufficient to cover the dividend due on Jan. 2, 1920, even if no provision were made for depreciation."

Southern Canada Power Co.'s Annual Report.

The Southern Canada Power Co. owns 11 electric lighting and power plants in Canada and one in Vermont, and of these only one, the Sherbrooke Ry. and Power Co., operates an electric railway in addition. The annual report for the year ended Sept. 30, 1919, issued recently does not give details of the railway operations separately, but gives earnings, expenses, etc., of its whole operations in bulk. The following table gives the figures, all inter-company charges being eliminated:—

Gross earnings	\$566,991
Purchased power	\$ 93,941
Taxes	10,989
Operation and maintenance.....	180,953
Administration	23,987
	309,780
Profit from operation	\$256,311
Non-operating profits	6,982
	\$263,293
Bad debts	\$ 1,114
Interest	204,115
	205,229
Surplus for year.....	\$58,054

The profit and loss account, showed a balance of \$146,008.84 brought forward, which has been increased to \$201,035.02. The total assets are valued at \$8,425,707.06, of which \$7,961,897.51 represents the company's various properties. The capital outstanding includes \$285,200 preferred stock, \$4,285,200 common stock; \$3,036,900 first mortgage bonds; \$110,777.95 bonds of subsidiary companies, and \$27,307.75 real estate mortgages. The current liabilities were \$74,787.27, and the accrued bond interest \$15,699.07, the other liability being the \$201,035.02 balance to credit of profit and loss account.

The following are the directors for the current year:—President, W. C. Hawkins; General Manager, Jas. B. Wood-yatt; other directors: W. K. Baldwin, M.P.; Jas. Davidson, J. S. Gillies, W. H. Miner, A. J. Nesbitt, G. Parent, K.C., M.P.; C. E. Read, J. M. Robertson, H. Sifton, J. R. Moodie. Secretary-Treasurer and Purchasing Agent, L. C. Haskell; Assistant Secretary - Treasurer and Comptroller, C. Johnstone. The Sherbrooke Ry. and Power Co.'s directors for the current year are: W. C. Hawkins, A. J. Nesbitt, J. B. Woodyatt, Grant Johnston, C. Johnstone and L. C. Haskell.

Montreal Tramways Co. and Cost of City Sewers.

Under existing legislation the Montreal Tramways Co. has to pay one-half of the cost of sewers built on the highways along the company's right of way. The company contends that it does not benefit in any way from the building of such sewers, the only benefit accruing to the owners of properties alongside the right of way, and that, therefore it should be relieved of the charge. A bill has been introduced in the Quebec Legislature to add a new section, 25b to the act, 1 George V, as amended by the act, 2, George V, as follows: "Notwithstanding any law to the contrary, the strips of land belonging to the company and constituting its right of way, when in the centre or bordering on a street, road or highway in a municipality, shall not be considered as property fronting on such street, road or highway, nor required, as such, to contribute to the cost of construction, maintenance or repair of roads, sidewalks, waterworks, or public drains of such municipality."

Electric Railway Projects, Construction, Betterments, Etc.

British Columbia Electric Ry.—Point Grey municipal council on Jan. 13, granted the company permission to lay tracks on Grenville St. W. G. Murrin, Assistant General Manager, Vancouver, was present and explained that the company has no particular desire to build the line, but it is under an obligation to the C.P.R. to make an expenditure of \$50,000. (Jan., pg. 34).

Calgary Municipal Ry.—Tenders have been received for the supply of ties and bolts for repairs to the tracks during this year.

After lengthened consideration, the Calgary, Alta., City Council has adopted a route for the extension of the Tuxedo Park line. It favors the extension of the present Center St. line from the present terminus at Twentieth Ave. to beyond Thirty-Second Ave. In order to carry out this plan the Canadian Estates Co. is being asked to permit the removal of the present line on First St., northeast to Center Ave., and for the taking up of the present line from Twenty-Fourth Ave. northeast, this track to be relaid on the Edmonton trail to Twenty-Seventh Ave., northeast.

In connection with a recent accident on the Fourteenth St. West hill, A. G. Graves, City Commissioner, and T. H. McCauley, Superintendent, have made a number of recommendations for the re-routing of cars, the construction of new loops, improvements to the car brakes, etc., with the view of making the operation safe. A press report states that the estimated cost of the improvements is \$14,000. (Dec., 1919, pg. 670).

The Hamilton, Grimsby and Beamsville Electric Ry.'s barns at Beamsville, Ont., together with 3 passenger cars, were destroyed by fire, Dec. 28. The amount of the damage is variously estimated at from \$40,000 to \$75,000.

Kingston, Portsmouth and Cataraqui Electric Ry.—We are officially advised that the company will make necessary repairs to its track, but is not contemplating any new construction.

London and Port Stanley Ry.—London, Ont., ratepayers on Jan. 1, by a vote of 2,930 to 2,188 defeated a bylaw for carrying out various betterments on the line, and the purchase of an electric locomotive and 6 passenger cars as detailed in Canadian Railway and Marine World for January, pg. 34. The commission asked for \$218,000, but the city council cut it down to \$200,000, which was the figure voted on. P. Pocock, Vice Chairman of the London Railway Commission, is reported to have stated, Jan. 5, that the defeat of the bylaw was probably caused by the large number of money bylaws voted upon, and the total amount asked for frightened the people that the money asked for the L. & P.S.R. is absolutely needed if the commission is to take care of the traffic and that the commission will, most probably, ask the council to have the bylaw submitted again at an early date. At this year's inaugural meeting of the London Railway Commission the question of the purchase of an electric locomotive and 6 cars was laid over for future consideration. It is said to be probable that the money for this rolling stock, and betterments for which the \$200,000 is required will be obtained by means of short term loans.

The new station building at Port

Stanley, Ont., which has already been described in Canadian Railway and Marine World, was opened Jan. 19.

An agreement with the London Gas Co. for the building of a spur line to the gas works has been approved, and it was decided to make application to the gas company for permission to extend the spur to the old Hunt's mill property and the hydro electric substation. (Jan., pg. 34).

The Moncton Tramways Electricity and Gas Co.'s car barns at Moncton, N.B., were destroyed by fire Dec. 26, the estimated amount of the damage being about \$50,000. The property destroyed included the car barn, and the machine shop, together with one car and a sweeper. A watchman lost his life as a result of injuries received during the fire. The property was only partially covered by insurance, the amount awarded to the company by the adjusters being reported to be \$8,540.

The Montreal and Southern Counties Ry. Co. is asking the Dominion Parliament to extend the time within which it may build its authorized lines of railway, and for other powers. The company was incorporated by the Dominion Parliament in 1897 to build a railway to be operated by electricity or any other mechanical power except steam, from the northern limit of Chambly County, Que., through Chambly, Vercheres, Rouville, St. Hyacinthe, Laprairie, St. Johns, Iberville, Missisquoi, Brome, Shefford, Stanstead and Sherbrooke Counties to the City of Sherbrooke, Que. In 1898 it was given power to build lines also in the Beauharnois, Chateauguay, Huntingdon and Napierville Counties. Extensions of time for construction were subsequently granted, the last being one of five years, granted in 1915. The company passed under G.T.R. ownership, and its railway consists of a line built from Montreal crossing the G.T.R. Victoria Jubilee Bridge to St. Lambert and Longueuil, and a converted Central Vermont Ry. branch having a total mileage of 52.20 miles. (Dec., 1919, pg. 670).

The Montreal Tramways Co. is, we are officially advised, building a new line on Stoville St., from Mason St., to Belanger St., 1.15 miles. At present it is not contemplating doing any new construction, but the usual work of renewal of tracks will be gone on with during the coming construction season. The company contemplates the immediate construction of a new substation at Cote St., with 10,000 k.w. capacity. (Dec., 1919, pg. 670).

The Oshawa Ry. has been authorized by the Board of Railway Commissioners to lay a second track across Wilkinson and Barrie Aves., and to make changes in the location of an existing spur line in Oshawa, Ont. (Aug., 1919, pg. 449).

Port Arthur Civic Ry.—A press report states that the Port Arthur, Ont., Civic Ry. contemplates the purchase of wires, etc., for the renewal of the overhead work on 4.5 mile of single track during this year.

Quebec County—A Quebec press report states that plans have been prepared for building an electric railway to link up a number of parishes and summer resorts in Quebec County, and that the project was laid before representatives of municipalities interested at a meeting held recently at Loretteville. The suggestion is to start from the

Sillery terminus of the Quebec County Ry., a subsidiary of the Quebec Ry., Light and Power Co., run through the Sillery, Cap Rouge, La Suede, Les Sauls, Loretteville, Ancienne, Lorette, Charlesbourg and Beauport municipalities and connect with the Q.R., L. and P. Co.'s line in Limoliou Ward, Quebec City. The estimated cost is \$500,000, and the promoters are said to be ready to begin building in April.

Quebec Ry., Light and Power Co.—Some complaints having been made as to the condition of extension work on the Beauport Road, W. J. Lynch, General Manager, was reported to have said, Jan. 13, that the extension was completed and that cars were running as far as the Canadian Northern Ry. crossing by Nov. 13, two days ahead of the date stipulated on the agreement with the city. Beyond the C.N.R. tracks grading has been finished and track laid, but owing to the state of the ground, the erection of the poles for the overhead work has been suspended. It is the company's intention to complete the work with as little delay as possible. (Jan., pg. 34).

Toronto Civic Ry.—We are officially advised that there were no extensions of or additions to the track, rolling stock or buildings during 1919. The only projected extension on which there is any definite instruction at present is the double tracking of the present temporary single track line on Bloor St. West, between Quebec Ave., and Runnymede Road, 0.491 mile.

Tenders will be received to Feb. 17, for the construction and equipment of the St. Clair Ave.-Mount Pleasant Road extension. The specifications show that this work involves the widening of St. Clair Ave., east of Yonge St.; the laying of a permanent pavement, with a double track railway, along the middle of the street; the grading of Mount Pleasant Road, the installation of a temporary ballast line; the construction of bridges and trestles, and the provision of 13 cars for the operation of the line. The track will be laid with 7 in. girder rails, 122 lb. to the yard; the St. Clair Ave. track to be classed as permanent, and the Mount Pleasant Road track to be classed as temporary. (Jan., pg. 34).

Toronto Ry.—The Board of Railway Commissioners has ordered the company to pay the C.P.R. \$10,093.98, being 10% of the estimated cost of the subway at Avenue Road, and interest at 5% on half the cost of the work during construction, and on the total cost from completion, amounting to \$13,807.01, altogether \$23,900.99. (Dec., 1919, pg. 671).

The Waterloo-Wellington Ry. Co. will apply to the Ontario Legislature to amend the letters patent incorporating the company under the name of the Berlin and Bridgeport Electric St. Ry. by authorizing it to build an electric railway from Bridgeport, through the Waterloo and Guelph townships to the City of Guelph.

A press report referring to the above, prior to the official notice of the application to the legislature being published, stated that W. H. Breithaupt, Kitchener, President of the company, said that after such a line had been built the company might be induced to sell out to the Hydro Electric Power Commission of Ontario at a fair price. (Jan., pg. 33).

Mainly About Electric Railway People.

Thos. Ahearn, President, Ottawa Electric Ry., is spending some time at Coronado Beach, California.

O. E. Baldwin, heretofore Purchasing Agent for the City of Guelph, Ont., has been appointed Manager, Guelph Radial Ry. at a yearly salary of \$1,800. He had transportation experience in London, Eng., where he is reported to have managed a motor bus company.

Sir Adam Beck, Chairman, Hydro Electric Power Commission of Ontario, who went to England, towards the end of Dec., 1919, where he was attacked by pneumonia, is reported to be convalescing there and hoping to be able to sail for Canada about the middle of February. He has been reappointed by the London, Ont., City Council to the London Railway Commission, which manages the London and Port Stanley Ry. for two years. He has also been re-elected Chairman L.R. Commission.

H. Brooker, dispatcher, Niagara, St. Catharines and Toronto Ry., St. Catharines, Ont., has resigned, and is reported to have entered Hydro Electric Power Commission of Ontario's service, in connection with the operation of the Sandwich, Windsor and Amherstburg Ry., which is being taken over by the commission.

E. P. Coleman, General Manager, Dominion Power and Transmission Co., addressed the Hamilton, Ont., scientific society, Jan. 16, on public utilities, dealing particularly with those supplying electric light and power, and operating electric railways. In the course of his address he gave an account of the origin and development of the Dominion Power and Transmission Co., and the electric railway companies owned and operated by it.

N. S. Cumming, heretofore chief clerk, Dominion Power and Transmission Co.'s railway department, Hamilton, Ont., has been appointed Superintendent Niagara, St. Catharines and Toronto Ry., St. Catharines, Ont., vice W. R. Robertson, resigned to enter the Hydro Electric Power Commission of Ontario's service.

Alderman T. J. Hanningan, Secretary, Ontario Hydro Electric Railway Association, resigned from the Guelph, Ont., City Council, Jan. 12, as a protest against the council having elected Alderman H. Westoby as mayor, Mr. Hanningan alleging that Mr. Westoby is opposed to the hydro projects, though the latter expressed himself subsequently as in favor of at least some of them.

A. F. McGill, Assistant Superintendent, Niagara, St. Catharines and Toronto Ry., St. Catharines, Ont., has resigned, and is reported to have entered Hydro Electric Power Commission of Ontario's service, in connection with the operation of the Sandwich, Windsor and Amherstburg Ry., which is being taken over by the commission.

J. Moir, Traffic Superintendent, Edmonton, Sask., Radial Ry., was suspended from duty by the mayor, Jan. 7. On the following day the mayor issued a memorandum giving reasons for the step he had taken, and making a number of charges against Mr. Moir. The committee in charge of public utilities held a meeting Jan. 9, at which the mayor withdrew all the charges made and withdrew the suspension of Mr. Moir, who was thereupon reinstated in office. Mr.

Moir then resigned his position, his resignation to take place in 30 days. On Jan. 10 the city commissioners granted him two months pay on his retirement.

A. N. Pay, Master Mechanic, Niagara, St. Catharines and Toronto Ry., St. Thomas, Ont., has resigned, and is reported to have entered Hydro Electric Power Commission of Ontario's service in connection with the operation of the Sandwich, Windsor and Amherstburg Ry., which is being taken over by the commission.

P. Pocock has been reappointed by London, Ont., City Council as a member of the London Railway Commission which manages the London and Port Stanley Ry. for a further term of two years. He has also been re-elected Vice Chairman of the commission.

W. R. Robertson, Superintendent, Niagara, St. Catharines and Toronto Ry., has resigned to enter the Hydro Electric Power Commission of Ontario's service. He is on its railway department's staff and is in charge of operation.

Herbert Grant Tulley, who has been appointed President, International Ry. Co., Buffalo, N.Y., was born at St. John's Common, Sussex, Eng., Aug. 1, 1872, and for some years was in the British army in India. On leaving the British army, he went to the United States, entered the Metropolitan Life Insurance Co.'s service, and served in various capacities from 1899 to 1905. From 1905 to 1911 he was investigator, adjustor, assistant claims agent, and officer in the Transportation Department, Chicago, City Railways, Chicago, Ill.; 1911 to Jan. 14, 1920, Assistant Superintendent of Transportation, Superintendent of Transportation, and Vice President, Philadelphia Rapid Transit Co., Philadelphia, Pa. The International Ry. operates 435 miles of track, including city services in Buffalo, Niagara Falls and Lockport, N.Y., and connecting interurban lines, and the Niagara Falls Park and River Ry. in Canada.

Senator J. M. Wilson, one of the Montreal Tramways Co.'s directors, has given \$100,000, towards the restoration of Laval University, Montreal, which was seriously damaged by fire recently.

C. J. Yorath, City Commissioner, Saskatoon, Sask., who has charge of Saskatoon Municipal Ry., was reported recently to have been appointed Comptroller-General for Manitoba. The Premier of Manitoba advised Canadian Railway and Marine World, Jan. 25, that Mr. Yorath had not received any appointment from his government.

Transcona-Winnipeg Omnibus Line—The Transcona, Man., Town Council, on Jan. 13, instructed its clerk to get in touch with Winnipeg city officials to obtain permission to establish a terminus in Elmwood for an omnibus line from Transcona; to secure estimates of the cost of motor busses and to report to a future meeting. The route of the projected line follows the Nairn Road from Transcona to the Elmwood end of the Louise bridge, Winnipeg, near the end of the Winnipeg Electric Ry. on Talbot Ave., 4.5 miles. Details of the service and the fares will be fixed at a future meeting. Several attempts to establish an electric car line between Transcona and Winnipeg have failed.

Proposals for Buying Ontario Electric Railways.

Guelph Radial Ry.—Guelph, Ont., ratepayers, by a vote of 1,095 to 237, passed a bylaw on Jan. 1 to raise \$150,000 by debentures for improving the Guelph Radial Ry. and buying additional rolling stock. It is to be operated as part of the electric railway system to be built and operated by the Hydro Electric Power Commission of Ontario.

Mayor Westoby, in his inaugural address to the city council on Jan. 19 is reported to have urged its members to co-operate in every way with the Hydro Electric Power Commission of Ontario to the end that Guelph may secure at an early date the hydro radial railways promised. He is also reported to have said that the Radial Ry. will be taken over by the commission, under the terms of the bylaw, in July, when improvements in the service will be made.

Sandwich, Windsor and Amherstburg Ry.—We were officially advised, Jan. 15, that it was expected that the Hydro Electric Power Commission of Ontario will assume control of this railway, the purchase of which was authorized by bylaws, passed by the nine municipalities interested, on Dec. 6, 1919, about the middle of March. Until the transfer is made the railway will be managed by the same staff as heretofore. One of the conditions of the transfer is that any of these officials shall resign on request from the commission.

Sarnia St. Ry.—A member of the Hydro Electric Power Commission of Ontario's engineering staff visited Sarnia, Ont., recently and it was reported Jan. 16, that complete survey of the Sarnia St. Ry. and its possibilities would be commenced by the commission's engineers during February. It is expected that as the result of the survey a proposition will be made to acquire the line by the city, and to extend it.

Toronto Suburban Ry.—On Oct. 16, 1919, the Toronto Board of Control requested the Works Commissioner to confer with the government authorities to ascertain what arrangements could be made for co-operation in the operation of the "City and Suburban Street Ry." and to form a scheme of operation for the benefit of the citizens. On Jan. 2, the Works Commissioner reported that he had received the following letter from A. J. Mitchell, Vice President, Canadian National Rys., dated Oct. 30, 1919:—

"The sale of the street railway lines within the City of Toronto, owned by the Canadian National Rys., was discussed at the last meeting of our board, when it was decided that the company would consider the sale of such lines at a fair price to be agreed on with the city, or subject to arbitration, providing that the city would agree to taking over the Woodbridge extension, or providing running rights to this company on an equitable basis over the lines taken over. The whole question of the operation of electric lines is under consideration at the present time and should the Hydro Electric Power Commission of Ontario proceed with an extensive programme of hydro radials this company might make an arrangement with the commission with respect to its lines outside the City of Toronto. I presume such an arrangement would not affect, but would rather advance, what the City of Toronto has in mind with respect to radials within

the city limits. I will be glad to discuss this matter further with you at any time."

In submitting this letter to the board of control, the Works Commissioner said: "Having regard for the provisions of the agreement between the city and the Hydro Electric Power Commission of Ontario, requiring the assent of the commission to acquisition by the corporation of any such lines, will your board please adopt a policy and instruct me further?"

On Jan. 14 the board of control decided to consult the Hydro Electric Power Commission of Ontario on the matter.

Reported Negotiations for Sale of Quebec, Montmorency and Charlevoix Ry.

Under an act of 1918 the Dominion Government was authorized to acquire from the Quebec Ry., Light and Power Co., the portion of its lines known formerly as the Quebec, Montmorency and Charlevoix Ry., extending from Quebec to St. Joachim, 25.1 miles, and there connecting with the Quebec and Saguenay Ry. Although this latter line has been taken over by the government under the same act, the Quebec, Montmorency and Charlevoix Ry. has not, but the Quebec and Saguenay trains are operated over it to Quebec under traffic agreement.

A press report states that negotiations are in progress between an English syndicate, acting in close conjunction with the Delaware and Hudson Co., for the purchase of the line from Quebec to St. Joachim; the price mentioned being \$2,000,000. The D. and H. Co., through its own lines in Canada—the Quebec, Montreal and Southern Ry. and the Napierville Junction Ry.—is reported to have secured running rights which will carry it up to the Quebec Bridge. Arrangements for running rights over this bridge into Quebec can, it is stated, be secured, and as a result, the Q., M. and S.R. could be linked up and with running rights over the Quebec and Saguenay Ry., which could probably be secured from the Dominion Government, the D. and H. Co. would have a through route to Murray Bay and other tourist points on the lower St. Lawrence River.

British Columbia Electric Railway Passenger and Lighting Rates.

The British Columbia Public Utilities Commissioner gave his decision recently on the Burnaby District's complaint that the British Columbia Electric Ry. was discriminating against the municipality in its electric light rates. The company in July, 1918, faced an increase in wages and suffered a strike. Before reoperating the cars the company asked for an increase of passenger fares in the City of Vancouver and in the Point Grey, South Vancouver and Burnaby municipalities. The increase was granted by all the municipalities except Burnaby, and in return for this concession the company agreed to a reduction in rates for lighting charged in the three municipalities named. The single city line, the Hastings East line, in Burnaby operate on the old fares. The Burnaby Lake line is an interurban one under the Board of Railway Commission's jurisdiction. Apart altogether from negotiations for increased fares on city lines, the company applied for, and received, author-

ity to increase them on the Burnaby Lake line from the Board of Railway Commissioners, but Burnaby municipality appealed against this decision.

The commissioner, after reviewing the whole matter, says he can see nothing in the case which implies discrimination by the company. It appears that Burnaby municipality is seeking relief from a situation which has arisen out of its council's considered action. It is probable that under the existing rates, brought about in the way described, users of electric light are sufferers in comparison with users in other municipalities who pay standardized rates, but on the other hand users of the Hastings St. car line are gainers. If this discrimination exists, it is discrimination against electric light users, but the Burnaby people are responsible therefor through their elected council. As the commissioner's jurisdiction as to fares on the Hastings St. line is to say the least of it, questioned by the 1919 amendment to the Dominion Railway Act, he considered himself only competent to deal with electric light rates, and these could not be dealt with until after a proper segregation of the company's electric light and power systems from its railways. The application was therefore adjourned until the question of jurisdiction has been definitely settled. As the company wishes to standardize both railway rates, on the Hastings St. line, and light rates, he suggested that the parties get together and come to an agreement on such a basis.

Increases in Electric Railway Freight and Passenger Rates.

Grand River Ry.—The Board of Railway Commissioners has authorized the company's standard passenger tariff 16, C.R.C. 14, fixing a fare of 2.875c a mile on all its company's lines and which went into effect Jan. 20.

London St. Ry.—London, Ont., ratepayers on Jan. 1, voted 4,080 to 3,604 against authorizing the company to increase its fares.

Ottawa Electric Ry.—In connection with the company's appeal against the Board of Railway Commissioners' refusal to grant an increase of fares on the Britannia line, which was argued before the Supreme Court of Canada, Nov. 17 and 18, 1919, the court on Dec. 22, 1919, decided that it requires further argument on the following questions:—1. Has the Board of Railway Commissioners authority to reduce the company's charge for passenger services within the City of Ottawa, below the fare of 5c now charged for any such services? 2. If the first question is answered in the negative, has the board power to require the company to provide a service partly within and partly beyond the limits of the City of Ottawa for a charge not exceeding 5c? 3. In passing upon the questions raised upon this appeal is the court in any respect governed by the Railway Act, 1919, Sec. 325? The argument will probably be heard in February. Nepean Tp. is the respondent.

Winnipeg Electric Ry.—A Winnipeg press dispatch of Jan. 28 says that the 6c street car fare there, will continue for some months. Justice Curran having stated that, even if the city should be successful in an action to obtain an injunction restraining the company from collecting such a fare, the injunction

would not become operative for many months.

Montreal and Southern Counties Ry. to Build Bridge at Granby.

Judgment was given Dec. 31, in the Quebec Court of King's Bench, upon the Montreal and Southern Counties Ry.'s appeal against a Quebec Superior Court judgment in an action brought against the company by the City of Granby. The action arose out of the interpretation of the company's franchise contract with the city; one of the clauses of which provided for the construction of a general traffic bridge over the Yamaska River by the company, and authorizing the city, if the company failed to build the bridge, to build it at the company's expense. The company had not built the bridge, because it did not want to lay its lines along the road crossing the river, but the city called for its erection. The Superior Court held that the company should build its bridge, and the Court of King's Bench, with one dissentient, has upheld that decision.

The appeal raised not only a question of the legal interpretation of the contract between the parties, but also asked whether the issue was not one for the Board of Railway Commissioners and not the civil courts to decide. Judgment, as arrived at by a majority of the court—Justice Carroll dissenting—was that under the conditions of the contract this was a question properly before the courts and that the company was wrong in its contentions. As a result, the majority judgment, orders the company to build a steel bridge over the Yamaska River at Irwin St., over which vehicles and pedestrians may safely pass. If it fails to do so, the City of Granby is authorized to build the bridge at the company's expense.

Hydro Electric Power Commission of Ontario's Railway Construction—In connection with the railway work which forms part of the power development being carried out by the Hydro Electric Power Commission of Ontario in the Niagara Peninsula, we are officially advised that the Canadian Bridge Co.'s tender has been accepted for the supply and erection of 3 double track deck plate girders to be designed for Cooper's E-70 loading. Each span will be 75 ft. long, designed in accordance with Michigan Central Rd. specifications, with concrete floor for ballasted deck. The bridge will be erected at the crossing of the Niagara power development canal about 1,000 ft. east of the crossing by the M.C.R. main line of the Welland River at Montrose, Ont.

Application for Increased Fares in New York—The Receivers for the New York Ry., the Interborough Subway and Elevated Lines, in Manhattan, and the Brooklyn Rapid Transit Co., have applied to the city for permission to charge an 8c fare until June 30. It was stated that unless an increased fare is granted the companies may be compelled to suspend all traffic.

Charles Kennedy and Lewis Kennedy, father and son, were each fined \$20 at the St. John, N.B., police court, recently, for assaulting a New Brunswick Power Co.'s conductor, while in charge of a car, Dec. 26. The accused persisted in taking a dog into the car with them in contravention of the rules.

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry. and allied companies:—

	4 mns. to 4 mns. to	
	Oct. 31, 1918	Oct. 31, 1919
Gross	\$710,405	\$580,354
Expenses.....	526,990	456,025
Net	183,415	124,326

—Cape Breton Electric Co. —

	12 mns. to 12 mns. to	
	Nov. 30, 1918	Nov. 30, 1919
Gross	\$51,610.95	\$49,235.47
Expenses	40,349.20	37,074.51
Net	11,261.75	12,160.96

Edmonton Radial Ry.—A report by the city controllers of Edmonton, Alta., on the operation of the civic public utilities to Nov. 30, 1919, contains the following: "The gross earnings for the months were \$1,912,322.88, while operation and maintenance cost \$1,073,140.27, showing a net surplus on operation of \$839,182.61, as against \$694,966.06 for the same period of the previous year, and after meeting capital and depreciation charges there is a net surplus on all the utilities (inclusive of the deficit on the street railway) for the 11 months of \$137,919.07 compared with \$2,528.76 for the corresponding period of 1918. The street railway for November showed a net surplus (inclusive of capital and depreciation charges), of \$1,526.39, against a net deficit for Nov., 1918 of \$25,546.05. The net deficit on the street railway for the 11 months to Nov. 30, 1919 was \$53,283.94."

Guelph Radial Ry.—A press report states that the receipts for 1919 show an increase of \$16,000 over those for 1918. We were officially advised Jan. 20 that the accounts were being audited, and that figures were not available.

London and Port Stanley Ry. Co.—The directors for this year are: President, E. S. Little, mayor; Vice President, Alderman G. B. Drake; other directors, Aldermen Watkinson, Ashton, Wheatcroft, Cunningham, Brighton and W. A. Wilson. The mayor of London, Ont., explained, Jan. 17, that it is necessary to hold an annual meeting to keep the company formally in existence, as the capital stock the Grand Trunk Ry. holds 210 shares, and other persons hold 47 shares. The remaining 8,637 shares are owned by the City of London. The company had paid out of the \$183,564.31 received from the London Railway Commission, \$183,494.51 for interest, sinking fund, etc., and the balance of \$68.80 for current expenses.

The Montreal Tramways Co. has declared a dividend at the rate of \$2.50 a share of its capital stock for the quarter ended Dec. 29, 1919. It is reported that the meeting of directors, Jan. 15, at which the dividend was declared, the President presented figures to show that owing to the recent advance granted in fares with a corresponding increase in passenger traffic, the company had been placed in a position to resume the payment of dividends on the common stock, payment of which had been suspended since the spring of 1918.

Nova Scotia Tramways & Power Co.—A Halifax, N.S., press report states that no dividends will be paid in the preferred stock for the 6 months ended Dec. 31, 1919. There are outstanding \$2,200,000 of preferred shares, bearing interest at 6% per annum and payable half yearly, the interest being one year in arrears, approximately \$122,000. Considerable sums have been expended on

renewal of track and other improvements, for which a short term loan of \$1,000,000 was made during 1919, and half of which has been spent. This improvement works will be continued during this year.

Toronto Civic Railway—

Receipts	Dec., 1919	Dec., 1918	1919	1918
Receipts	\$44,140.79	\$32,075.48	\$441,955.09	\$331,413.24
Passengers	2,603,065	1,922,409	26,190,336	19,755,072

Toronto Ry., Toronto and York Radial Ry. and allied companies—

	10 mns. to 10 mns. to	
	Oct. 31, 1919	Oct. 31, 1918
Gross	\$1,123,801	\$1,048,478
Expenses	729,430	557,908
Net	394,371	490,570

Toronto Railway—

	1918	1919
January	\$ 562,077	\$ 588,923
February	569,650	545,771
March	575,957	615,526

Moncton Tramways, Electricity and Gas Co., Moncton, N.B., is reported to have ordered 2 new cars, and a new sweeper, to replace the car and sweeper destroyed when the car barn was burned Dec. 26.

Calgary, Alta., City Council is receiving applications for the position of Traffic Manager of the Calgary Municipal Ry., a new position which the city commissioners recommended should be created.

The Moose Jaw, Sask., Electric Ry., is reported to have put in operation on Jan. 12, a regular 6 minute car service on the belt line in place of the irregular service in operation for some time previously.

The Toronto Civic Works Department called for tenders during January for 2 single truck cars for the Toronto Civic Ry.'s Bloor St. route. It is expected that the order will be placed about the end of February.

Calgary, Alta., City Council is reported to have ratified an agreement with the Dominion Government for carrying letter carriers on the Calgary Municipal Ry. at \$40 each per year instead of \$35 as heretofore.

The Cape Breton Electric Co. has issued an illustrated calendar for 1920. The top half of the sheet for each month contains a colored cartoon of a humorous character illustrating a phase of the safety first movement.

Winnipeg Electric Ry. employees decided, Jan. 8, by a vote of 550 to 300, to withdraw from the International Street Railway Men's Union and to form an independent union. The company employs about 1,100 men.

By order of the Montreal Tramways Commission, the public were given the privilege of using the Montreal Tramways Co.'s cars at the ordinary day rates from midnight to 5 a.m. on Christmas and New Year's mornings. The regular night fare between these hours is 15c cash.

The Toronto Board of Control, on Jan. 21, made an order for the return of reports made in 1918 in connection with the proposed building of a civic car factory in Toronto, so that it may again consider the question of the building of cars by the city for the operation of the civic railway.

The Toronto Police Commissioners are paying the Toronto Ry. \$100 a year each for badges to be used by plainclothes men and detectives, when riding on the company's cars. It was announced early in

April	543,055	600,231
May	548,778	620,068
June	533,393	*431,082
July	540,296	*534,412
August	555,709	629,540
September	571,637	641,422
October	475,545	650,914
November	517,226	638,871
December	594,847	678,407

Totals\$6,588,800 \$7,175,167

*Strikes in progress.

The city's percentage for 1919 was \$1,251,310.

Winnipeg Electric Ry. and allied companies—

	10 mns. to 10 mns. to	
	Oct. 31, 1919	Oct. 31, 1918
Gross	\$428,339	\$295,005
Expenses	321,795	261,441
Net	106,544	33,564

The surplus for Nov., 1919, after providing for fixed charges, was \$37,623.71.

Electric Railway Notes.

January that 160 of these were in use, but that the number will probably be considerably curtailed.

The Detroit United Railway adopted the queue system recently at Detroit, Mich., for handling crowds during the rush hours. Both the front and rear doors of the car are utilized, and two lines of intending passengers are formed, one for each door. Extra conductors are placed at each end to facilitate collection of fares.

The case of the City of Winnipeg Electric Ry., respecting the validity of the order, made by the Public Utilities Commissioner for Manitoba, increasing car fares, was set down for hearing at the sittings of the Manitoba Court of King's Bench, which opened Jan. 26. The city questions the validity of the Public Utilities Act.

The Toronto Board of Control, after considering the Imperial Privy Council's judgment on the Toronto Railway's appeal against the penalty of \$1,000 a day for noncompliance with an order of the Ontario Railway and Municipal Board to provide additional cars, decided that an application be made to the board forthwith for the enforcement of the original order.

The Quebec Ry., Light and Power Co. is reported to have announced, Dec. 24, that all tickets purchased at the rates in force prior to the recent increase in rates, would be accepted for transportation on the cars at face value. It was originally stated that these tickets would only be accepted on the cars for one month after the new rates went into force on Nov. 20, 1919.

The Toronto Board of Control, on Jan. 21, voted \$200,000 for the purchase of motor cars for operation on the civic railway, chiefly, to relieve congestion on Danforth and St. Clair lines. The Works Commissioner was instructed to buy cars, making the best possible arrangement, preference to be given to Canadian car building companies, but not to close any deal without further instructions from the board.

The Fort William Municipal Ry. has bought 14 cars from the Cleveland St. Ry., Cleveland, Ohio, to replace those destroyed by fire in Dec., 1919. They are somewhat shorter than those being operated at present in Fort William. Two arrived at Fort William towards the end of January, and were immediately overhauled and put in service. The price paid for the cars delivered at Fort William is approximately \$4,800 each.

At the British Columbia Electric Ry., Vancouver Island employes' annual dinner at Victoria, recently, A. T. Goward, Local Manager presiding, it was stated that 110 of the company's employes in the Island Division, who enlisted for overseas service, 11 were killed and 14 wounded in action. Of the company's employes in the whole province, 564 enlisted, and of these 40 were killed in action, 41 wounded, and 81 died. Of the remainder, 318 had returned.

Edmonton, Alta., Radial Ry. employes are reported to have requested the city commissioners to discontinue the opera-

tion of one-man cars, and to put two men in charge of all cars. The men contend that it is too much to expect one man to punch transfers, collect transfers, give change, sell tickets, attend to fare box and run a car on schedule time, that it is taking altogether too great a risk, is unreasonable, and that the service would be greatly improved by its alteration. It is stated that during certain periods of the a second man is placed on the one man cars to enable the work to be done.

The Board of Railway Commissioners, sitting at Kitchener, Ont., Jan. 12, had

under consideration the Grand Trunk Ry.'s appeal for an order to direct the Kitchener Light Commission, operating the Kitchener and Waterloo St. Ry. to pay 50% of the cost of the watchmen at the King St. crossing at Kitchener. It is stated that the Kitchener commission at present only pays 2c a day towards the watchmen's wages, which amounts to \$9,75, and the G.T.R. claims that a fourth man will have to be employed. Commissioner Goodeve, who heard the application, recommended the parties to come to an agreement and report.

The Canadian Electric Railway Association Expresses its Appreciation of Its Honorary Secretary-Treasurer.

On the eve of leaving Toronto for a short New Year's holiday, Acton Burrows, who resigned the Honorary Secretary-Treasurership of the Canadian Electric Railway Association recently, after having been unanimously re-elected for 12 years, and who has been elected an honorary member of the association and its Honorary Vice President, was entertained at luncheon at the Albany Club, Toronto, by a number of officials of electric railways which are members of the association, the arrangements having been made by a committee, consisting of A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Ry.; Lt.-Col. G. C. Royce, General Manager, Toronto Suburban Ry.; and C. L. Wilson, Assistant Manager, Toronto & York Radial Ry.

After the King's health had been drunk, the association's President, A. Gaboury, Superintendent, Montreal Tramways Co., who occupied the chair, said: "I need not explain the purpose of this luncheon, unfortunately we all know it too well, but I certainly cannot let the occasion go by without saying a few words of the great loss the association has sustained in the resignation of its Honorary Secretary-Treasurer, Acton Burrows, who has acted for so many years in that capacity, who has rendered such valuable services to the association, who has, as a matter of fact, sacrificed a great part of his time and energy, possibly to the detriment of his own personal affairs, for the purpose of helping along the Canadian Electric Railway Association, and making it a success. It is safe to say that it is the unanimous opinion of every member, from coast to coast, that much of its success has been due to the energy, experience and courage displayed at all time by our good friend Acton Burrows.

"Mr. Burrows, we have had the pleasure of knowing you for a great many years, and in those years you have made us feel that we could call upon you for all the help and assistance that lay in your power. You have always replied to any request for information, cheerfully and conscientiously, and I can assure you that we have appreciated and do still appreciate the courtesy and kindness you have always shown, both in your capacity of Honorary Secretary-Treasurer of the association, and as a personal friend. As a mark of our esteem we herewith tender you a small token of the very deep affection and love that all the members of the association feel for you. Do not accept the tokens at their price value, they are not intended as such, but accept them as a

reminder of deep attachment and friendship that will last forever."

The presentation consisted of a large Sheffield plate tray, silver on copper, with mounts, silver milled and hand engraved, and a Sheffield plate coaster, both of the period from 1800 to 1820, and several pieces of cut glass. The tray bore an engraved inscription "Presented to Acton Burrows by Canadian Electric Railway Association, Dec., 1919." Mr. Burrows expressed briefly his deep appreciation of the presentation, and of the too flattering manner in which Mr. Gaboury had spoken of his services, and assured the donors that although he felt compelled, owing to his business and personal affairs requiring his whole attention, to resign the honorary secretary-treasurership, he would always be at the association's disposal, and he hoped to continue to meet the members on many future occasions and to be in frequent correspondence with them from the Canadian Railway and Marine World's office.

The following, among those present, also spoke, A. Eastman, Vice President and General Manager, Windsor, Essex & Lake Shore Rapid Ry., and Honorary Secretary-Treasurer pro tem of the association; E. P. Coleman, General Manager, Dominion Power & Transmission Co.; E. W. Oliver, General Superintendent, Niagara, St. Catharines & Toronto Ry.; C. L. Wilson, Assistant Manager, Toronto & York Radial Ry.; F. D. Burpee, Superintendent, Ottawa Electric Ry.; W. J. Radford, Assistant Manager, Toronto Suburban Ry.; Jas. Anderson, Vice President, Sandwich, Windsor & Amherstburg Ry.; J. F. Deadey, Superintendent, Mimico Division, Toronto & York Radial Ry.

A. Eastman, acting Honorary Secretary-Treasurer, pro tem, read a number of telegrams and letters, received from officials of companies which are members of the association, from which the following are extracts:

E. P. Coleman, General Manager, Dominion Power & Transmission Co., Hamilton, Ont.: "We greatly regret to note that our Honorary Secretary-Treasurer, Acton Burrows, has felt constrained to tender his resignation to the association. We consider this a very serious matter, as there is no doubt that the success of the association in the past has been mainly due to the efficient and unselfish ministrations of our honored and Honorary Secretary-Treasurer and his wise direction of its affairs."

C. C. Curtis, Manager, Cape Breton Electric Co., Sydney, N.S.: "Please convey to Acton Burrows, the grand young

man of the C.E.R.A., my regret at being unable to be with you today, also my best wishes for a happy and most successful New Year."

E. J. Dickson, Vice President, International Ry., Buffalo, N.Y.: "Regret impossible to attend luncheon. Kindly convey our very best wishes to Mr. Burrows for all manner of success in the future."

G. Gordon Gale, Vice President, Hull Electric Co.: "I regret that I shall not be able to be in Toronto for the luncheon. I should very much like to join with you all in the presentation which will take place at that time."

Lt.-Col. J. E. Hutcheon, General Manager, Montreal Tramways Co., Montreal: "I am pleased to note that a presentation is to be made to Mr. Burrows. I would like very much to be present, but I fear that my attention will be required here during the entire week, on matters of very great importance to the company. If it is at all possible to get away, I assure you I will be present. Mr. Burrows has been of very great value to the association, in the many years he has occupied office, and we cannot do too much on his retirement to show our appreciation."

C. B. King, Manager, London Street Ry., London, Ont.: "We are very sorry that Mr. Burrows finds it necessary to discontinue serving as Honorary Secretary-Treasurer. Personally I feel the association may be quite unable to secure a substitute."

M. W. Kirkwood, General Manager, Grand River Ry. and Lake Erie & Northern Ry., Galt, Ont.: "It would really be a pleasure to attend the luncheon, but owing to perss of business, it is not possible for me to do so."

A. W. McLimont, Vice President and General Manager, Winnipeg Electric Ry., Winnipeg, Man.: "Unfortunately it will be impossible for any of this company's officials to be represented at the luncheon to be tendered Acton Burrows. I personally regret very much not being able to attend, as there is nothing that the members of the C.E.R.A. can do that would be more than Mr. Burrows' untiring efforts for the association's interests have entitled him to."

C. U. Peeling, Manager, Cornwall Street Ry., Light & Power Co., Cornwall, Ont.: "While our company cannot be represented at the luncheon we heartily concur in the association's action, and regret that we have been unable to show our appreciation of Acton Burrows' services at an earlier date."

W. B. Powell, General Manager, Montreal & Southern Counties Ry., Montreal, Que.: "I regret very much that owing

to our being very short handed at present, we will be unable to send a representative."

R. M. Reade, Superintendent, Quebec Ry., Light & Power Co., Quebec, Que.: "My best thoughts and wishes go out to all of you at this time, and I regret exceedingly my inability to be present, owing to this time of year being the busiest part of our winter season. We hate to lose Acton Burrows, even after 13 years, because he has always been a genuine inspiration to all of us, active and always in action, the man who has done things for the association, and Dec. 29, 1919, will stand out as evidence of his sterling character and worth, showing the great esteem, and I may say affection, we all have for him. Here's to his very good health and happiness and I hope that as Honorary Vice President of the Association he will give us the benefit of his mature experience in things 'electro-politico.' I feel we can count on his hearty co-operation, not only now in the re-organization, but in the years to come."

H. E. Weyman, Manager, Levis County Ry., Levis, Que.: "Sorry cannot attend. Please accept my esteemed appreciation."

W. S. Hart, Secretary - Treasurer, Three Rivers Traction Co., Montreal, wrote Mr. Burrows personally: "I regret to note from circular issued by Mr. Eastman that you have resigned as Honorary Secretary-Treasurer of the Canadian Electric Railway Association. I am hardly surprised at that action as certainly it must have been a great sacrifice to you to give up so much time as you have to the affairs of the association. The high standing of our association is such that I feel we should testify our gratitude for the work that you have done. I have not been a very important factor in the association, but all of my relations to it have been of a most satisfactory nature."

Calgary Municipal Railway Operating Results.

City Comptroller Wood in a report upon the operations of Calgary, Alta., public utilities for the 11 months ended Nov. 30, 1919, is reported to have said: "In the street railway department, there was a deficit at the beginning of the year which totalled \$7,118.24. Increased traffic, especially during the autumn and early winter, however, quickly brought a surplus to this department, and at the end of November, the total actual revenue of the lines was \$736,559.05, as against total expenditures of \$713,182.64, leaving a surplus of \$23,376.41. The milder weather of December, it is expected, will cut down the revenue somewhat as compared to November, but the figures indicate that the lines will finish the year with a surplus of approximately \$25,000. The unfortunate accident of Dec. 20, will have no effect on the profits of the line, for the reason that such accidents are paid for out of a special reserve fund created by taking 2% of the gross profits each year and setting them aside for this purpose. At the beginning of 1919, there was \$18,367 and the 2% of the gross this year will add another \$15,000 about. However, a number of other minor accident cases had to be paid for out of the money on hand at the beginning of the year so that the recent accident will just about clean out the reserve fund."

A press report of Jan. 6, stated that the results of the year's operation would be about as follows:—

Car earnings	\$772,881.05
Miscellaneous	15,045.15
Bowness Park	27,976.25
	\$215,092.46

The cost of operation is not given, but it is stated that the surplus is expected to be from \$25,000 to \$30,000.

In connection with these figures, T. H. McCauley, Superintendent, is reported to have given the following additional information:—"The total hours of operation for the year ended Dec. 31, were 304,596. On this basis, with 2 men on a car at 60c an hour, or \$1.20 an hour, the cost would have been \$365,515.20. With one man on a car, at 65c an hour, the cost was \$197,987.40, a saving of \$167,527.80. To this must be added saving in double time for holidays of \$8,223.60; saving on uniforms of \$5,550; winter trousers, \$1,612.50; saving on caps, \$487; a total saving of \$185,613.10.

Suits Against Montreal Tramways Co.

The Quebec Superior Court, sitting at Montreal, Jan. 14, awarded \$465.50 damages and costs in favor of George Gautier, against the Montreal Tramways Co. In Nov., 1917, the plaintiff was a passenger on one of the company's cars and after he had got off and was waiting for it to move on, the conductor, it was alleged, deliberately kicked him in the eye, causing a severe wound. There evidently had been some wrangling between the plaintiff and the conductor before the former got on the car, and the conductor admitted that in endeavoring to close the door of the car he touched the plaintiff, but without intending in anyway to cause him injury.

The Quebec Superior Court, sitting at Montreal, Jan. 12, gave a verdict in favor of the Montreal Tramways Co. in an action brought against it by Mrs. McConnell, who claimed \$2,000 damages for the death of her husband, caused by W. T. Mattice, an Italian. The evidence showed that McConnell was a passenger on one of the company's cars, May 17, 1917, on which the conductor had an altercation with an Italian. The Italian was ejected, but ran after the car, boarded it, and drew a knife. The conductor retreated to the interior of the car and closed the door. The Italian being in a rage turned on the passengers on the platform, inflicting such injuries on McConnell that he died June 8, 1917. The plaintiff alleged that the conductor did nothing to protect the lives and safety of the passengers on the platform. The court held that the death of the passenger was due to the criminal act of the Italian, and that the plaintiff had failed to prove the essential allegation of her claim, viz., the responsibility of the Montreal Tramways Co.

The Nova Scotia Tramways and Power Co.'s 24 safety cars, which are being built by the American Car Co. for the Halifax tramways service, as mentioned in a previous issue, are of the following general dimensions,—length over bumpers, 28 ft., ½ in.; length over dashers, 26 ft. 9½ in.; length of body, 17 ft. 9½ in.; width overall, 8 ft.; width over side plates, 7 ft. 8 in.; width inside, 7 ft. 2 in.; height from rail to roof, 9 ft. 10½ in.; height from rail to floor, 2 ft. 4 15-16 in.; wheel base, 8 ft. The cars have seating capacity of 32 persons each, and arrangement is made for fitting a

hinged seat against each vestibule, which is folded up when the door adjacent thereto is in use. The weight of each car is approximately 7½ tons, and owing to the installation of special safety devices, it is claimed that they can be operated on shorter headway. The safety devices applied to the cars are interlocked with a controller and brake handle, and it is necessary for the motorman to hold the control handle down to keep the car in motion, the releasing of the handle through any cause automatically cutting off the power, applying the brakes and releasing the pneumatically operated doors. Approximately 75% of the weight of the car body and passenger load is supported on swing links, suspended by the ends of quarter elliptic springs on the four corners of the truck.

Winnipeg Car Routing—The Winnipeg Electric Ry. some time ago arranged a rerouting on a number of its car lines; Elmwood residents protested against the rerouting insofar as it had effected a reduction on the three lines serving the Elmwood and East Kildonan districts. The Public Utilities Commissioner heard the case Dec. 23, 1919, and gave his decision Jan. 15, stating that the effort to make a through route over the whole district, including Sutherland Ave., and Talbot Ave. West, will never be satisfactory, and he therefore disapproved of it. He approved the looping of the Elmwood line at Donald and Ethel Sts. The consideration of the route to be taken by the Morse place cars, whether the old route will be restored, or a new one arranged was held over for further consideration.

MARINE DEPARTMENT.

Facilities for Aiding Early and Late Navigation on St. Lawrence River.

Early in January the Quebec Board of Trade wrote the Minister of Marine urging that facilities be provided to assist early and late navigation on the St. Lawrence River. Mr. Ballantyne replied in part as follows:—"The casualty that befell the s.s. Canadian Recruit is very much to be regretted indeed. The very severe ice conditions that resulted in the loss of this ship came about at a much earlier period than was anticipated here with regard to the experience of previous years. So far as the s.s. Canadian Spinner is concerned, while the situation is extremely serious, it is hoped it may be possible to rescue her from the other end.

"I have realized for some time that the facilities available for assisting vessels to navigate the St. Lawrence River after severe weather sets in are quite inadequate. For reasons that I am sure will commend themselves generally, the Marine Department consented to the transfer to the Russian Government of the ships that would be really effective in combatting the ice conditions in the St. Lawrence. My present intention is to take such steps as may be necessary to provide equipment that will be reasonably adequate to assist any ships that may find it necessary to navigate the St. Lawrence after the ice conditions became severe. The representations submitted as to the extent to which facilities should be provided will be borne in mind by me in the course of the further consideration that the question will receive."

Marine Department

Canadian Government Merchant Marine, Ltd., Shipbuilding, Operation, Etc.

Orders for Cargo Steamships—Canadian Railway and Marine World for January gave particulars of orders placed by the Marine Department for 56 steel cargo steamships for operation by Canadian Government Merchant Marine Ltd., and also referred to further orders which were being negotiated for on Jan. 12, we were officially advised that the following additional orders had been decided on:

Collingwood Shipbuilding Co., two ships, approximately 3,890 d.w. tons each, one will be built at Collingwood, Ont., and one at Kingston, Ont.

Nova Scotia Steel and Coal Co., New Glasgow, N.S., one ship, approximately 2,800 d.w. tons.

Total value, 45 ships\$54,234,635
Average cost per ton \$199.63

Summary 2.

No. of contracts agreed upon since signing of armistice, Nov. 11, 1918.... 15
Total d.w. tonnage..... 88,280
Total value, 15 ships\$15,287,625
Average cost per ton..... \$173.17

Summary 3.

Total no. of contracts agreed upon to Jan. 12 60
Total d.w. tonnage 359,945
Total value, 60 ships\$69,522,260
Average cost per ton..... \$193.14

Summary 4.

No. of ships completed to Jan. 12..... 23
Total d.w. tonnage.....121,275

Summary 5.

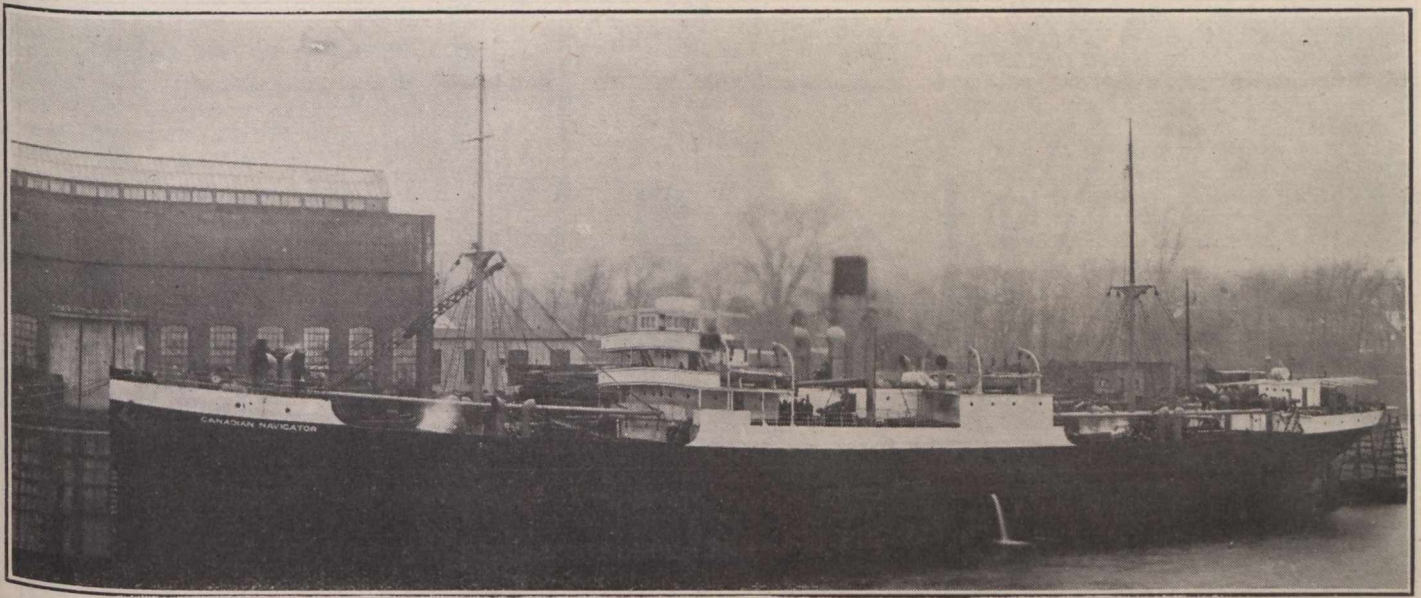
No. of ships turned over to Canadian Government Merchant Marine Ltd., to Jan. 12, and in service..... 19
Total d.w. tonnage 99,885

12; approximately 8,100 d.w. tons; J. Coughlan & Sons, Vancouver, B.C.; Dec. 27, 1919.

S.s. Canadian Inventor; Marine Department contract 36; builders' yard no. 13; approximately 8,390 d.w. tons; J. Coughlan and Sons, Vancouver, B.C., Jan. 24, 1920.

Deliveries of Steamships—In addition to the steamships mentioned in Canadian Railway and Marine World previously, the following were delivered to the Marine Department by the builders on the dates mentioned.

Dec. 20, 1919; s.s. Canadian Sealer; Marine Department contract 40; builders' yard no. 5; approximately 2,800 d.w.



Steel cargo steamship, Canadian Navigator; approximately 4,300 d.w. tons; built for Canadian Government Merchant Marine Ltd., by Canadian Vickers Ltd., Montreal.

Davie Shipbuilding and Repairing Co., Lauzon, Que., one ship, approximately 8,390 d.w. tons.

Fuller particulars of these ships are given in the table on pg. 90 of this issue. In connection with the shipbuilders' deputation which waited on the Dominion Government on Jan. 7, it is said that the orders for steel cargo steamships will be increased from the 60 already placed to 70, and negotiations are under way in this connection.

J. J. Coughlan, of J. Coughlan and Sons, Vancouver, on returning there recently from Ottawa, where he spent some time, is reported to have said that he had arranged for orders for two ships of approximately 8,100 d.w. tons each. The Port Arthur Shipbuilding Co. was reported on Jan. 10 to have received an order for one ship of approximately 3,940 d.w. tons, in connection with which we were officially advised Jan. 26, that negotiations were proceeding, but that details had not been agreed on.

Statistics re Orders, Deliveries, Etc.—The following information has been furnished by the Marine Department as of Jan. 12:—

Summary 1.	
No. of contracts agreed upon before date of armistice, Nov. 11, 1918.....	45
Total d.w. tonnage	271,665

Passenger Ships to Be Ordered—As fully reported on pg. 96 of this issue, the Minister of Marine in speaking at the Dominion Marine Association's dinner in Montreal, Jan. 9, stated that the government has under consideration the building of combined passenger and freight ocean steamships of about 15,000 gross tons, and a speed of 18 knots, to be operated by Canadian Government Merchant Marine and that they will be built in Canada. The Marine Department's Naval Constructor, C. Duguid, is now in Great Britain on official business and while there will probably look into the most up to date practice for this class of ships.

Keels Laid—Since our last issue we have been advised of the laying of the following keel:—

S.s. Canadian Victor; Marine Department contract 50; builders' yard no. 77; approximately 8,350 d.w. tons; Canadian Vickers Ltd., Dec. 10, 1919.

Launchings of Steamships—Since Canadian Railway and Marine World for January was issued, we have been advised of the following launchings:

S.s. Canadian Exporter; Marine Department contract 35; builder's yard no.

tons; Nova Scotia Steel & Coal Co., New Glasgow, N.S.

Dec. 27, 1919; s.s. Canadian Rancher; Marine Department contract 14; builders' yard no. 6; approximately 5,100 d.w. tons; Tidewater Shipbuilders Ltd., Three Rivers, Que.; delivered to Marine Department, Dec. 27, 1919.

Dec. 27, 1919; s.s. Canadian Planter; Marine Department contract 28; builders' yard no. 72; approximately 8,100 d.w. tons; Canadian Vickers Ltd., Montreal.

Jan. 17, 1920; s.s. Canadian Raider; Marine Department contract 7; builders' yard no 102; approximately 5,100 d.w. tons; Wallace Shipyards Ltd., North Vancouver, B.C. She was transferred to Canadian Government Merchant Marine Ltd., and is taking a cargo of lumber to Australia.

As stated above, 23 of the 60 ships ordered had been completed up to Jan. 12, and of these 19 had been transferred to Canadian Government Merchant Marine Ltd., for operation.

Officers of Steamships—The following officers have been appointed by Canadian Government Merchant Marine Ltd. The first column contains the names of the ships, the second those of the cap-

tains and the third those of the chief engineers:

Canadian Aviator	H. S. Hilton	J. F. Brown
Canadian Raider	R. Winter	.....

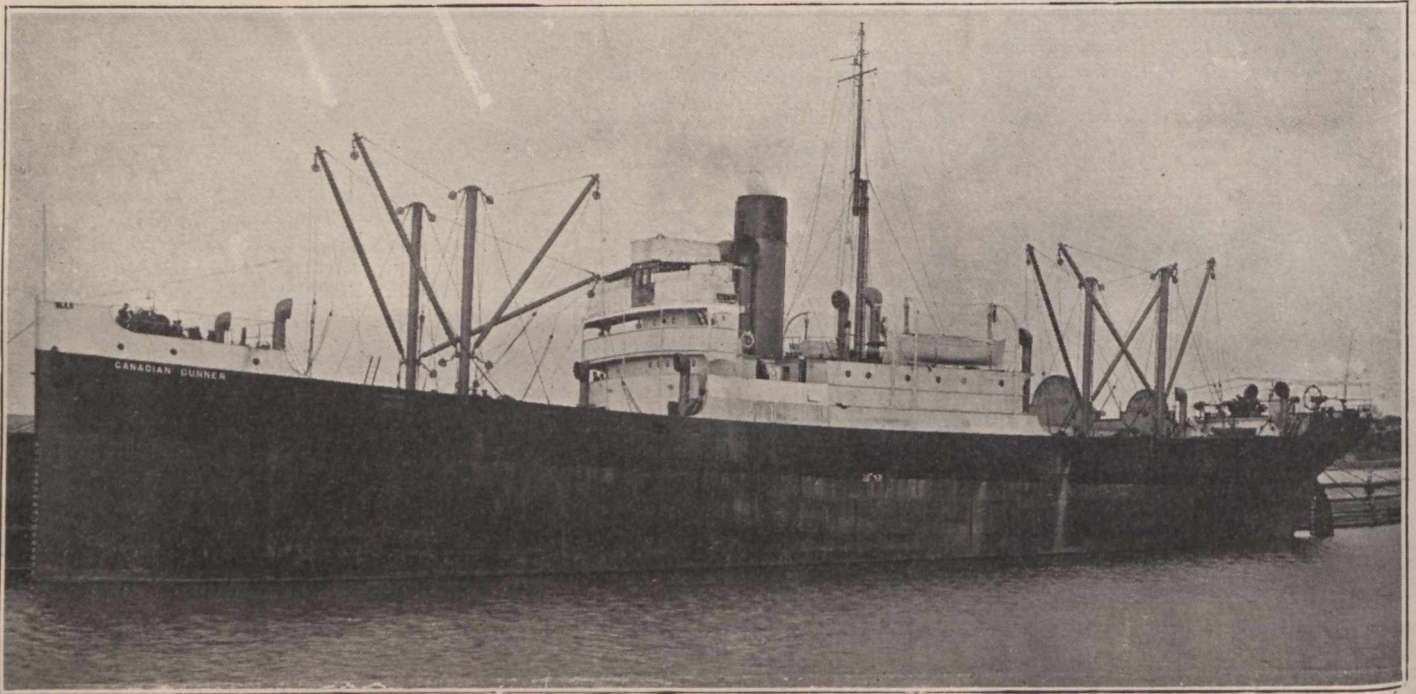
Deadweights of Steamships—Canadian Railway and Marine World for Sept., 1919, contained a table showing the approximate d.w. tons provided for in contracts for 8 of the steel cargo steamships ordered by the Marine Department for Canadian Government Merchant Marine Ltd., and the final determined weights at which the builders were paid at the price per long ton, stated in the contract. The following particulars have been received as to 3 other steamships:—

	Approximate	Determined
Canadian Adventurer	3,400	3,408
Canadian Miller	8,100	8,390
Canadian Sower	3,400	3,405 $\frac{3}{4}$

Steamship Services—Canadian Railway and Marine World for January mentioned that the Vancouver Board of Trade was reported to have received word that, as soon as possible, Canadian Government Merchant Marine Ltd.,

It is stated that British shipping freights are again bringing in the enormous revenue of over \$5,000,000 daily. The Canadian Industrial Reconstruction Association has prepared a statement upon the question of exchange and amongst ten recommendations to bring about its return to stability, from which the following is selected: "Utilize Canadian service. Shipments should be made over Canadian carriers and in case of overseas exports through 'Canadian ports in Canadian ships.' That this recommendation is sound, must be quite obvious. Why not assist in the building up of Canada's treasury by patronizing Canadian owned vessels? The Dominion Government is, at the public expense, establishing a merchant marine, known as Canadian Government Merchant Marine Ltd., operated by the Canadian National Rys. Board. There are in service at this date, 26 ships in the following trade routes, viz., 11 to the United Kingdom; 10 to the British West Indies and

The s.s. Canadian Spinner, which, as reported in our last issue, was icebound in the St. Lawrence River, near Matane, while on her voyage from Quebec to Halifax, N.S., was released subsequently from the ice, with the aid of the Dominion Government s.s. Montcalm, and arrived at Sydney, N.S., Jan. 13. She sailed from Quebec at 7 a.m., Dec. 16, with part of a general cargo for Rio de Janeiro, Santos and Buenos Aires, which was to be completed at Halifax and very soon experienced trouble with ice. She passed Crane Island Dec. 16, at 2 p.m., was off Murray Bay Dec. 17, at 9 a.m. and passed Red Island Dec. 18 at 10 a.m. Shortly afterwards she was reported as unmanageable through ice, and to be drifting with the current, with her rudder post broken. She passed Metis Dec. 23, and made some little headway, owing to a momentary slackening of the ice, which, however, closed in again about Dec. 27. Pointe des Monts was passed Dec. 29, and on Dec. 30 she was



Steel cargo steamship, Canadian Gunner; approximately 3,750 d.w. tons; for Canadian Government Merchant Marine Ltd.; built by Collingwood Shipbuilding Co., Collingwood, Ont.

would establish a steamship service between Montreal, Halifax and British Columbia ports, via the Panama Canal. We are advised that this matter has been brought to the Canadian Government Merchant Marine managements' attention on several occasions, and that the inauguration of such a service has been urged, but the management has not been able to satisfy itself that it could be made to pay, and nothing definite has therefore been done in connection with the matter.

In reference to the petition sent by the Canadian Merchant Service Guild to the Minister of Marine, asking that a government passenger steamship service be established between Vancouver, Victoria and San Francisco, we are advised that the same has been referred to the Canadian Government Merchant Marine management in connection with the matter.

D. O. Wood, Traffic Manager, Canadian Government Merchant Marine Ltd., has issued a circular to Canadian importers and exporters as follows: "Press dispatches declare that trade returns show British trade is once more solvent.

Cuba; 3 to Brazil and South America; 2 to Australia and New Zealand, with 34 vessels to follow within 12 months. The attention of the principals of all exporting and importing firms is particularly drawn to these facts, and their co-operation is earnestly desired."

The s.s. Canadian Sealer, which was delivered to the Marine Department by the Nova Scotia Steel and Coal Co., Dec. 20, 1919, and which was sent subsequently with supplies for the Magdalen Islands, was reported to have been caught in the ice at Souris, P.E.I., Jan. 19. The D. G. S. Montcalm was sent to break the channel through to the Canadian Sealer and take the Magdalen Island supplies from that steamship to the Magdalen Islands, about 75 miles from Souris. The transfer of the supplies was accomplished and the Montcalm left Souris, Jan. 24, but by noon, Jan. 27, she had made barely 25 miles and was practically ice bound. It was later reported that she was drifting away from the Island with the current, and that she had been ordered to abandon the trip temporarily and try to make for Halifax, N.S.

off Cap Chats, being reported as about 15 miles from shore, with the wind and current gradually driving her farther out, and towards Cap Magdalen. The master reported by wireless that the ship was in no immediate danger, and that everything was well on board. On Jan. 2, she was reported about 5 miles off shore, and 3 miles west of Cap Magdalen. On Jan. 3 at 9 a.m., it was announced that she was nearly clear of the surrounding ice and about a mile east of Fame Point. During the drift, temporary repairs were made to the broken rudder post. The Dominion Government icebreaking s.s. Montcalm was ordered up the Gulf from Sydney, N.S., to aid the Canadian Spinner, and on Jan. 5 sighted her about 20 miles east of Fame Point, where she had again become ice-bound. At this time the Montcalm was about 50 miles east of Fame Point. A way was gradually made through heavy ice, the Canadian Spinner being off Southwest Point on Jan. 6, the ships meeting on Jan. 7. The Montcalm led the way out of the ice, and both ships were reported to be at 48 n. 60 w. at noon Jan. 12, arriving at Sydney, N.S.

at 3 p.m., Jan. 13, and at Halifax, Jan. 15 at noon.

Sailings of Steamships—The following sailings (dates on or about) are scheduled subject to change without notice. The number in front of the ship's name in each case is that of the voyage.

1, Liverpool Service, from Halifax, N.S.	Feb. 23
4, Canadian Seigneur	Mar. 17
4, Canadian Miller	Mar. 27
1, Liverpool Service, from St. John, N.B.	
6, Canadian Voyager	Feb. 10
5, Canadian Ranger	Feb. 29
1, London Service, from St. John, N.B.	
8, Canadian Trooper	Feb. 28
1, Glasgow Service, from Halifax, N.S.	
2, Canadian Aviator	Feb. 17
2, Canadian Settler	Mar. 4
1, Australian and New Zealand Service, calling at Sydney and Melbourne, Australia, and Auckland and Wellington, N.Z., from Vancouver, B.C.	
1, Canadian Exporter	Feb. 15
1, Havana, Cuba, Service, from Halifax, N.S.	
5, Canadian Trader	Feb. 5
5, Canadian Sailor	Feb. 15
1, Havana, Cuba, Service, from St. John, N.B.	
4, Canadian Adventurer	Feb. 4
3, Canadian Sower	Feb. 10
1, Kingston, Jamaica, Service, from St. John, N.B.	
1, Thos. J. Drummond	Feb. 25
6, Canadian Warrior	Mar. 7
1, Barbados, Trinidad and Demerara Service, from Halifax, N.S.	
4, Canadian Signaller	Feb. 19
3, Canadian Gunner	Mar. 5

British American Shipbuilding Co., Welland, which has contracts from the Marine Department for 2 steel cargo steamships of approximately 4,350 d.w. tons each, expects to launch the first one, builder's yard no. 4; Canadian Otter; towards the end of February.

Canadian Vickers, Ltd., Montreal, laid the keel of s.s. Canadian Victor; Marine Department contract 50; builder's yard no. 77; approximately 8,350 d.w. tons, Dec. 10, 1919, and advised Jan. 6 that the keel of s.s. Canadian Conqueror; Marine Department contract 51; builder's yard no. 78; approximately 8,350 d.w. tons, would be laid "in the near future" thereafter.

This company delivered s.s. Canadian Planter; Marine Department contract 28; builder's yard no. 72; approximately 8,100 d.w. tons, to the Marine Department, Dec. 27, 1919.

Collingwood Shipbuilding Co. has received additional orders from the Marine Department for 2 more steel cargo steamships of approximately 3,890 d.w. tons each, one to be built in its Collingwood, Ont., yard and one in its Kingston, Ont., yard at \$182.50 per long d.w. ton.

J. Coughlan & Sons, of Vancouver, B.C. launched the steel cargo steamship, Canadian Exporter; Marine Department contract 35; builder's yard no. 12; approximately 8,390 d.w. tons, Dec. 27, 1919, and the s.s. Canadian Inventor; Marine Department contract 36; builder's yard no. 13; approximately 8,390 d.w. tons, Jan. 24, 1920.

They also launched the Canadian Inventor, Marine Department contract 36; builder's yard no. 13; 8,100 d.w. tons, Jan. 24, the christening being performed by Miss Dorothy Lougheed, daughter of Senator Sir James Lougheed. This is the third steamship of this type to be launched by this company for Canadian Government Merchant Marine, the keel having been laid May 3, 1919.

Davie Shipbuilding and Repairing Co., Lauson, Que., has received an additional order from the Marine Department for a steel cargo steamship, approximately 8,390 d.w. tons, at \$167.50 per long d.w. ton.

Harbour Marine Co., Victoria, B.C., which has contracts with the Marine

Department for 2 steel cargo steamships of approximately 8,100 d.w. tons, advises that the first one, s.s. Canadian Armourer, will probably be launched about the end of February or early in

March, and the second one, s.s. Canadian Composer, about a month later.

Nova Scotia Steel and Coal Co., New Glasgow, N.S., delivered the steel cargo s.s. Canadian Sealer; Marine Department contract 40; builder's yard no. 5; approximately 2,800 d.w. tons to the Marine Department, Dec. 20, 1919. See also sidehead paragraph "Canadian Sealer" above.

The company has received an order from the Marine Department for another steel cargo steamship, approximately 2,800 d.w. tons, at \$190 per long d.w. ton.

The Port Arthur Shipbuilding Co., Port Arthur, Ont., is negotiating with the Marine Department for an additional order for a steel cargo steamship of approximately 3,940 d.w. tons.

Tidewater Shipbuilders Ltd., Three Rivers, Que., delivered the s.s. Canadian Rancher; Marine Department contract 14; builder's yard no. 6; approximately 5,100 d.w. tons; to the Marine Department, Dec. 27, 1919.

The company is also building 2 other steel cargo steamships of approximately 5,100 d.w. tons each, for the Marine Department, viz., Canadian Fisher; Marine Department contract 15; builder's yard no. 7; the keel of which was laid Sept. 20, 1919; and Canadian Forester; Marine Department contract 16; builder's yard no. 8; the keel of which was laid Nov. 1, 1919. It expects to launch both in the spring.

Wallace Shipyards Ltd., North Vancouver, B.C., delivered the steel cargo s.s. Canadian Raider; Marine Department contract 7; builder's yard no. 102, approximately 5,100 tons, to the Marine Department, Jan. 17.

The Canadian Merchant Service Guild held its annual meeting at Vancouver, recently. The report for 1919 showed that there were 160 new members, the total membership being 606, including 9 honorary members. Decorations were won for bravery during the war by members, including one Order of the British Empire, one Distinguished Service Order and one Distinguished Service Cross. The financial statement showed a balance in the bank of \$1,781.06, not including a special reserve fund of \$2,427.61. Capt. W. L. Gilchrist, master of the C.P.R. s.s. Princess Patricia, was elected President. The other officers are:—Vice Presidents, J. B. Weeks, Nanaimo; D. Morton, Prince Rupert; J. J. Mulligan, Vancouver; D. Mackenzie, Victoria; J. H. Brown, Yukon, and J. O. Williams; Secretary, A. Goodlad; Treasurer, C. W. Wearmouth. Representatives of the various classes of ships were elected as follows: Ocean going, R. A. Bachelor; local passenger, D. Donald; local freight, John McNaughton; tow boats, W. W. Best; government boats, owned or chartered, H. R. Hilton; licensed pilots, J. C. Foote.

Steamships to Be Salvaged—Capt. J. T. Reid, General Manager, Reid Towing and Wrecking Co., Sarnia, Ont., is reported to have stated that he will close negotiations shortly for the salvaging of several steamships which were wrecked along the Atlantic and Gulf of St. Lawrence coasts, during last year. He expects to have sufficient contracts to keep the salvage crews busy throughout the forthcoming season. In cases where the hull is considered beyond salvage, attention will be paid only to the machinery and boilers.

Details of the Different Types of Steamships for Canadian Government Merchant Marine Ltd.

The following are comparative details of the seven different types of steamships being built for Canadian Government Merchant Marine Ltd.:

	2,800 ton.	3,400 ton.	3,750 ton.	4,300 ton.	5,100 ton.	8,100 ton.	10,500 ton.
Length, overall	280 ft.	260 ft.	260½ ft.	333 ft. 7 ins.	344 ft.	413 ft. 1 in.	445 ft.
Length, bet. perpendiculars	270 ft.	251 ft.	251 ft.	320 ft.	331 ft.	400 ft.	430 ft.
Breadth, moulded	38 ft.	43½ ft.	43½ ft.	44 ft.	46½ ft.	52 ft.	56 ft.
Depth, moulded	20½ ft.	23 ft.	26 ft.	25 ft.	25½ ft.	31 ft.	38 ft.
Draft, loaded	20½ ft.	20 ft.	22 ft. 2 in.	21 ft. 2 ins.	21 ft. 8 ins.	25 ft. 1 in.	29 ft.
Type	Tri-compound	S.d., p.b. & f.c's'le	Lake, s.d., p.b. & f.c's'le	S.d., p.b. & f.c's'le	S.d., p.b. & f.c's'le	2d., p.b. & f.c's'le	3d., p. & f.c's'le
Engines—Type	17½ x 25½ x 47 ins.	20½ x 34 x 56 ins.	18 x 30 x 50 ins.	Triple expansion	Triple expansion	Triple expansion	Triple expansion
Cylinders	33 ins.	40 ins.	36 ins.	45 ins.	41 x 68 ins.	27 x 44 x 73 ins.	29½ x 50 x 80 ins.
Stroke	875	1,800	1,200	1,800	2,500	3,000	4,000
Ind. h.p.	17½ ft.	1,800	1,200	1,800	2,500	3,000	4,000
Boilers—Type	S.d., p.b. & f.c's'le	Single ended	Single ended	Single ended	Single ended	Single ended	Single ended
No.	2	2	2	2	3	8	4
Diam. and length	12½ x 10½ ft.	15 x 11 ft.	14 x 10½ ft.	15½ x 11½ ft.	14 x 11½ ft.	15½ x 11½ ft.	15½ x 11½ ft.
Working pressure	185 lbs.	190 lbs.	180 lbs.	180 lbs.	180 lbs.	180 lbs.	180 lbs.
Furnaces—No.	2	6	6	6	9	9	12
Grate surface	80 sq. ft.	135 sq. ft.	100 sq. ft.	132 sq. ft.	156 sq. ft.	198 sq. ft.	270
Heating surface	3,000 sq. ft.	4,670 sq. ft.	3,900 sq. ft.	5,162 sq. ft.	7,275 sq. ft.	7,743 sq. ft.	10,500 sq. ft.
Speed	8½ knots	9 knots	9 knots	11 knots	11 knots	11 knots	12 knots
Classification	Lloyd's	Lloyd's	Brit. Corp.	Lloyd's	Lloyd's	Lloyd's	Lloyd's

Orders for Steel Cargo Steamships for Canadian Government Merchant Marine Ltd.

The following is a complete list of steel cargo steamships which the Dominion Marine Department has been authorized, by order in council, to place orders for, and which orders are to be carried out. The following contractions are used in the column giving the type of the vessels to be built:—s.d., single deck; 2.d., two deck; 3.d., three deck; lake, lake type; p. poop; b., bridge; f'c's'le, fore-castle.

Contract	Contract date	Name	Builder	Yard no.	Long tons d.w.	Price per ton d.w.	Total price	Type	Classification	Speed knots	Keel laid	Launched	Delivered.
1	Mar. 4, 1918	Canadian Voyager	Canadian Vickers Ltd.	66	4,575	\$207.	\$ 947,025	S.d., p., b. and f'c's'le.....	Lloyd's	11	June 11, 1918	Nov. 23, 1918	Feb. 22, 1919
2	May 22, 1918	Canadian Pioneer	"	67	8,390	180.	1,510,200	2.d., p., b. and f'c's'le.....	"	11	July 17, 1918	Dec. 3, 1918	May 9, 1919
3	May 18, 1918	Canadian Warrior	Collingwood Shipbuilding Co. Ltd.	61	3,990	205.	817,950	Lake, s.d., p., b. and f'c's'le	Bri. Corp.	9	Not stated	Dec. 21, 1918	Apr. 26, 1919
4	Mar. 15, 1918	Canadian Volunteer	Wallace Shipyards Ltd.	100	4,485	207.	928,395	S.d., p., b. and f'c's'le.....	Lloyd's	11	Oct. 1, 1918	Apr. 5, 1919	June 19, 1919
5	Nov. 25, 1918	Canadian Trooper	"	106	4,540	217.	985,180	S.d., p., b. and f'c's'le.....	"	11	Nov. 15, 1918	May 31, 1919	Aug. 7, 1919
6	Nov. 25, 1918	Canadian Aviator	"	101	5,100	210.	1,071,000	S.d., p., b. and f'c's'le.....	"	11	Apr. 5, 1919	Oct. 9, 1919	Nov. 15, 1919
7	Nov. 25, 1918	Canadian Raider	"	102	5,100	210.	1,071,000	S.d., p., b. and f'c's'le.....	"	11	May 31, 1919	Dec. 11, 1919	Jan. 17, 1920
10	July 5, 1918	Canadian Recruit	Collingwood Shipbuilding Co. Ltd.	62	3,990	205.	817,950	Lake, s.d., p., b. and f'c's'le	Bri. Corp.	9	June 3, 1918	May 3, 1919	June 7, 1919
11	Oct. 17, 1918	Canadian Signaller	"	63	3,990	205.	817,950	Lake, s.d., p., b. and f'c's'le	"	9	Jan. 16, 1919	June 28, 1919	Aug. 30, 1919
12	Oct. 17, 1918	Canadian Gunner	"	64	3,990	205.	817,950	Lake, s.d., p., b. and f'c's'le	"	9	Feb. 10, 1919	Oct. 4, 1919	Nov. 6, 1919
13	Aug. 9, 1918	Canadian Settler	Tidewater Shipbuilders Ltd.	5	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	Lloyd's	11	Jan. 8, 1919	Sept. 20, 1919	Dec. 2, 1919
14	Aug. 9, 1918	Canadian Rancher	"	6	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Jan. 10, 1919	Nov. 1, 1919	Dec. 27, 1919
15	Jan. 24, 1919	Canadian Fisher	"	7	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Sept. 20, 1919		
16	Jan. 24, 1919	Canadian Forester	"	8	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Nov. 1, 1919		
17	Sept. 4, 1918	Canadian Trapper	Davie Shipbuilding & Repairing Co.	459	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Mar. 11, 1919	Oct. 9, 1919	
18	Sept. 4, 1918	Canadian Hunter	"	460	5,100	200.	1,020,000	S.d., p., b. and f'c's'le.....	"	11	Mar. 28, 1919		
19	Sept. 4, 1918	Canadian Trader	Port Arthur Shipbuilding Co.	39	3,400	205.	697,000	Lake, s.d., p., b. and f'c's'le	"	9	Dec. 9, 1918	May 5, 1919	July 18, 1919
19a	Mar. 1, 1919	Canadian Adventurer	"	41	3,400	210.	714,000	Lake, s.d., p., b. and f'c's'le	"	9	Mar. 31, 1919	Sept. 8, 1919	Oct. 29, 1919
20	Sept. 4, 1918	Canadian Sailor	"	40	3,400	205.	697,000	Lake, s.d., p., b. and f'c's'le	"	9	Dec. 10, 1918	May 31, 1919	Aug. 7, 1919
20a	Mar. 1, 1919	Canadian Sower	"	42	3,400	210.	714,000	Lake, s.d., p., b. and f'c's'le	"	9	Mar. 31, 1919	Oct. 9, 1919	Nov. 18, 1919
21	Sept. 13, 1918	Canadian Mariner	Halifax Shipyards Ltd.	1	8,390	195.	1,636,050	2.d., p., b. and f'c's'le.....	"	10	Feb. 24, 1919		
22	Sept. 13, 1918	Canadian Explorer	"	2	8,390	195.	1,636,050	2.d., p., b. and f'c's'le.....	"	10	Mar. 15, 1919		
23	Oct. 11, 1918	Canadian Navigator	Canadian Vickers Ltd.	73	4,575	215.	983,625	S.d., p., b. and f'c's'le.....	"	11	Jan. 22, 1919	Oct. 18, 1919	Nov. 22, 1919
24	Oct. 11, 1918	Canadian Ranger	"	68	8,390	188.	1,577,320	2.d., p., b. and f'c's'le.....	"	11	Aug. 26, 1918	Apr. 19, 1919	May 23, 1919
25	Oct. 11, 1918	Canadian Seigneur	"	69	8,390	188.	1,577,320	2.d., p., b. and f'c's'le.....	"	11	Nov. 30, 1918	May 7, 1919	Aug. 14, 1919
26	Oct. 11, 1918	Canadian Miller	"	70	8,390	188.	1,577,320	2.d., p., b. and f'c's'le.....	"	11	Dec. 2, 1918	Aug. 16, 1919	Sept. 24, 1919
27	Oct. 11, 1918	Canadian Spinner	"	71	8,390	188.	1,577,320	2.d., p., b. and f'c's'le.....	"	11	Apr. 23, 1919	Nov. 8, 1919	Dec. 6, 1919
28	Oct. 11, 1918	Canadian Planter	"	72	8,390	188.	1,577,320	2.d., p., b. and f'c's'le.....	"	11	May 10, 1919	Nov. 22, 1919	Dec. 27, 1919
29	Jan. 24, 1919	Canadian Armourer	Harbor Marine Co. Ltd.	1	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	July 14, 1919		
30	Jan. 24, 1919	Canadian Composer	"	2	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	Aug. 9, 1919		
31	Dec. 11, 1918	Canadian Beaver	Collingwood Shipbldg. Co., Kingston	15	3,990	205.	817,950	Lake, s.d., p., b. and f'c's'le	Bri. Corp.	9	Apr. 7, 1919	Dec. 10, 1919	
32	Mar. 1, 1919	Canadian Runner	Port Arthur Shipbuilding Co.	43	4,575	215.	983,625	S.d., p., b. and f'c's'le.....	Lloyd's	10½	Aug. 29, 1919		
33	Mar. 1, 1919	Canadian Carrier	"	44	4,575	215.	983,625	S.d., p., b. and f'c's'le.....	"	10½	Aug. 29, 1919		
34	Nov. 22, 1918	Canadian Importer	J. Coughlan & Sons	11	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	Apr. 26, 1919	Dec. 6, 1919	
35	Nov. 22, 1918	Canadian Exporter	"	12	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	May 3, 1919	Dec. 27, 1919	
36	Nov. 22, 1918	Canadian Inventor	"	13	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	July 24, 1919	Jan. 24, 1920	
37	Nov. 22, 1918	Canadian Prospector	"	14	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	Sept. 26, 1919		
38	Dec. 10, 1918	Canadian Cruiser	Halifax Shipyards Ltd.	3	10,500	197.50	2,073,750	3.d. p., and f'c's'le.....	"	12	Oct. 2, 1919		
39	Dec. 10, 1918	Canadian Constructor	"	4	10,500	197.50	2,073,750	3.d. p., and f'c's'le.....	"	12	Oct. 6, 1919		
40	Mar. 31, 1919	Canadian Sealer	Nova Scotia Steel & Coal Co. Ltd.	5	2,800	210.	588,000	S.d., p., b. and f'c's'le.....	"	8½	Mar. 27, 1919	Oct. 8, 1919	Dec. 20, 1920
41	Mar. 31, 1919	Canadian Miner	"	6	2,800	210.	588,000	S.d., p., b. and f'c's'le.....	"	8½	Mar. 31, 1919		
42	Feb. 21, 1919	Canadian Reaper	Prince Rupert Dry Dock & Eng. Co.	1	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	Sept. 27, 1919		
43	Feb. 21, 1919	Canadian Thrasher	"	2	8,390	198.	1,661,220	2.d., p., b. and f'c's'le.....	"	11	Oct. 20, 1919		
44	Jan. 23, 1919	Canadian Otter	British American Shipbuilding Co.	4	4,575	215.	983,625	S.d., p., b. and f'c's'le.....	Bri. Corp.	10	Mar. 29, 1919		
45	Jan. 23, 1919	Canadian Squatter	"	5	4,575	215.	983,625	S.d., p., b. and f'c's'le.....	"	10	July 14, 1919		
46	Sept. 11, 1919	Canadian Farmer	Collingwood Shipbuilding Co. Ltd.	65	3,990	180.	718,200	Lake, s.d., p., b. and f'c's'le	Lloyd's	11	Sept. 3, 1919	Dec. 27, 1919	
47	Sept. 11, 1919	Canadian Observer	"	66	3,990	180.	718,200	Lake, s.d., p., b. and f'c's'le	"	11	Sept. 12, 1919		
48	Sept. 2, 1919	Canadian Artificer	Dominion Shipbuilding Co. Ltd.	10	3,500	180.	630,000	Lake, s.d., p., b. and f'c's'le	"	11	Nov. 8, 1919		
49	Sept. 2, 1919	Canadian Engineer	"	11	3,500	180.	630,000	Lake, s.d., p., b. and f'c's'le	"	11	Nov. 8, 1919		
50	Sept. 18, 1919	Canadian Victor	Canadian Vickers Ltd.	77	8,390	170.	1,426,300	2.d. p., b. and f'c's'le.....	Lloyd's	11	Dec. 10, 1919		
51	Sept. 18, 1919	Canadian Conqueror	"	78	8,390	170.	1,426,300	2.d. p., b. and f'c's'le.....	"	11			
52	Sept. 18, 1919	Canadian Commander	"	79	8,390	170.	1,426,300	2.d. p., b. and f'c's'le.....	"	11			
53	Sept. 18, 1919	Canadian Leader	"	80	8,390	170.	1,426,300	2.d. p., b. and f'c's'le.....	"	11			
—			Midland Shipbuilding Co. Ltd.	10	3,990	180.	718,200	Lake, s.d., p., b. and f'c's'le	Lloyd's	11			
—			Wallace Shipyards Ltd.	103	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.....	"	11			
—			"	104	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.....	"	11			
—			Collingwood Shipbuilding Co. Ltd.	—	3,990	182.50	709,925	Lake, s.d., p., b. and f'c's'le	Lloyd's	11			
—			"	—	3,990	182.50	709,925	Lake, s.d., p., b. and f'c's'le	"	11			
—			Nova Scotia Steel & Coal Co.	—	2,800	190.	532,000	2.d. p., b. and f'c's'le.....	"	8½			
—			Davie Shipbuilding & Repairing Co.	—	8,390	167.50	1,405,325	2.d. p., b. and f'c's'le.....	"	11			
					359,945		\$69,522,260						

Mainly About Marine People.

Capt. Barrett, of the Keystone Transportation Co., has been appointed head of the School of Navigation, in connection with Queen's University, Kingston, Ont.

Commander Sir A. Trevor Dawson, R.N., one of the directors of Vickers Ltd., London, Eng., and of Canadian Vickers, Ltd., Montreal, also Chairman, Canada Steamship Lines London, Eng. Advisory committee, who was a knight bachelor, has been created a baronet.

A. E. Disney, heretofore Passenger Agent, White Star Line, Seattle, Wash., has been appointed Assistant General Manager, White Star Line, New York.

Chas. Duguid, Naval Constructor, Marine Department, left Ottawa, about the middle of January, for Great Britain, on official business, expecting to be away a month or six weeks.

A. C. Garden has been elected chairman of the Hamilton, Ont., Harbor Commission.

Capt. W. L. Gilchrist, master of the C.P.R. s.s. Princess Patricia, has been elected President of the Canadian Merchant Service Guild.

M. J. Haney, Vice President, Canada Steamship Lines, Ltd., and a director of Canadian Locomotive Co., has retired from the presidency of the Home Bank of Canada.

Francis King, of Kingston, Ont., General Counsel, Dominion Marine Association, whose portrait appears in this issue, was born at Kingston in 1870. He is an M.A. of Queen's University, Kingston, 1890, was called to the bar in 1892, and in 1903 formed a partnership with Geo. H. Smythe, B.A., son of the late E. H. Smythe, K.C., LL.D.; the firm name being King & Smythe. He assisted in the formation of the Dominion Marine Association in 1903, and has been connected with it since; first as Secretary Treasurer, and since as General Counsel. He has been a member of council of Queen's University since about 1900, and is now Counsel for the university. He is an Anglican, and has been Honorary Lay Secretary of Ontario Diocese for the past 10 years. He is a member of council of Ontario Bar Association, and chairman of its committee on legal ethics, a member of board of commissioners (three in number) appointed three years ago by the Ontario Government to act with commissioners from the other provinces in promoting uniformity of legislation throughout Canada, was President, Kingston Board of Trade, in 1917 and 1918, and is President, Frontenac Club, Kingston, 1919-1920.

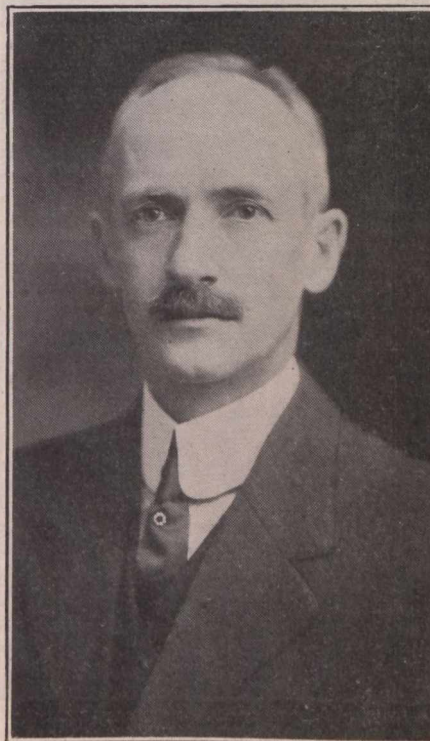
Alphonse Arsene Larocque, who has been elected Second Vice President, Dominion Marine Association, was born at Henryville, Que., April 30, 1865. From 1904 to 1918 he was Managing Director, Sincennes-McNaughton Line, Ltd., Montreal, and since 1918 has been President of that company. He has also been President, Sorel Mechanical Shops, Ltd., Sorel, Que., from 1916; President, Montreal Drydocks and Ship Repairing Co., Ltd., Montreal, since 1917; and a director of the Banque d'Hochelega, Montreal, since 1912.

Capt. G. LeMarquand, formerly of Bay City, Wash., has been appointed Manager, Consolidated Whaling Co.'s plant, Victoria, B.C., vice S. C. Ruck, who has left the company's service.

Frederick Orr Lewis, President, Canadian Vickers Ltd., shipbuilders, etc., and of Lewis Bros., Ltd., wholesale hardware merchants, Montreal, who has



A. A. Larocque,
President, Sincennes-McNaughton Lines Ltd., and
Second Vice President, Dominion Marine Association
and Canadian Lake Protective Association.



Francis King, M.A.,
General Counsel, Dominion Marine Association
and Canadian Lake Protective Association.

spent a considerable portion of his time in England during the last few years, has been created a baronet. He was born

at Hamilton, Ont., Feb. 11, 1862, his father being a shipowner on the Great Lakes, who retired from active business in 1890.

A. E. Mathews, Managing Director, Mathews Steamship Co., Toronto, and President, Dominion Marine Association, and Canadian Lake Protective Association, is spending a few weeks in Florida.

J. C. Mitchell, has been appointed Assistant Manager; **N. R. Nichol** has been appointed Inspector of Construction, and **F. Rockwell** has been appointed Superintendent of Construction, Toronto Harbor Commission.

Thomas R. Percy, who was appointed General Agent Canadian Pacific Ocean Services Ltd., Yokohama, Japan, recently, was born in Ireland, Apr. 21, 1888, and entered transportation service in March, 1902, since when, he has been to April, 1907, freight traffic clerk, Belfast and Northern Counties Ry. (Midland Ry.), Belfast, Ireland; May, 1907, to Jan., 1916, steamship audit clerk, C.P.R., Montreal; Jan., 1916 to Aug., 1919, chief clerk, Passenger Department, Canadian Pacific Ocean Services, Ltd., Montreal. He travelled all over the world until 1905, with his father, who was an ocean captain, and who died while on a voyage from Calcutta to England. A brother is in Furness Withy & Co.'s service at Montreal.

C. P. Sargeant, heretofore Assistant Passenger Agent, White Star Line, Toronto, has been appointed Passenger Agent, White Star Line, Seattle, Wash., vice A. E. Disney, promoted.

D. A. Stewart, Deputy Port Warden, Montreal, died there Jan. 1, of pneumonia, aged 39. Prior to his appointment in April, 1914, he was for some years in C.P.R. ocean steamship service.

William George Swan, who has been appointed Chief Engineer, Vancouver Harbor Commissioners, was, prior to the war, in Canadian Northern Pacific Ry. service in connection with railway construction in British Columbia, with headquarters at New Westminster. He also supervised the building of the terminals at Port Mann. He spent three years on active military service in France, with one of the railway construction battalions, with the rank of major, and latterly has been in charge of construction of the Canadian National Rys. Kamloops-Vernon-Kelowna-Lumby Branch.

John Torrance, Manager, White Star-Dominion Line, Montreal, who has retired from that position, was entertained at dinner recently by the Shipping Federation of Canada, of which he was chairman of executive committee for the past three years. He first entered transportation business in 1876 with David Torrance & Co., agents for the Dominion Line, and remained with the Dominion Line after its absorption by the International Mercantile Marine Co., and its incorporation with the White Star Line.

R. Winter, heretofore, chief officer, s.s. Canadian Trooper, has been appointed captain, s.s. Canadian Raider, Canadian Government Merchant Marine, Ltd.

H. A. Young, formerly Traffic Manager, Canadian Lake Line, has been appointed agent for the Walford Forwarding Corporation of New York, with office at 53 Yonge St., Toronto.

Dominion Marine and Canadian Lake Protective Associations' Annual Meetings.

The Dominion Marine Association's annual meeting was held at Montreal, Jan. 9. In the absence of the President, W. J. McCormack, Superintendent, Algoma Central Steamship Line, Sault Ste. Marie, Ont., the First Vice President, A. E. Mathews, Managing Director, Mathews Steamship Co., occupied the chair.

The Executive Committee's report for 1919 prepared by the General Counsel, Francis King, M.A., and approved by the committee, was submitted in printed book form, dealing with the following subjects: Legislation, including bills introduced and those passed at the Dominion Parliament's last session; coasting laws; coastwise customs clearances in Canada; immigration laws; St. Lawrence River pilotage; double courses on the Great Lakes; Dominion Wreck Commissioner; International Joint Commission; Board of Grain Commissioners; Canadian Wheat Board; conference at Ottawa regarding movement of 1919 grain crop; St. Lawrence River development; Welland Ship Canal and facilities for trans-shipment at Kingston; additional canal lock at Sault Ste. Marie; licenses for bunker coal and supplies; hospital expenses of seamen; shipping register at Toronto; lake levels; dock, harbor, channel and canal improvements; aids to navigation; obituary; general business, membership and tonnage. Under the heading last mentioned, it was stated that the steam tonnage enrolled in 1919 was 158,313 net registered tons, and the barge, or sailing, tonnage, 19,549 net registered tons, against 21,710 in 1918, a total of 177,862 tons in 1919 against 160,168 tons in 1918. The steam tonnage was increased by the enrolment of ships belonging to a number of new member companies. Appended to the report were reports from the Public Works Department's district engineers between Fort William and Montreal and from the Dominion Canals superintending engineers, showing work undertaken and improvements made in 1919 and in some cases forecasting further work contemplated or suggesting improvements which should be made and may reasonably be expected when the present financial stringency is lessened. On account of the exigencies of war, but little expenditure of public money has been made on works not demanded by actual necessity. Illustrations of a few of the more important recent marine undertakings on the Canadian side of the lakes, and upper St. Lawrence, and photographs of officers and members of the committee, were inserted in the report for first time.

It was resolved to obtain from the Upper Canada Tract Society a report as to the use made of the shipping register at Toronto, towards which the association has contributed certain amounts.

The executive committee having approved of a proposal for the merger of the Canadian Lake Protective Association in the Dominion Marine Association, the following resolution was adopted: Whereas the Canadian Lake Protective Association sprang from, and its members are all members of, the Dominion Marine Association, and whereas all these members have expressed their willingness that the Canadian Lake Protective Association should be merged in the Dominion Marine Association and conduct its proceedings as a committee or section of the parent organization; and whereas it appears to be expedient

the Dominion Marine Association hereby that this amalgamation or merger should take place; therefore, be it resolved, that



A. E. Mathews,
Managing Director, Mathews Steamships Co.,
President, Dominion Marine Association and
Canadian Lake Protective Association.



H. W. Cowan,
Director of Operation, Canada Steamship Lines
Ltd., and First Vice President, Dominion Marine
Association and Canadian Lake Protective
Association.

agrees to the proposal and to accept the assets and liabilities of the Canadian Lake Protective Association and to carry

on its work, or otherwise act in the premises, in accordance with the terms of a resolution adopted by the Canadian Lake Protective Association in the annual general meeting this day.

J. F. M. Stewart, Point Anne Quarries, Ltd., introduced a suggestion for enlargement of the association's scope so as to include coasting or ocean trade, and after discussion and the reading of a letter from W. E. Burke on the same subject, the matter was referred to the executive committee.

It was resolved to amend the constitution in accordance with notice given and in accordance with the executive committee's recommendation so as to permit the election of an executive committee of 12 or more members.

Plans of improvements proposed at Kingston to provide facilities for trans-shipment cargoes arriving through the new Welland Ship Canal were submitted from the Kingston Board of Trade, as approved by the Public Works Department's District Engineer, the engineer engaged by the City of Kingston and the engineers for the three railway companies, and the plans were referred to the executive committee.

It was resolved that the executive committee be asked to present a protest against the arbitrary action of the Canadian Wheat Board, and also to make enquiry as to the method of ice breaking at the head of the lakes, with special reference to lack of assistance suffered by certain ships.

T. R. Enderby, Managing Director, Montreal Transportation Co., suggested that the Dominion Government's attention should be called to the absolute necessity of having the Port Colborne, Ont., elevator repaired and in service again for the opening of navigation this year. He said that the elevator was destroyed on Aug. 9, 1919, and ship owners have been very severely handicapped by loading and discharging grain there through the Maple Leaf Milling Co.'s house on account of the loading and discharging facilities not being as efficient as the government house. The last reports received on the repairs to the elevator did not show that the repairs were in a very advanced stage. It was resolved to ask the Dominion Government to have the elevator ready for operation by the opening of navigation in the spring.

The question of the half cent charge for trans-shipment at the Maple Leaf elevator at Port Colborne, Ont., protested against by the association, was referred to the executive committee.

The following were appointed a committee on aids to navigation: W. J. Bassett, J. D. Andrews, A. E. Mathews, W. J. McCormack, H. N. McMaster, W. H. Smith, J. F. Sowards and John Waller.

The following were elected members of the executive committee for one year: Nomination for the executive committee were then called for and the following were received: W. J. McCormack, Algoma Central Steamship Line; H. W. Cowan, Canada Steamship Lines Ltd.; W. H. Smith, Ontario Car Ferry Co., retiring members, and G. J. Madden, Geo. Hall Coal Co., of Canada; T. R. Enderby, Montreal Transportation Co.; E. W. Oliver, Niagara, St. Catharines and Toronto Navigation Co.; J. Wilkie, Marine Superintendent, Imperial Oil Ltd.; E. H. Beazley, Union Steamship Co. of British Columbia.

At a subsequent meeting of the executive committee the following officers were elected: President, A. E. Mathews, Managing Director, Mathews Steamship Co., Toronto; First Vice President, H. W. Cowan, Director of Operation, Canada Steamship Lines, Montreal; Second Vice President, A. A. Larocque, President, Sincennes-McNaughton Line, Montreal.

Canadian Lake Protective Association.

The Canadian Lake Protective Association's annual meeting was held immediately after the Dominion Marine Association's meeting. In the absence of the President, W. J. McCormack, A. E. Mathews occupied the chair.

The executive committee having approved of a proposal for the merger of the association in the Dominion Marine Association, it was resolved that whereas the Canadian Lake Protective Association sprang from, and its members are all members of the Dominion Marine Association, and whereas all these members have expressed their willingness that the Canadian Lake Protective Association should be merged in the Dominion Marine Association and conduct its proceedings as a committee or section of the parent organization; and whereas it appears to be expedient that this amalgamation or merger should take place; therefore be it resolved that the Canadian Lake Protective Association be merged in the Dominion Marine Association, and that all its future proceedings be conducted or determined in such manner as may be decided by the last named association, which shall hereafter have full power and authority to deal in the matter as fully and effectively as with its own affairs; and that the President of the Dominion Marine Association, who is ex-officio Chairman of the Canadian Lake Protective Association, and the Secretary-Treasurer of the Canadian Lake Protective Association are authorized to transfer to the Dominion Marine Association, Victory Bonds for \$3,000, the funds in bank, and all other assets belonging to the Canadian Lake Protective Association and to sign all such documents as may be necessary.

The following were elected as the committee for 1920: A. E. Mathews, Chairman, Toronto; W. J. Bassett, Toronto; W. E. Burke, Montreal; H. W. Cowan, Montreal; J. D. Andrews, Montreal; T. R. Enderby, Montreal; W. J. McCormack, Sault Ste. Marie; J. Wilkie, Toronto; H. N. McMaster, Montreal; W. H. Smith, Montreal; John Waller, Montreal; A. A. Wright, Toronto.

Dominion Marine Association's Annual Dinner.

The Dominion Marine Association's annual dinner, the holding of which was suspended during the war, was held at the Windsor Hotel, Montreal, in the evening, was largely attended and was most enthusiastic and successful. A. E. Mathews, President, occupied the chair. The principal speakers were the Minister of Marine, Hon. C. C. Ballantyne, and the Minister of Railways and Canals, Hon. J. D. Reid, full reports of whose speeches appear further on in this issue. A. Johnston, Deputy Minister of Marine, and W. E. Becker, Cleveland, Ohio, the latter representing the Lake Carriers' Association, also spoke.

J. W. Troup, Manager, British Columbia Coast Service, C.P.R., is in Great Britain regarding the possible building of a steamship or steamships for the coast service.

Montreal Shipping Statistics for 1919.

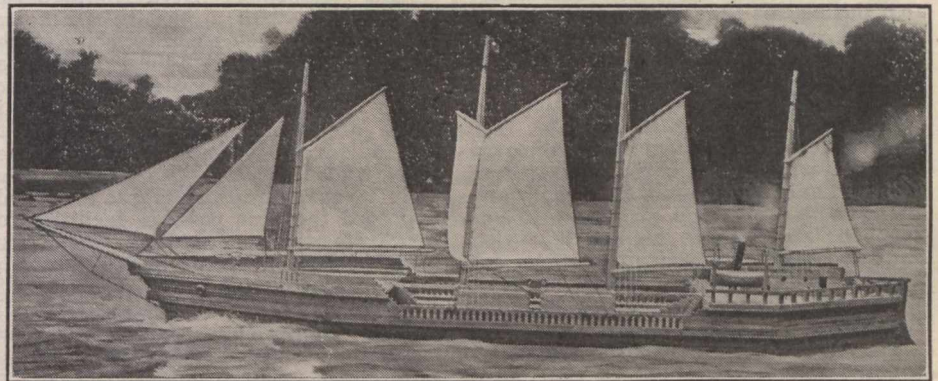
During 1919 there arrived at Montreal 702 trans-Atlantic ships representing a tonnage of 2,041,638, compared with 644 ships in 1918, with a tonnage of 1,910,621. In 1910 the number of such ships arriving was 410, and in 1914, when war had not greatly affected the situation, the number was 551.

The grand total of sea going ships which arrived in 1919 was 786, with a total tonnage of 2,179,280, and the number of seamen who operated them was 46,448. The great bulk of this shipping was British, there being 503 ships with a tonnage of 1,646,532, under that flag; while the next in importance was United States with 229 ships, representing a tonnage of 384,555. For the rest, there were French, Italian, Norwegian, Greek, Dutch, Danish, Brazilian and Rumanian craft. Of this total 756 were of iron or

644, and in 1919 to 702. It must be borne in mind that certain ships which belong to the St. Lawrence have been withheld by the British Ministry of Shipping, and there were also some delays and breaks in the port's activities owing to strikes on the other side of the Atlantic.

The Maritime Provinces' shipping shows a distinct falling off since the war. The year 1910 saw 336 vessels, with a tonnage of 574,808, and that standard was adhered to fairly well up to 1915; then in 1916 the figures fell to 129 ships, with 68 for 1917, 30 for 1918, rising to 84 for 1919.

In the figures for inland transportation there is a similar decline. In 1910 there were 13,636 ships, and in 1915, the number fell to 8,572 from 12,225 in 1914. The number in 1919 was 7,499; but, the total tonnage of 1914 was 4,357,734, compared with 4,327,799 in 1910, which indicates that though fewer ships are plying up and down the river and lakes, they are of a larger type.



Demountable Wooden Ship, with Auxiliary Power.

The above shows a demountable wooden ship, designed by John Arbuthnot, Victoria, B.C., with the following approximate dimensions,—length, 250 ft.; beam, 60 ft.; depth, 25 ft.; built up of lumber, with sails spread from 4 masts stepped in the cargo. Ships of this type will, it is announced, be operating shortly between British Columbia ports and Great Britain. On arrival at a British port, the ships will be demounted, the lumber cut to marketable dimensions, and the auxiliary machinery sold, or returned to British Columbia for further similar service. Canadian Railway and Marine World published a considerable number of interesting facts concerning this type of ship in its issues of July, Aug., and Sept., 1919.

steel, with a tonnage of 2,174,133, and 30 were of wood, representing 5,147 tons.

Shipping between Montreal and the Lower St. Lawrence, also inland shipping, showed some recovery, but far from the standard of pre-war days. Inland transportation was represented by 7,499 ships, the tonnage of which was 4,357,734, an increase of 1,397 ships and of 1,043,826 tonnage over 1918. The war period was a poor one for inland transportation owing partly to the fact that it was more expeditious to move food-stuffs by rail, and also on account of the fact that many small craft were diverted elsewhere for special war purposes.

River and gulf traffic between Montreal and the Maritime Provinces also showed a decided improvement, the number of ships in this category being 84, with a tonnage of 137,642, compared with 30 ships and 22,861 tonnage in 1918. In this case again the war had caused great interruption of traffic.

Statistics for the past decade shows that while the trans-Atlantic traffic has been steadily growing, the traffic between Montreal and the Maritime Provinces and the Great Lakes, dropped with the outbreak of war and has by no means recovered.

In 1910 the number of trans-Atlantic vessels that arrived in port was 411, in 1913 it was 477, and in 1914, 551. Then came the war, and the figures in 1915 dropped to 484. In 1916 the total rose to 569, in 1917 to 579, and in 1918 to

Proposed Development of Hamilton Harbor.

J. M. Wilson, District Engineer, Public Works Department, Central Ontario District, has reported to the Hamilton Harbor Commission on a proposed development of the port of Hamilton, Ont. The city has a population of 110,000, but is growing very rapidly, particularly in its industries. The proposed harbor scheme is intended to take care of the growth of the city for a number of years to come, but has certain provisions for early construction. The proposition resembles very much the new harbor development at Toronto, and shows the influence of the Toronto harbor engineers who acted in an advisory capacity. It provides, in general, for ships drawing 30 ft. of water, to dock in slips on the present shore line and along wharves built out into the harbor; the reclamation of considerable of the inner harbor area by dredging, which will deepen the central harbor, service of the industrial lines with cheap electric transportation concentrated on a marginal way; and the creation of park lands, recreation centers and a boulevard drive around the entire water front. The completion of the work would leave Hamilton harbor with an area of 4,380 acres or 6.8 square miles, having a general depth for navigation of 30 ft., compared with the present 4,500 acres having a depth of 18

Shipbuilders Petition Dominion Government for Bonusses.

A delegation waited on Sir Geo. E. Foster, Minister of Trade and Commerce, and acting Premier, Hon. C. C. Ballantyne, Minister of Marine, and other members of the Dominion Government at Ottawa, Jan. 7, to present a petition asking for bonusses in aid of shipbuilding, the companies named being represented as follows: British American Shipbuilding Co. Ltd., Welland, Ont.; H. M. Belfour and Davison; Canadian Allis-Chalmers Ltd., Bridgeburg, Ont., E. Jenking; Canadian Vickers, Ltd., Montreal, A. R. Gillham and P. L. Miller; Collingwood Shipbuilding Co Ltd., Collingwood, Ont., H. B. Smith and J. S. Leitch; Davie Shipbuilding and Repairing Co. Ltd., Lauzon, Que., Sir David Watson; Halifax Shipyards Ltd., Halifax, N.S., M. J. Haney, J. F. M. Stewart and R. M. Wolvin; Midland Shipbuilding Co., Midland, Ont., J. Wilkinson; Port Arthur Shipbuilding Co., Port Arthur, Ont., P. E. Chace and J. Whalen; Three Rivers Shipyards, Ltd., Three Rivers, Que., H. L. Clifford; Tidewater Shipbuilders, Ltd., Three Rivers, Que., A. A. Wright.

The petition was addressed to the acting Premier, the Right Hon. Sir George E. Foster, as follows:—On behalf of the following shipbuilders viz.: Halifax Shipyards Ltd., Halifax and Dartmouth, N.S.; Nova Scotia Steel and Coal Co., New Glasgow, N.S.; Three Rivers Shipyards Ltd., Three Rivers, Que.; Davie Shipbuilding & Repairing Co., Lanson, Que.; Tidewater Shipbuilders Ltd., Three Rivers, Que.; Canadian Vickers Ltd., Montreal; Dominion Shipbuilding Co., Toronto; British-American Shipbuilding Co., Welland, Ont.; Canadian Allis-Chalmers Ltd., Bridgeburg, Ont.; Midland Shipbuilding Co., Collingwood and Kingston, Ont.; Port Arthur Shipbuilding Co., Port Arthur, Ont.; Yarrows Limited, Victoria, B.C.; Prince Rupert Dry Dock and Shipbuilding Co., Prince Rupert, B.C.; Victoria Machinery Depot Ltd., Victoria, B.C.; Wallace Shipyards Ltd., North Vancouver, B.C.; J. Coughlan & Sons, Vancouver, B.C., we respectfully submit the following petition:—

Prior to the outbreak of war steel vessels were built in Canada in only a few shipyards, which produced intermittently a small tonnage of lake cargo and passenger vessels, scows, dredges, buoy steamers, etc. Subsequent, however, to the outbreak of war, all the existing companies, and a number of new ones, have energetically gone in for steel shipbuilding, and many extensive shipyard organizations have been built up. The capital actually invested at present is approximately \$47,000,000, exclusive of working capital, and the industry furnishes employment to approximately 23,500 men in the shipyards (not less than 25% of these men having served overseas) and almost another 23,500 men engaged in the construction of ship plates, shapes, machinery furnishings and equipment. Adopting the usual standard of dependents for each workman, over 200,000 persons are subsisting on this industry at present. An important feature to be noted is that the ship construction is almost entirely made within the country, whereas the product is chiefly for export, the result being additional wealth for the country.

Owing to the great demand for ton-

nage in 1916, the British Government, through the Imperial Munitions Board, induced the existing steel shipbuilding yards in Canada to construct steel ships were built, not only in the yards on the lakes, but also at Vancouver, Montreal and elsewhere. In the latter yards cargo vessels were constructed as large as 8,800 d.w. tons. When the present Dominion government came into power in 1917, it very wisely decided that Canada required a merchant marine of her own, and from that date up to now that work has kept the existing steel yards in Canada fully occupied. From the above some idea of the magnitude of the industry can be formed, and the importance to the country of continuing its operation is manifest.

The Minister of Marine has publicly referred from time to time with pride to the results accomplished, and the shipbuilders feel confident that the government will assist them in maintaining their operations. Following the suspension of hostilities, the Canadian Government shipbuilding programme provided the necessary work to keep the yards occupied to full capacity, and, what was more important, Canada has been able to greatly expand her export business, and to supply ships that will be needed to co-operate with the Canadian National Railways; thereby greatly improving the government's transportation system. It must be gratifying to the government to know how enthusiastically its shipbuilding programme has been received throughout the country, and that when its fleet of ships is completed it will have placed Canada in the position of trading successfully with other countries.

The Minister of Marine, made the statement in parliament in May, 1919, that the government was nearing the end of its shipbuilding programme and clearly indicated that if the shipyards in Canada hoped to continue they would have to look for business elsewhere. When introducing the government's shipbuilding programme in Mar., 1918, the Minister of Marine made the statement that the government's policy was to encourage shipbuilding as a permanent industry, which policy was confirmed subsequently by the encouragement given to the erection of a large plate mill at Sydney, N.S.

The workmen employed in our Canadian shipyards have demonstrated their efficiency and ability to build ships in a sound and workmanlike manner, and equal in all respects to those constructed in any other country, and in fairness to the workmen and their dependents, and having regard to the large capital invested, we submit that the present time is most opportune for co-operation between the government and the shipyards to the end that this great industry be firmly established. A reasonable bounty would enable Canadian shipbuilders to compete in the markets of the world for business, and permit them to operate to their fullest capacity, resulting in the ultimate reduction of costs and the placing of the industry on a permanent basis. In addition to the world wide financial difficulties, the shipbuilders are also faced with the abnormal conditions of exchange, which at present militate so greatly in favor of Great Britain. Our shipbuilding industry commenced a few years ago, with wide difference in wages

and efficiency as compared with the British shipbuilder, skilled in his trade from the days of his apprenticeship. The experience received on the vessels we have built has gradually increased the efficiency of Canadian workmen, and if this industry can go on continuously for a term of years, the excess labor cost in Canada will disappear, and Canada will have a national asset represented not so much by \$50,000,000 of operating shipyards, as by an army of skilled shipbuilders. Skilled labor is a nation's greatest asset.

The applicants therefore ask as an essential to the life of their industry, that the Dominion Government grant for a term of 10 years a bonus of \$10 per load displacement ton, and \$10 per indicated horse power on steel ships built in Canada and completed after April, 1920. Without the assistance asked for, the existing plants cannot be continuously employed, and the breaking up of the organizations will necessarily follow, thereby throwing large numbers of men out of employment, and undoing much of the good which the government has achieved by the encouragement given to the shipbuilding industry, and in the employment of returned soldiers and men previously at work on munitions. We are convinced of the great merit of our request and respectfully ask your earnest and favorable consideration and prompt action in the matter.

Signed on behalf of the companies above named by J. F. M. Stewart, Toronto and W. L. Murray, Secretary.

Subsequently P. L. Miller, H. B. Smith, J. F. M. Stewart and R. M. Wolvin, were appointed a committee to go into details with the government.

A number of boards of trade and other bodies were advised that the shipbuilders intended asking the government for substantial co-operation, and resolutions urging the same from the following organizations were attached to the petition:—

Halifax, Kingston, Montreal, New Glasgow, Port Arthur, Stellarton, Three Rivers, Sydney, Toronto and Welland boards of trade; Collingwood Chamber of Commerce; Halifax, Kingston, Port Arthur, and Sydney City Councils; and Bertie Tsp. Council.

The Montreal Board of Trade at a recent meeting passed a resolution, as stated above, urging the government to seriously consider measures toward ensuring the continuance of the steel shipbuilding industry in Canada, Sir George Foster, and Hon. C. C. Ballantyne, acknowledged its resolution and gave assurance of their appreciation of its terms, which would receive the government's most careful consideration. Mr. Ballantyne referred to the matter at the Dominion Marine Association's dinner in Montreal, Jan. 9, and a full report of his remarks appears on another page.

Steamship Glencadam—Canadian Railway and Marine World for Dec., 1919, contained an item announcing that the Great Lakes Transportation Co., Midland, Ont., had bought the s.s. F. P. Jones from U.S. owners, and had transferred her to the Canadian register under the name of Glencadam. We were later advised that the name was Glencaden, and made this announcement in the January issue. The correct name is, as first mentioned, Glencadam.

The Minister of Marine, and the Minister of Railways and Canals, on the Dominion Government's Shipbuilding Programme, the Canals, Etc.

The Minister of Marine, Hon. C. C. Ballantyne, and the Minister of Railways and Canals, Hon. J. D. Reid, were the principal guests at a dinner given by the Dominion Marine Association at the Windsor Hotel, Montreal, on the evening after the association's annual meeting, on Jan. 9.

Mr. Ballantyne, in replying to the toast of his health, explained what had been done by the government in its shipbuilding programme, this being for the benefit of the visitors from the United States, though he admitted this programme had not been on anything like the scale of the United States Emergency Shipbuilding Corporation. He said:—"It may interest you to know that we have 60 steel ships under construction. When they are finished, not later, I hope than this time next year, we will have a net tonnage of 360,000 tons. Twenty-three of these vessels are in service. Their tonnage ranges from the lake size vessels of 3,750 d.w. tons to as much as 10,500 tons, the latter ships are being built by the Halifax Shipyards Ltd., so you will see we have a pretty

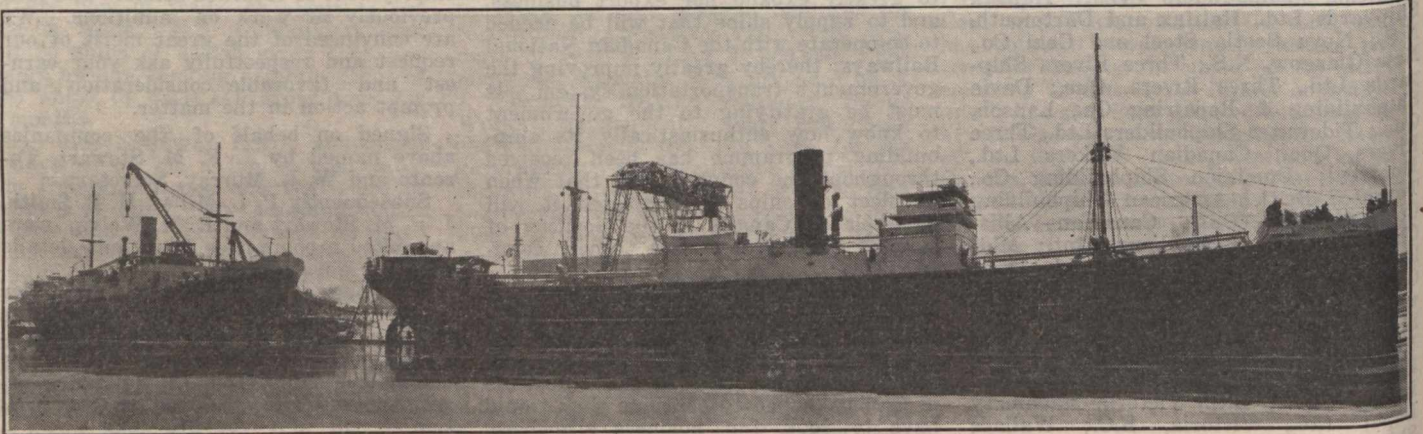
marine rests entirely on the shoulders of D. B. Hanna and his board of directors. What routes they shall be used on, what freight they will carry, what the rates of freight will be, is not a matter for the Dominion Government to deal with.

"We have shipbuilding yards from Halifax to Prince Rupert. Canada's ship building programme is young. A great deal of credit is due to Canadian ship builders for having risen to the occasion when the government asked them to undertake steel ship building, for the first time, in that they have done as well as they have. I am not stating anything beyond absolute facts when I say that the steel ships that have been built in our yards throughout Canada are equal in design, workmanship and efficiency to similar ships built in England, Ireland or Scotland. It is astonishing to find that the capital invested at present in the ship yards amounts to the very large sum of \$47,000,000. The number of men employed in ship yards only is 23,500. Not less than 25% of those men have served

handsome one indeed, and that reflects a great deal of credit on the Canadian Government Merchant Marine management.

"Our Canadian shipbuilders have demonstrated that they can build freight ships. I am happy to tell you that on the representations that have been made to Dr. Reid by Mr. Hanna for passenger ships of a one-class type, that is, a passenger ship of 15,000 gross tons, with speed of 18 knots and carrying both passengers and freight, the government has under consideration the building of such a type of steel ship. The government has no intention of ordering one outside of Canada, but it is the government's intention to have these passenger ships built in this country by our Canadian workmen and to use Canadian materials.

"If ever the time comes—and I do not know what the government's naval policy will be, as this is a matter that has not yet been discussed by the government—that Canada finds it necessary to build ships of war in this country, I am satisfied that Canadian shipbuilders will be able to build any war craft that may be



Steamship Canadian Rancher (left), and Canadian Settler (right), each approximately 5,100 d.w. tons, for Canadian Government Merchant Marine Ltd., built by Tidewater Shipbuilders Ltd., Three Rivers, Que. From photograph taken Nov. 25, 1919.

good nucleus now, and by this time next year, with our 60 ships, we hope to greatly expand Canada's export business. The country at present, due to the war and the other expenditures that were necessary, is of course rather handicapped. With a young and growing country like this, and more particularly if Canada will expand her export trade, everything will come out all right, and I hope that Canadian manufacturers of Canada will take full advantage of the Government Merchant Marine and go actively after foreign business.

"While these ships are built by the Dominion Government, and own by the government, they are not operated or managed by the government. The Canadian Government Merchant Marine, which is a subsidiary company to the Canadian National Railways, while it is owned by the government, is the company that operates and manages the Canadian Government Merchant Marine. D. B. Hanna and his board of directors have an absolutely free hand in the management of the government ships. As Minister of Marine I never assume to dictate to them in any way at all, neither does any other member of the government. The responsibility for the success of the government's merchant

overseas. Then in addition to that there are 25,000 men engaged in the construction of ship plates, ship machinery, furnishing, and so forth. Adopting the usual standard, there are at least 200,000 men who are subsisting at this time on these industries. Another important feature is that the material that enters into the construction of these ships is very largely produced in our own country and by Canadian workmen.

"Another very gratifying fact to the government is that notwithstanding when the war was on, Canada was able to produce steel ships at as low cost as any other nation was doing, and in a great many cases even less. Our ships contracted for during the war have all cost considerably less than \$200 a d.w. ton, and as soon as the armistice was signed the government was able to close contracts at \$25.00 a ton less than during the war. I think this speaks very well indeed for the efficiency and energy of our Canadian shipyards and the men who are engaged in them. Then in addition to that, and what is a great deal more important to the government, one of Mr. Hanna's officials has been good enough to give me figures as to the ships that are in operation, showing that their net profit of these ships has been a very

required by this country.

"The shipbuilders waited upon the government this week at Ottawa, asking in their modest way for a certain amount of protection of the shipbuilding industry. The matter will receive the consideration that it deserves at the hands of the government. I do not know what action the government may take, but I want to assure the shipbuilders here tonight that their representations will receive the most careful consideration of the government, and I hope before parliament meets that they will know whether or not they are going to get aid from the government. Their requests appear reasonable in view of the fact that there is no protection of any kind whatsoever on ships coming into Canada. Other industries in this country have received a certain amount of protection for a great many years, and in that way the country has been able to build up very large industries from one end of Canada to the other. If the government is able to see its way clear to assist shipbuilders in any way, I look forward to a very great expansion of the shipbuilding industry in Canada. I believe that a large number of the biggest shipbuilders in England will likely come to Canada to erect plants. I had

interviews with many of them when I was in England in 1918.

"You are aware that, as a result of our shipbuilding programme, the Dominion Steel Corporation was given a very large contract for ship plates. We want business, and as it is necessary to be as self-contained as possible, the government thought it well to enter into the large contract it did with the Dominion Steel Corporation. That corporation has erected a large mill at Sydney, N.S., at a cost of \$5,000,000. It is a very modern mill, and it hopes to turn out ship plates at the end of February."

The Minister of Railways and Canals' Speech.

Hon. J. D. Reid said:—"I can remember well the ships that passed through Welland and St. Lawrence Canals in the earlier days. They were probably of about 1,000 or 1,200 tons. They ran between Port Arthur and Montreal, and between Chicago and Montreal. We used to think they were great vessels. However, a short time afterwards public opinion, and the marine men themselves, decided that ships of that type were useless, that they would have to build larger ones and on the advice of the marine men submitting the class of ship that was required—the large ships that were required to travel between

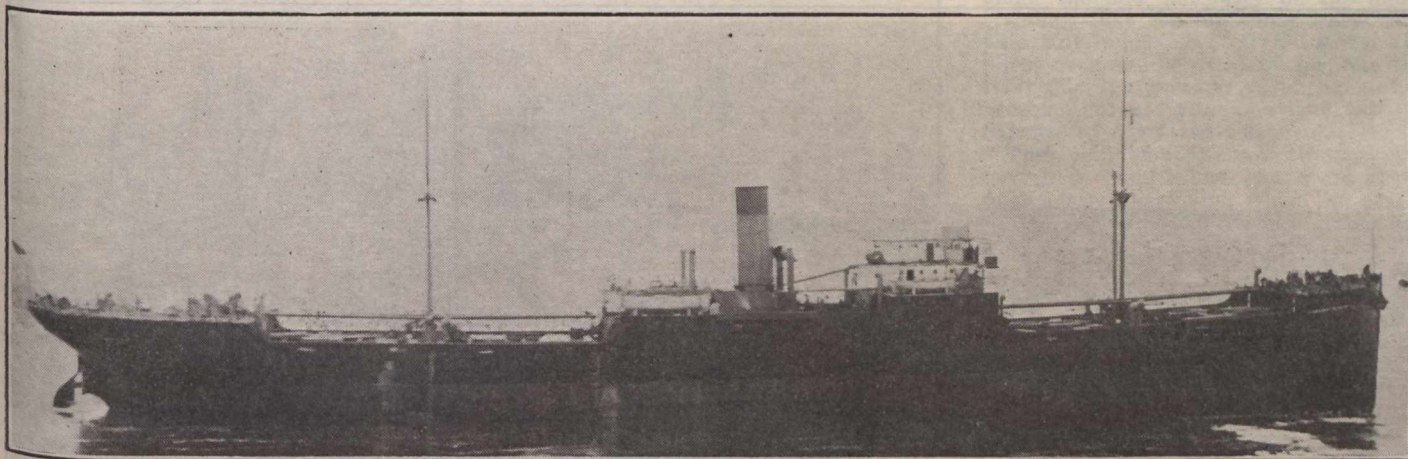
bringing your seven, or eight, or ten thousand ton ships to Kingston, but, not only that, the scheme between Prescott and Montreal would be under way with a view of canalizing the St. Lawrence River.

"When the government decided that it was going to enlarge your canals, it was realized that to make a good, perfect, complete highway for the vessels there must be terminal facilities of a good character. The government of the day looked around for a man to get the proper facilities for the port of Montreal, and I want to say here (and I am saying it as sincerely as any man can), that if you had not got a man with the backbone and public spirit of Mr. Ballantyne, you would not have the terminal facilities in Montreal that you have. The very fact of Montreal getting such splendid terminal facilities, which were necessary for the men that are operating vessels, Halifax and St. John demanded the same, and the government was compelled to do for them what they did for Montreal, and therefore we have, not only at Montreal, but at Halifax and St. John, practically as good terminal facilities as any ports on the Atlantic. Up at the head of the Great Lakes the same thing had to be done because it was necessary.

"We had in Canada, prior to the war,

with them the marine, that is, they must have vessels inland carrying traffic to and from the railways, and they must have vessels at Atlantic and Pacific ports carrying traffic to and from our country. You all know that the government is now a large owner of railway systems in Canada. When I first entered parliament there were 16,000 miles of railway in Canada. Today we have at least 40,000 miles, and of that 16,000 miles are controlled and operated by the Dominion Government, and within a very short time we expect to take over the Grand Trunk, when we will have 22,000 miles, so that we have a great railway system in Canada.

"With that then, there is of course, the Canadian Pacific, the two great systems that practically own all of the railways in Canada, and let me say that while we have two systems, it is the governments duty to see that no injustice or unfair advantage is taken of our great C.P.R. because we happen to own the other half of the railways. In other words, the management of the Canadian National Rys. under instructions from the government, communicated through me is operating the government lines as a private railway, and it must go out in the open market and compete with the C.P.R. on fair and just and equal privileges, and in that way it must be



Steel cargo steamship, Canadian Planter; approximately 8,100 d.w. tons; for Canadian Government Merchant Marine Ltd.; built by Canadian Vickers Ltd., Montreal.

Port Arthur and Montreal, and do work on the Great Lakes—plans were made by the government to provide a water-way between Port Arthur and Montreal, and it was decided to enlarge the Welland Canal.

"It is historical—it is in the records of the House of Commons and in the department over which I preside—that the Chief Engineer of the department at that time, Mr. Page, who was a very able man, decided that in enlarging the Welland Canal, it would be 50 years before it would be found necessary to enlarge it again. Now, let me tell you this, because perhaps it is a secret that has been kept, but is not any longer necessary to keep. When the government decided to proceed with the enlargement of the Welland Canal, we never let it be known, at least, we could not emphasize the fact, we took the ground that it was intended to bring the ships from Port Arthur to Kingston, but we always had in mind that as soon as we got them to Kingston we could then start and enlarge the St. Lawrence so that we could take them through to Montreal. If it had not been for the five long years of war, you would be

in 1913, 1,200,000 registered tonnage. I know that a good many Canadian registered vessels were lost during the war, many more probably than is generally realized, and, on this account, the latest figures might have been expected to show a decrease. But I was agreeably surprised to see by the Marine Department's report that instead of 1,200,000 tons, we have increased our tonnage to 1,475,000 or 250,000 tons more than we ever had. When we come to the end of the present year we will probably have made that nearly 2,000,000, and it is gratifying to know that today we stand eighth among the largest ship owning countries of the world, and at the end of this year it is believed that we will be fifth in that class.

"It is very gratifying to me to know that in our inland waters, years ago when I first entered parliament, about 1,200 tons was the largest vessel that we had in Canada, and today we have on the upper lakes vessels of 12,000 tonnage, and we are able to use them at a profit.

"Railways, of course, must work with the marine. The railways could not operate successfully unless they had

made a success. I want to be in a position, if I can, before I pass away from this life, to be able to say that I can get on the government railway system, to go to Vancouver and get on a Canadian owned, built and controlled steamship, built in Canada of Canadian products, by Canadian workmen, and travel right around the world on Canadian property.

"Mr. Ballantyne has also referred to our great industry down by the sea, the Dominion Iron and Steel. Iron and steel is the basic industry of this country. That is a great plant, but we have one nearly as large in Ontario, the Algoma Steel Corporation, and we have other similar industries—iron products, out in British Columbia, but we have more than that—we have in Canada natural resources of every kind and nature that will build up this country and with immigration, we will be in a position to develop this country and make it equal to any country on the face of the earth."

The Toronto Harbor Commissioners sold recently, \$2,000,000 of 4½% bonds, guaranteed by the city and due in 1953, to Wood, Gundy & Co., at 80.687.

General Shipbuilding Matters Throughout Canada.

British Columbia Marine Railway Ltd., Vancouver, B.C., launched a steamship Dec. 30, 1919, for the Union Steamship Co. of British Columbia, which was christened Capilano, by Mrs. E. H. Beazley, wife of the owning company's General Manager. The Capilano is 145 ft. long with capacity for about 350 passengers, and it is intended to operate her in the summer excursion traffic. This is the first vessel built by British Columbia Marine Railway Ltd., and it is stated that arrangements are being made by the company for building large vessels.

British Columbia Shipyards—A Vancouver press dispatch of Dec. 31, stated that the total of steel and wooden ships launched at British Columbia yards during 1919, was 10 steel and 46 wood, 170,000 d.w. tons. This is stated to be 14,900 d.w. tons more than in 1918. The yards are also stated to have orders for 65,600 d.w. tons, most of which is well on the way to completion.

Canada Steamship Lines Ltd. is reported to be contemplating building an excursion passenger steamship of somewhat novel design, for its Toronto-Lewiston-Queenston service. It is said that the ship will embody a number of new

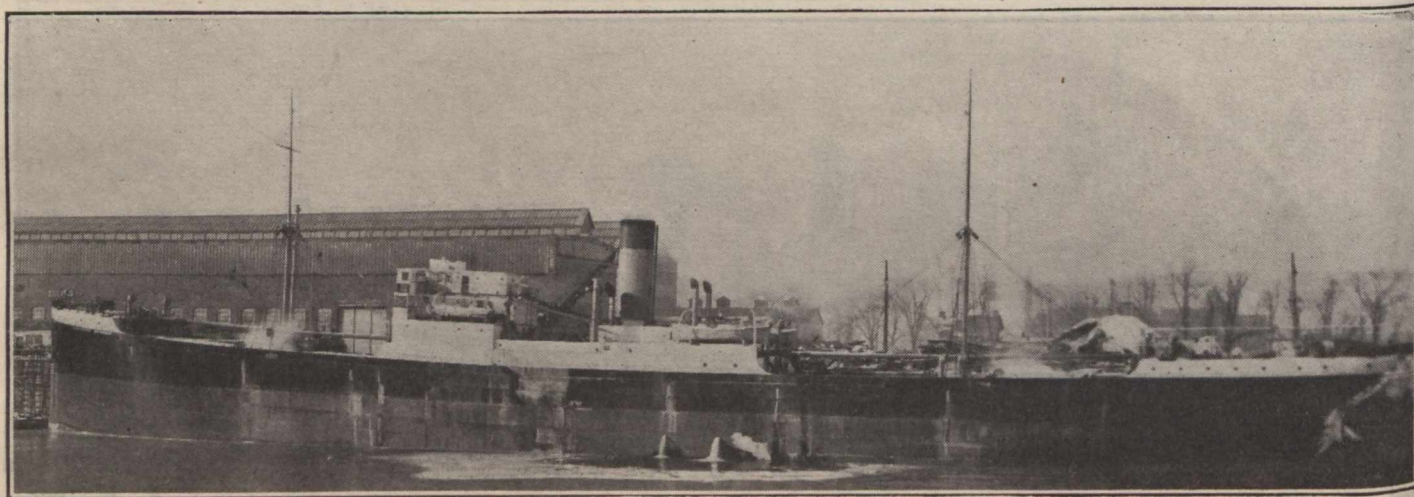
until the end of January or early in February. The damage caused by fire was estimated at \$15,000.

The Collingwood Shipbuilding Co.'s stock advanced in the unlisted section in Toronto in January from 65 to 75 bid and none offering, and 95 was bid for its bonds. The Toronto Globe says: "Brokers are at a loss to explain the sudden activity, and two theories were advanced. One was new orders received by the company and the other alleged negotiations by which the company would join up with Dominion Steel and other corporations in a great merger. Collingwood Shipbuilding has issued stock of about \$1,880,000, out of \$2,500,000 authorized. It has plants at Collingwood and Kingston. There is very little of the stock available, and the bonds to be had are said to have been about all picked up in the last few days."

J. Coughlan & Sons, Ltd., has been incorporated under the British Columbia Companies Act, with \$5,000,000 authorized capital, and office at Vancouver, B.C., to take over the stock in trade, plant, contracts, etc., of J. Coughlan &

a few days shut down, during which some financial reorganization was carried through.

Dominion Shipbuilding Co., Toronto, launched its tenth steel steamship, Jan. 17, which was named Torontonion, the christening being performed by Mrs. C. F. Easson. The ship is of the single deck type, with poop, bridge and fore-castle, steel texas on bridge, wing deck houses, with chart room and pilot house above, and the hull is built on the transverse system. There are 3 decks, main, bridge and boat, arranged on the 3 island plan, and there are 4 cargo hatches, each 22 x 18 ft. She is schooner rigged, with 2 pole masts, and the hull is divided into compartments by 4 water tight bulkheads and 1 screen bulkhead. There are 2 holds, with grain capacity of 151,466 cu. ft. The dimensions are: length, overall, 261 ft.; breadth, moulded, 43½ ft.; depth, moulded, 28 ft. 2 in.; d.w. capacity 4,300 tons. She is to be classed 100 A1 at Lloyd's for ocean service. The propelling machinery which is placed amidships, consists of a triple expansion inverted engine, with cylinders 20, 33 and 54 in. diam. by 40 in. stroke, 1,300 i.h.p., at 87.5 r.p.m., supplied with steam



Steel cargo steamship, Canadian Spinner; approximately 8,350 d.w. tons; for Canadian Government Merchant Marine Ltd.; built by Canadian Vickers Ltd., Montreal.

features, such as terraced decks, moving picture theatre, children's playground, dancing pavilion, etc. In addition to this, it is said that the lifeboats will be recessed into the sides of the ship, that the construction will be fireproof, and that the ship will have a speed of 18 knots an hour. No official information is yet available, but it appears probable that such a ship will be built if a satisfactory contract as to price can be secured.

Canadian Concrete Shipbuilding Co., North Sydney, N.S., is reported to have been organized to undertake the building of concrete ships, and to take over the yard operated for this purpose at North Sydney, N.S., by W. N. MacDonald, who is President of the new company. The concrete ship Permanencia, under construction there, information concerning which was given in our January issue, also being taken over. It was expected that she would be launched at the end of December, but owing to a fire on board, which destroyed all the wood work which encased the interior of the vessel, this had to be abandoned, and it was not expected that she would be launched

Sons, and to carry on the business of shipbuilding in all its branches, to build, own and operate drydocks, marine railways, etc., and conduct any other business incidental to shipbuilding.

Jos. Crane, New Westminster, B.C.—The New Westminster, B.C., City Council, on Jan. 12, received an application from Jos. Crane for the lease of a portion of the Indian reserve, bordering on the water front, for shipbuilding purposes. The applicant stated that he is building a large barge and scows on his present location, but there is shortage of room, and he is unable to build heavier vessels, owing to the presence of a bar in the vicinity which makes it impossible to launch anything but flat bottom boats. He is planning to build a 700 ton auxiliary schooner, about 200 ft. long. The council decided to lease him a 100 ft. water front lot at \$150 a year, which will be reduced to \$100 a year, when other property in the vicinity is taken up. It is the council's desire to foster boat building along the water front.

Davie Shipbuilding & Repairing Co., Lauzon, Que., resumed work Jan. 7, after

by 2 Scotch boilers, each 14½ ft. diam. by 11 ft. long at 180 lb. under forced draft, built by John Inglis Co., Toronto. The heating surface is 2,730 sq. ft. in each boiler, and there will be an approximate consumption of 20 1-10 tons of coal per 24 hr., with a speed of 10.2 knots an hour. The bunkers are arranged to carry 526.75 tons of coal. The propeller is 13¼ ft. diam., of cast iron, with 4 blades 12 ft. 8 in. pitch. Accommodation for 35 officers and men is arranged on the bridge and in the poop. The ship is to be equipped with steam steering gear 7 x 7 in., 8 reversible single drum, 2 speed, 7 x 12 in. cargo winches, and anchor windlass 8 x 8 in.

The Foundation Co., Victoria, B.C., is, according to B.C. press reports, dismantling its shipbuilding plant at Victoria on instructions from the company's head office in New York. The company has issued statistics covering its operations from Sept., 1918 to Nov., 1919, during which its contract with the French Government for the building of 20 wooden steamships of 3,000 d.w. tons capacity each, was carried through. The number of employes engaged at the

height of the work was 4,390, of which 65% were returned soldiers. The number of employes and their dependents is given as 12,655, of which 93.1% were British, 2.7% U.S., 1.6% Italian, and 2.6% other nationalities. The total pay roll was \$5,263,313.39; total material bought in British Columbia, \$3,733,150.43; bought in other parts of Canada, \$435,097.18. The investment in the plant at Victoria is given at \$616,174.57, and the total amount paid for labor and material in Canada \$10,048,735.57. The total amount of the contract was approximately \$11,000,000.

Grant & Horne, St. John, N.B.—The schooner *Cutty Sark*, launched at this yard recently, was built for Foster & Elkin, St. John, N.B., and has loaded number for the Canary Islands. She is 608 registered tons, and her dimensions are: keel, length, 159 ft.; beam, 36 ft.; draft, 13 ft.

National Shipbuilding Corporation, Three Rivers Shipyards Ltd., Division, Three Rivers, Que., has secured an order from French interests for building 6 steel cargo steamships of approximately 7,200 d.w. tons each, to be classed 100 A1 at Lloyd's, and equipped for a speed of 11 knots an hour, and also for 4

Erb, W. M. Wadden, H. B. Blanchard and I. M. Oettenhoefer, for an injunction to restrain other directors, W. E. Williams, E. Thompson, S. P. McMordie, E. C. Gibbons, F. F. Schellenberg and J. L. Mullen, from taking any part in the conduct of the company's affairs. N. Erb claims that the company was organized on his instructions, and he was elected chairman, and subsequently managing director, and that he secured the lease of the property from the Grand Trunk Pacific Ry., and also two contracts from the Dominion Government for building 2 steel steamships of approximately 8,100 d.w. tons each, at an approximate cost of \$3,207,600. He further alleges that the defendant directors usurped control of the plant, elected a new board of directors, increased the capital stock, and seriously disorganized the company's business, forfeited the Dominion Government's confidence owing to being behind with the contracts, and risked the cancellation of the lease of the property to the company. On the evidence submitted an interim injunction was granted for a few days pending further argument.

St. Martins Shipbuilding Co., Ltd., has been incorporated under the New Brun-

British Columbia Coast Pilots and the New Pilotage Regulations.

The order in council reorganizing the British Columbia pilotage authorities, and the new pilotage regulations providing revised pilotage dues, etc., which were published in *Canadian Railway and Marine World* for January, became effective Jan. 1. These regulations are applicable to the former pilotage districts of Vancouver, Nanaimo and Victoria-Esquimalt, which have been abolished, and have been established as the Pilotage District of British Columbia, in charge of Commander B. L. Johnston, D.S.O., as Superintendent. The pilotage district of New Westminster has not been changed, and is still under a pilotage commission.

The pilots concerned held meetings during December and submitted to the Minister of Marine a number of criticisms of the regulations, which it was claimed would reduce their earnings considerably, and not remove grievances as to certain working conditions. As a result of these meetings, they made proposals that they should continue working at the old rates, and under the old conditions, receiving all earnings, and maintaining and operating their pilotage plant and stations, out of these earnings, for six months, and also make provision for pilots over age; or, that they come under the new authority on the understanding that the minimum wage to be paid any pilot be \$350 a month, that pilots over age be provided for, and that their pilotage plant be taken over at its present market value, together with the expense of operating the plant.

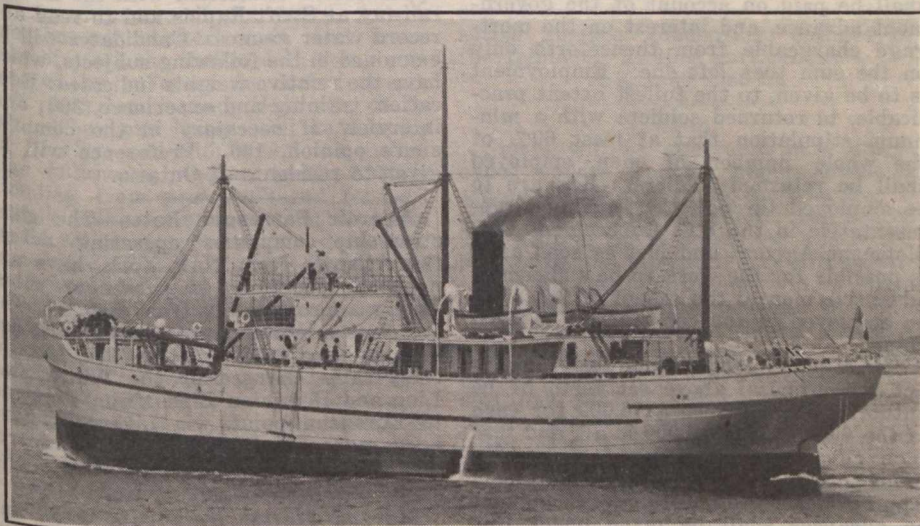
They claim that the new pilotage rates have been fixed below what were agreed upon many years ago, when the cost of living was considerably less than now, and that there is no definite assurance as to their remuneration. Though no threat was made by the pilots, local reports indicate that there was a strong probability they would cease operating under the government and offer their services as independent pilots.

The Vancouver Board of Trade, on Jan. 2, adopted a recommendation for submission to the Dominion Government, that the minimum paid to pilots be \$250 a month, with a maximum of \$350 a month. At a joint meeting of interested local boards, Jan. 7, a series of proposals was adopted for submission to the Dominion Government, with the view of terminating the dispute, and fixing the pay and working conditions of the pilots, and in the meantime it was announced, that an arrangement made is being continued for two months, whereby the pilots are working on a fixed salary of \$325 a month, and that at the end of that period the situation will be reviewed.

Pulpwood Terminal at Clayton, N.Y.—The Taggart Paper Co., Watertown, N.Y., has, according to a press report, bought 100 acres on the water front at Clayton, N.Y., opposite Gananoque, Ont., for a terminal for the reception of pulpwood from Canada.

Clyde Shipbuilding—It is stated that about 650,000 tons, were launched on the approximately 400 ships, with a total of Clyde River in Scotland in 1919, the output almost reaching the record for Clyde shipbuilding.

The Kennebecasis Steamship Co.'s s.s. *Hampton*, is having her sides rebuilt, and other repair work done at Hampton, N. B.



Wooden Steamship *Champlain*, approximately 3,000 d.w. tons, one of 20 similar ships built for the French Government, by the Foundation Co. of British Columbia Ltd.

steamships of approximately 3,200 d.w. tons, to be used as, what is termed, wine boats. We are officially advised that the 6 keels for the steamships first mentioned, will be laid about Feb. 15, and deliveries made during the autumn.

New Brunswick Shipbuilding Co. Ltd., has been incorporated under the New Brunswick Companies Act, with \$320,000 authorized capital and office at St. John, N.B., to build, own and operate steam and other ships of every description, with plant, docks, wharves, etc., incidental thereto. The incorporators are: A. F. Coughlan, J. D. P. Lewin, J. J. Stothart, St. John, N.B.

Prince Rupert Dry Dock and Engineering Co., Prince Rupert, B.C., is doing considerable repair work. The Grand Trunk Pacific Coast Steamship Co.'s steamships are being overhauled in turn, and work is proceeding on two 8,100 d.w. ton steel steamships for Canadian Government Merchant Marine Ltd., of an approximate value of \$3,207,600.

Application was made to the British Columbia Supreme Court, Jan. 10, on behalf of the Prince Rupert Dry Dock and Engineering Co., the Empire Ship and Dry Dock Corporation, Newman

wick Companies Act, with \$240,000 authorized capital and office at St. John, N.B., to build, own, and operate ships of every description with the plant, docks, wharves, etc., incidental thereto. The incorporators are: A. F. Coughlan, J. D. P. Lewin, J. J. Stothart, St. John, N.B.

Wallace Shipyards Ltd., North Vancouver, B.C.—The steamship which this company is building for the Union Steamship Co. of British Columbia will be of the following dimensions: length, 173 ft.; breadth, 30 ft.; depth, 14 ft., and she will have a deadweight carrying capacity of approximately 700 tons. She will be of the single deck, single screw, cargo type, equipped with triple expansion reciprocating engine of about 700 i.h.p., located aft, steam windlass, 4 winches, 4 derrick booms, 5 tons capacity each, one 20 ton derrick, and steam and hand steering gear. The accommodation for the master, engineers, and crew, will be arranged on the poop deck. The keel was laid in Dec., 1919, and we are advised that it is expected the ship will be launched about the first week in February and delivery will probably be made about Mar. 1.

Dominion Government Aid for British Columbia Wooden Shipbuilding.

During a visit of the Finance Minister, Sir Henry Drayton, to British Columbia in Nov., 1919, various plans were laid before him, with the view of obtaining assistance from the Dominion Government for wooden shipbuilding in the province, chiefly to meet the unemployment situation there, which since demobilization has become rather serious. One of the schemes submitted was by J. O. Cameron, President, Cameron Lumber Co., and who was at one time interested in Cameron-Genoa Mills Shipbuilders, Ltd., which built a number of auxiliary powered schooners for Canada West Coast Navigation Co. Ltd., the plant being sold subsequently to the Foundation Co. of British Columbia Ltd., Mr. Cameron proposed to build several auxiliary powered schooners under a series of loans to be made by the Dominion Government, and for which purpose the Foundation Co.'s plant would be leased if terms could be arranged. Another scheme proposed was by interests associated with the Cholberg Ship Co., Victoria, and it was proposed to form a company of local citizens to undertake the building of 4 wooden schooners, similar to those built recently at that yard for Norwegian interests, at an approximate cost of \$250,000 each, the government to finance the project up to \$175,000, the local company undertaking the balance. On his return to Ottawa, Sir Henry Drayton, laid the matter before other members of the government with the result that an order in council has been passed as follows:—

The Committee of the Privy Council have had before them a report, dated Dec. 20, 1919, from the Finance Minister, representing as follows: From reports of the Labor Department it appears that much unemployment exists at present in Victoria, B.C., owing to the fact that the extensive shipbuilding business heretofore carried on there has now practically ceased and that approximately 5,000 men are out of employment. It has been shown that a large number of returned soldiers have received their discharge on Vancouver Island, who were not enlisted there and that the number of returned soldiers now in British Columbia in excess of the enrolment from B.C. is estimated at about 12,000 and that a very large number of those unemployed in Victoria are returned soldiers, the estimate made by the returned soldiers' representative showing the number of unemployed returned soldiers to be about 4,000.

In order to relieve the unemployment situation Victoria citizens propose to form themselves into a joint stock company to build 4 wooden sailing ships (barkentine rig) each with a cargo capacity of 2,400 tons deadweight, or 1,500,000 ft. board measure fir lumber, the estimated cost of each being \$250,000. It is proposed that these ships be built in the Cholberg shipyard in Victoria. The citizens' association, represented by Clarence Hoard, have put themselves in a position to be able to advance on account of construction cost of each vessel in cash or in the delivery of materials \$75,000. If any portion of this cost be represented by the delivery of lumber, when required for the construction of such vessels, prices shall not exceed f.o.b. cars Victoria the following:

Framing grade	\$28 per M
Merchantable	\$30 per M
Planking	\$50 per M
Ships decking	\$65 per M
Additions as per standard fir timber list 2, B.C. average length 30 ft.	

Payment in other materials necessary for boat construction shall only be allowed at prices which shall not exceed the lowest price as ascertained by competitive bids, and no credit shall be given until such material has been delivered in the yard and there received and accepted in good condition. It is proposed, in order to render work available for the unemployed returned soldiers, that the government shall advance the balance required to complete each ship to a sum not exceeding \$175,000, and that this advance shall be secured by a first mortgage on each ship bearing interest at the rate of 6%. Interest on the government advance at the rate of 6% shall first be paid, and the owners shall then have the right to take out of the operating revenues enjoyed by each ship \$4,500. The balance of the net earnings shall be paid on account of the government advance, and interest on the mortgage chargeable from thenceforth only on the sum then left due. Employment is to be given, to the fullest extent practicable, to returned soldiers with a minimum stipulation that at least 60% of the whole number of men employed shall be returned soldiers. Men are to be employed through the Dominion representative in the B.C. Government Employment Agency, and just so soon as it is possible for the work to be sufficiently advanced, men to the extent of 235 shall be employed in the construction of each ship.

The Minister recommends that to carry out the proposal above set forth he be authorized to advance \$175,000 for each of the 4 ships, or \$700,000 in all, and that such advances be defrayed from the funds provided by the Demobilization Appropriation Act, 1919, provided that no advances shall be made under this order in council until an agreement has been entered into by the company, when incorporated, with the government, in form and terms satisfactory to the government. The Privy Council Committee concurred in the report and it was approved.

Canada Steamship Lines' s.s. Sir Trevor Dawson is moored at Buffalo, N.Y., for the winter, with a storage cargo of grain.

Marine Railway Operator for Trent Canal.

The Civil Service Commission advertised, Dec. 24, 1919, a competition, open to all residents of Canada, for the following position:— A marine railway operator, Railways and Canals Department, at Swift Rapids on the Trent Canal, at an initial salary of \$1,080 a year, which will be increased on recommendation for efficient service at the rate of \$60 a year, until a maximum of \$1,200 has been reached. This initial salary is supplemented during the present fiscal year by the following bonus: If head of a household (irrespective of age) \$420 a year. If not the head of a household, \$192 a year if over 21 years of age; \$150 if between 18 and 21 years of age; no bonus if below 18. Candidates must have had primary school education; some knowledge of the operation of gasoline launches, and of the installation, maintenance, and operation of electric motors. Candidates must be of good physical condition, and should preferably be not more than 40 years of age. The successful candidate will be required to operate and maintain in good working condition all apparatus in connection with the marine railway at Swift Rapids and to read and record water gauges. Candidates will be examined in the following subjects, which have the relative weights indicated: Education, training and experience, 300; oral interview, if necessary in the commission's opinion, 100. Preference will be given to residents of Ontario.

Atlantic Passenger Rates—The chief steamship companies operating across the Atlantic from New York, have announced reductions in passenger rates, dating approximately from Feb. 11. The 1st class minimum rate to Hamburg has been reduced from \$225 to \$175, the 3rd class rates charged by the White Star Line and Dominion Lines from Portland to European points via Liverpool, have been reduced by \$10, and a similar reduction has been made by the White Star Line running out of New York.

Havana Marine Terminals, Ltd., has been incorporated under the Dominion Companies Act, with \$30,000,000 authorized capital, and office at Montreal, to own and deal in real estate, and to carry on business as wharfingers, warehousemen, forwarders, etc., and in connection therewith to own and operate ships and other transportation facilities. The incorporators are: G. W. MacDougall, K.C., G. Barkley, A. Knatchbull-Hugessen, J. G. Cartwright and E. Tudor, all of Montreal.

Vessels Added to and Deducted From the Canadian Register During November, 1919.

Added.	No.	Steam.—Tonnage—		No.	Sailing.—Tonnage—	
		Gross.	Registered.		Gross.	Registered.
Built in Canada	8	8,993	5,267	21	4,956	4,583
Purchased from foreigners.....	2	1,937	1,164	1	42	42
Transferred from United Kingdom.....	7	11,395	7,220	—	—	—
New registers	1	75	12	—	—	—
Tonnage alterations without reregistry.....	—	—	15	—	22	86
Totals	18	22,400	13,678	22	5,020	4,711
Deducted.						
Wrecked or otherwise lost.....	5	1,077	728	14	925	799
Broken up or unfit for use.....	54	1,612	1,027	35	1,381	1,365
Sold to foreigners	—	—	—	3	986	896
Transferred to United Kingdom.....	1	1,422	810	—	—	—
Transferred to British possessions.....	—	—	—	2	587	503
New registers	1	53	37	5	220	185
Tonnage alterations, without reregistry.....	—	12	—	—	43	—
Totals	61	4,176	2,602	59	4,142	3,748

The 10,500-Ton Steel Cargo Steamships for Canadian Government Merchant Marine, Ltd.

As announced in Canadian Railway and Marine World at the time, the Marine Department gave contracts to Halifax Shipyards, Ltd., Halifax, N.S., on Dec. 10, 1918, for 2 steel cargo steamships of approximately 10,500 d.w. tons each to be operated by Canadian Government Merchant Marine Ltd. The keels for them were laid as follows:— S.s. Canadian Mariner; Marine Department contract 21; builder's yard no. 1; Feb. 24, 1919, and s.s. Canadian Explorer; Marine Department contract 22; builder's yard no. 2; Mar. 15, 1919. It is expected that the first ship will be delivered before the end of this year. Their principal dimensions, etc., are as follows:—

Length between perpendiculars.....	430 ft.
Breadth moulded	56 ft.
Depth moulded	30 ft., 38 ft.
Sheer forward	7 ft.
Sheer aft	3 ft.
Lowest point of sheer	Amidships
Draft mean	28 ft. 11¼ in.
Deadweight, in long tons, about.....	10,500
Speed loaded on 6 hours trial.....	11 knots
Complement, officers and men, about.....	63

These ships are of the shelter 2 deck type, having shelter, main and lower decks of steel, the shelter deck being surmounted by a forecastle deck forward, 45 ft. long, and a poop deck aft, 45 ft. long. They are being built to Lloyd's 100 A1 class and will have 8 w.t. transverse bulkheads, and a double bottom extending from peak bulkhead forward to peak bulkhead aft, dividing the ship into 24 w.t. compartments. A deep tank is provided abaft of the engine room. The frames and beams are of heavy bulb angle section, and the various decks are strongly supported by tubular pillars.

The cargo working arrangements are very complete. There are 4 hatchways, each about 30 x 18 ft. and 2 hatchways, each about 15 x 18 ft. commanded in all by 20 five ton derricks. The derricks will be operated by twenty 7 x 12 in. winches, of the Clarke Chapman type. In addition no. 2 hold is provided with a 30 ton derrick for heavy weights, such as machinery. The usual steam windlass forward is provided.

The steering engine is of the Wilson Pirrie type, 10 in. diameter by 10 in. stroke, direct connected to the rudder head. The ship will be electrically lighted throughout, being provided with duplicate sets of generating machinery, running in parallel 110 voltage. Two masts are provided, one forward and one aft, carrying the wireless aerials, the wireless set being of 1½ k.w. capacity.

Each ship will be provided with the following life saving equipment: 2 lifeboats, 28 x 8½ x 3½ ft.; 2 lifeboats 22 ft. x 6¾ ft. x 2 ft. 10 in.; 2 working boats, 18 x 5½ x 2½ ft. All other parts of the livesaving equipment will be in accordance with the British Board of Trade and Canadian Steamship Inspection requirements. The anchor and cable equipment will be in accordance with Lloyds as follows: 2 bowlers, stockless, 72½ cwt.; 1 spare, stockless, 72½ cwt.; 1 stream, ex-stock, 20½ cwt.; 1 kedg, ex-stock, 9 cwt., and 300 fathoms 2 6-16 stud link cable, with the usual steel wire and malleable hawsers, warps and towlines.

The accommodation for the officers and crew will be very complete. The engineers' cabins are placed in an island deckhouse on the shelter deck, about

amidships, containing cabins, dining saloon, lavatories, pantry, etc. The navigating officers will be in a deckhouse over on the lower bridge, and the captain's quarters comprising day cabin, sleeping cabin, office and lavatories, will be placed on the upper bridge, which will be surmounted by the chart room and wheel house on the flying bridge. The crew will be located aft, under the poop and shelter deck. A total complement of 63 officers and men is provided for. Forward under the forecastle deck will be the hospital, carpenter shop, paint store, oil room and boatswain's store. Steam heating at 20 lb. pressure will be supplied to all living quarters.

Cold chambers for the preservation of the ships' provisions will be abreast of the engine casing, on the main deck, and will have a total capacity of about 1,000 cu. ft. The refrigerating engine will be on the Clothel principle, capable of maintaining a temperature of 28° in tropical climates.

The propelling machinery will consist of one set of inverted vertical direct acting surface condensing engines of the following leading particulars:—

29½ x 50 x 80 in.

54 in.

Steam will be generated in 4 single ended boilers working under Howden's system of forced draft and having a working pressure of 180 lb. per sq. in. The heating surface will be about 10,500 sq. ft. and the grate area 270 sq. ft.

The air and bilge pumps will be direct connected to the main engine. One pair of Weir's feed pumps will be provided, each capable of supporting the boilers at full power. The other auxiliaries will comprise general service pump, ballast pump, sanitary pump, evaporator, distiller, feed filter, feed heater, auxiliary condenser, ash hoist and turning engine.

There will be one funnel of double section, and the usual ventilation to the engine and boiler rooms.

These ships, which have been designed by the Naval Constructor of the Marine Department, for bulk, general and refrigerated cargoes, will be capable of a speed of 12 knots under load conditions.

Winter Moorings of Canadian Steamships.

Following are Canadian steamships and the ports at which they have been berthed for the winter, in addition to those given in Canadian Railway and Marine World for January:—

Canada Steamship Lines Ltd., Montreal—Steamships, Lucia, S. H. Dunn, Port Colborne, Ont.; Ionic, Kingston, Ont.; Sarnor, Sorel, Que.

Keystone Transportation Co., Montreal—Steamships Keybell, Keynor, Keyport, Keywest, Grand Trunk dock, Kingston, Ont.

St. John Steamship Co., St. John, N.B.—Steamship Glenholm, Annapolis, N.S.

A record for speed was achieved by the British torpedo boat destroyer Tyrian on her recent deep water trials, when she attained 45 miles an hour on a 4 hour trip.

Sorel Government Shipyards Superintendency.

Canadian Railway & Marine World for Dec., 1919, gave particulars of notice issued by the Civil Service Commission inviting applications to be sent in by Nov. 24, 1919, by residents of the Province of Quebec only, for the position of Shipyard Superintendent, for the government shipyard at Sorel, Que., at an initial salary of \$3,000 a year. Apparently no satisfactory applications were received, as on Dec. 24, another notice was issued inviting applications for the position and stating that the competition was open to all residents of Canada, as follows:—A shipyard superintendent for the Government shipyard at Sorel, Que., Marine Department, at an initial salary of \$3,000 a year, which will be increased on recommendation for efficient service at the rate of \$180 a year until a maximum of \$3,540 has been reached. Candidates must have education equivalent to graduation in engineering from a school of applied science of recognized standing; at least five years of experience in ship design and construction, two years of which shall have been in responsible charge of such work; thorough knowledge of various types of ships and ship machinery and the construction and repair thereof; firmness, tact, good judgment, and ability to manage men; preferably a knowledge of both French and English. No special age limit is fixed for this position, but the appointee must be of such an age as to ensure a reasonable period of satisfactory service after appointment. The successful candidate will be required to perform the following duties: under direction to have charge of the Sorel shipyard; to be responsible for the design, estimate, construction and repair of ships; to supervise the buying and safekeeping of stores and stock and the work of all employes; and to perform other related work as required. An examination will be held in education and experience along the lines indicated above. An oral examination of the best qualified candidates will be held, if necessary in the commission's opinion. This position was advertised Nov. 6, 1919, and is now readvertised.

As stated in Canadian Railway & Marine World for Dec., 1919, the vacancy was caused by the resignation of W. S. Jackson, who was appointed Superintendent, May 12, 1919. F. A. Willsher, Assistant Naval Constructor, Marine Department, Ottawa, has been acting as Superintendent since Mr. Jackson's resignation.

Shipbuilding and Naval Architecture Instruction — Brigadier General C. H. Mitchell, C.B., C.M.G., D.S.O., Dean of Applied Science and Engineering Faculty, Toronto University, in his recent inaugural address, said, among other things:—"The subject of shipbuilding and naval architecture, which appear to be now in some demand, especially with the revival of Canadian shipping on the Great Lakes, and the development of the harbor works at Toronto and elsewhere, are being kept in view."

The Canadian Brotherhood of Light-house Keepers' Association, New Brunswick branch, was organized at St. John, N.B., Jan. 18. The officers are: J. E. Collins, Cape Spencer, President; K. McClellan, Port Esquimalt, Vice President; F. Fauley, Port Lepreaux, Secretary.

The Marine Department's Annual Report.

The Marine Department's report for the year ended Mar. 31, 1919, was issued in Dec., 1919. Following are extracts from the report of the Deputy Minister, A. Johnston:

At the beginning of the last fiscal year the German submarine menace had reached its maximum, a toll of approximately 1,000,000 d.w. tons of allied and neutral shipping having been taken in April alone; after that, losses in ships due to war causes steadily declined.

It was surmised in last year's report that the United States output of ships during 1918 would in all probability be a powerful factor in the defeat of the submarine; this has now been clearly shown. The U.S. production of ships during 1918 has been remarkable, particularly when it is remembered that prior to her entry into the war the U.S. was not to any extent a shipbuilding nation, and had to establish yards before turning out ships.

The submarine peril, though much lessened, was far from removed despite all contributions to new shipping. Archibald Hurd, Naval Correspondent of the Daily Telegraph, gives the following figures illustrating this. During April, May and June, 1918, total shipping losses, allied and neutral, were 946,578 gross tons, compared with 2,236,934 gross tons for the same period in 1917. This average loss of approximately 1,000,000 tons to a quarter, and a trifle over 300,000 tons a month was grave enough, though the losses in the course of a year had been more than cut in half. British losses due to enemy action and marine risk from April 1 to the end of July, 1918, were 1,312,315 gross tons; British vessels built and put afloat in the same period 763,246 tons, a decrease in British shipping during the first four months of the fiscal year 1918-19 of 549,069 gross tons.

Merchant Ship Losses and Building.

From Aug., 1914, to the signing of the armistice, Nov. 11, 1918, the total yearly losses suffered by the allied and neutral nations are given by the New York Journal of Commerce as follows:

1914 (5 months)	681,363 gross tons
1915	1,724,720 "
1916	2,797,866 "
1917	6,623,623 "
1918	3,096,418 "
Total	14,923,990 "

Following is a comparison of allied and neutral ship deliveries and losses for 1918 in gross tons:

Deliveries	3,790,730
Losses	3,096,418
Gain	694,312

For each of the first four months in 1918 ship losses exceeded ship building; the margin of losses, however, decreasing, and especially in March, falling quite sharply. From May to November in each month the building topped the losses, and in the last completed month of the war, October, by nearly 500,000 tons, thus indicating clearly the progressive increase of building over losses during the year.

The proportional losses in 1918 were as follows in gross tons:

Britain	1,922,599
United States	110,239
Other allies and neutrals.....	1,064,139

This shows that the British losses nearly doubled those of the other allies and neutrals combined.

The proportionate yearly British and

other allied and neutral losses during the war were as follows in gross tons:—

Britain	9,031,828
Other allies and neutrals.....	6,021,958

Total15,053,786

The losses in 1918, although slightly less than half those in 1917, were still greater than the losses in any war year preceding 1917, showing that German submarine operations were a grave danger up to the end.

The British shipping loss of 9,000,000 tons comprised roughly (on the authority of Prof. W. S. Abell, Chief Surveyor of Lloyds) 2,000 vessels, 500 liners and 1,500 tramps; the toll of lives among British merchant seamen was 15,000.

The losses sustained by the different allied and neutral countries during the war, as given by Archibald Hurd in the Daily Telegraph were, in gross tons, as follows:

United Kingdom and dominions.....	9,055,668
United States	501,038
Belgium	105,081
Brazil	31,279
Denmark	245,302
Holland	229,041
France	807,077
Greece	414,675
Italy	861,435
Japan	270,033
Norway	1,171,760
Spain	237,862
Sweden	264,001

Total14,194,252

This total is slightly less than that given by the New York Journal of Commerce already quoted. The losses of the allied and neutral nations, apart from Great Britain, are put by Mr. Hurd at 5,138,584, Great Britain's losses being nearly double those of all the other given nations combined, 17 times those of the United States, and 10 times those of either France or Italy.

In 1915, allied and neutral losses exceeded building by 522,720 gross tons, in 1916 by 1,109,858, in 1917 by 3,686,837, but in 1918, owing to the 1917 losses being cut in half and to increased building activity, especially by U.S., the building surpassed the losses by 810,421 gross tons; 1914 being the only other similar war year, when the margin of safety was 303,733 gross tons.

British merchant shipping decreased during the war by 4,689,530 gross tons, that of the other allies and neutrals remaining almost stationary, with a small balance of 485,273 gross tons in favor of building over losses.

The total decrease of allied and neutral shipping during the war was 4,204,259 gross tons; this is serious enough, but worse is behind; taking Lloyd's figures, the gross steam merchant tonnage of the allied and neutral powers in 1914 was roughly 39,000,000, at the normal yearly peace increment increase of 5% this tonnage ought, in four years time, to have reached an additional 8,000,000; the real shortage of shipping for these nations to meet their peace requirements is therefore 12,000,000 tons, and the demands on sea transport after the war are bound to be excessive; this situation is somewhat relieved by the confiscation of 2,392,675 gross tons of enemy vessels in neutral ports, provided, of course, that these remain confiscated.

Britain was particularly hard hit; taking 20,000,000 as her gross tonnage in 1914 and applying the 5% principle, it will be found that the shortage amounts to about 9,000,000 gross tons for her

ordinary needs, and her needs for a considerable period after the war will be the reverse of ordinary.

Shipbuilding.

For the quarter ended Dec. 31, 1918, there were being built in Great Britain 424 steam and sail merchant ships, gross tonnage 1,979,952. Between one-third and one-half of the total number of steamships under construction in Great Britain for the quarter ended Dec. 31, 1918, were in the 5,000 to 6,000 gross ton class, or, put in deadweight tons, 7,500 to 9,000. In last year's report it was stated that the class of vessel giving the best return on outlay is one ranging between 7,000 and 10,000 tons deadweight capacity; the British programme gives practical support to this theory.

What is of peculiar interest to the Empire and to Canada, is a comparison between the returns for Britain and the dominions, and those for the United States, and the position taken by Canada herself among the other nations. The number of ships under construction in Britain and the Dominions was 619, total gross tonnage 2,258,663, in the United States 997, total gross tonnage 3,645,919. It can be readily judged what sort of part the United States is likely to play in the world's sea-carrying trade, and four years ago she was almost an on-looker. Comparing small things with great, the Canadian return is scarcely less remarkable.

Lloyd's statement includes returns from all the chief shipbuilding countries of the world with the exception of the Central Powers. In this company Canada's 1918 programme ranks third in the number of ships, 148 to Japan's 116; and fourth in tonnage 225,264 to Japan's 278,140; only 52,876 tons less; a notable showing in a short time, which augurs well for the future.

The French war output is only one-fifth of that for the four previous years, Britain's about one-half, Denmark and Norway show a slight increase, Italy increased her output by one-third, Holland by one-quarter. The Swedish output for 1915-18 is about double that for 1911-14, the Dominions about treble, the Japanese fourfold, and the United States fivefold; the main building increase for these three last countries taking place in 1918. The world's total output of tonnage for 1915-18 very nearly equals that for 1911-14, the difference in favor of the latter being 462,596 tons.

Ocean Freight Rates.

The sharp fall in ocean freight rates came somewhat as a surprise. The lead was taken by such British lines as the Cunard, Furness-Withy, International Mercantile Marine group, and Canadian Pacific, after notice had been given to the Director of Operation of the U.S. Shipping Board. This action was taken on their own initiative, as the rates on free space are fixed by the lines themselves, and are not subject to the approval of the British Ministry of Shipping, with the single exception of the rate on cotton. Upon the receipt of this notice the U.S. Shipping Board promptly followed suit by declaring a rate reduction of 66% on ocean freight from U.S. to European ports borne by its ships; these reduced rates only apply to U.S. Shipping Board vessels, and not to those privately owned, but as the Shipping

Board operates at least half of the U.S. Merchant Marine, the remainder is certain to be largely affected, and on routes where both are operating in common the Shipping Board's rates are certain to obtain. Whether or not the new revision will stand for any length of time is a moot question, but in U.S. shipowning circles the prevailing opinion seems to be that an approximate minimum has been reached and that the present scale of rates is not likely to go lower, although it may in some cases be increased; in the cases, however, of a number of shippers and exporters whose opinions were solicited by the New York Journal of Commerce, the majority favored a further and more general reduction. The tendency will be to restore and extend export business, and to lower the prices of commodities generally; the trades chiefly affected are cotton, steel, copper, hides, textiles, lumber, and groceries and foodstuffs; the profits of merchant ships, whether under private or government control, will of course, be curtailed. The comparison between the old and new rates per measurement ton was thus given by the New York Journal of Commerce, the new rates going into force on Feb. 1, 1919:—

America to United Kingdom.....	\$66.00 cut to \$20
America to French Atlantic ports..	66.00 cut to \$26
America to French Mediterranean ports	71.50 cut to \$34

From the same source are taken the following U.S. Shipping Board rates on Webb high density cotton, present cargo space not warranting the shipment of loosely baled cotton:—

	Per 100 lb.	
	New	Old
From U.S. Atlantic ports to—		
United Kingdom main ports.....	\$1.25	\$4.50
France main Atlantic ports.....	1.00	4.75
Main Mediterranean ports.....	2.00	5.25
Holland, Rotterdam	1.50	4.75
Belgium, Antwerp	1.50	4.75
Portugal, main ports.....	1.50	4.75
Spain, Barcelona	2.00	5.75
Italy, main ports	2.25	5.50
Shipments from U.S. Gulf ports, 25c extra.		

Merchant Marine.

In Aug., 1917, there were in the U.S., 61 shipyards, of which 37 were steel yards, with 162 ways. In Sept., 1918, there were 203 yards, with 1,020 ways; of these yards, 77 were steel, 117 wood, 2 composite, and 7 concrete. In 1916 the U.S. yards employed 50,000 men; they now employ 386,000. At the time of the entry of the U.S. into the war her merchant marine comprised 2,750,000 d.w. tons of seagoing ships over 1,500 tons burden; in Sept., 1918 (not including vessels of 1,500 tons), it consisted of:—

	No.	D.w. tons.
Requisitioned U.S. ships	449	2,900,525
Ex-German and ex-Austrian ships taken over	100	644,713
New ships owned by Shipping Board	256	1,465,963
Old lake steamships transferred..	31	117,800
U.S. ships not yet requisitioned (over 1,500 tons d.w.).....	377	980,459
Dutch steamers requisitioned.....	81	486,945
Foreign ships chartered to Shipping Board	291	1,208,411
Foreign ships chartered to U.S. citizens	600	1,707,099
Total	2,185	9,511,915

Of this fleet, 1,294 ships, total tonnage 6,596,405, fly the U.S. flag, 891 foreign vessels, total tonnage 2,915,510, are under charter, either to the Shipping Board or to private companies.

Australian Shipbuilding.

Following are the numbers and tonnage of ships built and registered in Australia from 1914 to 1917:

	No.	Gross tons
1914	55	3,817
1915	14	1,278
1916	7	146
1917	6	333
Total	82	5,574

Australia's output for 1918-19 was expected to be about 40,000 tons. The importance attached by Australia to the building of ships may be judged by the fact that her programme for 1918-19 is seven times her total output for the four preceding years.

Shipping in the Future.

Sea transport after the war will, in all likelihood, be chiefly controlled by Great Britain and the dominions, the United States, Japan, and possibly Germany and Austria-Hungary. In 1914 the merchant steam tonnage of these countries, according to Lloyd's Register, was in gross tons:—

Great Britain and dominions	20,523,706	6,187,000
Germany	5,134,720	1,813,775
Austria-Hungary	1,052,280	1,078,386
United States		
Japan		

*This is sea going tonnage only. The U.S. had besides, 3,040,973 in lake tonnage.

The total steam tonnage of the world at that time was 45,403,877, Great Britain and the dominions owning 40% of it; post war conditions, however, may tend to somewhat modify this position.

The recent shipbuilding activities of the United States and Japan, coupled with their comparative immunity from submarine losses, will have a very considerable effect on the shipping situation of the future.

Britain, during the entire course of the war, despite her heavy losses, placed her merchant tonnage unreservedly at the service of the allies; in doing so she abandoned to a greater or lesser extent some of her former trade routes; this holds true in particular of the Pacific trade, of which she controlled 40% before the war, Japan's share being 30%. British tonnage on this route has now dropped by 10%, while the Japanese has doubled, but owing to the astonishing increase of U.S. shipbuilding during the war, Japan's most formidable rival there in the future will probably be the U.S.

In 1913 the value of Britain's imports was \$3,736,050,381, of her exports \$3,085,200,784; the adverse balance of trade of \$650,849,597 was offset in part by interest on foreign investments, but chiefly by the earnings of her merchant marine. Britain's merchant marine is literally her life-line, and its standing after the war in relation to that of other maritime nations will be of the utmost importance.

Mercantile shipbuilding in Britain since 1914 has been heavily handicapped; there has been a shortage of steel due to the pressing demand for guns and munitions, the drain on her man power stripped her plants, and men were put into the ranks who might better have served the allied cause in the yards. It was not until the spring of 1918, when the tonnage situation became acute, that 20,000 shipwrights were released from the army. She had to consider the imperative needs of her navy, and to maintain constantly at sea an immense fleet of first line battleships and cruisers, besides destroyers, trawlers, drifters, and all manner of anti-submarine craft.

Addressing visiting U.S. journalists in London in Oct., 1918, Admiral Sims, commanding the U.S. fleet in European waters, said that there were then about 5,000 anti-submarine craft operating day and night in the North Sea and vicinity; of this flotilla, 160, or 3% were U.S. vessels, the remainder being British; he stated that about the same proportion obtained in the Mediterranean. This is a striking tribute to the pre-eminence of Britain's navy, and of her merchant marine as well, for no small share of the

battle against German mine and submarine has been borne by the latter. During four years of war the displacement tonnage of the navy, including auxiliaries, increased from 2,500,000 to 6,500,000, and the personnel from 146,000 to 406,000. British yards of late have carried on an extensive work in the repairing and refitting of merchant ships damaged by mine or torpedo, hampering greatly the output of new shipping. Between June, 1917, and Oct., 1918, 10,000 British ships, besides a number of allied and neutral vessels, were repaired and made serviceable. In any estimate of Britain's capacity to build merchant ships under post war conditions, all these factors must be taken into account.

The Central Powers' Shipping.

In considering the merchant shipping output of the Central Powers during the war period, it must be borne in mind that they were largely free from the disabilities under which Britain has labored. Early in the war they gave up any attempt to keep the sea, confining themselves almost entirely to the use of submarines, thereby curtailing the building of the larger battleships. The repairing and refitting operations of their merchant shipyards were confined to their Baltic fleet, a mere trifle; they were thus able to devote the greater part of their building activity to the production of new merchant ships, and that they did this to a very considerable extent may be taken for granted from information that has leaked out from Germany. On the authority of the late Herr Ballin, there are at present building in German yards one ship of 56,000 gross tons, one of 35,000, two of 30,000, and a number ranging from 9,000 to 22,000 tons; Germany, as heretofore, evidently pinning her faith to the big freighters. The system of heavy subsidies started before the war is to be continued, especially to merchant ships completed within three years after the declaration of peace.

Of the merchant shipping of the Central Powers, 2,700,000 tons were interned in German or Austrian ports at the outbreak of war, the remaining 3,487,000 being in neutral ports; of the latter 2,392,675 tons were confiscated; irrespective of new output the Central Powers have at present 3,794,325 gross tons of merchant shipping. As their output of shipping in 1914 was roughly 600,000 gross tons, it may be assumed that they have at present at the least between four and five million tons for post war trade.

Canadian Shipbuilding Policy.

Owing to the drain on merchant tonnage generally and on British tonnage in particular, due to the war, the possession of ships has become of capital importance to the dominions, first to carry their own products overseas, and second to partake in the sea-carrying trade, and obtain the advantage of the high freight rates which are likely to obtain for a considerable post war period; it has already been shown how Australia has increased her shipbuilding activities.

The Canadian Government, recognizing how much the possession of a merchant marine, solely under Canadian control, either governmental or private, will mean to the future trade prosperity of Canada, has launched an extensive plan for the building of a Canadian merchant marine in Canadian shipyards.

In this connection it may be noted that rolling mills for the output of steel plates and steel shapes for ships have been es-

tablished at Sydney, N.S. Hitherto the bulk of these plates and shapes came from U.S. sources, but Canada is now in a position to employ Canadian firms only in all that pertains to the building of ships.

Apart from the formation of a much needed Canadian merchant marine the government plan has another side, the placing of the Canadian shipbuilding industry on a firm footing. Nearly one-fourth of the government contracts for ships run into 1920; this ought to enable the Canadian yards affected to become securely established, and to compete successfully in the output of ships for foreign governments.

This portion of the Deputy Minister's report is followed by a table giving some particulars about the first 45 steel cargo steamships ordered by the Marine Department for operation as Canadian Government Merchant Marine Ltd. Fuller particulars of 60 ships, orders for which have been announced are given in the table which Canadian Railway and Marine World publishes monthly, and which appears on another page in this issue.

Vessels built in Canada and registered during 1918.

Province	Sailing.		Wood.		Gas.		Metal.		Totals.						
	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage					
Nova Scotia	80	28,852	24,923	5	1,487	1,048	24	920	793	1	1,735	1,067	110	32,994	27,831
New Brunswick	9	2,451	2,436	.....	.....	.....	7	261	154	.....	.....	.....	16	2,712	2,590
P.E. Island	.....	.....	.....	1	23	16	3	73	62	.....	.....	.....	4	96	78
Quebec	10	3,117	2,868	5	364	78	7	309	201	4	10,782	5,939	26	14,572	9,086
Ontario	21	3,955	3,955	13	483	315	3	107	85	11	10,031	5,743	48	14,576	10,998
Manitoba	.....	.....	.....	1	58	39	.....	.....	.....	.....	.....	.....	1	58	39
British Columbia	99	13,894	13,894	29	56,696	34,942	63	2,692	1,908	1	5,703	4,145	192	78,985	54,889
Totals	219	52,269	48,076	54	59,111	36,438	107	4,362	3,203	17	28,251	16,894	397	143,993	104,611

Vessels on Canadian registry books, Dec. 31, 1918.

Province	Sailing vessels.			Steam vessels.		
	No.	Gross tons	Net tons	No.	Gross tons	Net tons
New Brunswick	782	34,853	33,804	261	24,795	15,679
Nova Scotia	1,897	109,948	99,366	551	42,272	25,151
Quebec	781	138,052	132,727	537	236,303	142,508
Ontario	590	108,333	101,629	1,474	335,362	211,236
Prince Edward Island	128	7,776	7,353	30	7,511	3,452
British Columbia	505	83,550	81,821	1,423	245,076	149,692
Manitoba	17	3,394	3,394	79	9,717	6,397
Yukon Territory	1	556	556	7	2,312	1,484
Saskatchewan	1	145	145	4	660	384
Totals	4,202	486,607	460,795	4,866	904,008	555,983

Comparative Statement of Vessels on Canadian Registry Books in 1909 and 1918.

Province	1909.		1918.	
	Vessels.	Net tons.	Vessels.	Net tons.
New Brunswick	937	62,984	1,043	49,483
Nova Scotia	2,058	160,286	1,948	124,517
Quebec	1,432	175,370	1,318	175,235
Ontario	2,061	208,652	2,064	312,865
P.E. Island	150	10,154	153	10,805
British Columbia	1,020	92,746	1,928	231,513
Manitoba	90	5,087	96	9,791
Yukon Territory	16	2,984	8	2,040
Saskatchewan	4	290	5	529
Totals	7,768	718,553	8,568	1,016,778

New Vessels Built and Registered in Canada in 1918.

Province	Vessels	Net tons
New Brunswick	16	2,590
Nova Scotia	110	27,831
Quebec	26	9,086
Ontario	48	10,998
P.E. Island	4	78
British Columbia	192	54,889
Manitoba	1	39
Total	397	104,611

Vessels Removed From Canadian Registry Books During 1918.

Sold to foreigners	44
Wrecked	20
Stranded	11
Lost	11
Broken up, etc.	166
Abandoned at sea	5
Collisions	1
Foundered	24
Burnt	12
Transferred to St. John's, Nfld.	90
Transferred to Australia	1
Transferred to Great Britain	6
Transferred to South Africa	2

Missing	20
Registry no longer required	6
Sunk by enemy	23
Total	442

It is estimated that 44,103 men and boys, etc., inclusive of masters, were employed on ships registered in Canada during 1918.

Canada Steamship Lines' Winter Overhaul of Steamships.

Following are particulars of a number of Canada Steamship Lines' steamships which are being overhauled while laid up for the winter, with the names of the ports at which they are moored, and some details of the work being done on them:

S.S. T. P. Phelan, Kingston, Ont., reconstruction to make it suitable for grain carrying;

S.S. Ionic, Kingston, Ont., general rebuilding;

S.S. City of Hamilton and City of Ottawa, Toronto, new wale strakes, no. 1 hold bulk-head renewed, new deck houses and general repair;

winches;

S.s. Collingwood, Port McNicoll, Ont., after bulkhead repairs, rebuilding wireless telegraph room, and four new deck winches;

S.s. Emperor, Fort William, Ont., new hatch pulling winches;

S.s. Haddington, Fort William, Ont., all cabins to be remodelled and wale strakes renewed;

S.s. Cadillac, Fort William, Ont., renewal of hatch coamings; deck winches removed and overhauled, wale strake and bilge repairs;

S.s. Sarnian, Buffalo, N.Y., new boilers, new steel deck house, and new hatch coamings.

Winter Navigation of the St. Lawrence River.

Canadian Railway and Marine World for January contained an article on the possibilities of winter navigation on the St. Lawrence River by Hon. D. O. L'Esperance, President, Quebec Harbor Commission, in which he dealt exhaustively with the general average conditions existing in the St. Lawrence River and Gulf during winter. This matter has been discussed by various people interested in shipping in general, and those associated with Quebec in particular. The Quebec Board of Trade took the matter up recently with the Minister of Marine, and J. T. Ross, Chairman of the Board, received a reply from the Minister early in January, to the effect that it is his intention to take such steps as may be necessary to provide equipment that will be reasonably adequate to assist any vessel that may find it necessary to navigate the St. Lawrence after ice conditions have become severe. He said in part:—

"The casualty that befell the Canadian Recruit is very much to be regretted, indeed. The very severe ice conditions that resulted in the loss of the ship came about at a much earlier period than was anticipated here with regard to the experience of previous years. In so far as the Canadian Spinner is concerned, while the situation is extremely serious, it is hoped it may be possible to rescue this vessel from the other end. I have quite realized for some time that the facilities available for the purpose of assisting ships to navigate the River St. Lawrence after severe weather sets in are quite inadequate. For reasons that I am sure will commend themselves generally, the department consented to the transfer to the Russian Government of the ships that would be really effective in combatting the ice conditions in the River St. Lawrence. My present intention is to take such steps as may be necessary to provide equipment that will be reasonably adequate to assist any ships that may find it necessary to navigate the St. Lawrence after the ice conditions become severe. The representations submitted by you on behalf of the board of trade as to the extent to which facilities should be provided will be borne in mind by me in the course of the further consideration that the question will receive."

The Webster Steamship Co.'s Steamships, which are operating generally in the coal and package freight business on the St. Lawrence and Great Lakes, are all named after the President's (Senator L. C. Webster) sons and daughters, the names being as follows: Colin W.; Eric W.; Howard W.; Marion W.; Muriel W., and Stewart W.

S.s. Seguin, Kingston, Ont., new ceiling in hold, houses recanvassed, new life boats;

S.s. Belleville, Toronto, general repairs;

S.s. Bickerdike, Hamilton, Ont., new ceiling in holds, renew spar deck and deck houses;

S.s. Maplegrove, Port Dalhousie, Ont., new bilge planks, repairs to port rail and quick work, new stanchions;

S.s. J. H. G. Hagarty, Goderich, Ont., alteration of bulkhead doors in cargo holds;

S.s. E. B. Osler, Goderich, Ont., remodelling passenger dining room and officers' quarters, bulkhead to be built in no. 1 hold to facilitate quicker unloading;

S.s. W. D. Matthews, Goderich, Ont., new starboard hawse pipe, alteration of pilot houses and renewal of wale strakes;

S.s. Midland King, Goderich, Ont., bilge and wale strake repairs;

S.s. Martian, Goderich, Ont., new starboard hawse pipe, renewal of wale strakes, deck beams and stanchions in holds cut away and Herreman system installed, new refrigerator plant and new coal bunker;

S.s. W. Grant Morden, Port McNicoll, Ont., general outfit and new wireless telegraph room;

S.s. Midland Prince, Port McNicoll, Ont., general fitout and three new deck

Dominion Wreck Commissioner's Enquiries, Judgments, Etc.

Enquiries have been held, and judgments delivered in connection with the following casualties,—

Lakeport-Howard W. Collision.

Held at Montreal, Dec. 16, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. C. Lapiere and C. A. Ouellette, as nautical assessors, into the collision between the s.s. Lakeport, owned by Peterson and Collins, Cleveland, Ohio, and the Webster Steamship Co.'s s.s. Howard W., of Montreal, Oct. 29, 1919, near Hamilton Island in the River St. Lawrence. The court found that the responsibility for the accident rested solely on the s.s. Howard W. The master was absent from the bridge at a time and place when his presence was most needed, especially so in view of the fact, that the mate, his son, is very young, with only very limited experience as a mate. While accepting the master's statement that his absence was obligatory, yet his evidence and that of the wheelman differ somewhat as to where he was at the time of the collision, and the court has heard similar excuses so many times that, while it cannot reject that part of the master's evidence, it finds it very peculiar that these absences coincide so frequently with shipping casualties. The two ships were meeting at a point where a slight alteration of course was necessary, the s.s. Lakeport, bound east, was descending with the tide, and the green light of the Howard W. on her starboard side was broad enough to permit the mate to assume that though they were about to pass on the wrong side of the channel, according to the International Rules of the Road, since at that time the adoption of the Rules of Road for the Great Lakes had not been specified by whistle, and in view of the fact that the Howard W. was well to starboard, from the situation of both vessels it was considered safe for the Lakeport to continue on her course. The green light on the Howard W. alone was seen with her masthead light. It was said by the Lakeport that the range light of the Howard W. was not visible, but this was disproved by independent witnesses, but it may, at the time, have been obscured by smoke. The exact direction of the Howard W. could not be ascertained, but when at a ship's length from each other, it was perceived that she was coming obliquely on to the Lakeport, a turn of the wheel to starboard was given and the collision occurred. The court expressed the opinion that the Lakeport was in such water as to permit her to go full speed, that continuing full speed was good seamanship, as a diminution or reversal would undoubtedly have caused more damage, by bringing about a collision of greater violence. There was no lookout, but the absence of this did not contribute to the casualty. The collision happening 200 ft. from the Hamilton light does not clearly indicate that the Howard W., after having been sighted well south of the channel had attempted to steer over to the north side whilst having the green light, or even the three lights of the Lakeport on her starboard side. There was ample proof that the Howard W.'s red light was not burning, or, if not, that it was so low as not to be seen by the Lakeport. Had this been in order when the Howard W. chose to cut across, its appearance would have caused, or compelled, the Lakeport to signal

sooner. Hence the court did not find any reason for criticism of the action of the Lakeport's crew. The Howard W. was being navigated, if not carelessly, at least with a lack of ordinary prudence. The master had left his post at a place where extreme caution had to be exercised on account of change of courses which descending and ascending vessels have to adopt, leaving the mate, his son, who had had but one season's experience. The Lakeport did not comply with the letter of rule 25 of the Rules of the Road of the Great Lakes, but the court expressed the opinion that the spirit of the rule had been observed. The court, therefore, found that the Lakeport, having the right of way, and it being clear weather, exercised the necessary precautions which the unforeseen situation demanded, and its officers were therefore exonerated from blame. With regard to the Howard W., there was lack of judgment and prudence on the part of mate L. J. Daigneault, and he was therefore held to blame for the collision, and for his failure to comply with rule 25, his certificate as mate was suspended for 7 months, from Dec. 20, 1919, to July 20, 1920. The master, L. Daigneault, was given the benefit of the doubt, as to his absence from his post, and he was warned that the same excuse could not always be accepted. The court also took occasion to advise owners and agents of ships, to impress upon their officers the importance of maintaining a look out.

Grounding of s.s. Canadian Volunteer.

Held at Montreal, Dec. 22, 1919, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Capt. C. Lapiere and C. J. Stuart, as nautical assessors, into the Canadian Government Merchant Marine's s.s. Canadian Volunteer striking a buoy and bottom near buoy 90 Q, River St. Lawrence, Dec. 6, 1919.

Capt. E. C. Sears stated that the ship is built of steel, 1,910 tons net, 3,188 tons gross, 320 ft. long, 44 ft. 2 in. broad, and draws 17 ft. 2 in. forward and 19 ft. 4 in. aft, equipped with single screw and triple expansion engines for a speed of 10 knots, supplied with all necessary instruments for navigation, and has 36 of a crew, including 2 officers on this occasion and 3 engineers with certificates. He left Montreal Dec. 6 and experienced snow when he anchored, gradually proceeding later. On Dec. 8 he had been on deck practically all the time; but absented himself for two minutes to look at the chart, and reached the deck when the ship struck. The engines were stopped and helm put hard to port, then full speed astern, the ship striking a second time. It was found the ship was making water. At the time of grounding the steering pilot was acting on pilot Hamelin's advice and orders. The wind was light northeast. It was one minute after the buoy was seen that the ship came in contact with it.

Capt. J. D. Weir, Superintendent of Lights, stated that the buoy was reported as having disappeared.

J. O. Michaud, clerk of the Pilotage Office, stated that he had received orders from the agent for one pilot; but sent the two which were in turn on the list. He had been shown a letter purporting to be an agreement between the pilots and the Shipping Federation of Canada, with respect to placing the pilots on

board; but had not read it. He had also received telephone orders from the Superintendent at Quebec to that effect. He acknowledged having sent the second pilot on the request of pilot Hamelin.

F. Hamelin, pilot, stated that he had been a pilot for 13 years, 11 of which he worked steadily for the C.P.R. This was his first enquiry. He was on deck, the second pilot steering under his orders. He saw the buoy 90 Q a quarter point on the starboard bow, Grondines ranges were opened slightly to the south. He tried to detect St. Emilie range, the aids for the turning point; but could not do so in time. The current was setting to the south and the tide was half ebbing. He ported the helm, and saw it was done, but owing to the quantities of ice floating in the channel the ship did not obey as promptly as expected, and struck a buoy in the vicinity of the bridge on the starboard side. The ship's engines were stopped, the helm hard aported, then full speed ahead. The ship struck a second time, and then proceeded. The weather was clear, though sky cloudy, wind light and the ground was covered with snow, which prevented him from sighting St. Emilie range. He saw the buoy, which was about 3 ft. above water, when about 700 ft. distant, adopting the same method as in former navigation; but the current, which was about 2½ knots, carried him on swiftly towards the buoy and the masses of ice prevented the ship from responding to the helm with the promptness required at this turn. The buoy, when first sighted, must be on the starboard side as it is necessary to make the turn to the north in order to counteract the current setting south, which would tend to throw the ship on the south bank. He stated that he was the responsible pilot, pilot Rivard acting only on his orders. The only time he left the latter to his own devices being when he had to absent himself from the bridge, selecting parts of the river where there was ample room.

F. X. Rivard, pilot, said his duties consisted of steering. He did not remember how the Grondines lights were opened. He watched the steering only and obeyed the orders given him by the pilot. He did not remember if the buoy was a quarter point or more on the starboard bow.

R. Proteroe, third officer, stated that he was on deck, on the port side of the bridge, the buoy when seen being half a point on the port bow. He noticed by the movements of the arms of the wheelman that the wheel was starboarded, bringing the buoy three points on the starboard bow, when the ship drifted towards the buoy, striking in line with the funnel. The helm was then put port; and hard to port, the ship striking a second time. The engines were stopped. He then left the bridge.

Having heard arguments by Hon. A. W. Atwater, K.C., for the Shipping Federation of Canada, and G. H. Bernier, for pilot Hamelin, the court adjourned to Dec. 27, when its judgment was announced, of which the following is a summary: The evidence shows a striking contradiction between the statements of pilot Hamelin and the ship's third officer. The pilot's evidence, which was corroborated by his assistant, was that the buoy was first sighted on the starboard side, while the third officer stated that it was first sighted on the port side, and

that a starboard helm was given, the vessel drifting on to the buoy, starboard on. The preponderance of evidence was in favor of the pilot, the difference being so great that the court held the opinion that the third officer, being a stranger in these waters, unacquainted with local intricacies, and standing on one side of the bridge, must have erred, as it would have been incredible that two pilots, absolutely sober, the one in control having had a very successful career as a pilot, and having been a trusted C.P.R. employ for 11 years, could possibly have made the blunder of starboarding upon sighting the buoy. As the St. Emilie ranges could not be discerned, the turning of the ship was not begun until she had passed this determining point, and the joint action, of the current making toward the south, and the mass of ice, which appears to have been running, prevented proper and timely evolutions being performed. The pilot's evidence was straightforward, and there appeared to be no attempt at prevarication. The court therefore found that he did not, either through negligence or error, cause the ship's grounding, but that it was due to uncontrollable circumstances, and a situation which prevented the ship from obeying the helm as promptly as expected. The pilot, master and third officer were therefore exonerated.

The court endorsed the recommendation made in 1915, to erect some aid to navigation at Ste. Anne de la Parade, as a guide for the turning point, as it considers that in such a narrow pass and sharp curve, where prompt action has to be taken, in view of the various elements which make this channel difficult of navigation, the Ste. Emilie range is too distant for effectiveness. With regard to the carrying of an additional pilot, the court recommended that a definite understanding be arrived at between the Marine Department and the parties, so as to eliminate any cause of apprehension or friction which the presence or action of a second pilot may bring about. The court also expressed its appreciation of the efforts of the counsel engaged, and of Thos. Robb, Manager, Shipping Federation of Canada, in helping to bring to a successful termination, a case, which at first presented a serious and acrimonious situation.

Contracts Let for Marine Public Works.

The Dominion Public Works Department has let the following contracts:—
Scotch Cove, White Point, N.S.; extension to breakwater; A. W. Girroir and W. F. MacKinnon, Antigonish, N.S.;

Dec. 22, 1919; schedule of prices.
Pas, Man.; construction of wharf; N. J. Wylie and L. Berry, Winnipeg; Nov. 1, 1919; schedule of prices.
Naramata, B.C.; construction of wharf; S. Mills, New Westminster, B.C.; Nov. 3, 1919; schedule of prices.
Port Essington, B.C.; landing float and approach; M. Hyatt, Prince Rupert, B.C.; Nov. 5, 1919; schedule of prices.
Meteghan, N.S.; repairs and renewals to public wharf; M. C. Denton and M. A. Condon, Digby, N.S.; Nov. 10, 1919; \$4.59 per cub. yd.
Beisdale, N.S.; wharf; E. Dickson, Louisburg, N.S.; Nov. 10, 1919; \$2,350.
Little Brook, N.S.; repairs to breakwater; H. F. Deveau, Meteghan, N.S.; Nov. 11, 1919; schedule of prices.
St. Jean d'Orleans, Que.; repairs to wharf; E. Nethot and J. E. Thibault, Montmagny, Que.; Nov. 26, 1919; schedule of prices.
Petit Rocher, N.B.; repairs to breakwater; T. P. Charleson, Ottawa; Dec. 2, 1919; schedule of prices.
Sorel, Que.; reconstruction of corner in concrete and other repairs to wharf; O. Poliquin, Portneuf, Que.; Dec. 9, 1919, schedule of prices.

The Southern Salvage So., Liverpool, N.S., has been given judgment for \$300 against the schooner Frances P. Moquito.

Vessels Registered in Canada During November, 1919.

In compiling the following lists of vessels registered, steamboats and motor boats, operated by engines of less than 10 n.h.p., are eliminated, as also are sailing vessels of less than 100 tons register.

STEAM.

No.	Name	Port of Registry	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, H.P.	Engines, H.P.	Owners or managing owners
114449	A. E. Ames	Montreal	Howden-on-Tyne, Eng. ....1903	246.2	37.0	21.6	1637	1020	217	Sc.	Canada Steamship Lines, Ltd., Montreal.
108236	Alice	Ottawa	Sorel, Que. ....1894	70.7	17.5	7.6	67	46	15	Sc.	Minister of Railways and Canals, Ottawa, Ont.
125440	Beaverton	Montreal	Hebburn-on-Tyne, Eng. ....1908	249.3	42.7	21.0	2012	1357	106	Sc.	Canada Steamship Lines, Ltd., Montreal.
141478	Canadian Gunner*	Montreal	Collingwood, Ont. ....1919	251.0	43.6	23.6	2415	1455	124	Sc.	Minister of Marine and Fisheries, Ottawa, Ont.
141483	Canadian Navig'r*	"	Montreal ....1919	319.3	44.2	22.6	3161	1929	226	Sc.	"
141487	Canadian Sower*	"	Port Arthur, Ont. ....1919	251.3	43.9	20.3	2069	1201	146	Sc.	"
141544	E. D. Kingsley*	Vancouver, B.C.	Fort William, Ont. ....1919	200.0	32.0	14.5	1029	541	92	Sc.	Kingsley Navigation Co. Ltd., Vancouver, B.C.
122856	Edmonton	Montreal	Hebburn-on-Tyne, Eng. ....1906	249.2	42.7	20.6	1983	1341	106	Sc.	Canada Steamship Lines, Ltd., Montreal.
107247	Fearless	New Westminster, B.C.	New Westminster, B.C. ....1898	71.0	15.6	7.7	75	12	13	Sc.	J. Mayers, New Westminster, B.C.
138219	Glencadam (a)	Midland, Ont.	Wyandotte, Mich. ....1913	244.0	43.0	18.2	1870	1118	115	Sc.	Great Lakes Transportation Co., Midland, Ont.
114446	H. M. Pellatt*	Montreal	Port Glasgow, Scotland. ....1903	239.7	37.0	21.8	1608	1027	164	Sc.	Canada Steamship Lines Ltd., Montreal.
114447	J. H. Plummer	"	Walker-on-Tyne, Eng. ....1903	246.0	37.0	21.8	1582	992	210	Sc.	Canadian Maritime Co., Montreal.
123961	Mapleton	"	Sunderland, Eng. ....1909	250.0	42.7	16.4	1782	1140	106	Sc.	Canada Steamship Lines Ltd., Montreal.
138848	Murray Stewart	Port Arthur, Ont.	Port Arthur, Ont. ....1918	119.0	26.0	15.7	243	92	109	Sc.	Port Arthur Shipbuilding Co., Port Arthur, Ont.
138465	St. Joe Island Ferry	Sault Ste. Marie, Ont.	Richards Landing, Ont. ....1919	60.0	18.0	2.1	32	22	24	Sc.	G. W. Langstaff, Richards Landing, Ont.
128187	Victoria (b)	Victoria, B.C.	Paisley, Scotland ....1908	193.1	32.1	13.1	791	393	154	Sc.	James Dunsmuir, Victoria, B.C.
141502	Willie H.	Quebec, Que.	Quebec, Que. ....1913	43.0	15.2	5.5	32	13	16	Sc.	M.J. and W.J. Hacket, Quebec, Que.

*Equipped with wireless. (a) formerly F. P. Jones. (b) formerly Dolaura.

SAILING.

No.	Name	Port of Registry	Rig	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Owner or Managing Owner.
141572	Celeste D.	Weymouth, N.S.	Schr.	Meteghan River, N.S. ....1919	164.0	37.4	13.0	649	595	Doucet Shipbuilding Co., Meteghan River, N.S.
141461	Donald II.	Shelburne, N.S.	"	Shelburne, N.S. ....1919	109.6	27.0	11.2	215	199	Shelburne Shipbuilders, Ltd., Shelburne, N.S.
138439	Fundy King	Annapolis Royal, N.S.	"	Margaretville, N.S. ....1919	141.0	32.7	12.0	412	376	J. A. Balcom, Margaretville, N.S.
140985	G.S. McD. Co. No. 7	Vancouver, B.C.	Barge	Victoria, B.C. ....1915	84.6	40.0	6.9	192	192	Whalen Pulp & Paper Mills, Ltd., Vancouver, B.C.
141075	Gertrude Parsons	Windsor, N.S.	Schr.	Cheverie, N.S. ....1919	132.5	31.1	12.3	357	341	G. M. Parsons, Cheverie, N.S.
141519	J. L. Ralston	Parrsboro, N.S.	"	Eatonville, N.S. ....1919	156.5	35.6	13.0	499	462	Wm. Kirkpatrick, Parrsboro, N.S.
141384	M. J. Parks	LaHave, N.S.	"	Shelburne, N.S. ....1919	123.3	26.5	10.9	176	173	M. J. Parks, M.O., LaHave, N.S.
141386	Maid of LaHave	"	"	Dayspring, N.S. ....1919	111.3	29.6	12.7	266	222	J. L. Publicover, M.O., LaHave, N.S.
141518	Nova Queen	Parrsboro, N.S.	"	Advocate, N.S. ....1919	150.0	35.0	13.0	476	432	T. K. Bentley, Parrsboro, N.S.
141546	P.S.B. 4	Vancouver, B.C.	Scow	Vancouver, B.C. ....1910	91.0	29.8	7.0	161	161	Progressive Steamboat Co., Vancouver, B.C.
141412	Richard B. Silver	Lunenburg, N.S.	Schr.	Mahone Bay, N.S. ....1919	123.3	27.7	11.2	267	224	H. W. Adams, Lunenburg, N.S.
141385	St. Clair Ritcey	LaHave, N.S.	"	Salmon River, N.S. ....1919	134.0	30.5	11.6	364	332	J. N. Rafuse & Sons, Conquerall Bank, N.S.
141258	W. S. MacDonald	Yarmouth, N.S.	"	Meteghan, N.S. ....1919	146.5	32.7	12.3	430	382	T. H. Macdonald, Meteghan, N.S.

Canadian Notices to Mariners.

The Marine Department has issued the following:—

Ontario—Lake Ontario, Toronto Harbor—During the past season, the Dominion Public Works Department has dredged the channel between the piers at the eastern entrance to Toronto harbor 200 ft. wide to a depth of 17 ft. below elevation 245.0 or zero of the Toronto Harbor Commissioner's gauge at Queens wharf.

Ontario—Lake Erie, Rondeau Harbor—The hand fog horn maintained on the outer end of the east breakwater pier was discontinued Dec. 31, 1919.

Ontario—Lake Huron, Kincardine—During the past season the entrance between the piers and a part of the basin in Kincardine harbor were dredged by the Dominion Public Works Department, to a depth of 14 ft. below the zero of the harbor gauge, which is 578.50 ft. above mean sea level, New York. The channel between the piers is 50 ft. wide from deep water to the inside end of the entrance piers, where the deepened area turns southward for 205 ft. The south end of the dredged area is 50 ft. wide, gradually widening to 90 ft., 108 ft. north. For the next 85 ft. the dredged area is 250 ft. wide, then narrowing gradually to 50 ft. at the inside end of the entrance piers.

British Columbia—Strait of Georgia, Sandheads at entrance to Fraser River—The two red steel conical buoys 10F. and 12F. established in 1919 on the south side of the channel at the entrance to the Fraser River will be discontinued; black buoy 9F. will be re-established on its former position 0.30 mile 66° 30' (N. 41° 30' E. mag.) from buoy 7; black can buoy 11F. will be re-established on its former position 0.27 mile 66° 30' (N. 41° 30' E. mag.) from buoy 9.

British Columbia—Chatham Sound, Prince Rupert Harbor, Barret Rock—On or about Mar. 1, 1920, when the gas and bell buoy will be withdrawn, and light and fog alarm established on the rock, lat. N. 54° 14' 32", long W. 130° 20' 38"; character, occulting red acetylene light, automatically occulted at short intervals; elevation, 22 ft. Structure, white rectangular reinforced concrete tower, with pointed ends, surmounted by square concrete house with lantern on top; height, 44 ft. Fog alarm, diaphone, operated by air, compressed by electric

city, controlled from dwelling on shore, gives 2 blasts of 2 secs. duration every 30 secs.; the horn elevated 13 ft. above high water, and will be put in operation immediately; dwelling, rectangular wooden dwelling on shore directly east of beacon by submarine cable.

British Columbia—Strait of Georgia, Fraser River—Frasermouth Outer Range Lights; the fixed oil lights will be replaced by occulting acetylene gas lights, automatically occulted at short intervals; the front light will be changed from red to white, the back light to remain white as formerly; Garry Point Range Lights; front light, on Steveston jetty; fixed red light shown from a cluster of 3 incandescent electric lamps, at elevation of 15 ft; visibility, 6 miles; structure, wooden pole; back light on same pole as Wingdam back range light; fixed white light shown from a cluster of 3 incandescent electric lamps at elevation of 30 ft.; visibility, 10 miles in line of range; the lights in one astern bearing 305° (n. 80 w. mag.) lead up from the intersection of their alignment with that of the northside range lights to black buoy 25F.

British Columbia—Cousins Inlet, David Point—Lighted beacon established on northeast extremity of point; fixed red oil light at elevation of 16 ft.; wooden slatwork pyramid, surmounted by a slatwork ball having the lantern suspended from a bracket on the north face of the beacon; color, white; height, 26 ft.; the light will be maintained by Pacific Mills, Ltd., Ocean Falls.

Prince Edward Island—South Coast, Summerside Harbor—During the past season the Dominion Public Works Department has dredged the approach to, and a berth on the east side of Queens wharf, Summerside; from deep water 550 ft. south from the end of the wharf the approach was cleaned up to a depth of 18 ft.; the berth on the east side of the wharf is 250 ft. long by 80 ft. wide with 18 ft. water at the outer end of the wharf gradually decreasing in depth to 10 ft. at the inner end of the dredged area.

Quebec—Gulf of St. Lawrence, Moisie River—Owing to the back light of the Moisie River range lights having been moved northward, the bearing of the range has been changed to 272° (n. 62°

w. mag.); distance between front and back lights 436 ft.

Quebec—River St. Lawrence below Montreal, vicinity of Longue Pointe—The two red gas buoys that were placed to mark a reserved harbor area in the vicinity of Longue Pointe have been discontinued.

British Columbia, Fraser River, North Arm, change in character of lighted beacons—Westerly light, on south side of channel at outer entrance to North Arm, occulting white acetylene light, automatically occulted at short intervals, shown from a lens lantern, elevation, 18 ft.; easterly light, on south side of channel at turn in jetty, occulting white acetylene light, automatically occulted at short intervals, shown from a lens lantern, elevation, 18 ft.; both lights are unwatched.

Gulf of St. Lawrence Shipping and Trading Co.'s Services.

Canadian Railway and Marine World for December, 1919, contained some details of this company's projected winter services in the Gulf of St. Lawrence. It is further reported that a winter service down the Gulf as far as Blanc Sablon and Natashquan, on the north shore, and a summer service between Montreal and Gulf and Newfoundland ports will be undertaken. The winter service comprises a regular operation between Murray Bay, at the mouth of the Saguenay River, as far as Natashquan and Blanc Sablon, to which ports navigation has not yet been attempted in winter. The company's s.s. Labrador is, it is said, to be used in the service, which will consist of two trips a month. The company expects to obtain certain privileges from the Dominion Government to enable it to carry on the service to some advantage. Arrangements are reported to have been made for the chartering of a number of steamships for an extended summer service on the same line as carried out in 1919.

The Canadian Deep Waterways Association held a joint meeting with the Great Lakes and St. Lawrence Tidewater Association at Windsor, Ont., Jan. 21, and discussed plans for deepening the St. Lawrence system to allow ocean going vessels to pass to the head of the Great Lakes.

Grain Shipped from Port Arthur and Fort William, Ont.

The following table, prepared by the Board of Grain Commissioners, shows the quantity of each kind of grain shipped by vessels from Port Arthur and Fort William, Ont., during the 1919 navigation season, according to the ports at which the cargoes were discharged:—

To	Wheat Bush.	Oats Bush.	Barley Bush.	Flax Bush.	Rye Bush.	Mixed lbs.	Screenings tons.
To Canadian ports—							
Depot Harbour	2,600,347—00						
Goderich	10,472,521—40	3,192,728—13	147,352—25	375,188—44	33,474—46	6,376,140	
Midland	8,498,470—10	2,952,263—04	2,144,640—46		571,074—31	4,590,691	
Montreal	427,777—30	2,084,812—32	1,806,603—10	66,000—00	55,648—28		
Port Colborne	21,657,569—10	721,246—31	3,761,276—46		58,907—14	3,307,710	
Fort McNicoll	28,181,602—40	2,918,282—11	1,848,365—39	53,378—42	66,545—03	5,908,408	161—1740
Tiffin	14,647,886—00	289,489—04	1,350,995—09				
Total	86,486,174—10	12,108,823—27	11,059,234—31	494,567—30	785,550—10	20,182,949	161—1740
To U. S. ports—							
Buffalo	2,797,037—30	2,468,948—06	1,085,367—24	180,572—42	29,684—14		1,612—0750
Chicago							5,986—1810
Cleveland				34,150—00			
Duluth - Superior	988,285—50			397,518—49	273,737—38		34,168—0420
Total	3,785,323—20	2,468,948—06	1,085,367—24	612,241—35	303,421—52		41,767—0980
Winter storage cargoes.....	2,497,823—20	1,150,310—12	261,260—16	100,397—48			
Grand total	92,769,320—50	15,728,082—11	12,405,862—23	1,207,207—01	1,088,972—06	20,182,949	41,929—0720

Atlantic and Pacific Ocean Marine.

The Canadian Pacific Ocean Services' s.s. *Monteagle* was damaged by fire, in her engine room, while at Hong Kong, China, Dec. 31, 1919.

The Greek s.s. *Platea*, which went ashore on Sable Island, towards the end of 1919, will be salvaged shortly, a contract having been awarded to the Atlantic Salvage Co. The work commenced Jan. 14.

The German s.s. *Kronprinz Freiderich Wilhelm*, one of the ships seized by the allies at the outbreak of war, has been allocated to Canadian Pacific Ocean Services Ltd., for the north Atlantic route. It is said that she is to be docked and thoroughly overhauled and refitted, to make her equivalent to the company's ships of the *Empress* class.

The White Star s.s. *Olympic*, which has been engaged almost solely for some time in troop transportation, has been restored to her old condition and equipped with oil burning furnaces. She is said to be the first of the large passenger steamships to be so equipped. She will resume her service between Great Britain and New York during March.

The former German steamship *Germanicus*, which stranded on Northwest Reef, Bic Island, near Father Point, in Nov., 1919, is being offered for sale by the Salvage Association of London, Eng., as she lies stranded. She was built in England in 1901, passed to German owners, and during the war, was taken over by the British Ministry of Shipping. At the time of the casualty she was on her way to Montreal light to load grain for Europe.

The British s.s. *Yarmouth*, which left New York for Havana, Jan. 17, was reported by wireless to be in a sinking condition in lat. 49, north longitude 74 west, about 240 miles northeast of light vessel 3. She was formerly in the Dominion Atlantic Ry.'s service between Yarmouth, N.S., and Boston, Mass., and was sold recently to British purchasers. She was built at Dumbarton, Scotland, in 1887 and is screw driven by engine of 260 n.h.p. Her dimensions are: length, 220.3 ft.; breadth, 35.2 ft.; depth, 21 ft.; tonnage 1,452 gross, 725 registered. She eventually reached New York, where repairs were made, after which she proceeded on her voyage, Jan. 22.

The Canadian Robert Dollar Co. has announced that its first direct sailing from the Orient to New York, calling at Vancouver, will be made by the s.s. *Melville Dollar*, scheduled to arrive at Vancouver, April 25, and sailing thence for New York, May 4. She is booked to arrive at Vancouver, from New York, on the return trip, July 12. The first direct sailing from New York to the Orient, calling at Vancouver, will be made by the s.s. *Grace Dollar*, leaving New York, April 12, arriving at Vancouver May 11. Other steamships to be used in this service are: *M. S. Dollar*; *Bessie Dollar*; and *Harold Dollar*.

Maritime Provinces and Newfoundland.

The *Majestic Steamship Co.*'s s.s. *Champlain* is being thoroughly overhauled and having a new boiler installed at Gregory's yard, St. John, N.B.

The schooner *Madonna*, owned in Newfoundland, while en route from a New-

foundland port to Sydney, N.S., was driven ashore at Petit Point, outside Sydney Harbor, Jan. 3.

The Reid Newfoundland Co.'s s.s. *Dundee*, which ran ashore during a hurricane, Dec. 26, 1919, is expected to be a total loss. The passengers and crew were taken off by the company's s.s. *Clyde*.

The Reid Newfoundland Co.'s s.s. *Sagona* struck on the rocks at the entrance of Rocky Harbor, Nfld., early in January, but was able to proceed to Port aux Basques, Nfld., under her own steam.

The St. John River Steamship Co.'s s.s. *Elaine*, is reported to have been chartered by Cuban interests, and to have left St. John for New York, where some repairs are being made, before she proceeds to Cuba.

The sailing ship *Lucille*, which left Perth Amboy, N.J., Nov. 30, 1919, for Halifax, N.S., with a cargo of coal, was reported at the end of December to be missing, nothing having been heard of her or her crew since she left port.

The 3 masted schooner *Pelleen* was sold by auction at St. John's, Nfld., recently. She was built at Port Blandford, Nfld., in 1919 and is 430 tons gross, 388 tons net, and was offered as she lay in St. John's harbor, fitted and practically ready for sea.

The s.s. *Merle C.*, en route to Port Greville, N.S., sprang a leak in deep water near that point, and sank with her cargo of coal, Jan. 11, the crew having abandoned her. She was built at Port Greville, in 1919 and was owned by Capt. Robert Kerr and others of Parrsboro, N.S.

The schooner *Frances Gardiner*, owned by W. C. Smith & Co., Lunenburg, N.S., was abandoned at sea early in January, the crew having been rescued and taken to St. John's, Nfld., by a Norwegian steamship. She sailed from Newfoundland about Dec. 16, 1919, with fish for Oporto, Portugal.

The schooner G. H. Murray, 350 tons, owned by the Bissett Co., Halifax, N.S., and which was built by the Comeau Shipbuilding Co., Comeauville, N.S., in Sept., 1919, has been wrecked on the Coladoes reef, Cuba, and become a total loss. She took cargo at Walton, N.S., in Oct., 1919, for New York, where she reloaded for Havana, leaving New York, Nov. 10.

The Naval Service Department received tenders to Jan. 22, for the purchase of the Dominion Government s.s. *Thirtynine*, as she lies at Halifax, N.S. She was built of steel, at North Shields, Eng., in 1902. Her dimensions are: length, 80 ft.; breadth, 18.1 ft.; depth, 8.3 ft.; tonnage 79 gross, 33 registered. She is screw driven by engine of 21 n. h.p. at about 9 knots an hour.

The Kingsley Navigation Co.'s s.s. E. D. Kingsley, which grounded recently at Whitehead Harbor, N.S., on the second portion of her journey from the Great Lakes to Vancouver, B.C., was involved in an action at Halifax, N.S., Jan. 8, on a claim by Munro and Phalen for \$5,000, for salvage work. Mr. Justice Drysdale, of the Admiralty Court, awarded the plaintiff \$400 for salvage services, and costs, subject to a reduction of \$400 because of the excessive claim which had been made and which compelled the ships owners to put up bonds at an expense of \$500.

The s.s. E. Ross, which has been operated on the Indiantown, N.B., ferry service for some time, is reported to have been sold to the St. John Drydock and

Shipbuilding Co. She was owned by Capt. James Leonard, St. John, N.B., and was operated on a monthly agreement with the Lancaster and Indiantown Ferry Commission. Some opposition to the sale has developed, and it is reported that an arrangement will probably be made with the new owners, either to allow the vessel to remain in the service, or for the commission to purchase it by a bond issue. The E. Ross was built at St. John, N.B., in 1894, and is screw driven by engine of 7 n.h.p. Her dimensions are: length, 41.9 ft.; breadth, 15.3 ft.; depth 5.1 ft.; tonnage 30 gross, 20 registered.

Ontario and the Great Lakes

The Hamilton Board of Control considered plans for harbor improvement, involving an expenditure of about \$15,000, recently.

The Canadian Towing & Wrecking Co.'s steam tug A. B. Conmee was considerably damaged by fire at Port Arthur, towards the end of December, the loss being estimated at \$25,000.

The Toronto Harbor Commissioners have deposited with the Dominion Public Works Department, description of site and plans of the harbor head walls to be built in Toronto Bay between the western limit of York St. produced southerly, and the western limit of Yonge St. produced southerly, and have applied for permission to build them.

Canada Steamship Lines Ltd., has transferred the following of its steamships from the British register to the Canadian, A. E. Ames, Beaverton, Edmonton, H. M. Pellatt, and Mapleton. All of these were built in Great Britain, and were either owned by companies which have been absorbed by Canada Steamship Lines Ltd., or bought by that company.

The schooner *Oliver Mowat*, owned by W. H. Peacock, Port Hope, and W. Savage, Picton, Ont., is reported sold to T. L. Vandusen, and R. G. K. Hepburn, Picton, Ont. for use as a coal carrier between Oswego, N.Y., and Picton. She was built at Mill Haven, Ont., in 1873, her dimensions being: length, 116 ft.; breadth, 23.8 ft.; depth, 9.8 ft.; tonnage, 170 registered.

The U.S. Lake Survey reports the stages of the Great Lakes in feet above mean sea level for Dec., 1919, as follows: Superior, 602.33 ft.; Michigan and Huron, 580.18 ft.; St. Clair, 74.62 ft.; Erie, 571.81 ft.; Ontario, 245.54. Compared with the average December stages for the past 10 years, Superior was 0.03 ft. above; Michigan and Huron 0.08 ft. above; Erie, 0.12 ft. above; Ontario, 0.33 ft. above.

The Keystone Transportation Co.'s s.s. *Keyvive*, operated formerly in the Great Lakes trade, is now being operated under 12 months charter between New York and West Indies and Gulf of Mexico ports. Her first sailing under this charter was from Montreal, Nov. 26, 1919, when she left for Clark City for a cargo of baled pulp for New York, after discharging which she loaded coal at Hampton Roads for Cuba.

Canada Steamship Lines' s.s. *Chicora*, which sank at her moorings at Toronto in the latter part of 1919, and was refloated, is being offered for sale by tender. She was built at Liverpool, Eng., in 1864 for use as a blockade runner in the United States civil war. She

is paddle wheel driven by engine of 180 n.h.p. Her dimensions are: length, 221 ft.; breadth, 26 ft.; depth, 10.9 ft.; tonnage, 931 gross, 540 registered. She is equipped for wireless telegraphy.

The Toronto Harbor Commissioners' issue of \$2,000,000 of 4½% bonds, due in 1953, is to cover the estimated expenditure for this year's work, which comprises the acquisition of lands, ship channel bridge, piers and docks, sewers, general development, maintenance and general administration. Of the estimated expenditure during the year, 17% will take place on the eastern section (Ash-bridge's Bay), 64% on the central section (bay front from Bathurst to Cherry Sts), and 19% on the western section (Bathurst St. to Humber River).

Manitoba, Saskatchewan and Alberta.

The Lamson-Hubbard Canadian Co. has under construction at Fort Smith, Alta., a stern wheel steamboat with accommodation for both passengers and freight, for operation on the Mackenzie River from Fort Smith northerly. The frame work is reported completed and the boiler installed.

The assets of the Peace River Trading Co., which is a subsidiary of the

be resumed. Connection for all points along the Slave, and Mackenzie Rivers to the Arctic being made at Vermilion Chutes.

British Columbia and Pacific Coast.

The C.P.R. s.s. Princess Mary ran aground, on a sand bar in the first narrows of Burrard Inlet, Dec. 28, 1919, but floated off with the tide, without sustaining any damage.

The C.P.R. s.s. Princess Charlotte collided with Frank Waterhouse and Co.'s s.s. Morning Star, in the first narrows of Burrard Inlet, recently, during a heavy fog, neither ship being much damaged.

The Union Steamship Co. of British Columbia's s.s. Capilano, was launched by B.C. Marine Railway Ltd., Vancouver, Dec. 30. The company has another vessel under construction by Wallace Shipyards, Ltd., North Vancouver.

The C.P.R. s.s. Princess Patricia arrived at Victoria recently in tow of the tug Nitinat, with a defective boiler. The repairs were undertaken by the Victoria Machinery Depot Co., and were expected to be completed by the end of January

probably build a steamship similar to the s.s. Princess Sophia, for the northern route, and that J. W. Troup, Manager British Columbia Coast Service, is in Great Britain in this connection.

The Union Steamship Co. of British Columbia's new steamship, which is being built by Wallace Shipyards, Ltd., North Vancouver, B.C., is expected to be launched early in February and to be delivered early in March. She will be used in the coastwise freight service.

The Union Steamship Co. of New Zealand's s.s. Waihamo was hauled out on the marine railway at Esquimalt for general overhaul and rivet tightening during January. She is a new steamship and recently completed her maiden voyage. She will be operated between Canada and the Antipodes in the mail service.

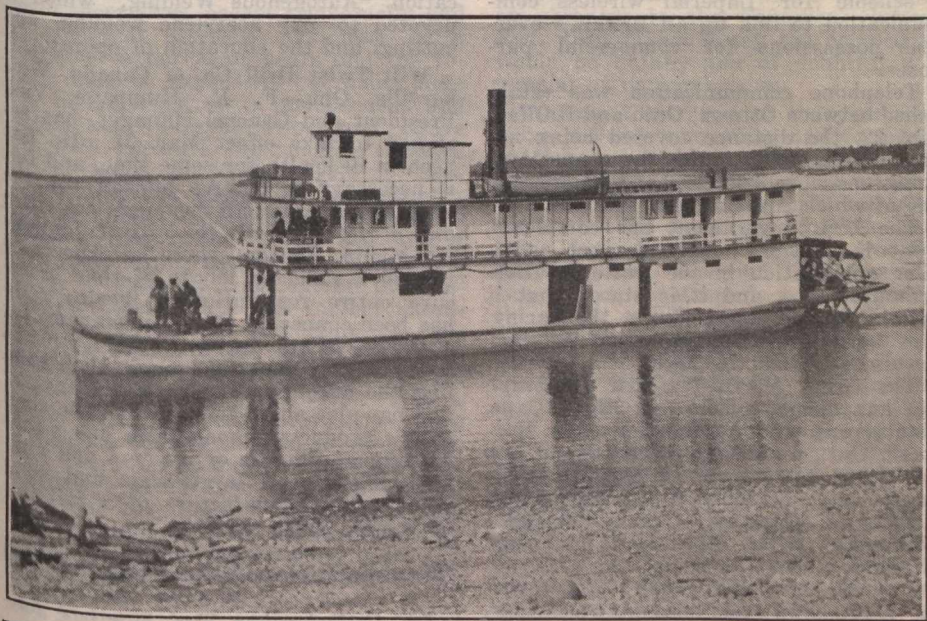
The auxiliary powered schooner Oregon, which was seized in 1916, by the British, in the Gulf of California, and brought as a prize to Victoria, has been released to her owners, with sufficient compensation to put her in seaworthy condition. The money realized by the sale of the cargo, with accrued interest, was also handed over.

It is reported that the Dominion Marine Department's new administration building on the Songhees Reserve, Victoria, is to be proceeded with immediately. The work was said to have been held up until an agreement had been reached regarding the Johnson St. bridge, and as this has been settled, it is expected that the work will be pushed.

The C.P.R. s.s. Princess Victoria was withdrawn from the Vancouver-Victoria-Seattle route, Jan. 7, and laid up at Victoria, for overhaul and refit. The service is being maintained by the company's steamships, Princess Alice and Princess Charlotte. The steamships Princess Adelaide and Princess Royal are running between Vancouver and Victoria, and the s.s. Princess Mary is on the Alaska service and running to Gulf ports as occasion requires.

At a meeting of the Victoria Inner Harbor Association, Jan. 8, Capt. C. D. Neroutsos, Marine Superintendent, British Columbia Coast Service, C.P.R., and acting Manager, during the absence of J. W. Troup in Great Britain, urged immediate further dredging in the harbor, as owing to silting it is becoming unsafe to manoeuvre steamships. It was suggested that a dam and lock at the Gorge bridge might be a solution of the silting problem. The association's officers for this year are: President, G. A. Kirk; Secretary-Treasurer, T. C. Sorby; Board of Management, J. O. Cameron, C. J. V. Spratt, J. W. Troup, A. Bechtel, C. H. French and L. Gonnason.

The new pilotage regulations, as published in Canadian Railway and Marine World for January, applying to various classes of vessel engaged in British Columbia coastal service, became effective Jan. 1. Under these regulations, ships registered elsewhere than in Canada, engaged exclusively in the coastal trade between any port in British Columbia and any U.S. Pacific port, including Alaska, are compelled to pay pilotage dues on a different basis than Canadian registered vessels. This will effect the C.P.R. s.s. Princess Victoria, and the Grand Trunk Pacific Coast Steamship Co.'s steamships Prince George and Prince Rupert, and it is stated that these vessels will be transferred to the Canadian register.



Steamboat Nipawin, operated during navigation season, between Pas, Man., and Sturgeon Landing, by Ross Navigation Co. Ltd., Pas.

Peace River Development Co. are reported sold to Lamson Hubbard Canadian Co., Boston, Mass. The Peace River Trading Co. forms a portion of the estate of the late Lord Rhondda (D. A. Thomas), and during the past four years has given a regular transportation service on the Peace River between Hudson's Hope and Fort Vermilion, with its steamships D. A. Thomas and Lady Mackworth, named after the late Lord Rhondda and his daughter, the present Baroness Rhondda, respectively. The Lamson-Hubbard Canadian Co. is principally a fur trading organization, with a number of trading posts along the Athabasca, Slave and Mackenzie Rivers to the Arctic Ocean, and also some stations on Hudson Bay. Under the new ownership, it is stated, the transportation service will be continued as heretofore, and on or about May 1, the regular weekly service on Peace River, will

Passenger fares on all steamships running out of Vancouver to northern ports, have been increased, as from Jan. 1, owing to increased cost of operation. For the present, the rates between Vancouver, B.C., and Seattle, Wash., remain as they were.

The Union Steamship Co. of British Columbia's s.s. Chilliwack, which ran ashore in Millbank Sound while returning from a northern trip recently, was docked by B.C. Marine Railway Ltd., and repaired. She was only out of service a few days.

The Vancouver Harbor Commissioners, on their return from Ottawa recently, are reported to have said that a start would be made on the harbor development scheme at once and that A. D. Swan, Consulting Engineer, Montreal, will be in charge of the work.

A C.P.R. official is reported to have stated recently, that the company will

Canadian Merchant Shipping Losses During the War.

Canadian Railway and Marine World for January contained a list of Canadian registered vessels lost through enemy action during the war. The information was extracted from a return by the Admiralty presented to the British House of Commons, recently, for which we are indebted to the Deputy Minister of Marine. We have been advised that three sailing ships which were sunk by German submarines, were omitted, as follows,—

Aug. 19, 1915—St. Olaf (s) 323 gross tons, sunk off southeast coast of Ireland.

Aug. 14, 1917—First Prize (s), 227 gross tons, sunk off the English coast.

July 20, 1918—Charles Theriault (s), 339 gross tons, sunk off the Azores.

No lives were lost in either of these disasters.

The sailing ships, Clayton W. Walters and Marion Adams, part of the fishing fleet which was attacked by a German submarine on the Canadian Atlantic coast in Aug., 1918, and which were mentioned in our last issue as having been captured but not sunk, were, at the time we were advised, at Lunenburg, N.S.

Cunard, Anchor, and Anchor-Donaldson Lines' Atlantic Services.

The Cunard Line is operating a freight service between Canada, London and Avonmouth, Eng., and the Anchor-Donaldson Line is running between Canada and Glasgow, Scotland. All of the Cunard Lines' passenger steamships sailing between Canada and the United Kingdom, prior to 1914, were lost during the war, and new steamships are being built for the service. It is expected that the first of these will be ready shortly after the reopening of St. Lawrence navigation. The steamships operated formerly on the route were: Andania, Auronia, Ascania and Ausonia, and it is said that the steamships now being built will have the same names. The Anchor-Donaldson line is operating two steamships on the Glasgow route and two others are under construction.

In addition to the Canadian service the Cunard Line is operating from New York to London, Plymouth, Southampton, Liverpool, Avonmouth, Eng.; Havre, Cherbourg, France; Antwerp, Belgium; Rotterdam, Holland; Danzig, and Mediterranean ports; from Boston, Mass., to Liverpool, London, and Mediterranean ports; from Philadelphia, Pa., and Baltimore, Md., to Liverpool, and Avonmouth, Eng., and Glasgow, Scotland, and Mediterranean ports; and from Boston, Mass., to Glasgow, Scotland.

The Cunard Steamship Co. is announced to have increased its capital stock from £1,000,000 to £4,500,000, the new shares being offered to present shareholders at the rate of one new share for every two held.

The Grand Manan Steamboat Co. Ltd., has been granted supplementary letters patent, under the New Brunswick Companies Act, increasing its authorized capital from \$20,000 to \$60,000, and extending its powers, to cover the building, owning and operating of ships of every description, and the necessary structures for navigation and repair of ships.

Among the Express Companies.

Canadian National Ex. Co. has opened offices at Edson, Dandurand, Jasper, Rosevale and Peers, Alta.

The Canadian Ex. Co., which was fined \$200 and costs recently for a breach of the Ontario Temperance Act by carrying intoxicating liquors from one point to another in Quebec (Montreal to Hull), through a portion of Ontario, and appealed, has had the conviction quashed.

The Canadian Ex. Co. was sued at Riverfield, Que., recently, by a local farmer, who claimed \$235.85 damages on the sale of 9 pigs, alleged to have become unsaleable, while in possession of the express company for transit between Howick and Montreal. The evidence showed that the plaintiff did not conform to the rules for shipping goods, and that the pigs were shipped without proper wrappings, the judge therefore, disallowed the claim, but as the company had accepted the pigs in an improperly wrapped condition, it was ordered to pay its own costs.

Telegraph, Telephone and Cable Matters.

The British Secretary of State for the Colonies is reported as being preparing a scheme for Imperial wireless communication to link up all Britain's overseas possessions for commercial purposes.

Telephone communication was established between Ottawa, Ont., and Halifax, Jan. 22, the distance covered being approximately 1,300 miles, the connections being made by 4 telephone companies, one of which is a United States one.

The U.S. Government has completed, what is said to be the largest radiotelegraph station in the world, at Bordeaux, France, and it is stated that it will be in full operation in the spring. The aerials are swung upon 8 steel towers, each 900 ft. high.

The Great North Western Telegraph Co. has opened offices at Black Cape, Montmagny and Prouxville, Que., Burwash, Ont., and Birch River, Man., and has closed its offices at Little Metis light-house and Perthuis, Que., Beamsville, Beaumaris, Cardinal Canal, Carpenter (Winona), Mille Roches, Wilgar and Wyebridge, Ont.

The Montreal Telegraph Co.'s report for 1919 shows cash, accounts receivable, bonds and other securities as \$163,483, and liabilities \$132,586. The total assets are given as \$2,315,307 against \$2,314,422 in 1918. The usual dividends amounting to \$160,000, were paid during the year and the directors were re-elected for this year.

The Commercial Cable Co. announced early in January that the direct trans-Pacific cable to Manila has been broken, owing to coral formation. The break, it is stated is between Guam and Manila, where it broke early in 1919, when traffic was suspended for about 10 weeks. It is expected to have the cable in operation again early in February.

Restrictions on Immigrants—An order in council was passed recently, providing that immigrants into Canada from overseas who are mechanics, artisans, or laborers, skilled or unskilled, must on landing in Canada be in possession of \$250, as well as transportation to destination. This restriction is in force until March 31, unless otherwise ordered.

Trade and Supply Notes.

The matter which appears under this heading is compiled, in most cases, from information supplied by the manufacturers of, or dealers in, the articles referred to, and in publishing the same we accept no responsibility. At the same time we wish our readers distinctly to understand that we are not paid for the publication of any of this matter, and that we will not consider any proposition to insert reading matter in our columns for pay or its equivalent. Advertising contracts will not be taken with any condition that accepting them will oblige us to publish reading notices. In other words, our reading columns are not for sale, either to advertisers or others.

Taylor & Arnold Ltd.—Railway and Marine Supplies, Montreal, has changed its name to Taylor & Arnold Engineering Co. Ltd.

Calendars—Wall calendars for 1920 have been received from American Steel Foundries, Chicago; John Bertram and Sons, Dundas, Ont.; Cunard Steamship Co., Montreal; Dearborn Chemical Co., Chicago and Toronto; Lyman Tube & Supply Co., Montreal; Pratt and Whitney Co., Dundas, Ont., Taylor & Arnold Engineering Co., Montreal.

Davis-Bourbonville Co., Jersey City, N.J., and Niagara Falls, Ont., has issued an illustrated bulletin of 4 pages on its lead burners, outfits for welding lead sheets, storage battery connectors, lead pipes, chemical apparatus, and all lead work. The company has also issued the January number of its quarterly publication, "Autogenous Welding," which is devoted to oxy acetylene welding and cutting, and the education of operators.

Wilt Twist Drill Co. of Canada, Walkerville, Ont.—F. R. Humpage, Vice President and General Manager, has resigned to take effect Mar. 31. He has been in ill health for some time, and felt it necessary to divorce himself for the time being from all business activities and he left towards the end of January for Miami, Florida, where he expects to remain a sufficient length of time to secure entire restoration of health. He has been connected with the company for about 3½ years, during which, it is said, he has been successful in more than trebling the output and sales of the factory and has also added new lines to the company's products, among them being that of the manufacture of reamers and milling cutters on a large scale and more recently the manufacture of a full line of special Ford reamers.

Transportation Conventions in 1920

- Feb. 10-12—American Wood Preservers' Association, Chicago, Ill.
- Mar. 16-18—American Railway Engineering Association, Chicago, Ill.
- May—Association of Railway Claim Agents, Atlantic City, N.J.
- May—International Railway Fuel Association, Chicago, Ill.
- May 5-7—Air Brake Association, Chicago, Ill.
- May 12—Railway Accounting Officers' Association, Washington, D.C.
- May 25-28—Master Boiler Makers' Association, Minneapolis, Minn.
- June—American Association of Freight Agents.
- June 9-16—American Railroad Association's Mechanical Section, Atlantic City, N.J.
- Oct. 5-7—Maintenance of Way Master Painters' Association, Detroit, Mich.
- Oct. 19-21—American Railway Bridge and Building Association, Atlanta, Ga.

Transportation Associations, Clubs, Etc.

The names of persons given below are those of the secretaries unless otherwise stated:
 American Association of Port Authorities. M. P. Fennell, Jr., 57 Common St., Montreal.
 Belleville Railway Men's Educational Club. Meets each Tuesday, 7.30 p.m. F. A. Pinkston, Belleville, Ont.
 Canadian Car Service Bureau—W. J. Collins, Manager, 401 St. Nicholas Building, Montreal.