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Snow Fighting Equipment.

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Spreader Ploughs.—Figs. 17, 18 and 19 show what is commonly known as a snow spreader or dozer. The front of the car is V-shaped. A low V-shaped plough, with drop wings, is attached to the front. When these wings are dropped into working position they form a continuation of the plough mold plates. The simplest form of spreader consists of a flat car with wings attached to each side, the wings being operated from the floor of the car by means of levers. The

still further. This type of plough is frequently used for cleaning up yards. Some roads utilize their ballast spreaders for this purpose.

Machine Ploughs. — On roads which have to fight deep drifts, snow slides, or other conditions beyond the capacity of push ploughs, the rotary machine plough is used, and to date is the most effective instrument that has been developed for the purpose. These ploughs can work their way through deep cuts and slides where it would be impossible for any type of push plough to lift the snow and, in addition, can throw the snow

revolved without throwing any snow.

The next development was known as the Marshall plough, a full size working model of which was tried either on the Chicago, Milwaukee & St. Paul Rd. or the Chicago & North Western Rd., in the northwestern part of Iowa, in the latter part of the 70's. The wheel, which revolved on a shaft at right angles to the center line of the track, was a large wooden disc on which were fastened a number of radiating blades. This plough was also a failure.

Another attempt to construct a successful machine plough was known as



Fig. 31. Canadian Pacific Railway Rotary Snow Plough, built in 1911.

illustrations show a house car spreader. The drop wings are raised and lowered by air cylinders. The side wings are supported by jib cranes, hinged to the side of the car, and are held in working position by means of heavy bar braces. On some ploughs these braces are moved into working position by means of air cylinders. Some types of spreaders are equipped with drag wings hinged to the back corners, as shown in fig. 17. This type of spreader is used by some roads to widen cuts after a plain push plough has passed. When widening cuts these wings are in such position that they serve as snowbank cutters, and snow is carried in toward the center of the track, from which it can be thrown by either a wedge plough or a rotary. When equipped with drag wings these spreaders are often called cut wideners. The large side wings when extended to their full width have a total spread of approximately 30 ft. The snow is first cut by the V-shaped plough and, after it is thrown or pushed to one side, the long wings push it out

clear of the track. If the snow is much higher than the top of the casing it is only necessary to loosen it and throw it down in front of the plough in order to have it picked up and thrown clear of the track.

A rotary plough, invented in 1869 by J. W. Elliott, consisted of a wheel having four flat arms and which was supported on a horizontal shaft, rotating in line with the track. The wheel was enclosed in a casing, the front of which was shaped to collect the snow and the rear of which was shaped cylindrically.

The first machine plough built was known as the Hawley plough, and was exhibited at the Philadelphia Centennial Exhibition in 1876. The plough was equipped with a large vertical conveyor screw supported in a rectangular casing, the front of which was shaped to collect the snow. This plough was tested on what was then the Teeswater Division, Toronto, Grey & Bruce Ry., now a part of the C.P.R. This plough was an absolute failure, as the elevator screw

the Blake machine snow plough, and it embodied a rotary principle. It was tried on the Winona & St. Peter Division, Chicago & North Western Rd., in the early 80's, and was also an absolute failure.

A later attempt to develop a machine plough resulted in what was known as the Kryger steam snow shovel. In some ways this plough looked very much like a modern ditching machine. Buckets were placed on an endless conveyor and these buckets were supposed to pick up the snow and convey it up and back to a point where it could be automatically thrown clear of the track by a revolving wheel. This machine was built at the Minneapolis, St. Paul and Sault Ste. Marie Ry. Minneapolis shop, in 1889 or 1890, but was never tried in the snow.

The Cox machine snow plough, which was never built, was illustrated in several of the U.S. railway journals in the early 90's, and unsuccessful efforts were made to organize a company to build it.

Mr. Elliott was the original inventor of the rotary principle. His invention

was improved by Orange Jull, who applied a knife or cutting wheel, fig. 20, in front of the Elliott wheel, fig. 21. In 1883 the Leslie Brothers built the first rotary embodying the Jull modification. The fan wheel was mounted on a hollow shaft, in which revolved a solid shaft supporting the knife wheel. The fan and cutting wheels were revolved in op-

snow could be thrown to either side of the track and that a flanger was necessary to prevent derailment in hard snow and ice and to leave a satisfactory rail after passing.

To overcome these objections the Leslie Brothers developed a wheel with manually reversible knives which could be changed in position to enable them

part of the cutter which dropped down inside of and about 2 in. below the rail head was shaped like a planer too. The part of the cutter above the rail was shaped like the blade in a wood plane, and in service position came within 1/2 in. of the top of the rail head. Two flangers, shaped very much like the mould boards of an ordinary farm

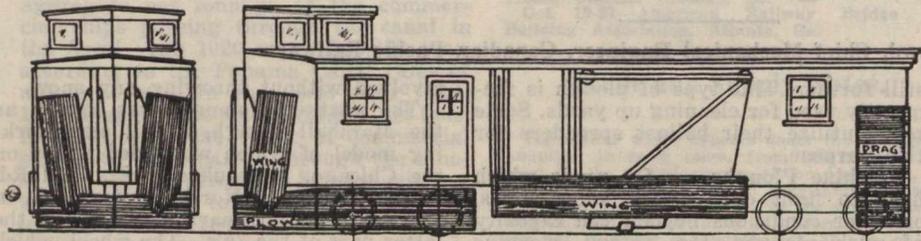


Fig. 17. Snow Spreader or Dozer.

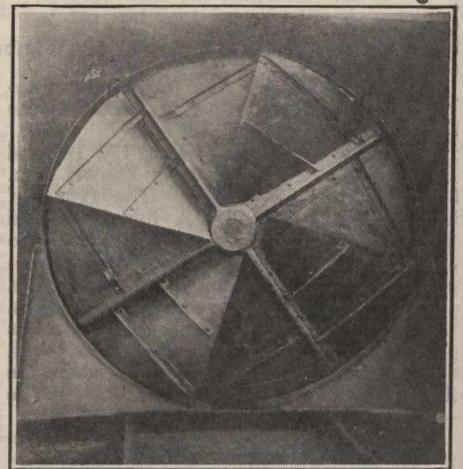


Fig. 20. Jull Cutting Wheel, for Rotary Snow Plough.

plough, were fastened to the rear of the truck. These picked up the ice removed by the cutters and put it in the corner of the cut made by the rotary casing. The cutters and flangers could be either raised or lowered simultaneously by air.

A plough containing these improvements was built for them by the Cooke Locomotive Works, of Paterson, N.J. This plough was put in service on the Chicago & North Western Ry. during the winter of 1885-86, fig. 23. It is very interesting to note that the engines of this plough were equipped with Walschaert valve gear. One difficulty, however, was experienced. The friction caused by the snow passing between the knife wheel and the fan wheel absorbed more power than that required to cut

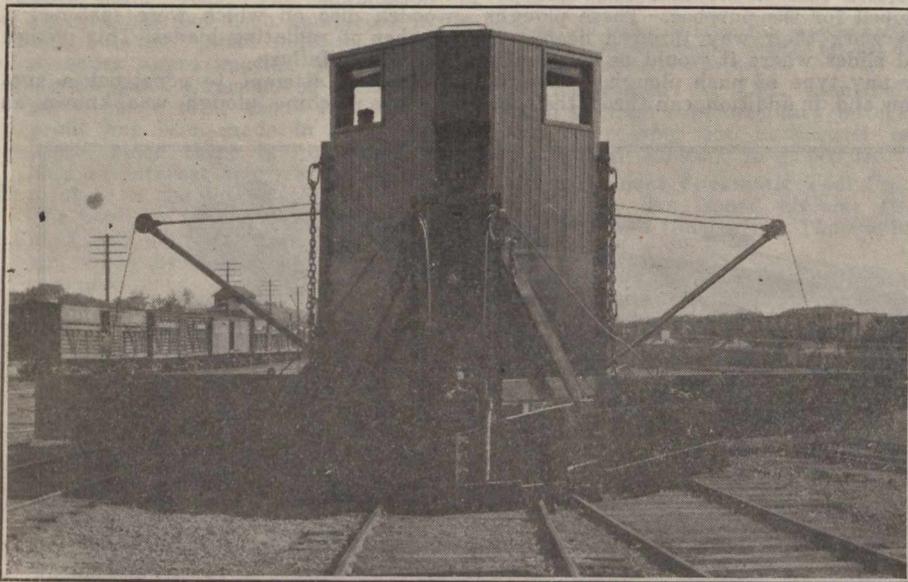


Fig. 18. Snow Spreader.

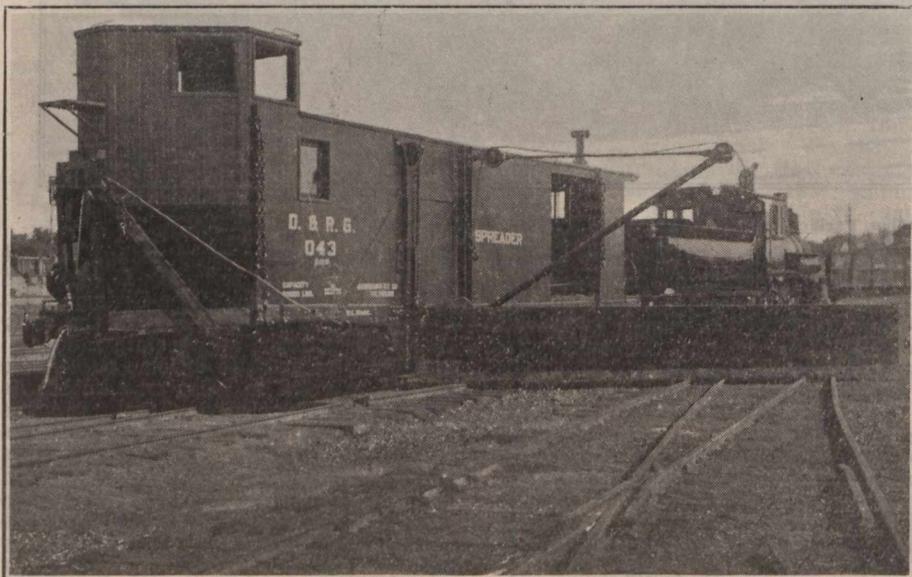


Fig. 19. Snow Spreader.

posite directions by means of a gear system. During the winter of 1883-84, the C.P.R. gave this model, fig. 22, a trial at Parkdale, Ont. This preliminary trial, in which snow and ice were thrown over 300 ft., demonstrated the practicability of removing snow with a revolving wheel. It, however, also indicated that the plough should be constructed so that

to cut in either direction. They also applied a movable hood to the cylindrical portion of the casing through which snow could be thrown to either side of the track. In addition they designed an ice cutter, and a flanger, which were applied to the front truck of the plough. The ice cutters, one for each rail, were fastened to the front of the truck. The

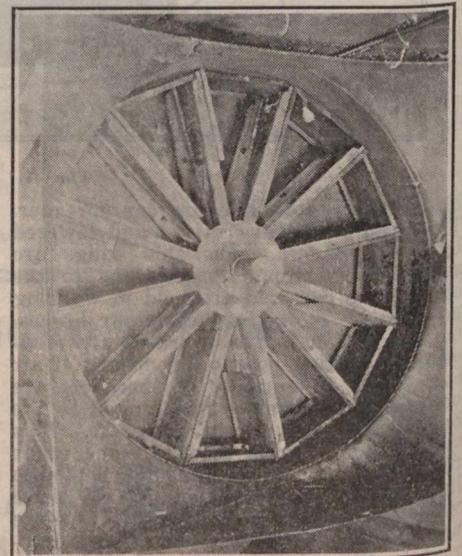


Fig. 21. Elliott Rotary Fan Wheel, for Rotary Snow Plough.

and throw away the snow. The principle of opposite revolving wheels was then abandoned and the Leslie Brothers designed a single fan wheel with adjustable cutting edges. These cutting knives were attached directly to the wheel and automatically reversed their position as

the direction of rotation was changed. The Cooke Locomotive Works rebuilt the plough, embodying these improvements,

had been able to proceed. J. S. Leslie personally operated the plough during the trial. The operation of the "rotary"

real shops, applying a fan wheel which had been still further improved by the Leslie Brothers. This wheel is shown in fig. 25. Fig. 26 shows a plough with the perfected Leslie wheel. The ice cutter and flanger can be seen very well in this illustration.

In 1889, Orange Jull devised a centrifugal excavator which was first put in service on the Union Pacific Rd. during the winter of the same year. Fig. 27 shows a plough of this type. This excavator was intended to remove snow by means of a cone shaped screw conveyor. The screw was built up of plate and supported on a shaft. It was not only set diagonally across the track, but inclined so that the nose pointed down toward the right hand rail. The shaft was supported by two bearings, the front one being located in the bottom right hand corner of the hood; the back one in the left hand corner. The screw was made up of four spiral blades of 1/2 in. steel plate. The action of the excavator was similar to that of an auger, the snow being carried back and up through an opening in the top of the hood. The screw was revolved at from 250 to 300

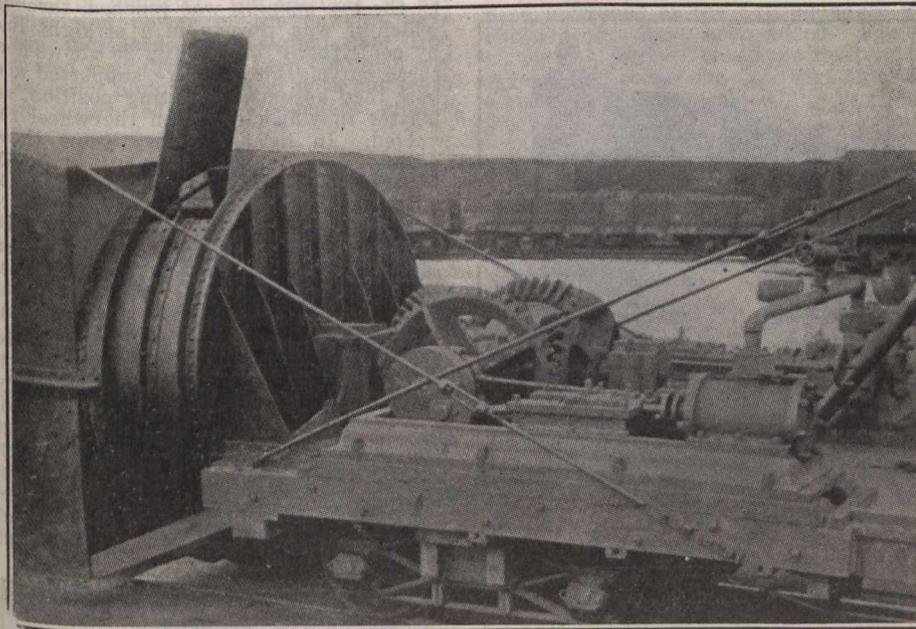


Fig. 22. Leslie Bros.' Model Rotary Snow Plough, tried in C.P.R. Parkdale yards, Toronto, in 1883-84.

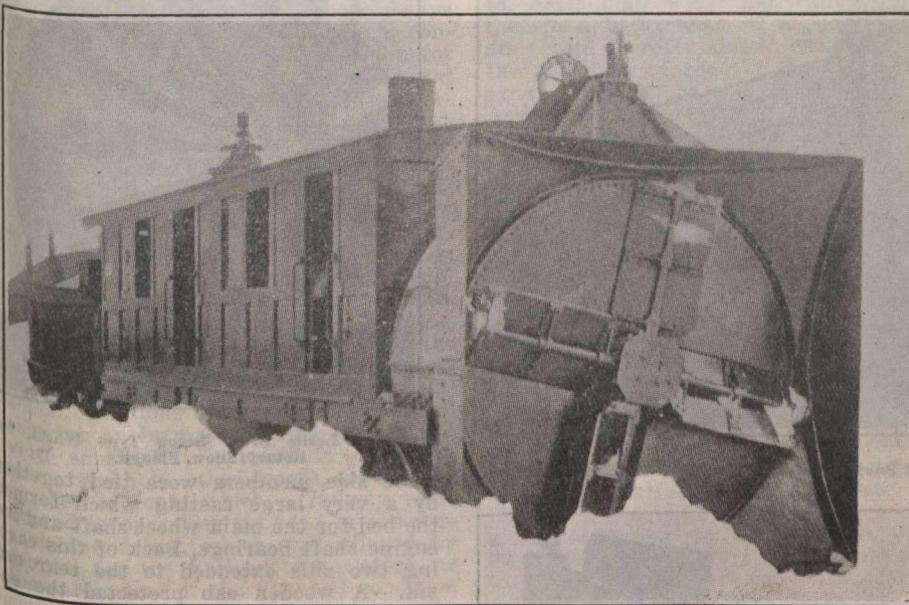


Fig. 23. Leslie Bros.' Rotary Snow Plough, 1886.

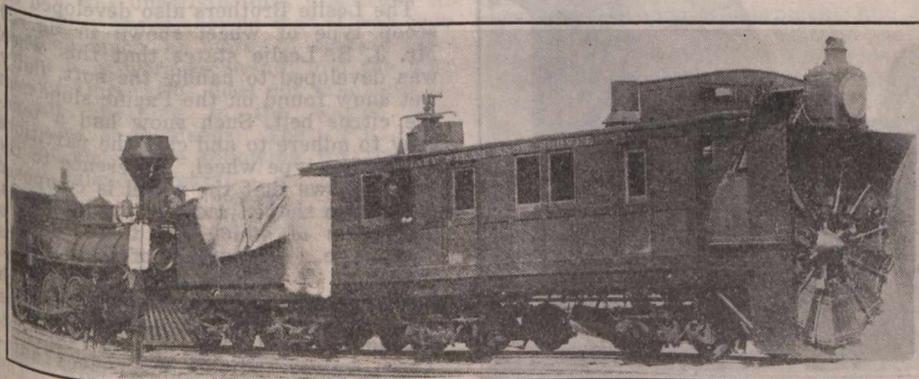


Fig. 24. Improved Leslie Bros.' Rotary Snow Plough, as rebuilt by Cooke Locomotive Works.

fig. 24, and during the winter of 1886-87, it was put into service on the Union Pacific Rd., doing particularly good work in opening up one 70-mile branch which had been blocked for some time and through which no ploughs of other types

was so successful that the railway company not only purchased it, but three others in addition.

In Canada, in 1888, the C.P.R., through the Polson Iron Works Co., of Toronto, built eight of these ploughs in its Mont-

real shops. The Jull plough was unsuccessful. The screw conveyor filled up solid with snow and ice; the spiral cutter was easily damaged by rocks and ice; the screw also had a tendency to raise the front of the plough, resulting in derailment.

During 1889, another snow plough, called the Cyclone, was brought out and put into service on the Central Pacific Rd., now a part of the Southern Pacific System. This plough, like the Jull excavator, had a revolving auger, with a fan wheel placed behind it to remove the snow. The fan wheel and auger were mounted on the same shaft, and driven by two powerful engines. This plough was also unsuccessful.

Although there has been considerable development, the general arrangement of the modern rotary is very similar to that of the improved Leslie ploughs. As development progressed, the ploughs became heavier and were made more powerful. The size of the cutting wheels has increased to such an extent that on the heaviest and most modern ploughs the knives will cut through small trees and successfully open up snow slides containing a very large proportion of dirt, rock and gravel.

The first rotary ploughs with the improved Leslie wheel were equipped with

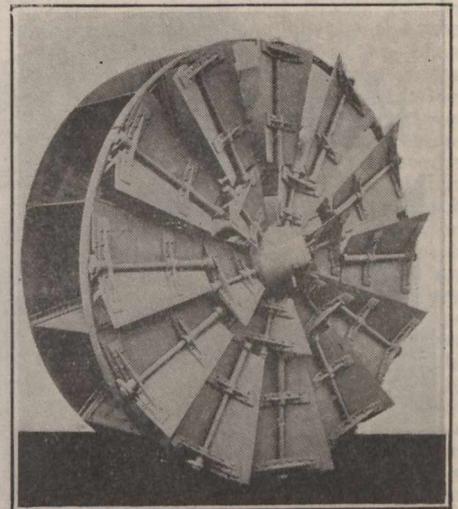


Fig. 25. Improved Fan Type Wheel, for Rotary Snow Plough.

a 17 in. diameter by 24 in. stroke 2 cylinder engine. Steam was supplied by a locomotive type boiler, having 1,259 sq. ft. of heating surface and carrying 180

other early rotaries, were equipped with a wheel of the fan type, illustrated in fig. 25. The back of this wheel consisted of steel plate, to which the fan blades,

was in operation the revolving knives cut the snow and delivered it into the space between the partitions. The snow was then carried around the casing until the top opening was reached, through which it was thrown in a straight line by centrifugal force. Fig. 28 shows how these cutting knives were supported and how they assumed a cutting position, no matter in which direction the wheel revolved. In light and dry snow these wheels were satisfactory, but in heavy work their construction proved inadequate. In wet and heavy snow the partition and cutting plates buckled and the supporting rings became distorted. This caused the knives to fail and the wheel to jam in the casing. These troubles were overcome by heavier construction.

This fan type wheel is still in service on very many railways. It is the opinion of most users, an opinion endorsed by J. S. Leslie, that a well constructed, heavily built, fan type wheel is the most efficient snow remover that has yet been devised. On these ploughs the boiler, the engines, the main shaft and gears were supported on an underframe the sides of which were steel channels. At the front

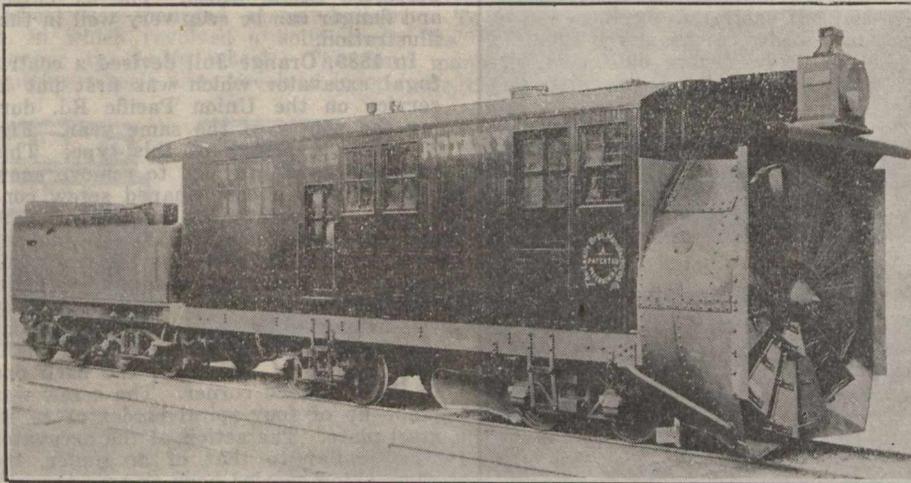


Fig. 26. Leslie Bros. Rotary Snow Plough, with Ice Cutters and Flangers.

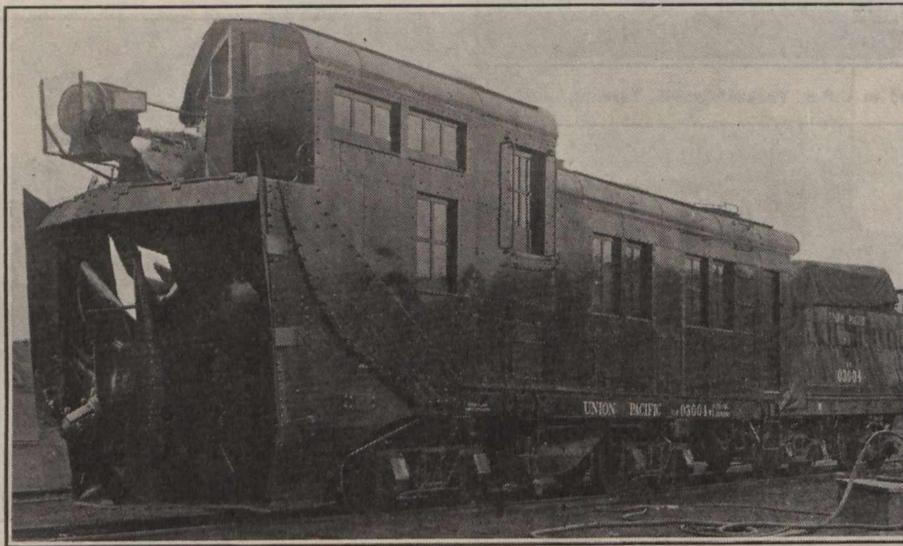


Fig. 27. Jull Centrifugal Snow Excavator.

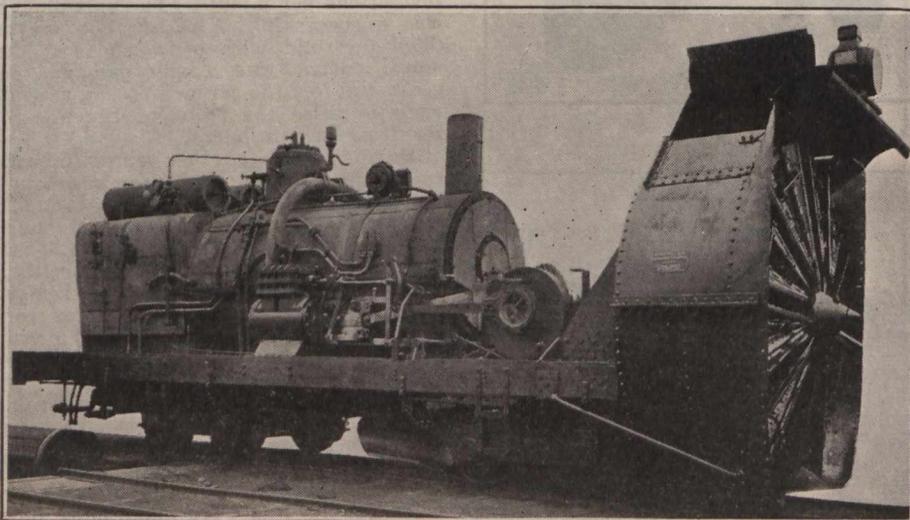


Fig. 30. Boiler and Machine Arrangement of Rotary Snow Plough, built by American Locomotive Company.

lb. pressure. The cutting wheel was supported by an 8½ in. diameter shaft geared to the engines. The shaft was supported in a main bearing 34 in. long. These snow ploughs, as well as many

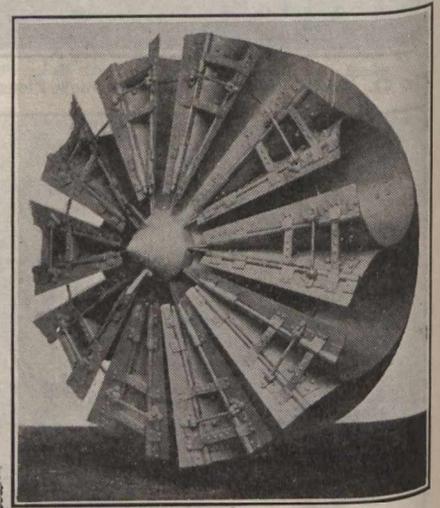
or partitions, were secured. The fronts of the partitions were supported to heavy inner and outer rings. The reversible cutters were supported by trunnions riveted to these rings. When the plough

Fig. 29. Leslie Bros.' Scoop Type Wheel, for Rotary Snow Plough.

these side members were tied together by a very large casting which formed the bed for the main wheel shaft and the engine shaft bearings. Back of this casting two sills extended to the rear end sill. A wooden cab protected the engines and boiler. The plough, without the tender, weighed 125,000 lb.

The Leslie Brothers also developed the scoop type of wheel shown in fig. 29. Mr. J. S. Leslie states that this wheel was developed to handle the soft, fluffy, wet snow found on the Pacific slope near the citrus belt. Such snow had a tendency to adhere to and clog the partitions of the fan type wheel. Reference to the figure shows that the wheel is composed of 10 cone shaped radially placed scoops, the backs of which are fastened to a steel plate. The surface of these scoops is smooth to prevent snow from adhering. Each scoop is open its entire length on the front side. A cutting knife is hinged on each side of the opening. These knives adjust themselves automatically into cutting position. The knives on the adjacent edges of each scoop are connected by links so that when one knife is cutting snow the other knife is depressed to afford the necessary clearance.

With the exception of special ploughs the general construction of the modern



rotary has not changed greatly. The cutting wheels have been increased to 11 ft. in diameter; the capacity of the boiler and power of the engines have been increased; the original cast iron beveled gear drive has been changed, and two bevel pinions of steel with cut teeth and supported on independent engine

shafts are used. The cutting knives have been made heavier and of cast steel. The strength of the surrounding casing has been increased at the cutting edges and cut wideners have been added. Fig. 30 shows a plough of this type built by the American Locomotive Co. Fig. 31 shows a plough built for the C.P.R. in 1911.

This figure shows hinged cut wideners in working position. When not in use these cut wideners are folded back against the sides of the casing, the supporting rods being removed.

This article will be continued in Canadian Railway and Marine World's next issue.

Increases Authorized in Railway Freight and Passenger Rates.

Full particulars of the two applications made to the Board of Railway Commissioners by the steam railway companies for authority to advance freight and passenger rates, etc., were given in Canadian Railway and Marine World for August, pg. 434, and September, pg. 491.

The Chief Commissioner's Judgment.

The Chief Commissioner, Board of Railway Commissioners, Hon. F. B. Carvell, K.C., gave the following judgment on Sept. 6. Re application of the Railway Association of Canada, on behalf of the railway companies members thereof, and of all other railway companies within the Board's jurisdiction, for authority to make a general advance of 30% in the tolls charged for the carrying of freight by the said companies. This is an application made by the Railway Association of Canada on behalf of all the railways under the Board's jurisdiction, and consisted, first of a general application for a 30% increase in all railway freight rates. Before the hearing, and as a result of the decision of what is known as the Chicago Wage Award, by which substantial increases were given to all railway employes in the United States, dating back to May 1 last, a supplementary application was made asking for a further increase of 10% in all freight rates; 20% in passenger fares; 50% in sleeping and parlor car rates; 40% in milk rates, and 20% in excess baggage rates.

At the hearing representatives of the different railways filed statements, showing, at great length, their respective financial conditions for some years past; all showing an increase of business, with a very substantial increase in operating ratio, which in other words, means the number of cents which a railway must expend in operating its road in order to earn one dollar, which was alleged by counsel for the Railway Association, as the surest test of the financial condition of any railway, and, unfortunately, with the exception of the Canadian Pacific Ry., which was unsatisfactory, practically all the other roads showed that it was costing as much, or more, to operate them than they were receiving; and the term "operating ratio" does not take into account anything in the way of fixed charges or dividends. The C.P.R. statement shows the following for the past four calendar years:—

Year.	Operating Net earnings.	Operating ratio.
1916	\$50,476,499	63.87
1917	46,546,018	70.01
1918	34,502,387	78.16
1919	32,933,036	81.39

while for the six months ended June 30, 1920, its operating ratio had jumped to 87.58%; and in the report for July just filed with the Board, excluding taxes and including increased wages, it had increased to 91.43%.

The operating ratio of the Grand Trunk Ry. for the year ended Dec. 31, 1919, was 87.43%, and for the 6 months ended June 30, 1920, was 99.97%. For the Canadian Northern Rys. System, not including the Intercolonial or National Transcontinental Rys., the operating ratio for the year ended Dec. 31, 1919, was 112.08%, and

for the 12 months ended May 31, 1920, was 117.61%. According to estimates filed with the Board, the result for 1920, if increased wages were granted, as hereinbefore referred to, and no increase in the traffic rates, the operating ratio would be 134.23%. If the wage increase were granted as from May 1, 1920, and the full rate increases from Sept. 1, 1920, the operating ratio would be 119.59%, and the estimated result of operations for 12 months on the 1920 basis, with both wage and rate increases granted, would still leave an operating ratio of 105.01%.

All the counsel representing the opposing interests based their case upon the financial statement of the C.P.R., and practically all the evidence, outside of the financial statements above referred to, dealt only with that railway, and therefore, in arriving at a judgment, I am forced to refer almost exclusively to the condition of the C.P.R. in order to arrive at proper conclusions. Mr. Moule, Assistant Comptroller, C.P.R., stated that the company's reserves could be placed at \$317,000,000, but of this amount \$160,000,000 would only be available after the lands were sold. He also stated that at present the "liquid assets" consisted of \$53,000,000 in cash and accounts collectable, amounting to about \$16,000,000, making a total of \$69,000,000, of which about \$37,000,000 was represented by Imperial and Dominion Government securities. As against this, he stated that there were accounts which had to be paid, amounting to \$27,000,000, and also alleged that within four years \$52,000,000 of actual cash must be provided for the retirement of notes maturing in Mar., 1924, although by that date the cash fund should be augmented to a considerable extent by the receipts from land sales, which are specially allocated to meet these obligations.

Notwithstanding these facts, it was contended by G. R. Geary, counsel for the City of Toronto, and D'Arcy Scott, for the Saskatchewan Government and the National Dairy Council, that no matter what the loss might be in operation, any deficit required for the payment of dividends should be taken from the reserves, so long as the same lasted, instead of increasing the rates as applied for.

Mr. McMaster, counsel for the Canadian Manufacturers' Association, as I understand him, contended that the rates should be so adjusted that the C.P.R. would be able to pay its dividends without drawing upon its reserves, but nothing further. Mr. Symington, counsel for the Province of Manitoba, was not quite so general, and Mr. Coyne, representing the amalgamated boards of trade of the three prairie provinces, would draw upon the reserves to some extent if necessary for the payment of dividends. I am unable to agree with any of these contentions, and much less with that of Mr. Geary, because, should his doctrine be followed to its logical conclusion, in a very short time the cash reserves would be dissipated, and it would only be a question of time when this company

would find itself in the position of the Grand Trunk and Canadian Northern systems. If the C.P.R. Co. has, for many years past, kept an outstanding position among transportation companies of the world, it is because, through wise business management, it has been able to place itself in such a financial position that the financial world has faith in the institution, and perhaps none of us realize the value which this financial status has been to Canada in the outside world during recent years, the most outstanding case being the loan of \$40,000,000 worth of debenture stock to the Imperial Government, which was actually hypothecated in the United States for the purchase of munitions during the war.

But, apart altogether from this phase of the question, we have in the actual conditions in Canada, that about which there can be no speculation whatever. It is known, from its financial statement, that the C.P.R. has actually put into the road out of reserves, proceeds of land sales, etc., \$130,000,000, which has probably been expended more or less in every province in Canada through which the road runs, in bettering conditions and fitting it to that extent to better serve the public as a common carrier; and, according to the evidence, during the present fiscal year, it has already expended more than \$8,000,000 out of reserve for the construction of branch lines in Western Canada. Under the present financial conditions, all the counsel above referred to, I think, would admit that none of these branch lines would be possible during the present year if the C.P.R. Co. did not have the reserve from which to draw for this purpose, but, even supposing it was able to sell securities to the public, it would mean an increase of its fixed charges or dividends which would have to be met out of earnings, and every addition to capital expenditure would be a further demand for increased rates; and therefore, considering the question from every standpoint, I consider it a national necessity that the C.P.R. at least be kept in a healthy financial condition, with the hope that, as a result, the other great railway system may be benefited in a corresponding degree. The financial statement of the C.P.R. for the year ended Dec. 31, 1919, showed a surplus of \$844,249. It was contended, and was not denied, that should it pay the increases to its employes, based upon the Chicago award, without receiving any increase in rates, the 1920 balance sheet would show a deficit of many millions of dollars. The above mentioned award, if adopted by the C.P.R., would require an additional wage expenditure before Dec. 31 next, of \$14,822,300, and for the next full year nearly \$22,000,000, and, if adopted by the other roads, would mean the same proportion of increases.

It was strongly contended by many interests, that the Board, in making its decision, should take into consideration only the financial requirements of the C.P.R. Co., and whatever deficit there should be in the operation of the Canadian National Rys. System should be

borne by the country out of ordinary taxation. In replying to these contentions the representatives of the Canadian National Rys. pleaded most earnestly for the full increases asked for, claiming that were they granted, and they paid the wage increases above referred to, their operating ratio for the next year would be 105%, and they only asked to be placed in such a position that they could run the railway without going to the country for assistance, admitting, for the present at least, that the country should take care of the fixed charges, as well as the deficit which was sure to result from the operation of the Intercolonial and National Transcontinental Rys. systems.

Before attempting to arrive at the amount of increases, if any, to be granted, I take it the Board must first decide what policy it will adopt with respect to these opposing contentions. While I realize that, to a very large extent, the financial requirements of the C.P.R. must govern our decision, yet I would be very sorry to take the attitude that we should not in any manner consider the requirements of the Canadian National Rys. System. It would be entirely useless, for the purposes of this decision, to at all enter into the history of this great system; suffice it to say it is now a reality, which the people of Canada own and must work out to the best interests, not only of the railway, but the country as a whole.

Reference was made, during the course of the hearing, to a statement made by the Minister of Railways in Parliament in March last, that it was a question for the House to decide as to whether the deficit of \$47,000,000 on the Canadian National Rys. should be met by rates or taxes upon the people. Parliament sat for nearly three months after this statement was made, and prorogued on the last day of June, without having taken any action; and therefore this Board must approach it from the standpoint of the law as it now stands, which imposes upon this Board the duty of "fixing, determining and enforcing just and reasonable rates," not only for the C.P.R., but for all other railways under its jurisdiction. Therefore, as only one rate ought to be made for all companies, the real question to be decided is, what are just and reasonable rates, considering all the circumstances of all the railways of Canada as they exist today. What might be considered a just and reasonable rate for one company might be an unjust and unreasonable rate for another, and therefore, I take it we must arrive at that medium which will, on the whole, be just and reasonable, in so far as it is possible to do so, and, at the same time, be just and reasonable to the community who have to pay the tolls. If we give a rate which will barely allow the C.P.R. to pay its fixed charges and dividends, or a lesser rate, then it is absolutely certain that the Canadian National Rys. System, including the Grand Trunk, Grand Trunk Pacific, Intercolonial and National Transcontinental Rys., and, for the purposes of this judgment I am considering them as a part of this system, will face an operating deficit of at least \$50,000,000 a year, assuming that the wage award is adopted and including the Intercolonial and National Transcontinental and Grand Trunk Pacific Rys. The National system would therefore be condemned at its birth to a condition, which practically for all time to come, or at least for many years, would force it to Parliament annually for money with which to pay the

operating expenses of the road. Such a condition must necessarily prove very discouraging to its managers and officials. In my judgment that is not in the best interests of the country, as a whole, and therefore, while not attempting to grant a rate which will immediately place the Canadian National Rys. System upon a self supporting basis, yet it should be one which will at least give its managers the hope that, by wise and prudent operation, this happy end may be attained, and that it may, within a reasonable time reach a position of independence without which, I fear, nothing but disaster can be the result.

According to the statement furnished by Mr. Beatty, President of the C.P.R., assuming that the wage award is adopted, and assuming that the full increases asked for are granted, its deficit would be \$62,179 at the end of this year, and, in order that there may be no misunderstanding, I quote that portion of the statement as follows:—"The anticipated results for the year 1920 have been estimated on the following basis:—

The actual gross earnings for the first six months were	\$92,057,586
Assuming for the balance of the year a 20% increase in freight traffic and 10% in passenger traffic, the gross for the last half of the year are estimated at	112,600,000
Estimated on sleeping car and commutation car rates now in effect.....	650,000
Estimated gross revenue	\$205,307,586
Operating expenses, January to June, inclusive	\$80,629,400
Assuming the same operating ratio for the last half of 1920 as for the last half of 1919, without added wage or material costs	89,291,800
	\$169,921,200
Add advance in cost of fuel	\$4,293,000
Advance in cost of material and supplies	6,112,000
Sales tax	400,000
Overtime train service at one and one-half ..	765,000
	11,570,000
Total estimated operating expenses.....	\$181,491,200
Estimated net for 1920 without advance in rates	23,816,386
30% increase in freight rates for four months, assuming 20% increase in freight traffic	16,563,600
Estimated net	\$40,379,986
Estimated income tax	3,068,838
Net after income tax	\$37,311,048
Fixed charges, dividends and pension fund ..	32,579,077
Surplus ..	\$4,731,771
Wage award if applied in Canada—Four months—	
May to August, inclusive	\$7,113,750
Sept. to Dec., inclusive	7,708,450
	\$14,822,300
Estimate of revenue from supplemental application—	
Freight 10%	\$5,521,200
Passenger 20%	3,619,300
Sleeping and parlor car 50% ..	828,565
Milk 40%	32,410
Excess baggage 20% ..	26,875
	\$10,028,350
	\$4,793,950
Deficit ..	\$62,179

In arriving at this conclusion we must take into consideration the fact that his increases are based upon a period of four months from Sept. 1, while now they will be somewhat less than that, and which to that extent would increase the deficit, and also that eight months increased wages will be paid during this year. This naturally leads to what would be the result assuming that the full increases were

granted, when applied to the fiscal year of 1921, and it must be admitted that this is to some extent a matter of speculation. Mr. McMaster furnished a very interesting statement for the year ended June 30, 1920, in which he estimated a surplus of \$26,000,000. For the purpose of this decision, however, I think the fairer way would be to take the estimate of the C.P.R. for the year 1920, and attempt to figure out what the result would be during the next fiscal year, assuming the same volume of business and the same general conditions as we know to exist during the present fiscal year. I have therefore prepared a statement, based upon the evidence adduced, showing the estimated gross revenue for the year 1920, first without increased rates, and secondly with the full increases asked for, and also the estimated expenditures. Included in the latter is the item of \$6,250,000 for increased labor necessary to bring the maintenance of way up to the average pre-war years. I have also in the statement shown the estimated receipts to some extent divided. Instead of the miscellaneous item, I have shown the amounts receivable in the different items making up the account. These latter items have been furnished, at my request, by Mr. Moule and are not found in the exhibit filed, in the same detail as contained herein. The result of this calculation, both of estimated receipts and expenditures, is as follows:—

Estimated Gross Revenue for 1921, Based on 1920 Without Increased Rates.

Freight, Eastern Lines (including 20% increase 2nd half year)	\$63,000,000
Freight, Western Lines (including 20% increase 2nd half year)	74,000,000
Switching, Eastern Lines	270,000
Switching, Western Lines	330,000
Passenger (deducting coolie business, but including 10% increase in latter half year) ..	45,000,000
Sleeping and parlor car (including full year 20% increased rates in effect and 10% increase in business 2nd half year) ..	5,000,000
Milk ..	250,000
Excess baggage ..	400,000
Express ..	7,000,000
Mail ..	1,500,000
Demurrage ..	470,000
Hire of equipment	2,950,000
Storage of freight and baggage	450,000
Grain elevators ..	1,000,000
Parcel rooms ..	130,000
Rents and miscellaneous	2,000,000
	\$203,750,000

Estimated Revenue for 1921, Based on 1920, with Increases Applied For.

Estimated gross as per above	\$203,750,000
Add 40% to freight (see note)	54,800,000
Add 40% to switching	240,000
Add 20% to passenger	9,000,000
Add 50% to sleeping and parlor car....	2,500,000
Add 40% to milk	100,000
Add 20% to excess baggage	80,000
	\$270,470,000

Estimated expenses as per attached... 217,230,000

Net revenue

Fixed charges and pension fund.....

Net income

Income tax, 10½%

Dividends ..

Surplus ..

Estimated Expenses for 1921 on Present Basis of Costs.

Actual expenses to June 30, 1920.....

Estimate of expenses July to Dec., assuming same operating ratio as last year ..

Estimate of new wage award

Increase in cost of coal for locomotives, 4,200,000 tons at \$2.10

Increase in coal for other purposes, 600,000 tons (inland steamship lines, station buildings, power plants, etc.) ..

Miscellaneous material 30%

Ties, 5,000,000 at 15c.

Rails, 100,000 tons at \$10.00

Maintenance of way labor below average for 4 years prior to war: 134 days per mile of mile per annum....

6,225,000

\$217,231,000

This shows an estimated surplus for the next fiscal year of \$15,064,500, which is probably more than the company should be entitled to, and which is probably a little less than the actual surplus would be for the year's operation, as possibly the increase of the maintenance of way labor might not be realized. As against this, however, for reasons hereinafter stated, the gross revenue would not be as great as I have estimated.

This brings me to the question, what rate of increase, if any, should be granted? Practically the whole argument of Messrs. Symington and Coyne, outside of the general statement as to the payment of the dividends herein referred to, was based on the allegation that the rates in western Canada were greater than those in eastern Canada. This has been a burning question with the people of the west at every rate hearing since the organization of this Board, and as the matter was so thoroughly discussed in the Western Rates Case, 17 Can. Railway Cases, 123, and decisions arrived at, I feel it unnecessary to enter into any lengthy analysis of figures to show to what extent, if any, this claim is justified. The eastern rates apply to the portion of Canada east of Port Arthur, including Port Arthur eastbound, and the western rates to the territory west of Lake Superior, including Port Arthur westbound. It was admitted by all parties at the hearing that the operating ratio in western Canada was somewhat less than in the east; that the tonnage per train was greater in the west than in the east, and that about 55% of the total traffic of the C.P.R. system was in eastern Canada and 45% in western Canada.

In order to satisfy myself of the facts, I have investigated the tariffs, both east and west, applicable to the more important traffic movements. I find that on building brick, sand, gravel and crushed stone, also on green vegetables to and from distributing points, the carload rates are lower in the west than in the east; that on rough or partly dressed building stone the western rates are the lower for the shorter hauls, and slightly the higher for the longer, with parity in some of the mileage blocks; and that on cheese, eggs and fresh meat the carload tariff to and from distributing points is lower for distances to between 150 and 200 miles and higher for the longer movements than in the east.

On lumber, while the shorter haul rates are lower than, or the same as, those in the east, and higher for the longer distances under the mileage tariff, the specific point to point tariff, which really governs the bulk of this traffic, is considerably higher in the west than for similar distances in eastern Canada. In dealing with a station to station tariff, however, a mere comparison of similar distances is not always conclusive, since a density of movement on the one side may not be counterbalanced on the other.

As to livestock; while there is little difference between the west and east rates in the mileage tariffs, the point to point western tariff is in general the higher, taking movements to Winnipeg and Montreal as illustrative.

As regards agricultural implements shipped in carload lots from distributing points; up to 100 miles the western rates are lower than the eastern for some distances, and are the same for others, but above 100 miles they rule higher—considerably so—for the long hauls. The carload mixing privilege is, however, more liberal in the west than in the east.

When we come to general merchandise, or what is referred to as class freight, I find that the western rates are considerably greater than the eastern, whether they be those of the standard maximum mileage tariffs or those of the special tariffs from distributing points.

It is somewhat difficult to form a comparison of the grain rates between the two divisions, because practically all the grain rates in the west are based upon Fort William or Port Arthur, and we have no such distances in the east as we have in the west, but, generally speaking, the following table affords an indication, taking Windsor, Ont., as the starting point producing the longest eastern hauls of Ontario grown grain:—

	Miles.	
Windsor to Montreal	555	35½c.
Brandon to Fort William	553	17½c.
Windsor to Lennoxville	657	32c.
Wapella, Sask., to Fort William.....	655	21c.
Windsor, Ont., to St. John, N.B.	1,033	36½c.
Hatton, Sask., to Fort William	1,032	28c.

Allowing for the undoubted fact that a very large proportion of the traffic both east and west is on the commodity basis, I am still forced to the conclusion that the rates in western Canada average considerably greater than in the east, possibly around 15 or 18%. In coming to this conclusion I am stating nothing new, as this fact has always been recognized, and particularly by Sir Henry Drayton, the then Chief Commissioner, in the Eastern Rates Case, in re Eastern Tolls 22 Can. Ry. Cases, at page 41, where the following statement appears:—

"While, as has been set out at greater length in the Western Rates Case, differences of condition do exist between eastern and western Canada, and while western freight rates have already materially been reduced, the general schedule there obtaining is still higher, notwithstanding the fact that certain western rates that may be instanced are lower. There is no doubt but what the act requires and the general public interest of the country, as a whole, demands, that, if practicable, eastern rates should be advanced so that the different schedules may more nearly approach a parity."

This principle should be followed. Giving weight to the conditions set out in Re Western Tolls, as affecting the relative levels of tolls east and west of Fort William, and also bearing in mind changes in conditions which have taken place, I am of the opinion that it is justifiable to allow a reasonably less percentage of increase on freight tolls west of Fort William than east thereof. Consequently, I have concluded that an increase in rates should be granted along the following lines, with the exception of the items hereinafter specially referred to.

Until Dec. 31, 1920, I would give a general increase of 40% in eastern freight rates, and 35% in western freight rates, with 20% both east and west in passenger fares, which, however, should not exceed 4c. a mile, 50% in sleeping and parlor car rates and 20% on excess baggage.

Commencing Jan. 1, 1921, and until there is another revision of rates, I would reduce these percentages on freight to 35% in eastern territory and to 30% in western territory, with 10% reduction in passenger fares up to July 1, 1921, when passenger rates should come back to the basis in effect prior to the coming into force of this judgment; but continuing the full increases in parlor and sleeping car rates and excess baggage. It will of course be understood that the percentages of increases in the rates east and west of Port Arthur herein granted will, in the case of through rates between the east and the west, excepting trans-continental commodity rates, apply to the east and west factors thereof respectively.

This will, in my opinion, very nearly give the C.P.R. an even balance sheet at the end of the present fiscal year, and for the year 1921, according to my estimate, should give it a reasonable surplus; but it may still leave Canadian National Rys. System with an operating deficit.

At the hearing I was very much impressed with the argument presented by those opposing any increase on crushed stone, sand and gravel, as, from the evidence adduced, and which was not contradicted by the railway companies, they must be making a fairly substantial profit in the transportation of these commodities; but I am arriving at this conclusion, to a very great extent, by the public necessities of Canada at the present time. Perhaps, next to the railways, nothing is more urgently required than the improvement of our highways, and any increase in the rates on the materials entering into their construction must of necessity defer this much needed improvement; in fact, it was stated by Mr. McLean, of the Ontario Public Works Department, that they were now establishing in many parts of that province crushing plants at local centers; as the rates were already greater than the traffic would bear, and therefore any increased rate would not only deprive the public of a real necessity, but would probably reduce the business and consequently the profits of the railways, therefore I would give no increases in the rates on these three commodities.

Owing to the unprecedented cost of coal today and the likelihood of the same continuing for some time to come, I am not inclined to grant the above general increases in this commodity. The order in council, no. 1863, gave the following increases:—

In rates 0 to 49c. a ton:	Increase, 15c.
In rates 50 to 99c. a ton:	Increase, 20c.
In rates 100 to 199c. a ton:	Increase, 30c.
In rates 200 to 299c. a ton:	Increase, 40c.
In rates 300 up a ton:	Increase, 50c.

This scale was that prescribed in the McAdoo order for the United States. There is no lower rate now from Black Rock to Ontario points than 80c., and the higher rates are \$1.80 to Kingston, \$2.40 to North Bay, Parry Sound and Depot Harbor, and \$3.10 to Sudbury. Based on the current rates, I would allow the following increases, viz.:—

In rates 0 to 80c. a ton:	Increase, 10c.
Over 80 to 150c. a ton:	Increase, 15c.
Over 150c. a ton:	Increase, 20c.

In the west the minimum line haul rate is also 80c., but the hauls being much longer than in eastern Canada, the great bulk of the territory will take the maximum increase of 20c. From Lethbridge, for example, the maximum increase will operate to destinations Medicine Hat and east.

The increase in the rates on cordwood, slabs, edgings, and mill refuse, all for use exclusively as fuel, should be limited to 10%.

I would also refuse any increase in milk rates, as only a few months ago this Board, on a special application, refused any increase on this commodity.

I also think there should be no increase in the minimum class rate scale as established by order in council no. 1863, and now in force by a recent order of this Board, as well as the minimum charge per shipment.

As substantial increases were given in commutation fares by special order of this Board only a few months ago, no additional increase should be given them herein.

So far, the freight rates dealt with are those charged for line hauls. Local

switching rates were materially increased by the carriers about 10 months ago, and these, together with the tolls for interswitching, it is not the purpose of this judgment to increase. The same must be said of the charges for such other incidental service as milling in transit diversion, reconsignment, stop-overs, demurrage, weighing and the like. Should the carriers feel that the existing tariffs do not fully compensate them for the services rendered, any formal applications they may make will be investigated and dealt with on their merits.

In some industries the amount of increase in the rates themselves is a consideration secondary to the preservation of the rate relationships from the points of production. For example, the maintenance of the existing spreads between the rates from the various mills in British Columbia was urged at the hearing by the lumber interests of the province. While the principle of percentage increases must necessarily disrupt these relationships to some extent, it is considered important that in the working out of the tariffs such recognized differentials as have been referred to should be preserved so far as may be practicable, even though certain rates may result which are lower, or higher than they would otherwise be.

Transcontinental commodity rates may be advanced correspondingly to the increases now permitted in the United States, preserving the relationship between the territorial groups of the two countries that have obtained since 1918.

As under a percentage division of joint through rates each participating carrier will receive its appropriate share of the increases herein authorized, it is necessary that those railways that in joint traffic are paid an arbitrary division in a fixed amount, should receive a percentage of increase corresponding to the increase in the through rates.

As our jurisdiction for granting increases on certain lines of railway in western Canada depends entirely upon the amendment to sec. 325 of the Railway Act, 1919, which expires on July 6, 1922, the rates hereby established cannot continue beyond that date, unless Parliament, in its wisdom, sees fit to extend the provisions of that section. Therefore the rates herein provided for shall not extend beyond July 1, 1922.

E. M. Macdonald, K.C., on behalf of the Maritime section of the Canadian Manufacturers Association, and Mr. Finn on behalf of the Nova Scotia Government, urged that in any advance which might be made the proportional arbitraries east of Montreal in existence prior to 1915, should be maintained. I fear, however, we have not sufficient information at present to justify us in attempting to deal with this question; therefore, in arriving at my decision, I have not taken this into consideration, but always reserving the right of the Maritime people to apply to the Board, and also reserving the right to render a decision on the sugar application, now before us, regardless of what the general decision may be hereunder.

At the hearing, H. G. Kelley, speaking for the Railway Association of Canada, stated that they had decided to pay the railway employes the rates granted to the United States employes by the Chicago award, granting back pay to May 1, 1920, and on cross examination he frankly admitted that if they were not granted he firmly believed "there would be a general strike throughout Canada." Realizing as I do the sincerity of his

statement, and the terrible results which would necessarily befall the people of this country as a whole under such a contingency, I have taken his statement into consideration in adjusting the rates herein. It must not be forgotten that a very large part of the increase hereby granted will be necessary to take care of this increased wage, in the case of the C.P.R. alone, amounting to nearly \$22,000,000 per year.

I realize these rates will be a substantial burden upon the people of Canada, but it was admitted by all parties at the hearing that the cost of everything entering into the operation and maintenance of railways has increased more than 100% during the past four years, while the railway companies have been granted increases in what are known as the 15% and 25% cases, amounting on an average to not more than 35%. It is entirely unreasonable that the railway companies should be expected to provide the necessary transportation services for this country unless they receive rates somewhat in proportion to the increased cost of their operation, and while the rates herein established fall below the increased cost of everything else, yet I feel they will be sufficient to enable the railways to carry on during the term to which they apply, and that the people, in the light of the actual facts, will cheerfully contribute their quota in order to keep these utilities in a position to efficiently transport the business of the country.

The Canadian Pacific, Grand Trunk and Canadian Northern Ry. Companies will be required to furnish to this Board monthly statements of their operating revenues, and, should this Board, at any time before July 1, 1922, be of the opinion that a greater or less amount of money is being paid to the railway companies than is actually necessary to enable them to maintain a reasonable degree of operating efficiency, this Board reserves to itself the right, at any time, on notice, to readjust the rates to meet the conditions then existing.

The steam railway companies subject to this Board's jurisdiction shall therefore be entitled to publish and file tariffs in accordance with the above provisions effective on or after Monday, Sept. 13, instant.

In working out the rates under this judgment, fractions will be disposed of as set out in order in council no. 1863.

The foregoing judgment was concurred in by Assistant Chief Commissioner S. J. McLean; Deputy Chief Commissioner Hon. W. B. Nantel, and Commissioners A. S. Goodeve and J. G. Rutherford, C.M.G.

The Board of Railway Commissioners' Orders.

The Board passed general order 308, Sept. 9, as follows:—Re application of the Railway Association of Canada, on behalf of the railway companies members thereof and of all other railway companies within the Board's jurisdiction, for authority to make a general advance of 30% in the tolls at present charged for the carriage of freight by the said companies; and the further application for an additional increase of 10% in all freight rates, and an increase of 20% in passenger fares, 50% in sleeping and parlor car rates, 40% in the rates on milk, and 20% in the rates for excess baggage. Upon hearing the applications at Ottawa, Aug. 10, 11, 12, 18, 19, 20 and 21, in the presence of counsel for and representatives of Canadian Pacific, Grand Trunk, Canadian Northern,

Toronto, Hamilton & Buffalo, New York Central, Essex Terminal, Wabash, and Great Northern Railways, Michigan Central Railroad, Canadian Railway Association, Canadian Freight Association, Canadian Manufacturers' Association, the Livestock Dealers' Association, Canadian Wholesale Grocers' Associations, Canadian Lumbermen's Association, Retail Merchants' Association of Canada, Clay Workers' Association, Canadian Export Paper Company, Dominion Canners Ltd., Carnation Milk Products, Ltd., Riordan Paper Co., National Dairy Council, United Farmers of Ontario, Canadian Council of Agriculture, certain commercial organizations of the Maritime Provinces, Retail Coal Dealers of Ontario, Eastern Canada Livestock Union, Crushed Stone Industries of Ontario, Western Canada Livestock Union, Canadian Construction Co., boards of trade of Winnipeg, Toronto, Montreal, and St. John, City of Toronto, Hamilton Chamber of Commerce, London Chamber of Commerce, Border Cities Chamber of Commerce, provinces of Manitoba, Saskatchewan, and New Brunswick, and Ontario Department of Public Highways, the evidence offered and what was alleged; and upon reading the written submissions filed, judgment, dated Sept. 6, 1920, was delivered by the Chief Commissioner, and concurred in by the other members of the Board who heard the application, a certified copy of the said judgment being attached hereto marked A, it is ordered that the changes in the tariffs of the companies operating steam railways subject to the board's jurisdiction, as set forth in the judgment, which is hereby made part of this order, be and they are hereby authorized.

The Board of Railway Commissioners passed general order 309, Sept. 9, as follows:—Re application of Railway Association of Canada, on behalf of railway companies, members thereof and of all other railway companies within the Board's jurisdiction, for authority to make a general advance of 30% in the tolls at present charged for carriage of freight by the said companies; and the further application for an additional increase of 10% in all freight rates and an increase of 20% in passenger fares, 50% in sleeping and parlor car rates, 40% in the rates on milk, and 20% in the rates for excess baggage. Supplements to the standard freight and passenger tariffs of the undermentioned railway companies having been filed on the basis prescribed by the Board's judgment, dated Sept. 6, and general order 308, dated Sept. 9, it is ordered that the following supplements to standard freight tariffs of maximum mileage tolls be approved; the rate scales of the said tariffs to be published in at least two consecutive weekly issues of The Canada Gazette, preceded by the following notice: "The undermentioned supplements to standard freight tariffs having been filed for the approval of the Board of Railway Commissioners for Canada, and being found by the Board to be in accordance with its judgment, dated Sept. 6, and its general order 308, dated Sept. 9, and having been approved by its general order 309, dated Sept. 9, the rate scales thereof are hereby published."

Atlantic, Quebec & Western Ry., Supplement 1 to C.R.C. 26.

Canadian National Ry., Supplement 1 to C.R.C. no. E.115.

Canadian Northern Ry., Supplement 1 to C.R.C. no. E.1102. Supplement 1 to C.R.C. W.1182.

Canadian Pacific Ry., Supplement 1 to C.R.C. no. E.3543. Supplement 1 to C.R.C. no. W.2392.

Dominion Atlantic Ry., Supplement 1 to C.R.C. 576.

Esquimaux & Nanaimo Ry., Supplement 1 to C.R.C. 402.

Glengarry & Stormont Ry., Supplement 1 to

C.R.C. 93.
Grand Trunk Ry., Supplement 1 to C.R.C. no. E.3957.
Grand Trunk Pacific Ry., Supplement 1 to C.R.C. 298.
Great Northern Ry., Supplement 1 to C.R.C. 1423, 1424, 1425, 1430.
Edmonton, Dunvegan & British Columbia Ry., Supplement 1 to C.R.C. 86.
Kettle Valley Ry., Supplement 1 to C.R.C. 174.
Quebec, Montreal & Southern Ry., Supplement 1 to C.R.C. 661.
Quebec Central Ry., Supplement 1 to C.R.C. 681.
Michigan Central Ry., Supplement 1 to C.R.C. 2812.
New York Central (Ottawa Div.), Supplement 1 to C.R.C. 1650.
New York Central (Adirondack Div.), Supplement 1 to C.R.C. 1681.
Quebec Oriental Ry., Supplement 1 to C.R.C. 37.
Napierville Junction Ry., Supplement 1 to C.R.C. 198.
Temiscouata Ry., Supplement 1 to C.R.C. 328.
Toronto, Hamilton & Buffalo Ry., Supplement 1 to C.R.C. 1227.
Central Canada Ry., Supplement 1 to C.R.C. 33.

It is further ordered that the following supplements to standard passenger tariffs of maximum mileage tolls be approved; the said supplements to be published in at least two consecutive weekly issues of The Canada Gazette, each preceded by the following notice: "The undermentioned supplement to standard tariffs having been filed for the approval of the Board of Railway Commissioners for Canada, and being found by the Board to be in accordance with its judgment, dated Sept. 6, and its general order 308, dated Sept. 9, and having been approved by its general order 309, dated Sept. 9, is hereby published."

Canadian Northern Ry., Supplement 1 to C.R.C. no. E.1064. Supplement 1 to C.R.C. io. W. 1492.
Canadian Pacific Ry., Supplement 1 to C.R.C. no. E.3187.
Grand Trunk Ry., Supplement 1 to C.R.C. no. E.2669.
Grand Trunk Pacific Ry., Supplement 2 to C.R.C. 660.
Halifax & South Western Ry., Supplement 1 to C.R.C. no. P.77.
Michigan Central Rd., Supplement 1 to C.R.C. 244.
Napierville Junction Ry., Supplement 1 to C.R.C. 92.
New York Central Rd., Supplement 2 to C.R.C. N.Y.C. 191.
Toronto, Hamilton & Buffalo Ry., Supplement 1 to C.R.C. 1209.

On Sept. 15 the Board of Railway Commissioners passed general order 310. Its recital was worded the same as that of order 309 above, the rest of the order being as follows:—Supplements to the standard freight and passenger tariffs of the undermentioned railway companies having been filed on the basis prescribed by the Board's judgment, dated Sept. 6, and general order 308, dated Sept. 9, it is ordered that the following supplements to standard freight and passenger mileage tariffs be and they are hereby approved; the said supplements, together with reference to this order to be published in at least two consecutive weekly issues of the Canada Gazette:—

Freight.

Algoma Central & Hudson Bay Ry., Supplement 2 to C.R.C. 478.
Algoma Eastern Ry., Supplement 1 to C.R.C. 223.
Central Vermont Ry., Supplement 1 to C.R.C. 1295.
Fredericton & Grand Lake Coal & Ry., Supplement 1 to C.R.C. 84.
New Brunswick Coal & Ry., Supplement 1 to C.R.C. 61.
Pere Marquette Ry., Supplement 1 to C.R.C. 2215.

Passenger.

Central Vermont Ry., Supplement 1 to C.R.C. 502.
Dominion Atlantic Ry., Supplement 1 to C.R.C. 404.
Fredericton & Grand Lake Coal & Ry., Supplement 1 to C.R.C. 4.
Great Northern Ry., Supplement 2 to C.R.C. 1161.
Glangarry & Stormont Ry., Supplement 2 to C.R.C. 2.
Midland Ry. of Manitoba (Northern Pacific Ry.), Supplement 1 to C.R.C. 317.

New Brunswick Coal & Ry., Supplement 1 to C.R.C. 4.
Pere Marquette Ry., Supplement 1 to C.R.C. 580.
Quebec Central Ry., Supplement 1 to C.R.C. 174.
Wabash Ry., Supplement 1 to C.R.C. 996.

On Sept. 23 the Board of Railway Commissioners passed general order 311. Its recital was worded the same as that of order 309 above, the rest of the order being as follows:—Whereas standard freight tariffs or supplements thereto of the undermentioned railway companies have been filed on the basis prescribed by the Board's judgment of Sept. 6, 1920, and general order 308, dated Sept. 9, it is ordered that the following tariffs and supplements be approved; the said tariff and supplements, with a reference to this order, to be published in at least two consecutive weekly issues of The Canada Gazette:—

Essex Terminal Ry., C.R.C. 544.
Boston & Maine Rd., Supplement 1 to C.R.C. 1908.
Maine Central Rd., Supplement 1 to C.R.C. no. C1566.

The Canadian Freight Association's Manager gave notice in the Canada Gazette of Sept. 11 of the supplements to standard freight tariffs which had been approved by the Board of Railways Commissioners, and published the rate scales thereof.

In accordance with the Board of Railway Commissioners' general orders 309 and 310, the various railway companies have given notice, in the Canada Gazette, of the supplements to their standard freight and passenger tariffs, putting the new rates in force.

Edmonton, Dunvegan & British Columbia Ry. and Central Canada Ry. Rates.

S. J. McLean, Assistant Chief Commissioner, Board of Railway Commissioners, gave the following judgment, Sept. 8, on the application of Edmonton, Dunvegan & British Columbia Ry. and Central Canada Ry. for approval of standard freight and passenger tariffs increasing their rates:—Application was launched for a 50% increase in freight rates and a corresponding increase in passenger rates. The rates of this railway are, for the reasons set out in "Re Edmonton, Dunvegan & British Columbia Ry. Co., 22 Can. Ry. Cas., 1," permitted to be on the Mountain scale. The application as launched asked, as has been pointed out, for a 50% increase in standard passenger rates. The standard rate of the Mountain scale being 4c., this would give a rate of 6c. a mile. In the course of the hearing, counsel for the railway companies substituted 5c. as the maximum rate per mile for which they were asking.

At the hearing, representation was made by counsel for the railways that a general application based on increased costs of operation was in course of preparation by the railways subject to the Board's jurisdiction. Representation was made at the hearing by Mr. Ford, counsel for the Grand Prairie Board of Trade, that the matter of rate increase should stand over until the general application for rate increase was dealt with. Subsequent to the hearing, the Board received a telegram from the Secretary of the United Farmers of Alberta, strongly urging that the application should not be decided before the general application of railway rate increases. When the application for general rate increases was launched, notification of the hearing was given to him.

During the hearing, representations were made as to the condition of the ser-

vice afforded on the applicant railways. It was strongly urged that the need for retention of the Mountain scale basis no longer existed. In addition to what was set out at the hearing, representations are on file from various organizations taking this position. It was strongly urged that with the limited population at present located in the country served by the railways concerned, any increase of rates would be highly detrimental. The burden of increased rates is one which should be imposed only when there is a thoroughly established justification therefor. At the same time, in the present application, as well as in the application launched by the railways for a general increase in rates, much material was submitted, reinforcing what is a matter of common knowledge, viz., that in the period which has elapsed since 1914 railway costs of operation have practically doubled, while rate increases have been very much less. The weighty responsibilities imposed upon the Board by Parliament compel the conclusion that rate inadequately remunerative are not only detrimental to the railway concerned, but, in a wider and more important phase, are detrimental to the public served by the railway, because if the rates do not adequately remunerate for the service, the efficiency will tend to deteriorate, and there will be progressive difficulty in obtaining those adequate facilities which are essential if traffic is to move.

While the Board was considering the evidence submitted in the present application, the application of the railways subject to the Board's jurisdiction for a general increase in rates was launched; and the Board was impressed with the idea that the position was well taken that the decision in the present application was one which should be considered in connection with the decision in the general rate application.

The placing of the Edmonton, Dunvegan & British Columbia Ry. on the Mountain scale was, as indicated in the judgment already referred to, a temporary measure. Conditions have not, however, so changed as to warrant at present the applying of the Prairie scale instead of the Mountain scale. As already pointed out, the present application, in the first instance, asked for an increase of 50% in passenger rates over the Mountain scale rate. Subsequently, this was reduced to an increase of 25%. The increase in passenger rates as allowed in the decision of the Board which has just issued in the general rate investigation is 20%, subject to a maximum rate of 4c., it being further provided that one-half the increase shall disappear at the end of Dec., 1920, and the other half on July 1, 1921.

On considering the various factors involved, I am of the opinion that the applicant railways should be allowed to put in force the same rate increases as are authorized in the Board's judgment in the matter of the application of the Railway Association of Canada, on behalf of the railway companies members thereof, and of all other railway companies within the jurisdiction of the Board, for authority to make a general advance of 30% in the tolls at present charged for the carriage of freight by the said companies; and that the rate increases authorized herein may become effective on the same date as authorized in the judgment in the application above referred to.

Commissioners Goodeve and Rutherford concurred in this judgment.

Provisions for Appeals from the Board's Decisions.

The Railway Act, 1919, contains the following provisions:—

"51. The Board may review, rescind, change, alter or vary any order or decision made by it, or may rehear any application before deciding it.

"52. (1) The Governor in council may at any time in his discretion, either upon petition of any party, person or company interested, or of his own motion, and without any petition or application, vary or rescind any order, decision, rule or regulation of the Board, whether such order or decision is made inter partes or otherwise, and whether such regulation is general or limited in its scope and application; and any order which the Governor in council may make with respect thereto shall be binding upon the Board and upon all parties.

"(2) An appeal shall lie from the Board to the Supreme Court of Canada upon a question of jurisdiction, upon leave therefor being obtained from a judge of the said court upon application made within one month after the making of the order, decision, rule or regulation sought to be appealed from, or within such further time as the judge under special circumstances shall allow, and upon notice to the parties and the Board, and upon hearing such of them as appear and desire to be heard, and the costs of such application shall be in the discretion of the judge.

"(3) An appeal shall also lie from the Board to such court upon any question which in the opinion of the Board is a question of jurisdiction, or both, upon leave therefor having been first obtained from the Board within one month after the making of the order or decision sought to be appealed from, or within such further time as the Board under special circumstances shall allow, and after notice to the opposite party stating the grounds of appeal; and the granting of such leave shall be in the discretion of the Board.

"(4) No appeal, after leave therefor has been obtained under subsection 2 or 3 of this section, shall lie unless it is entered in the said court within 60 days from the making of the order granting leave to appeal.

"(5) Upon such leave being obtained the party so appealing shall deposit with the Registrar of the Supreme Court of Canada \$250, by way of security for costs, and thereupon the Registrar shall set the appeal down for hearing at the nearest convenient time; and the party appealing shall, within 10 days after the appeal has been so set down give to the parties affected by the appeal or the respective solicitors by whom such parties were represented before the Board, and to the Secretary, notice in writing that the case has been so set down to be heard in appeal as aforesaid; and the said appeal shall be heard by such court as speedily as practicable.

"(6) On the hearing of any appeal, the court may draw all such inferences as are not inconsistent with the facts expressly found by the Board, and are necessary for determining the question of jurisdiction, or law, as the case may be, and shall certify its opinion to the Board, and the Board shall make an order in accordance with such opinion.

"(7) The Board shall be entitled to be heard by counsel or otherwise upon the argument of any such appeal.

"(8) The court shall have power to fix the costs and fees to be taxed, allowed and paid upon such appeal, and to make

rules of practice respecting appeals under this section; and, until such rules are made, the rules and practice applicable to appeals from the Exchequer Court shall be applicable to appeals under this Act.

"(9) Neither the Board nor any member of the Board shall in any case be liable to any costs by reason or in respect of any appeal or application under this section.

"(10) Save as provided in this section:

"(a) every decision or order of the Board shall be final; and,

"(b) no order, decision or proceeding of the Board shall be questioned, or reviewed, restrained or removed by prohibition, injunction, certiorari, or any other process or proceeding in any court."

The Dominion Government States its Position.

The following official statement was given out at Ottawa, Sept. 11:—"Telegrams have been received from different parts of the country protesting against the judgment of the Board of Railway Commissioners granting a general increase in railway rates, and requesting that the action of the Board should first be suspended and afterwards set aside by the Government. Many of the wires received have been sent under misapprehension as to the position of the Board of Railway Commissioners and its action, to the Government. The wires, indeed, would indicate that a belief exists which, if not prevalent, has at least obtained in certain parts of the country, that the Board of Railway Commissioners is merely a department of the Government service. This is not the case, and it is important that the right position be stated.

"In 1903 Parliament decided that the control of railways was to be removed from direct departmental and political interference and provision was made for a Board of Railway Commissioners. The Board was subsequently constituted and has since discharged the statutory and judicial functions assigned to it in a manner undoubtedly, on the whole, in the public interest, and to the general acceptance of the people. It has not been interfered with by this or any other government. Instead of being a mere governmental department, the Board is, by statute, constituted a court, and has the rights, privileges and independence of a court. The act, however, provides for an appeal to the Governor in council, and reserves the right of the Governor in council on such appeals to vary or rescind any order, rule or decision of the Board. The practice that has grown up under this rule is well settled. The decisions of the Board cannot lightly be interfered with. As a matter of fact, since the Board commenced its operations no judgment of the Board has been set aside by the Governor in council. In a case of the importance of the present it undoubtedly becomes the duty of the Governor in council to go carefully into the whole of this issue, to hear the arguments that may be made, and, after becoming seized of the whole matter, to dispose of the appeal, having regard to the underlying principles of the Railway Act, the rights of shippers, the rights of the carriers, and the underlying national interests.

"The question of a stay of the Board's judgment has been as carefully considered as the very short time at the Government's disposal renders possible. The Board's judgment goes into effect on Sept. 13. The Government has had before it the complete judgment of the Board, embodying references to the evi-

dence of the reasons for judgment. This has been carefully studied. As against this there have been, and, of course, could be presented, only brief contentions by way of protest. The judgment finds that the relief granted is necessary and should be applied, and this after the hearing of evidence and arguments on both sides. A suspension means more or less indefinite postponement, and if the judgment is right, would render impossible the remedying of any injustice done. The judgment of the commissioners, which, it should be pointed out, is unanimous, being concurred in by all the commissioners who sat upon the case, further indicates that the objections now urged were taken into account, and emphasized that such objections went to the measure of relief that ought to be granted rather than to the claim that no increase should be made. The official judgment of the Interstate Commerce Commission of the United States has, as well, been available for reference. This judgment, it may be noted, is now in force. A perusal of this judgment discloses that more general, and, in many cases, heavier increases have been granted to railways in that country. For example, on coal the Interstate Commerce Commission has increased the rate 35% in western territory, and 40% in eastern territory. In Canada the rates on coal are increased 10c. a ton on all existing rates not exceeding 80c., and increased 15c. a ton on all existing rates over 80c. a ton and not exceeding \$1.50 a ton; and 20c. a ton on all existing rates over \$1.50 a ton.

"It will be noted that the increase in Canada is very considerably the lower. Coal constitutes a large proportion of the total traffic of Canadian carriers. The rates on sand, gravel and crushed stone in the U.S. have been increased 40% for the eastern territory and 35% in the western. In Canada no increase whatever is allowed. On cordwood, slabs and mill refuse used for domestic fuel, the same increase has been granted in the U.S., while in Canada the increase is held down to 10%. The general increases allowed in U.S. territory are reduced in the cost of milk movement, the increase allowed there by the Interstate Commerce Commission being 20%. In Canada no increase whatever is allowed.

"Over and above this, the increases in the U.S. are not limited as to time in the manner as to which increases in Canada are. The general increases of 35% in western territory and 40% in eastern territory allowed by the Canadian Board are reduced, under the judgment, to 30% and 35% effective Jan. 1 next, and, in addition, the railway companies are bound to submit monthly statements so that their earnings may be checked and reductions made in rates, in case the rates allowed proved unnecessarily high.

"It should also be noted that the increase in passenger rates is also limited. In the U.S. territory the increase is 20% in Canada the increase is 20%, but in Canada the increase is to be reduced to 10% effective January 1 next, and on July 1 next the increase is cancelled altogether. No limitations are made in the U.S. order.

"The above references are necessary to be taken into account when the Government is asked to take responsibility for the confusion, and possibly the injustice, that may be done at this date by interfering with the Board's order to suspend its application. The whole subject can, however, be fully gone into on appeal. Every facility will be given to argue the merits of all contentions ad-

vanced and to review the entire order. If it should appear to be a case where the appeal should be granted and the decision reversed, there could, if deemed proper, be provision for rebates of rates charged beyond those ultimately fixed. The Government, while decided that it could not justify now a suspension of the order, will facilitate in every way the early

hearing of the appeal." Appeals against the Board of Railway Commissioners' Decision.

We were advised by the Clerk of the Privy Council on Sept. 23 that appeals to the Privy Council, against the Board of Railway Commissioners' judgment of Sept. 6, authorizing increases in railway freight and passenger rates had been

received from the Manitoba and Saskatchewan governments, the Prime Minister of Manitoba, the cities of Toronto and Winnipeg, the Halifax, Winnipeg and Edmonton boards of trade and the Canadian Wholesale Grocers Association, and that the appeals would be heard in the Privy Council Chamber, Ottawa, on Sept. 29.

Car Records and Their Relation to Transportation and Car Accounting.

By J. D. Altimas, Assistant General Superintendent Car Service, C.P.R., Montreal.

In the early days of railroading, car records were not much in vogue, for the reason that cars usually were confined to service on the owner's rails. Shipments moving from one road to another were transferred at the junction point to cars of the receiving road. This condition obtained for many years, but with the expansion of industrial activities came through rates and through routes, and these aided, by that all important factor, competition, gradually compelled all roads to permit their equipment to be loaded to points on other roads, with the understanding that the car and the contents would move through to destination without breaking bulk. As cars commenced to move from one road to another, always subject to possible delays and diversions, it became necessary for car owners to keep a close tab on the movements of both home and foreign equipment. These same conditions made it necessary for the roads to get together and formulate rules and regulations to cover the interchange of equipment and to protect the accounting of car hire.

Up to June 30, 1902, the remuneration for the use of freight cars was on a mileage basis, i.e., so much for each mile a car moved. The rates varied according to special conditions and territories, but usually the rate for common cars, i.e., box, flat, coal and stock, was six mills a mile, while the rate for special class cars, i.e., refrigerator, tank, palace horse, etc., was $\frac{3}{4}$ c. a mile. These rates were paid for both the loaded and empty movement, but when cars did not move, they did not earn anything. In those days we did not have any demurrage regulations, and as a result cars were delayed most unreasonably at unloading stations and in many cases at the loading stations. Many of the railways deliberately allowed empty cars to lie around, waiting prospective loading, to avoid empty mileage. Such delays were often to the great detriment of the car owners, which had business available on their own roads, which they were unable to accept and move on account of shortage of equipment. In the early nineties, when the writer was chasing cars through New England and the New York and Pennsylvania territories, it was not unusual to find cars delayed under load for periods of two, three or even four months at a time, and the shippers or consignees did not consider this practice unreasonable, although they very seldom made much effort to justify it, simply stating that it was one of the risks incident to the transportation business. It certainly was cheap storage for the shippers and consignees, although a most expensive proposition for the railways, both in the matter of car supply and terminal facilities. These conditions, which permitted excessive delays to car equipment, were mainly responsible for the stories, both told and published, of "lost cars." There is no doubt that many roads had

considerable difficulty in locating their equipment in those days, principally due to the inadequate records kept by many of the roads, but since the advent of the per diem as the basis of remuneration for the use of freight cars, we do not hear much about lost cars. Under per diem rules the road receiving a car must account for it to the car owner, at the current per diem rate, from the date of its receipt up to the date it is delivered to the owner, or to another road, or in the case of a destroyed car, up to the date it is reported as a "destroyed" car to the owner, in accordance with per diem rules.

We may take it for granted that in recent years the majority of the railways, especially the larger roads, have been maintaining fairly good records. Generally speaking, car records are maintained at all stations and contain everything there is to know in connection with the handling of the car and contents, including the charges assessed, or collected, while in the terminal. Apart from the accounting features these records show the following information: Initials and number of car, kind of car, date and time of arrival, train reference, point of shipment and kind of commodity if a loaded car, date and time of notification to consignee of arrival of his shipment, date and time of placement, date and time of release, date and time car is forwarded, train reference, and, if car is loaded, kind of commodity and destination.

At stations where a great number of cars are handled, there is also maintained a daily on hand report, usually referred to as the yard check. This report shows the initials and number of the car, kind of car, on what track located and whether loaded or empty, and if held, for what purpose. At stations where cars are interchanged with other roads, an interchange report is maintained, which shows the initials and number of the car, kind of car, name of road to which car is delivered, date and time of interchange, name of billing station, name of destination station and kind of contents. An index record for ready reference is also maintained at the larger stations.

The movements of all cars on any part of the road and on foreign roads are recorded in the books of the car accountant, whose office is usually at headquarters. The basis of these records is the agents' interchange report, the conductor's freight or mixed train report, and the foreign road's junction report.

The interchange report now in use on all roads is authorized by the American Railroad Association, and is known as the reciprocal form of report. The agent of the delivering road prepares the report in quadruplicate, showing information for all cars delivered, and passes the completed report to the agent of the receiving road, who checks the information shown thereon, and, if he finds it correct, signs all four sheets, certifying to the receipt of the cars. He retains one

copy of the report for his station record, sends one copy to his car accountant, and returns two copies to the agent of the delivering road. The latter keeps one copy for his station record and forwards one copy to his car accountant.

The conductor's freight or mixed train report is not uniform on all roads, but the information usually shown includes: initials and number of car, loaded or empty, kind of car, date of movement, name or number of station taken at, name or number of station left at; if loaded, kind of contents, name or number of billing station, name or number of destination station. Some of the roads also include information covering tonnage rating, tare tons, content tons, locomotive record, etc., for statistical purposes.

Under American Railroad Association Rules, where a railway delivers a foreign car to a connection, not the owner of the car, he is obligated to advise the car owner the name of the road the car was delivered to, and the date of the movement, and to show whether the car was loaded or empty. This is called the junction report. Roads which use the cut up system preserve the interchange slips for foreign cars delivered, and send them to the car owners as the junction report. This saves the delivering road considerable work, and gives the car owner a first hand record, avoiding all errors due to transcribing.

Practically all of the larger roads now use the cut up or self transcribing system for conductor's train report and the agent's interchange report. Under this system the conductor's train report consists of one wide form giving all the information required, including an extra column for the date of the movement, also one narrow form, which is a duplicate of the wide form, in so far as it refers to the initials and number of the car, number of station car is taken at, and left at, and date of movement. This narrow form has punch holes about 2-16 of an inch, between the lines, to the left of the initials column for the use of the sorting clerks. These two forms are made at one operation by the use of carbon paper. The information covering initials and number of cars, numbers of stations cars are taken at and left at, and the date of the movement must be written in for every car handled. Ditto marks must not be used. This is necessary on account of the forms being cut up into slips. Each slip must show complete information covering the car referred to. For all other information called for by the form ditto marks may be used wherever considered advisable.

The agent's interchange report consists of four wide forms giving all the information required, including an extra column for the date; also two narrow forms which are duplicates of the wide forms, in so far as they refer to the initials and number of the cars, name of road delivered by, and name of road delivered to, name of station delivery is effected, and

date of delivery. The narrow forms have punch holes, about 2-16 of an inch, between the line to the left of the initials column for use by the sorting clerks. The narrow forms are of different colors, one pink, for the use of the delivering road, and one canary, for the use of the receiving road. The pink indicates a delivered record, the canary a received record. The original and five copies of this report are made in one operation by use of carbon paper. The information covering initials and numbers of cars, name of road delivered to, name of station at which delivery is effected, and the date of delivery, must be written in for every car delivered. Ditto marks must not be used. This is necessary on account of the forms being cut up, and each slip must show complete information covering the car referred to. For the information called for by the form ditto marks may be used wherever considered advisable. These forms, when completed by the agents and conductors, are forwarded promptly to the car accountant's office, where they are entered into the car record books.

The handling of these reports in the car record office is a systematic and interesting operation which I will endeavor to describe to you. As soon as the mail is opened the reports are passed from the mail desk to the examining clerks, who see that all the information called for by the form is properly entered, after which the narrow forms are separated from the wide forms. The wide forms of the conductor's train report are immediately turned over to the statistical department for its use, while the wide forms of the interchange reports are filed for ready reference. The narrow forms are then sorted, the ones having only one car being placed in one lot, those with two cars in another lot, those with three cars in another, and so on. These forms are then made up into packages of from 200 to 300 per package, the forms showing the smallest number of cars being on top. This is done to enable the cutter to dispose of the blank slips as they come from the machine, and thus eliminate the unnecessary handling of blank slips by the sorting clerks. Interchange reports are given preferred handling. When the narrow forms reach the cutter, they are put through the machine, and as the slips leave the machine the cutter immediately separates the blank slips from the record slips, and throws the blanks into a receptacle used for this purpose, thus eliminating the unnecessary handling of blanks by sorting clerks. These slips are placed in small boxes, enclosed on three sides only, and these boxes have their tare weight (equivalent number of record slips) stencilled on them, so as to facilitate the weighing. These tare weights are checked occasionally to see that there is no variation. The boxes with the record slips are weighed, the correct weights taken, and they are then passed on to the sorting clerks. The machine used for this purpose is of the advance lever type, and when the reports are of uniform size, with spacing and punch holes also uniform, there is practically no chance for mutilation of slips.

The paper used in the reports is of uniform weight, and when cut up the slips average about 17 to 1-16 of an ounce, or 272 an ounce. With a list of scale weights from 1-16 of an ounce to one pound, it is a very simple matter to ascertain the actual number of record slips handled each day by the sorting clerks and the record clerks. A clerk

weighs the slips as they come from the cutter, and credits the various sorters with the actual number of slips handled by them. This clerk also weighs the slips turned in each night by the various record clerks, and credits them with the correct number of record slips worked. An ordinary druggist scale, with a single beam graduated 1-16 of an ounce to five ounces, capacity 8 lb., gives every satisfaction.

The sorting table is usually a high desk, the top being slightly raised toward the back, with two rows of spindles 1 in. apart, the second row being about 7 in. behind the first. The spindles are usually made of brass, and are about 4 $\frac{1}{4}$ in. high. There is a shoulder or collar on the spindle, about $\frac{3}{4}$ in. from the bottom, and this part below the shoulder fits into holes bored in the top of the desk, which leaves about 4 in. of spindle above the desk. One or more spindles are allotted for each record, and sufficient spindles to accommodate all records are looked after by one sorting clerk.

The spindles are a little less than 2-16 of an inch and as the record slips have a hole 2-16 of an inch punched to the left of the initials column, the sorters slip them on to the spindles very rapidly, the only thing necessary being a knowledge of the various cars allotted to each spindle. Lists are prepared which show this information, and these are posted in suitable places on the sorting desk. Sorting clerks are educated to hold the slips in the right hand and sort with the left. When the slips are held in the left hand, the fingers cover the initials of the cars and the handling is consequently slower. Sorting clerks generally handle about 26 to 30 slips per minute. Some roads do not use spindles. Instead they sort into boxes, each box having a sufficient number of small compartments about 5 $\frac{1}{2}$ by $\frac{3}{4}$ in. to take care of the number of records operated.

The original sorting is done to suit individual requirements. Usually the first sorting is done in book order and the second in page order. In many instances, owing to the make-up of the book, a second sorting is not economical. The junction records, when received on the standard junction report form, are transcribed by typewriter to the cut up form, and are passed through the machine in the same manner as other forms and are then passed on to the sorters. Junction records received on the cut up forms are at once turned over to the sorters for handling. At regular periods during the day the record clerks take or receive the record slips from the sorting desk, and proceed to enter them in their books. By this method a record clerk does not have to handle any records except those which are to be entered in his book.

The record books are usually about 18 in. long by 17 in. wide. The home car record sheets are ruled about as follows: One column about 1 in. wide for last account, one column about 1 in. wide for car number, then 31 columns 6-16 of an inch wide, for the days of the month, and one column about 1 in. wide to the extreme right for mileage or per diem purposes. Each page holds 50 cars, and a book usually includes 5,000 cars in numerical order. The home car record usually is made up to take care of two months records, in order to avoid the necessary transferring of the records from one book to another.

The foreign car record sheets are ruled as follows: One column about $\frac{3}{4}$ in. wide, for the last account, one column

about $\frac{3}{4}$ in. wide, for initials, on column $\frac{3}{4}$ in. wide, for number, one column $\frac{1}{4}$ in. wide, for kind of car, one column $\frac{1}{4}$ in. wide, for per diem days earned, one column $\frac{1}{4}$ in. wide, for checking purposes, 31 columns $\frac{1}{4}$ in. wide for the days of the month, and three or four columns 6-16 of an inch wide for mileage purposes. Each page holds 50 cars, and each book contains space for 5,000 or 6,000 cars, of which 1,500 to 1,800 are actually in service at any one time. These books are made up to show cars in alphabetical road order and in numerical order and are indexed for ready reference.

The loose leaf principle for car records is generally used by the larger roads. They cost considerably less, and can be manipulated to suit all conditions; especially is this true of the foreign car records, where the number of cars handled fluctuates from month to month.

When the clerk is ready to enter records, he first finds the space allotted to the car, and then enters in the block which represents the date of the movement, the number of the station at which the car was taken, and the number of the station at which car was left. Usually the number of the station at which car is taken already appears in the block, and it is only necessary to enter the number of the station at which the car is left, and a check mark drawn after the number of the station at which the car is left indicates the record is complete. Where the car moves empty, the pencil line drawn above the number of the station at which car is left indicates the record is complete.

In the case of interchange records, a receipt from a connecting road is entered by showing the symbol representing the road in the upper left hand corner of the block, immediately followed by the number of the station. To indicate a delivery to a connecting road, the symbol of the road is entered in the lower right hand corner of the block, preceded by the station number. In practically all cases the number of the station already appears in the record and it is only necessary to enter the symbol.

A good medium hard pencil is used for entering records. Some roads use a black pencil to indicate a loaded movement, and a red or purple pencil to indicate an empty movement. Several of the larger roads use a black pencil exclusively, and draw a line above the number of the station at which the car is left, to indicate the car moved empty. Home record clerks average about 300 entries an hour, whereas foreign record clerks average about 225 entries an hour.

Roads which do not use the cut up form of reports, simply take the interchange reports, the conductors' train reports and the junction reports, from the mail desk, place them in packages of suitable size for handling and pass them around the several record clerks, who enter the movements direct from the reports to the books. Under this method each clerk must examine every car shown in the reports, in order to pick out the records which are to be entered in his record. This takes considerable time and labor. Any road which handles more than six or seven records will find it advisable and economical to use the cut up form of reports.

With a record of every movement made by cars on his own rails, with the interchange record of cars delivered to and received from connections, and with the junction record of his cars furnished by foreign roads, a car owner has a complete record of every one of his cars dur-

ing each month of each year. This enables him to keep a close check on the handling of his cars by foreign roads, and to check the earnings of his cars under any and all circumstances. He is also in a position to know what other owners' cars are doing on his rails.

Car records, properly maintained and kept up to date, are of great benefit, and serve many purposes of the transportation department in addition to being the basis of the accounting for car hire. The current records are used constantly: To furnish records to the public in connection with shipments in which they are interested. To furnish records to the transportation department, to assist in tracing freight urgently required at destination, or which may have been unduly delayed in transit, or which may be required to be diverted in transit. To furnish location of special class equipment, such as refrigerator, tank, potato, Eastman heaters, palace horse, special grain cars, etc., to enable the car service department to keep them in the special service to which they are allotted or to move them to points where they are required, also to see that such cars are used to full advantage. To furnish car movements, loaded and empty, to the transportation department, to assist in tracing delays and placing responsibility, and to the claims department to assist in locating overs and shorts and disposing of claims. To check the handling of cars on foreign roads and thus overcome unnecessary delays and diversions. To furnish weekly or monthly statements of the distribution of all classes of equipment by districts or divisions. To furnish records of carloads transhipped in transit. To furnish mileage, loaded and empty, made by special class cars of any class. To check the record of foreign equipment to see they are not unduly delayed or used contrary to car service rules. To check repair bills as to location. These are the principal items, but numerous enquiries of all kinds develop each day which can only be answered by reference to the car records.

A record clerk works on the average about six hours a day in entering records, and about two hours a day in furnishing locations, movements and other information.

The car record is the basis of the car hire accounting system, and the car records of foreign equipment handled are usually turned over to the accounting department about the tenth day following the close of the month. The first duty of the clerks on accounts is to ascertain what records are incomplete, i.e., what cars are short an interchange receipt or delivery and to check back against the interchange reports to see if such records were skipped by the record clerks. The second operation is to extend the number of days each car was on the rails, and where there is an incomplete record, to list the initials and number of the car so as to aid the correction staff in completing the records.

Where a missing delivery is involved, per diem is usually allowed up to the date car is last reported moving. In the case of a missing receipt per diem is allowed from the date car first moved. When the record has been completed, the balance of the per diem, if any due, is allowed in a subsequent month's report. After the per diem days have been extended, a per diem report is prepared for each road, showing the car number and the number of days earned, and same is forwarded to the car owner, within 40 days from the last day of the month in

which the per diem was earned. On receipt of the per diem report by the car owner, he enters in the record opposite each car the number of days per diem allowed by each road, and after all the per diem reports have been entered, if his records indicate a shortage, he has the privilege of making claim against the road which, according to his records, has short paid the per diem. Such claims to be valid must be issued and handled in accordance with the rules.

In addition to preparing reports for per diem earned currently, reports are also prepared to cover errors and omissions in per diem reports of previous months, to cover switching reclaims, to cover rule 14 reclaims, namely, cars held by one road on account of inability of another road to receive and to cover reclaims due to special conditions.

Under per diem rules, per diem must be paid by a road using a car to the car owner, for each and every day car is in service on that road, but where a road handles a car in terminal switching service for another road, it is entitled to an arbitrary reclaim from the carrier road of an agreed number of days not to exceed five for each car handled in such service. Per diem rule 15 also provides that where a road holds cars on account of the inability of another road to receive them, the holding road is entitled to reclaim from the road on whose account the cars were held, the full amount of per diem involved, always provided that due notice is given in accordance with the rules.

The per diem rules agreement, to which practically all Canadian and United States roads subscribe, is promulgated by the American Railroad Association and lays down rules to govern every phase of per diem accounting. These rules in their original form were adopted and made effective on July 1, 1902. Since that date there have been changes from time to time in the rate, to take care of the increased cost of owning and operating a car. At present the rate is 90c. a day and many roads claim this rate under present conditions is not sufficient compensation to take care of the capital and maintenance charges. The main objection to the rules in their original form was that no penalty was provided for the nonpayment of per diem earned, and as a result the car owner was put to considerable expense to collect what rightly belonged to him. On July 1, 1913, a penalty of 5c. a car a day was made effective when per diem was not paid to the car owner within six months from the last day of the month in which the per diem was earned. At first this rule brought about considerable improvement, but it did not accomplish what was expected of it. To meet this situation, which was the weak spot in the per diem rules agreement, revised rules, with severe penalties for non-payment within a reasonable period, were made effective on Mar. 1, 1920. The next few months will show just how these regulations will work out.

The per diem rules have done more than anything else to force the railways to keep proper car records. While it may be true that the cost of accounting for car hire under per diem rules is much greater than under the mileage plan, yet I doubt very much if you could find a dozen railway car owners who would agree to return to the old method of settlement for car hire on a mileage basis. Under the per diem system a car owner knows exactly what his cars earn, and methods are provided to permit of a pro-

per accounting, whereas, under the mileage plan, the car owner had no means whatever of checking the earnings of his cars on foreign roads, and had virtually to accept whatever was allowed. In the old mileage days, many cases of deliberate dishonesty in accounting were developed, and the conditions helped a great deal in the agitation which was carried on in favor of the adoption of the per diem system.

Car records to be of value must be properly maintained and kept up to date. This can only be accomplished by the hearty co-operation of all concerned in the preparation and handling of the reports and the records. In the car accountant's office surprise checks are used to a great extent, and with good results, to ascertain if the correct and complete information is being recorded in the books. With this system the clerks soon realize that they must do their work properly or make way for others who will. The secret of the whole transaction is system and supervision.

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

Canadian National Railways Earnings.

	1920	1919
January	\$ 7,727,562	\$ 6,787,517
February	6,516,059	6,265,562
March	7,761,326	7,160,086
April	8,207,478	6,936,635
May	8,305,860	7,884,287
June	7,776,538	6,433,035
July	9,003,674	7,896,685
August	9,582,989	8,415,864
	\$64,421,486	\$57,779,621

Canadian Northern Railway System.

	1920	1919
January	\$4,200,700	\$4,026,000
February	3,862,300	3,363,800
March	4,587,700	3,554,350
April	4,732,623	3,873,149
May	4,868,500	4,337,750
June	4,364,600	3,131,000
July	5,168,500	4,347,300
	\$31,779,923	\$26,638,349

Canadian Pacific Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, from Jan. 1, 1920, compared with those of 1919:

	Gross	Expenses	Net	Increase or decrease
Jan.	\$13,914,569	\$13,328,628	\$ 585,941	*967,571
Feb.	13,557,104	12,843,231	713,873	*267,242
Mar.	15,715,937	13,758,171	1,957,766	418,721
Apr.	15,929,416	13,587,570	2,341,846	253,222
May	16,459,986	13,262,044	3,197,942	164,182
June	16,480,574	13,849,757	2,630,817	*359,604
July	17,375,761	15,756,275	1,619,486	*1,377,218
Aug.	17,994,769	15,793,956	2,200,813	*1,577,955
	\$127,428,116	\$112,179,631	\$15,248,485	*\$3,712,865

Incr. 20,701,832 \$ 24,414,697
 Decr. \$3,712,865
 *Decreases.

The expenses for August include provision for estimated increase under new wage award. Approximate earnings for 2 weeks ended Sept. 14, \$8,249,000, against \$7,362,000 for same period 1919.

Grand Trunk Railway Earnings, Expenses, Etc.

Gross earnings, working expenses, net earnings, and increases or decreases, from Jan. 1, 1920, compared with those of 1919:

	Gross	Expenses	Net	Decrease
Jan.	5,054,034	5,867,445	*\$813,441	\$ 97,406
Feb.	4,660,831	5,159,742	*498,911	188,987
Mar.	5,756,372	5,491,293	265,079	575,215
Apr.	5,477,816	5,187,340	290,476	465,592
May	5,878,934	5,547,513	331,421	337,200
June	6,645,433	6,146,600	498,833	195,649
July	7,592,000	6,568,053	1,023,947	111,446

\$41,065,420 \$39,967,986 \$1,097,434
 Incr. \$5,462,833 \$7,043,040
 Decr. \$1,580,207
 *Deficit.

The Canadian Express Company's History.

By John Pullen, President, Canadian Express Co.

Early in 1842, Messrs. Pullin & Copp started a stage express business between New York, Albany, Troy and Saratoga Springs. A little later they connected at Albany and Troy with Virgil & Howard's Express, which operated to Whitehall by stage, thence by boat to Burlington and Plattsburg on Lake Champlain; St. Johns, Que., on the Richelieu River, stage to Laprairie, Que., and across the St. Lawrence to Montreal. The crossing of the St. Lawrence, between Laprairie and Montreal, was effected by scows, propelled with oars. In the winter these scows were pulled over the ice. Late in the season, when open stretches of water were encountered, oars were used, and when the navigation of the open stream was completed the scow was drawn up and again pulled over the ice. These lines were consolidated about 1844 under the name of Pullin, Virgil & Co.'s Express, operating from New York to Albany, through northeastern New York, Vermont, and to the principal cities of eastern Canada.

In 1844, Cheney, Rice & Co. operated a stage express business from Boston to Montreal. Later, they extended their operations from Montreal to Toronto by stage, on runners during the winter, and steamboat during the navigation season.

The United States and Canada Express Co., which was a consolidation of Cheney, Fiske & Co., having facilities on the Boston & Fitchburg and the Worcester & Nashua Roads, as early as 1848; Penniman & Co., operating between Boston and Lowell; and other small lines, was a very important company, under the management of Benjamin P. Cheney, of Boston, and Frank Richardson, Superintendent, at St. Johnsbury, Vt. This line covered a portion of eastern Massachusetts and extended up through New Hampshire and Vermont into Canada.

In 1854, Johnson & Co. started an express from Albany to Rutland and Saratoga, N.Y., with the idea of extending it to Canada, which was later consolidated with Pullin, Virgil & Co. under the name of the National Express Co. This company had express contracts on the following railways: Hudson River; Troy & Boston; Saratoga & Whitehall; Rutland & Washington; Western Vermont; Rutland & Burlington, and Champlain & St. Lawrence.

The Champlain & St. Lawrence Ry. was the first railway built in Canada. It was opened for traffic between Laprairie and St. Johns, Que., 17.38 miles, on July 23, 1836. The first train consisted of four cars, drawn by horses, locomotive power being adopted in 1837. This railway constituted an important link in the through rail and water route between Montreal and New York, via the Richelieu River, Lake Champlain and the Hudson River.

In 1854, a group of Canadian business men formed the British and North American Express Co., with a capital stock of \$200,000, to terminate in 10 years from May 1, 1855. The officers were: John P. Forsyth, President; Thos. Kirkpatrick, Vice President; Thos. Robinson, Secretary; E. W. Palmer, Treasurer, and J. C. Clark, General Superintendent. A contract was made with the St. Lawrence & Atlantic (now part of the Grand Trunk) covering express operations between St. Lambert and Richmond, Que., and Portland, Me., also between Rich-

mond and Point Levi, opposite the City of Quebec. Although the railway from Montreal to Toronto and Point Edward (Sarnia, Ont.), was completed in 1855, our information is that the express company operated between Montreal and Toronto and Hamilton by the Royal Mail Line of Steamships during the navigation season, and by stage, on runners, during the winter. The first year was spent in this manner, and a meeting was held in Montreal, at which the representatives of the several express companies operating in Canada were present. The British & North American Express Co. was represented by its Treasurer, E. W. Palmer, and General Superintendent, J. C. Clark; Cheney, Rice & Co., by Benjamin P. Cheney, of Boston, Mass., and Pullin, Virgil & Co. by E. H. Virgil, of Troy, N.Y. The object of the conference was to endeavor, if possible, to consolidate under one name and management the various express companies operating in Canada. After much controversy, these interests referred to above were merged under the name of the British & American Express Co., with a capital stock of \$300,000, which company continued to operate until the spring of 1865.

Realizing the importance of British and European trade, the British & American Express Co. established an office at Liverpool in the latter part of May, 1858, with Wm. Blackwood as agent. Upon Mr. Blackwood's death, Wm. Cuthbertson was appointed General Agent, and on the latter's death, E. J. Wearing was appointed and is at present the General Agent of the Canadian Express Co. at Liverpool. The establishment of the agency at Liverpool in 1858 was the nucleus for the extensive European organization of the Canadian Express Co., of which F. C. Salter is European Traffic Manager, with headquarters in London.

On Dec. 8, 1864, a meeting was held at Montreal, of the subscribers to take stock in a new express company to succeed the British & American Co. Wm. G. Fargo occupied the chair. It was resolved that the new company be called the Canadian Express Co.; that a provisional board of directors, consisting of B. P. Cheney, E. H. Virgil, Wm. G. Fargo, Rybert Kent and Thos. Kirkpatrick should obtain a charter for the new company, purchase the British & American Express Co.'s property and good will, and make arrangements for continuing the business from Jan. 1, 1865, until the new company received its charter by letters patent. This was issued Feb. 16, 1865, and read, in part, as follows:—

"That by and with the advice of our executive council of our Province of Canada . . . we do by these our letters patent constitute the said B. P. Cheney, E. H. Virgil, W. G. Fargo, Rybert Kent and Thos. Kirkpatrick, and all and every such other person or persons as now is or are or shall at any time hereafter become shareholders in the said company . . . a body corporate and politic with perpetual succession and a common seal by the name of The Canadian Express Company . . . with power to the said company to carry on the business of forwarding, as also of the constructing, owning, chartering and leasing of ships, steamboats, wharves, roads and other property required for the purposes of such forwarding business; the operations of the said company to be carried on within our said province, in and over the Grand Trunk Railway of Canada and all its branches, and all other railways . . . and also on all roads, rivers, lakes and other modes of communication within our said province."

The official seal of the Canadian Express Co. shows a pony express rider, which is emblematic of the express ser-

vice in the early days and the present time rapid transportation of merchandise, money and valuables. But how much more rapid it is today than prior to the advent of the steel highway, when a beaten path or a wagon track constituted the route between the business centers of the country.

The first meeting of the Canadian Express Co. after receiving its charter was held at Montreal, Mar. 15, 1865, when Thos. Kirkpatrick was elected President; Rybert Kent, Secretary-Treasurer, and Gilman Cheney, Superintendent. Semi-annual meetings of the directors were held at New York, Boston or Montreal, as the case might be. On Aug. 12, 1882, the President, B. P. Cheney, Sir R. J. Cartwright, E. H. Virgil, Gilman Cheney and Rybert Kent attended the semi-annual meeting at the Profile House, in the White Mountains.

Early in 1866 an arrangement was entered into between the Canadian Express Co. and the American Express Co., whereby, in consideration of the Canadian Express Co. relinquishing the line between Toronto and Hamilton, which was formerly occupied by the British & American Express Co., the American Express Co. turned over to the Canadian company the line between Toronto and Detroit.

On June 14, 1869, a new contract was made between the Canadian Express Co. and the Grand Trunk Ry. Co. Although particulars are lacking, it is presumed that the operations of the express company were extended over new portions of the railway system which had been built or acquired since the previous contract was entered into.

At a meeting of directors at Montreal Jan. 25, 1871, B. P. Cheney was elected President of the company, succeeding Thos. Kirkpatrick, deceased.

In 1872 contracts were made with the Toronto & Nipissing Ry. and the Midland Ry. (both now being part of the G.T.R. System) for the purpose of extending the company's operations over those lines.

At a meeting of directors at Boston, Feb. 1, 1875, a resolution was passed, increasing the company's capital stock from \$500,000 to \$1,500,000.

In 1877 a contract was made with the Intercolonial Ry. on behalf of the Canadian Express Co. and the Eastern Express Co., which were jointly interested and between which a partnership contract existed in relation to this business. The Eastern Express Co. was changed later to the Intercolonial Express Co., which was operated by the Canadian Express Co. as part of its system east of Riviere-du-Loup, Que., on the Intercolonial Ry.

In 1879 the Canadian Express Co. was operating on the Quebec, Montreal, Ottawa & Occidental Ry. between Montreal and Ottawa; also on the North Shore Ry. between Montreal and Quebec. Both these railways later became part of the C.P.R. System.

On Aug. 15, 1887, Gilman Cheney, Superintendent, was appointed General Manager, and was succeeded as Superintendent by Samuel Chadwick, who retired in 1889. James Bryce, who had been Superintendent at St. John, N.B., since 1882, was appointed Superintendent at Montreal, to succeed Mr. Chadwick. H. C. Creighton, who had been route agent at

Halifax, N.S., succeeded Mr. Bryce as Superintendent at St. John, which position he still occupies.

On Aug. 28, 1888, the American Express Co. agreed with the Canadian Express Co. to withdraw from all G.T.R. lines in Ontario west of Toronto, and transferred its entire business thereon to the Canadian company.

On Oct. 13, 1889, B. P. Cheney tendered his resignation as President, to take effect from Jan. 1, 1890. On Oct. 23, 1889, Gilman Cheney was elected President, the appointment to take effect from Jan. 1, 1890.

On Dec. 29, 1891, an agreement was made between the G.T.R. and the Canadian Express Co. whereby the railway company purchased the express company's capital stock at 43c. on the dollar, thereby becoming the sole shareholder, the express company, however, maintaining its identity.

On Jan. 1, 1892, L. J. Seargeant, General Manager, G.T.R., became President of the Canadian Express Co., and Gilman Cheney, Vice President, an honorary position which he held until his death in 1897. James Bryce continued to occupy the position of Superintendent at Montreal.

In 1896, when the late Chas. M. Hays became Second Vice President and General Manager of the Grand Trunk, he was elected President of the Canadian Express Co., and James Bryce, theretofore Superintendent, was appointed Manager. In 1901, when Mr. Hays retired from the G.T.R. to become General Manager of the Southern Pacific Co., Geo. B. Reeve became Second Vice President and General Manager of the G.T.R. and President of the Canadian Express Co., with James Bryce as Vice President and Manager. When Mr. Hays returned to the G.T.R. in 1902 as Second Vice President and General Manager, he again became President of the Canadian Express Co.

On Oct. 27, 1908, the Canadian Express Co. extended its service over Grand Trunk Pacific Ry. between Winnipeg and Edmonton, 800 miles, and followed the railway as it was built toward the Pacific coast, operating its service as soon as train service was established, and similarly with respect to the various branch lines.

On Oct. 1, 1911, Mr. Hays was elected Chairman of the board of directors of the Canadian Express Co. and was succeeded as President by John Pullen, theretofore Assistant Freight Traffic Manager, G.T.R. System.

On Dec. 1, 1911, the Canadian Express Co. entered into an agreement with the Timiskaming & Northern Ontario Ry. Commission for the operation of its service on that railway between North Bay and Cochrane, 253 miles, which forms one of the important links today in the through express service operated between Toronto and the Canadian northwest.

March 31, 1912, saw the retirement of James Bryce, Vice President and Manager, who had devoted 40 years of his life in the express service, 30 of which were exclusively with the Canadian Express Co.

Upon the death of Mr. Hays in April, 1912, E. J. Chamberlin was elected President of the G.T.R. and Chairman of the board of directors of the Canadian Express Co.

On Sept. 1, 1914, the Canadian Express Co. extended its service through to Prince Rupert, B.C., the Pacific coast terminus of the Grand Trunk Pacific Ry., 1,755 miles from Winnipeg.

Upon the completion of the National Transcontinental Ry. between Cochrane, Ont., and Winnipeg, 777 miles, and the inauguration of a through passenger train service between Toronto and Winnipeg, via G.T.R. to North Bay, T. & N.O.R. to Cochrane, and N.T.R. to Winnipeg, the Canadian Express Co. placed its service in operation between those two cities on July 13, 1915, thus giving an all Canadian transcontinental express route from the Atlantic to the Pacific.

On May 1, 1915, the Canadian Express Co. established its service on the St. John & Quebec Ry., now part of the Canadian National Rys., between Fredericton and Centerville, N.B., 88 miles.

On July 29, 1915, train service having been established on the National Transcontinental Ry. between Monk and Levis, Que., 110 miles; and between Quebec City and Fitzpatrick, Que., 123 miles, the Canadian Express Co. inaugurated an express service between those points.

On Feb. 1, 1916, the Canadian Express Co. extended its service from Fitzpatrick to Parent, Que., 119 miles, the National Transcontinental Ry. having inaugurated a passenger train service between those points.

June 11, 1916, saw the Canadian Express Co. operating through from Quebec City to Winnipeg via the National Transcontinental Ry., train service having been established between Parent, Que., and Cochrane, Ont., 302 miles.

On July 10, 1916, the Canadian Express Co. extended its service on the St. John and Quebec Ry. from Fredericton to Gagetown, N.B., 32 miles.

On July 26, 1916, the Canadian Express Co. placed its service in operation between Monk, Que., and Edmundston, N. B., on the National Transcontinental Ry., 125 miles.

A year later, through trains were operated over the National Transcontinental Ry. between Moncton, N.B., and Levis, Que., train service having been established between Edmundston, N.B., and Moncton, 230 miles. The Canadian Express Co. commenced to operate its service between the two latter points on June 22, 1917.

On Sept. 1, 1917, Howard G. Kelley was elected President of the G.T.R. Co. and Chairman of the board of directors of the Canadian Express Co., succeeding E. J. Chamberlin, who had retired from active railway life a few months previous.

On Jan. 1, 1918, the United States Railroad Administration took over, for operating purposes, certain of the lines of the Grand Trunk Ry. of Canada, located within the United States, viz.: Portland, Me., to Norton Mills, Vt., 165.1 miles; Lewiston Jct., Me., to Lewiston, Me., 5.4 miles; South Paris, Me., to Norway, Me., 1.5 miles; Detroit, Mich., to Port Huron, Mich., 57 miles, over which the Canadian Express Co., up to that time, operated an express service. It being the U.S. Railroad Administration's desire that the express operations on the railways under federal control should be conducted by a unified company, a contract was entered into with the American Railway Express Co. giving that company the exclusive privilege of conducting the express service thereon, effective July 1, 1918, on which date the Canadian Express Co. relinquished its control of the express service on the lines mentioned above; disposed of and transferred to the American Railway Express Co. all its movable property and equipment, and withdrew its representation at and participation in the expenses of the joint offices main-

tained at the International Boundary, viz., Buffalo, N.Y., Suspension Bridge, N.Y., Port Huron, Mich., and Detroit, Mich. Although the railways returned to private ownership on Mar. 1, 1920, the operation of the express service on the above mentioned lines has been continued by the American Railway Express Co.

On Oct. 20, 1919, the Canadian Express Co. further extended its service on the St. John & Quebec Ry. from Gagetown to St. John, N.B., 48 miles, via Westfield Beach, and the C.P.R., the St. John and Quebec Ry. having secured running rights over the C.P.R. from Westfield Beach to St. John, 13 miles.

In the early days the train messengers were responsible to the company for the charges on all waybills, both prepaid and collect, covering shipments originating at and destined to offices along their routes. They were in reality the company's travelling bankers. The agents remitted direct to the messengers the total of all collect charges on waybills covering shipments destined to their offices, as well as the total prepaid charges (less advance charges, if any) on waybills covering shipments forwarded by them. A messenger would first debit himself with the total of the collect charges on all waybills covering shipments received en route; second, debit agents with the total of the prepaid charges on shipments received en route; third, debit agents with the total of the collect charges on waybills covering shipments detained by him. Cash books were used, and messengers had to balance their accounts for each trip. The messengers, instead of the agents, as is now the case, were checked up by the auditor, as they were the custodians of the company's cash. A report had to be made to the company at the end of each round trip, consequently it was quite a simple matter for the auditor to form an opinion as to whether there were any irregularities or not. The absence of a remittance for two or three round trips would likely result in the messenger involved having his accounts checked.

Amongst the notable statesmen of Canada who served as directors of the Canadian Express Co., were Sir Richard Cartwright and Sir Alexander Campbell.

Among those prominent in the American Express Co.'s service who commenced their express careers with the Canadian Express Co. are: H. S. Julier, formerly Vice President and General Manager of the Eastern Department, was a train messenger on the Buffalo and Goderich route; J. R. Christie, General Manager of the New York city department, was at one time a clerk in the London, Ont., office; Robt. Mundle, formerly Comptroller, held a clerical position in the Montreal general office; Robt. Balfour, Assistant to Vice President, R. E. M. Cowie, of the Eastern Department, was a wagon man at Montreal.

A prominent man in the express world in the early days was D. T. Irish. Born at Shelburne, Vt., he entered the United States & Canada Express Co.'s service at Burlington, Vt., as a clerk under Wm. Henderson, agent. He went to Montreal at the age of 19 and became General Agent of the British & North American and United States & Canada Express Companies, to which were added later the Canadian Express and National Express Companies.

Canada Rolling Stock Co. Ltd. has had its registration, under the Nova Scotia Companies Act, revoked by the Nova Scotia Government.

Mainly About Railway People Throughout Canada.

F. G. Adams, who has been appointed Assistant General Freight Agent, Canadian National-Grand Trunk Pacific Rys., Winnipeg, was born at St. John's, Nfld., Apr. 6, 1878, and entered railway service Sept. 4, 1893, since when he has been, to Dec. 31, 1902, clerk, general offices, G.T.R., Montreal; Jan. 1, 1903, to Mar. 31, 1907, Contracting Freight Agent and Travelling Freight Agent, G.T.R., Montreal; Apr. 1, 1907, to Aug. 31, 1908, Contracting Freight Agent, G.T.R., Winnipeg; Sept. 1, 1908, to July 31, 1911, Travelling Freight Agent, G.T.R., Winnipeg; Aug. 1, 1911, to July 14, 1913, Commercial Agent, G.T. Pacific Ry., Regina, Sask.; July 14, 1913, to Apr. 16, 1914, Division Freight Agent, G.T. Pacific Ry., Edmonton, Alta.; Apr. 26, 1914, to Sept. 1, 1920, Commercial Agent, G.T.R., and Division Freight Agent, Grand Trunk Pacific Ry., Winnipeg.

Walter U. Appleton, who has been General Superintendent of Rolling Stock, Eastern Lines, Canadian National Rys., Moncton, N.B., was born there, Jan. 29, 1878, and entered railway service, Oct. 12, 1890, since where he has been, to Sept. 1895, junior clerk, Intercolonial Ry., Moncton; Sept. 1895 to May 1899, machinist apprentice, same road; 1900, clerk; 1901 to 1903, machinist; 1905 to 1909, chief clerk to Superintendent of Motive Power; 1909 to 1913, Assistant to Superintendent of Motive Power; 1913 to Feb. 1918, General Master Mechanic; Feb. to Dec. 1918, Superintendent of Motive Power, Canadian Government Rys., all at Moncton; Dec. 1918 to Sept. 15, 1920, Mechanical Superintendent, Eastern Lines, Canadian National Rys., Moncton.

John Henry Corcoran, who has been appointed General Travelling Agent, Canadian National Rys., Moncton, N.B., was born at Charlottetown, P.E.I., Sept. 18, 1874, and entered railway service in Oct. 1890, since when he has been, to Nov. 1892, clerk, locomotive house, Intercolonial Ry., Moncton, N.B.; Nov. 1892 to Aug. 1911, clerk, General Passenger Department, Intercolonial Ry., Moncton; Aug. 1911 to Aug. 1919, Travelling Passenger Agent, G.T.R., Moncton; Aug. 1919 to Aug. 1920, General Agent, Passenger Department, G.T.R., Moncton.

R. Creelman, whose appointment as Assistant Passenger Traffic Manager, Canadian National and Grand Trunk Pacific Rys., and Grand Trunk Pacific Coast Steamship Co., Winnipeg, was announced in our last issue, entered railway service Sept. 1891, since when he has been, to 1893, messenger, City Freight Agent's office, G.T.R., Toronto; 1893 to 1897, ticket clerk, G.T.R. city office, Toronto; 1897 to 1900, chief clerk, District Passenger Agent's office, G.T.R., Toronto; Jan. 1, 1900, to Aug. 1901, in General Passenger Agent's office, C.P.R., Winnipeg; Aug. 1901, to Sept. 1, 1903, in Passenger Traffic Department, Canadian Northern Ry., Winnipeg; Sept. 1, 1903, to July 1, 1906, City Ticket Agent, Northern Pacific Ry., Winnipeg; July 1, 1906, to July 1, 1909, Travelling Passenger Agent, Canadian Northern Ry., St. Paul, Minn.; July 1 to Oct. 1909, Commercial Agent, Canadian Northern Ry., St. Paul, Minn.; Oct. 1909 to Mar. 1, 1911, Assistant General Passenger Agent, Canadian Northern Ry., Winnipeg; Mar. 1, 1911, to Dec. 31, 1918, General Passenger Agent, Western Lines, Canadian Northern Ry., Winnipeg; Jan. 1, 1919, to Aug. 24, 1920, Assistant Passenger Traffic Manager, West-

ern Lines, Canadian National Rys., Winnipeg.

Howard Alexander Dixon, who has been appointed Chief Engineer, Western Lines, Canadian National Rys., and Grand Trunk Pacific Ry., Winnipeg, was born at Sand Hill, Ont., Oct. 7, 1878. He was educated at Jarvis St. Collegiate School, Toronto, and School of Practical Science, Toronto University, graduating with the degree of B.A.Sc., with honors, in 1901. He qualified as Ontario land surveyor in 1903 and Manitoba land surveyor in 1906, and is a member of the American Railway Engineering Association. He entered Canadian Northern Ry. service in 1903, since when he has been, to 1904, draftsman, Winnipeg; 1904 to 1905, Resident Engineer, Winnipeg; 1905 to 1906, Resident Engineer, Fenton, Sask.; 1906 to 1910, Locating Engineer, Western Lines; 1910 to 1912, Division Engineer, Maryfield, Sask.; 1912 to 1915, District Engineer, Resplendent, B.C.;



J. A. MacGregor,
Manager, Edmonton, Dunvegan & British Columbia Ry. and Central Canada Ry.

1915 to Apr. 1919, District Engineer, Vancouver, B.C.; Apr. 1919 to Sept. 1920, Chief Engineer, Western Lines, Canadian National Rys., Winnipeg.

W. E. Duperow, whose appointment as General Passenger Agent, west of Duluth, Minn., Port Arthur and Armstrong, Ont., and east of Lucerne, B.C., Canadian National and Grand Trunk Pacific Rys., Winnipeg, was announced in our last issue, was born at Stratford, Ont., Sept. 4, 1872, and entered transportation service Nov. 3, 1893, since when he has been, to Oct. 15, 1894, in G.T.R. service at Seaforth, Ont.; Oct. 15, 1894, to June 1, 1896, ticket clerk, G.T.R., London, Ont.; June 1, 1896, to July 11, 1898, ticket clerk, G.T.R., Toronto; July 11, 1898, to Aug. 1, 1899, theatrical and excursion clerk, General Passenger Agent's office, G.T.R., Toronto; Aug. 1, 1899, to April 19, 1902, chief clerk, same office; April 19, 1902, to Feb. 15, 1907, General Manager, Sec-

retary and Treasurer, Huntsville, Lake of Bays and Lake Simcoe Navigation Co., Huntsville, Ont.; Feb. 15, 1907, to June 1, 1910, Travelling Passenger Agent, G.T.R., Toronto; June 1, 1910, to April 15, 1912, City Passenger Agent, G.T.R., Toronto; June 1, 1910, to April 15, 1912, City Passenger and Ticket Agent, G.T.R. and Grand Trunk Pacific Ry., Victoria, B.C.; Apr. 15, 1912, to Mar. 1, 1914, General Agent, Passenger Department, G.T.R., G.T.P.R., and Grand Trunk Pacific Coast Steamship Co., Vancouver, B.C.; Mar. 1, 1914, to Sept. 1, 1917, Assistant General Passenger Agent, G.T.P.R., Winnipeg. Sept. 1, 1917, to Aug. 28, 1920, General Passenger Agent, Grand Trunk Pacific Ry., Winnipeg.

Leslie Allen Fonger, who has been appointed Division Freight Agent, Western Lines, Canadian National Rys., and Grand Trunk Pacific Ry., Port Arthur, Ont., was born at St. George, Ont., Dec. 23, 1892, and entered railway service Oct. 23, 1907, since when he has been, to Aug. 2, 1912, stenographer, freight office, C.P.R., Guelph, Ont.; Aug. 6, 1912, to Nov. 30, 1915, clerk, General Freight Department, Canadian Northern Ry., Winnipeg; Dec. 1, 1915, to Sept. 8, 1920, chief clerk, General Freight Department, Canadian National Rys., Winnipeg.

C. H. R. Fuller, who has been appointed City Engineer, Chatham, Ont., was for some time engaged as Resident Engineer, on the Danforth section of the Toronto Civic Ry., and subsequently was an Assistant Engineer for the Toronto Harbor Commissioners. He spent about 3½ years on active service in France and Belgium, first as Captain in the 216th Battalion, C.E.F., and later in the 10th Battalion Canadian Railway Troops. He has written a booklet on the employment of light railways in modern warfare.

John Macneill Grieve, who has been appointed General Superintendent, Sleeping, Dining and Parlor Cars and News Service, Canadian National-Grand Trunk Pacific Rys., Toronto, was born in Scotland, Aug. 25, 1870, and entered railway service in July, 1900, since when he has been to Sept. 1900, waiter, Intercolonial Ry., Halifax, N.S.; Sept. 1900 to Apr. 1907, waiter and steward, C.P.R., Montreal; May 1907 to Apr. 1908, waiter; Apr. 1908 to Mar. 1910, dining car steward, Mar. 1910 to Mar. 1912, Inspector, Mar. 1912 to Apr. 1915, Chief Inspector, Apr. 1915 to Oct. 1917, Assistant Superintendent, Sleeping, Dining and Parlor Cars and News Service, Canadian Northern Ry., Winnipeg; Oct. 1917 to May 1, 1920, Superintendent, same department, Canadian Northern Ry., afterwards Canadian National Rys., Winnipeg; May 1 to Sept. 1, 1920, General Superintendent, Sleeping, Dining and Parlor Cars and News Service, Canadian National Rys., Toronto.

Walter Hatley, who has been appointed Assistant General Freight Agent, Canadian National Rys., Western Lines, and Grand Trunk Pacific Ry., Winnipeg, was born at Brantford, Ont., Mar. 5, 1887, and entered railway service in Mar. 1904, since when he has been, to Aug. 1908, clerk, local freight office, G.T.R., Hamilton, Ont.; Aug. 1908 to Sept. 1909, accountant, Superintendent's office, G.T.R., Toronto; Sept. 1909 to Oct. 1913, clerk, Freight Tariff Bureau, G.T.R., Montreal; Oct. 1913 to Oct. 1915, clerk, Freight Tariff Bureau, Canadian Northern Ry., Winnipeg; Oct. 1915 to Jan.

1919, Chief of Tariff Bureau, Canadian Northern Ry., Winnipeg; Jan. 1919 to Aug. 28, 1920, Assistant General Freight Agent, Western Lines, Canadian National Rys., Winnipeg.

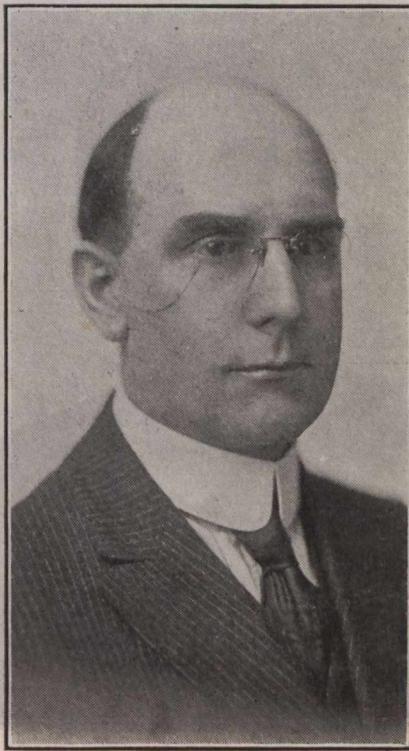
John Andrew Heaman, B.Sc., who has been appointed Assistant Chief Engineer, Western Lines, Canadian National Rys., and Grand Trunk Pacific Ry., Winnipeg, was born at Memphis, Tenn., June 3, 1874, and was educated in public school and at Collegiate Institute, London, Ont., and McGill University, graduating in 1902. He served as an articled pupil to Moore and Henry, engineers and surveyors, London, Ont., from 1893 to 1898, and holds diplomas as Dominion and Ontario Land Surveyor. He entered railway service in Apr. 1901, since when he has been to Sept. 1901, instrument man, G.T.R., St. Catharines and Port Union, Ont.; Apr. to Nov. 1902, Resident Engineer, G.T.R., Oshawa, Ont.; Nov. 1902 to Nov. 1903, Assistant Resident Engineer, G.T.R., Toronto; Nov. 1903 to May 1905, Assistant Engineer in charge of location party east of Winnipeg, Grand Trunk Pacific Ry.; May 1905 to Nov. 1906, Division Engineer in charge of location and construction east of Winnipeg, National Transcontinental Ry.; Nov. 1906 to Oct. 1908, Assistant District Engineer, N.T.R., Ont.; Oct. 1908 to June 1910, Assistant District Engineer, G.T.P.R., Kenora, Ont., and Winnipeg; June 1910 to Apr. 1911, District Engineer, G.T.P.R., Winnipeg; Apr. 1911 to Mar. 1912, Office Engineer, G.T.P.R., Winnipeg; Mar. to Aug. 1912, Division Engineer, G.T.P.R., Jasper, Alta.; Aug. 1912 to Nov. 1, 1917, Assistant to Chief Engineer, G.T.P.R., Winnipeg; Nov. 1, 1917, to Sept. 1, 1920, Assistant Chief Engineer, G.T.P.R., Winnipeg.

J. M. Horn, whose appointment as General Freight Agent, Canadian National and Grand Trunk Rys., Winnipeg, was announced in our last issue, was born at Allanton Mills, Lanarkshire, Scotland, Apr. 12, 1880, and entered railway service in July, 1890, since when he has been, to 1900, abstract clerk and biller; 1900 to 1901, checker, local freight office, Northern Pacific Ry., Winnipeg; May 1901 to 1902 rate clerk, local freight office, Canadian Northern Ry., Winnipeg; 1902 to Apr. 1904, chief clerk to Local Freight Agent, same road, Winnipeg; Apr. 1904 to May 1909, City Freight Agent, same road, Winnipeg; May 1909 to Mar. 1916, District Freight Agent, same road, Edmonton, Alta.; Mar. 1916 to Dec. 31, 1918, Assistant General Freight Agent, Western Lines, same road, Winnipeg; Jan. 1, 1919, to Aug. 28, 1920, General Freight Agent, Western Lines, Canadian National Rys., Winnipeg.

Samuel J. Hungerford, who has been appointed Vice President, Operation and Maintenance, Canadian National Rys., Toronto, was born near Bedford, Que., July 16, 1872, and entered railway service in May, 1886, since when he has been, to Feb. 1891, machinist apprentice, South Eastern Ry., and C.P.R., Farnham, Que.; May 1891 to Aug. 1894, machinist at various points in Quebec, Ontario and Vermont; Sept. 1894 to Aug. 1897, charge man, C.P.R., Windsor St., Montreal; Aug. 1897 to Apr. 1900, Assistant Foreman, C.P.R., Farnham, Que.; Apr. 1900 to Feb. 1901, Locomotive Foreman, C.P.R., Megantic, Que.; Feb. to Sept. 1901, General Foreman, C.P.R., Cranbrook, B.C.; Feb. 1903 to Jan. 1904, Masted Mechanic, C.P.R., Western Division, C.P.R., Calgary, Alta.; Jan. 1904 to Dec. 1907, Superintendent, Locomotive Shops, C.P.R., Winnipeg; Jan. 1908

to Feb. 1910, Superintendent of Shops, C.P.R., Winnipeg, Man.; Mar. 1910 to Apr. 1915, Superintendent of Rolling Stock, Canadian Northern Ry., Winnipeg; May 1915 to Nov. 1, 1917, Superintendent of Rolling Stock, C.N.R., Toronto; Nov. 1, 1917, to Dec. 1, 1918, General Manager, Eastern Lines, C.N.R., Toronto; Dec. 1918 to Sept. 1920, Assistant Vice President, Operation, Construction and Maintenance, Canadian National Rys., Toronto.

Thomas King, Superintendent, Detroit Division, Western Lines, G.T.R., Durand, Mich., whose territory has been reorganized, was born at Dunbarton, Ont., July 18, 1869, and entered G.T.R. service Mar. 28, 1885, since when he has been, to Oct. 7, 1885, switch man, Pickering, Ont.; Oct. 8, 1885, to Oct. 1886, operator, Sidney, Ont.; Nov. 1, 1886, to Dec. 1889, operator, York, Ont.; Jan. 1, 1890, to June 1907, operator, Don Station, Toronto; July 1, 1897, to Oct. 1898, ticket clerk, Oshawa, Ont.; Nov. 1898 to Jan. 1899, operator, Belleville, Ont.; Jan. 1899 to Aug. 1902, agent, Whitby, Ont.; Aug. 1902 to May 1905, agent, Brockville, Ont.;



J. A. Heaman, Assistant Chief Engineer, Western Lines, Canadian National Rys. and Grand Trunk Pacific Ry.

May 1905 to Nov. 1907, agent, Sherbrooke, Que.; Nov. 1907 to May 1909, agent, Lewiston, Me.; May 1909 to Aug. 1910, Travelling Passenger Agent, Montreal; Aug. 1910 to Dec. 1912, agent, Pontiac, Mich.; Dec. 1912 to Sept. 1, 1917, agent, Detroit, Mich., and from Sept. 1, 1917, Superintendent, Detroit Division, Detroit, Mich.

Joseph Gaston Legrand, who has been appointed Bridge Engineer, Western Lines, Canadian National Rys., and Grand Trunk Pacific Ry., Winnipeg, was born at Sompuis, Marne, France, Dec. 24, 1861. He underwent officers' training in the French Army in 1881 and 1882, and from 1882 to 1887 was chainman and instrument man on the French Government Railways in Ardennes; from 1887 to 1889, engineer in charge for the contractor on fortification works at Verdun; and from 1889 to 1891, engineer in charge of construction of mining plant for the Hafna

Mining & Smelting Co., Llanrwst, North Wales. He came to Canada June 9, 1891, and has been, from 1891 to 1893, Assistant to J. A. U. Beaudry, civil engineer, Montreal 1893 to 1903, structural draftsman, checker and designer, Dominion Bridge Co., Montreal; 1903 to 1906, Assistant Chief Engineer, Structural Department, Locomotive & Machine Co., Montreal; 1906 to 1908, Bridge Engineer, Grand Trunk Pacific Ry., Montreal; 1908 to 1920, Bridge Engineer, Grand Trunk Pacific Ry., Winnipeg. In 1907 he was asked by the Minister of Railways and Canals to act on a board appointed to decide on a design for the Quebec Bridge. From 1912 to 1914, he was Consulting Bridge Engineer for Edmonton, Dunvegan & British Columbia Ry., and Pacific Great Eastern Ry., and was also designing engineer for the Provencher bridge over the Red River between St. Boniface and Winnipeg. During his service with the Grand Trunk Pacific Ry., through its construction period, he was responsible for the design of its permanent bridges, stations, locomotive houses, coaling and fuel oil stations, power and heating plans, warehouses and wharves. He is a member of the Engineering Institute of Canada and of the American Railway Engineering Association.

James Alexander MacGregor, who has been appointed Manager, Edmonton, Dunvegan & British Columbia Ry., and Central Canada Ry., Edmonton, Alta., was born at Dufftown, Scotland, Apr. 5, 1873, and entered C.P.R. service May, 1892, since when he has been to Feb. 1903, clerk, stenographer, chief statistical clerk and Travelling Car Agent, Montreal; Feb. 1903 to June 1904, Car Service Agent, Winnipeg; June 1904 to Oct. 1908, Assistant Superintendent Car Service, Winnipeg; Oct. 1908 to Oct. 1909, Superintendent, Souris, Man.; Nov. 1909 to Sept. 1913, Superintendent, Brandon, Man.; Sept. 1913 to July 1914, Relieving Superintendent on various divisions; Aug. 1914 to July 1920, Superintendent, Edmonton Division, Alberta District, C.P.R., Edmonton.

T. C. Machett, town ticket agent, C.P.R., and agent, Dominion Ex. Co., Lindsay, Ont., died there Sept. 24, aged 64, following a paralytic stroke.

M. H. MacLeod, Vice President, Operation, Maintenance and Construction, Canadian National Rys., returned to Toronto recently, after spending several months in the prairie provinces and on the Pacific coast, but has not yet resumed active service, owing to ill health.

W. G. Manders, whose appointment as Assistant Freight Traffic Manager, Canadian National and Grand Trunk Pacific Rys., and Grand Trunk Pacific Coast Steamship Co., Winnipeg, was announced in our last issue, was born at Owen Sound, Ont., July 24, 1876, and entered railway service in Apr. 1897, since when he has been to Feb. 1901, clerk and stenographer, Local Freight Office, C.P.R., Owen Sound, Ont.; Feb. to July 1901, chief clerk, Local Freight Office, C.P.R., Fernie, B.C.; July 1901 to Dec. 31, 1903, clerk, General Freight Office, Canadian Northern Ry., Winnipeg; Jan. 1, 1904, to Jan. 1, 1907, chief clerk in charge of loss and damage and overcharge freight claims, General Freight Office, C.N.R., Winnipeg; Jan. 1, 1907, to May 1, 1909, chief clerk, Freight Traffic Department, C.N.R., Winnipeg; May 1, 1909, to Feb. 29, 1916, Assistant General Freight Agent, C.N.R., Winnipeg; Mar. 1, 1916, to Jan. 1, 1919, General Freight Agent, Western Lines, Canadian Northern Ry., Winnipeg; Jan. 1, 1919, to Aug. 24, 1920,

Assistant Freight Traffic Manager, Western Lines, Canadian National Rys., Winnipeg.

Richard Marpole, General Executive Assistant, C.P.R., Vancouver, B.C., who died there, June 8, is reported, in a press dispatch, as having left an estate valued at \$604,232 to his family and grandchildren.

Henry Hilaire Melanson, who appointed as Passenger Traffic Manager, Canadian National and Grand Trunk Pacific Rys., and Grand Trunk Pacific Coast Steamship Co., Toronto, was announced in our last issue, was born at Scadouc, N.B., Mar. 9, 1872, and entered Government railway service Nov. 18, 1889, since when he has been, to Aug. 1892, clerk in Mechanical Department, Intercolonial Ry.; Aug. 1892 to Dec. 1899, clerk in Passenger Department; Dec. 1899 to Mar. 1901, chief clerk, Passenger Department; Mar. 1901 to May 1903, General Baggage Agent; May 1903 to Nov. 1909, chief clerk, Passenger Department; Nov. 1909 to May 1913, Assistant General Passenger Agent; June 1913 to June 1917, General Passenger Agent; June 1917 to Jan. 1, 1919, Passenger Traffic Manager, Canadian Government Rys., all at Moncton, N.B.; Jan. 1, 1919, to Aug. 24, 1920, Passenger Traffic Manager, Canadian National Rys., Toronto.

A. J. Mitchell, Vice President, Finance and Accounts, Canadian National Rys., left Toronto Sept. 28 for a business trip to England.

C. H. Nicholson, who has been appointed Manager of Steamships with jurisdiction over floating equipment under operation by Western Lines, Canadian National Rys., and Grand Trunk Pacific Ry., Vancouver, B.C., was born at Belleville, Ont., and was educated there, at Queen's University, Kingston, Ont., and at the University of Maryland, Baltimore. He entered transportation service with the Richelieu & Ontario Navigation Co., and subsequently became purser on one of the steamers operated by C. F. Gildersleeve, on the Bay of Quinte and River St. Lawrence. He remained as purser for three years, and became captain, having charge successively of the Heró, Hastings, Norseman and North King. When C. F. Gildersleeve organized the Lake Ontario and Bay of Quinte Steamboat Co., he became General Freight Agent, and until 1903 represented its interests in the U.S., with headquarters at Rochester, N.Y. During the season of 1903 he was Manager of Transportation, Muskoka Lakes Navigation & Hotel Co., at Gravenhurst, and from Feb., 1904, to Nov. 30, 1909, was Traffic Manager, Northern Navigation Co., Sarnia, Ont.; Nov. 30, 1909, to Sept. 1, 1920, Manager, Grand Trunk Pacific Coast Steamship Co., Vancouver, B.C.

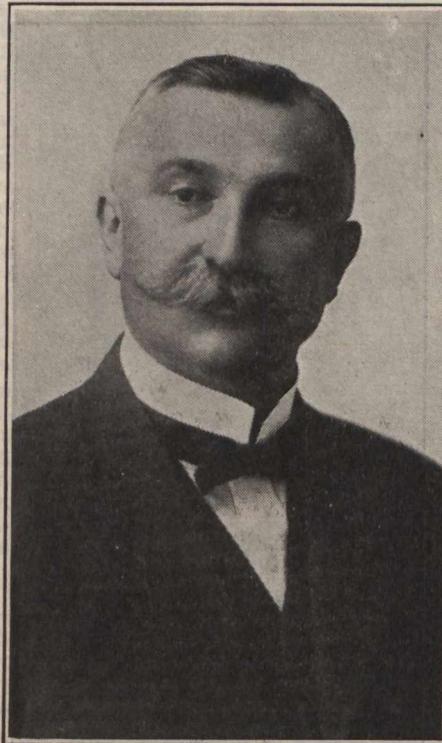
S. N. Parent, formerly Chairman, National Transcontinental Railway Commission, died at Quebec, Que., Sept. 7, after a long illness. He was born at Beauport, Que., Sept. 12, 1855, and practised law for several years, becoming a K.C. in 1899. He was Mayor of Quebec from 1894 to 1905, and represented St. Sauveur in the Legislature from 1890 to 1905, and from 1900 to his resignation in March, 1905, was Premier of the province. He was President of the Quebec Bridge Co., 1897 to 1908, when the construction of the first bridge was undertaken, and which collapsed in its earlier stages. He was also a director of the Quebec Ry., Light & Power Co., the Quebec & Lake St. John Ry. Co., and from 1900 to 1911 was Chairman, National Transcontinental Ry. Commission.

W. J. Ptolemy, Deputy Treasurer for Manitoba, died suddenly at Winnipeg, Sept. 10. He was born near Smithville, Ont., in 1850, and from June, 1873, to May, 1875, served in the Engineering Department of the Great Western Ry. (now G.T.R.), and was also engaged on the construction of telegraph lines with Fuller and Milne's telegraph construction party, and for the Dominion Government, on the C.P.R., between Fort Pelly and Fort Edmonton.

Hon. J. R. Reid, Minister of Railways and Canals, sailed from New York, Sept. 18, for England, accompanied by Mrs. and Miss Reid, expecting to be away about two months. Hon. A. L. Sifton is acting Minister, during his absence.

R. S. Richardson, Superintendent, Canadian National Rys., Fort William, Ont., left there early in September on a trip to the Pacific coast, going direct to Vancouver and thence to Prince Rupert, B.C. He will go east as far as Quebec before returning to Fort William.

Alfred E. Rosevear, who has been ap-



J. G. Legrand,

Bridge Engineer, Western Lines, Canadian National Rys. and Grand Trunk Pacific Ry.

pointed General Freight Agent, Western Lines, Canadian National Rys., and Grand Trunk Pacific Ry., Winnipeg, was born at Montreal, Feb. 20, 1863, and entered railway service May 21, 1878, since when he has been, to Apr. 15, 1880, clerk, Motive Power Department, G.T.R., Montreal; Apr. 15, 1880, to Apr. 13, 1886, clerk, General Superintendent's office, G.T.R., Montreal; Apr. 13, 1886, to July 31, 1890, clerk, General Manager's office, G.T.R., Montreal; July 31, 1890, to Aug. 1, 1890, accountant, Freight Traffic Department, G.T.R., Chicago, Ill.; Aug. 1, 1891, to Oct. 1, 1898, accountant, Freight Traffic Department, G.T.R., Detroit, Mich.; Oct. 1, 1898, to Apr. 19, 1908, Freight Claim Agent, G.T.R., Montreal; Apr. 19, 1908, to Nov. 1, 1912, Assistant General Freight Agent, G.T.R., Montreal; Nov. 1, 1912, to June 30, 1913, Assistant to Vice President (Traffic), G.T.R. and Grand Trunk Pacific Ry., Montreal; July

1, 1913, to Aug. 28, 1920, General Freight Agent, Grand Trunk Pacific Ry., Winnipeg.

Mrs. A. E. Rosevear, wife of the General Freight Agent, Western Lines, Canadian National Rys. and Grand Trunk Pacific Ry., and the Misses Rosevear, have returned to Winnipeg after spending the summer at St. Lambert, Que.

Mrs. A. L. Sauve, wife of the C.P.R. City Ticket Agent, Ottawa, Ont., died there recently.

Lord Shaughnessy, Chairman, C.P.R. Co., is chairman of a Montreal citizens committee, which is co-operating with McGill University authority, to raise \$500,000 for the university purposes.

Mrs. G. W. Shibley, of Woodstock, Ont., who died Sept. 19, aged 72, after a long illness, was a sister of Geo. H. Ham, of the Canadian Pacific Ry. headquarters staff, Montreal.

Angus William Sinclair, son of Angus Sinclair, railway contractor, Toronto, was married there Sept. 25 to Miss A. H. Kay.

Lorne Cameron Thomson, who has been appointed General Storekeeper, Eastern Lines, Canadian National Rys., Toronto, was born at Kingston, Ont., Nov. 25, 1882, and entered railway service, in Mar. 1897, since when he has been, to June 1898, requisition clerk, Stores Department, Delorimier Ave. Shops, C.P.R., Montreal; June 1898 to Apr. 1889, billing clerk, Stores Department, C.P.R., Hochelega, Montreal; Apr. 1899 to June 1900, timekeeper, car shops, C.P.R., Hochelega, Montreal; June 1900 to Mar. 1901, Storekeeper, C.P.R., Quebec, Que.; Mar. 1901 to June 1902, Storekeeper, C.P.R., Brownville Jct., Me.; June 1902 to Nov. 1903, Division Storekeeper, C.P.R., McAdam Jct., N.B.; Nov. 1903 to June 1904, relieving storekeeper, Eastern Lines, C.P.R.; June 1904 to Oct. 1905, Storekeeper, section A, Angus shops, C.P.R., Montreal; Oct. 1905 to Mar. 1907, chief clerk, General Storekeeper, Angus shops, C.P.R., Montreal; Mar. 1907 to July 1909, Storekeeper, Ontario Lines, Canadian Northern Ry., Parry Sound, Ont.; July 1909 to Nov. 1912, Division Storekeeper, Ontario and Quebec Lines, Canadian Northern Ry., Toronto; Nov. 1912 to Feb. 20, 1916, General Storekeeper, Eastern Lines, Canadian Northern Ry., Toronto; Feb. 20, 1916, to Jan. 14, 1919, Superintendent Transportation, Imperial Munitions Board, Ottawa, Ont.; Jan. 14 to Apr. 1919, General Storekeeper, Eastern Lines, Canadian National Rys., Toronto; Apr. 1919 to Sept. 7, 1920, General Storekeeper, Canadian Car & Foundry Co., Montreal.

William Walkden, who has been appointed Assistant Bridge Engineer, Western Lines, Canadian National Rys. and Grand Trunk Pacific Ry., Winnipeg, was born at Alderley Edge, Cheshire, Eng., June 1, 1885, and served as an indentured pupil and assistant with P. Pierce & Son, Architects and Engineers, Stockport, Eng., from Oct. 1902 to July 1907. He entered transportation service in Nov. 1907, since when he has been, to July 1909, draftsman, Engineering Department, Canadian Northern Ry.; July 1909 to May 1912, draftsman and Assistant Engineer, Bridge Engineer's Department, same road; May to Nov. 1912, chief draftsman, same road; Nov. 1912 to Feb. 1917, Assistant to Bridge Engineer, same road; Feb. 1917 to Apr. 1919, acting Bridge Engineer, same road; Apr. 1919 to Sept. 1, 1920, Bridge Engineer, G.T.P.R., Winnipeg.

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.

Board of Railway Commissioners.—A. E. ECCLESTONE, chief clerk, Secretary's Department, has resigned, and J. B. Arbick is acting in that capacity.

Canadian Government Merchant Marine, Ltd.—W. A. CUNNINGHAM, heretofore Export and Import Freight Agent, Canadian National Rys., Montreal, and who, since July, 1919, attended to the booking of traffic intended for C.G.M.M. ships, has been appointed acting General Freight Agent, C.G.M.M., in complete charge of all traffic matters in respect to this company. Office, 230 St. James St., Montreal.

J. P. DOHERTY, heretofore Port Agent, St. John, N.B., is reported to have been appointed Assistant General Freight Agent, at Montreal.

H. E. KANE, heretofore Assistant Port Agent, is reported to have been appointed Porth Agent, St. John, N.B., vice J. D. Doherty, promoted.

The following representatives have been appointed in the West Indies for Canadian Government Merchant Marine Ltd., and Canadian National Rys.:—Bridgetown, Barbados, Gardiner Austin & Co.; Georgetown, Demerara, Sandbach, Parker & Co.; Kingston, Jamaica, Jamaica Shipping & Trading Co.; Trinidad, Geo. F. Huggins & Co.

Canadian National Rys.—Owing to increased work, caused by the additional mileage, including the Grand Trunk Pacific Ry., brought under the C.N.R. management, it has been found necessary to divide the Construction, Operation and Maintenance Department. M. H. MACLEOD, heretofore Vice President, Operation, Construction and Maintenance, has been appointed Vice President in charge of Construction. S. J. HUNGERFORD, heretofore Assistant Vice President, Operation, Construction and Maintenance, has been appointed Vice President in charge of Operation and Maintenance. Offices, Toronto.

W. U. APPLETON, heretofore Mechanical Superintendent, Eastern Lines, has been appointed General Superintendent of Rolling Stock, Eastern Lines, and his former position has been abolished. Office, Moncton, N.B.

D. M. CRAWFORD, heretofore General Agent, Cleveland, Ohio, has been appointed General Agent, Pittsburg, Pa., vice F. G. Wood, appointed Ontario Freight Agent, Canadian Government Merchant Marine.

G. R. EDGLEY, heretofore Superintendent, St. Maurice Division, Quebec District, Quebec, Que., has been appointed Superintendent, Ottawa Division, Quebec District, vice W. R. Kelly, transferred. Office, Ottawa, Ont.

G. N. GOAD, heretofore Superintendent, Superior Division, Ontario District, Hornepayne, Ont., has been appointed Superintendent, Nipissing Division, Ontario District, vice G. A. Hoag, appointed Superintendent of Transportation. Office, Capreol, Ont.

F. GRIFFIN, heretofore Assistant Superintendent, District 1, Quebec Division, Levis, Que., has been appointed Superintendent, St. Maurice Division, Quebec District, vice G. R. Edgley, transferred. Office, Quebec, Que.

G. A. HOAG, heretofore Superintendent, Nipissing Division, Ontario District,

Capreol, Ont., has been appointed Superintendent of Transportation, Ontario District. Office, Toronto.

W. R. KELLY, heretofore Superintendent, Ottawa Division, Ottawa, Ont., has been appointed Superintendent, Montreal Division, vice J. J. Sunderland, appointed Superintendent of Transportation. Office, Montreal.

M. LANCASTER, heretofore locomotive man, Hanna, Alta., has been appointed Assistant Air Brake Instructor, Sioux Lookout, Ont.

J. J. NAPIER has been appointed Superintendent, Superior Division, Ontario District, vice G. N. Goad, transferred. Office, Hornepayne, Ont.

J. H. PAKENHAM has been appointed Assistant Superintendent of Terminals, with jurisdiction between Quebec bridge and Palais station and Ste. Foye to Quebec, vice J. A. Trudel. Office, Palais station, Que.



S. J. Hungerford,
Vice President, Operation and Maintenance, Canadian National Railways.

W. E. RIVERS has been appointed Division Engineer, Kamloops Division, Pacific District. Office, Kamloops Jct., B.C.

F. A. SHAW, heretofore General Agent, Freight and Passenger Department, C.N.R., Detroit, Mich., has been appointed General Agent, Cleveland, Ohio, vice D. M. Crawford, transferred.

J. J. SUNDERLAND, heretofore Superintendent, Montreal Division, Quebec District, Montreal, has been appointed Superintendent of Transportation, Quebec District. Office, Quebec, Que.

L. C. THOMSON, formerly General Storekeeper, Eastern Lines, Canadian National Rys., and latterly General Storekeeper, Canadian Car & Foundry Co., Montreal, has been appointed General Storekeeper, Eastern Lines, C.N.R., vice W. D. Stewart. Office, Toronto.

J. A. TRUDEL, heretofore Assistant Superintendent of Terminals, Quebec, Que., has been appointed Assistant Sup-

erintendent, Levis Division, Quebec District, vice F. Griffin, promoted. Office, Levis, Que.

See also Canadian Government Merchant Marine Ltd.

Canadian National Rys.-Grand Trunk Pacific Ry.—In connection with the placing of the G.T.P.R. under the Canadian National Rys. board, the jurisdiction of the following C.N.R. officials has been extended over the G.T.P.R.:—

H. G. FOREMAN, Treasurer, Canadian Northern Ry. System, Toronto;

C. E. FRIEND, Comptroller, Canadian Northern Ry. System, Toronto;

J. M. GRIEVE, General Superintendent, Sleeping, Dining and Parlor Cars and News Service, Canadian National Rys., Toronto;

R. M. MITCHELL, Right of Way and Property Commissioner, Canadian National Rys., Toronto;

WM. PHILLIPS, European Manager, Canadian National Rys., London, Eng.;

W. PRATT, Manager, Sleeping, Dining and Parlor Cars and Hotels, Canadian National Rys., Toronto;

G. E. SMART, General Master Car Builder, Canadian National Rys., Toronto;

E. B. WALKER, Electrical Engineer, Canadian National Rys., Toronto;

T. G. WATSON, Tax Commissioner, Canadian National Rys., Toronto. He will now supervise all matters of assessment and taxation, relating to lands of the former Canadian Northern Ry. Co., and its subsidiary lines, together with the Intercolonial, National Transcontinental and Grand Trunk Pacific Rys.

Canadian National Rys. Western Lines-Grand Trunk Pacific Ry.—In connection with the placing of the G.T.P.R. under the Canadian National Rys. Board, the jurisdiction of the following officials has been extended over both lines:—

J. M. BANNERMAN, Chief Special Agent, Western Lines, C.N.R., Winnipeg;

H. P. BLAKE, Engineer of Water Supply, Western Lines, C.N.R., Winnipeg;

W. C. BLAKE, Divisional Accountant, C.N.R., Winnipeg;

W. BURNS, Engineer of Construction, Western Lines, C.N.R., Winnipeg;

A. E. COX, General Storekeeper, Western Lines, C.N.R., Winnipeg;

E. CRAWFORD, Superintendent of Car Service, Western Lines, C.N.R., Winnipeg;

H. A. DIXON, Chief Engineer, Western Lines, C.N.R., Winnipeg;

J. P. DRISCOLL, General Superintendent of Car Service, C.N.R., Toronto;

A. H. EAGER, Mechanical Superintendent, Western Lines, C.N.R., Winnipeg;

A. G. GILMOUR, Freight Claim Agent, C.N.R., Winnipeg;

J. A. HEAMAN, Assistant Chief Engineer, G.T.P.R., Winnipeg;

J. G. LEGRAND, Bridge Engineer, G.T.P.R., Winnipeg;

J. M. LENEY, Assistant Chief Medical Officer, G.T.P.R., Winnipeg;

S. J. LUPTON, Chief Boiler Inspector, Western Lines, C.N.R., Winnipeg;

A. McCOWAN, Master Car Builder, Western Lines, C.N.R., Winnipeg;

C. H. NICHOLSON, Manager, G.T.P. Coast Steamship Co., Vancouver, B.C., Manager of Steamships, with jurisdiction over all floating equipment under the direction of the railways;

W. LeB. ROSS, Local Treasurer, G.T.P.R., Winnipeg;

A. A. TISDALE, Assistant to General Manager, G.T.P.R., Winnipeg.

F. G. ADAMS, heretofore Commercial Agent, G.T.R., Winnipeg, has been appointed Assistant General Freight Agent, C.N.R. and G.T.P.R., with supervision of the solicitation of freight traffic. Office, Winnipeg.

R. H. BELL, heretofore Division Freight Agent, C.N.R., Edmonton, Alta., has been appointed Division Freight Agent, Canadian National and Grand Trunk Pacific Rys., there.

E. BOWER, heretofore Travelling Passenger Agent, C.N.R., Regina, Sask., has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., Vancouver, B.C.

A. BROSTEDT, heretofore Assistant General Freight Agent, C.N.R., Vancouver, has been appointed General Freight Agent, C.N.R. and G.T.P.R., with supervision of territory Lucerne, B.C., and west, and including G.T. Pacific Coast Steamship Co. Office, Vancouver, B.C.

C. H. BROWN, heretofore Assistant Superintendent, G.T.P.R., Edmonton, has been appointed Superintendent of Transportation, Western District, C.N.R. and G.T.P.R. Office, Edmonton, Alta.

W. A. BROWN, General Superintendent, Western District, C.N.R., Edmonton, Alta., has had his jurisdiction extended over G.T.P.R. lines, Edmonton to Biggar, both inclusive, Tofield to Calgary, Biggar to Loverna, Oban to Battleford, and Battleford to Carruthers.

J. D. CAMERON, heretofore City Freight Agent, C.N.R., Victoria, B.C., has been appointed Travelling Freight Agent, C.N.R. and G.T.P.R., Vancouver, B.C.

A. D. CAREY, heretofore Superintendent, G.T.P.R., Edson, Alta., has been appointed Superintendent, Canadian National and Grand Trunk Pacific Rys., with territory as hitherto. Office, Edson, Alta.

B. T. CHAPPELL, General Superintendent, Prairie District, C.N.R., Moose Jaw, Sask., has had his jurisdiction extended over G.T.P.R. lines,—Biggar to Watrous, Young to Prince Albert, Melville to Regina, Regina to Riverhurst, Regina to Northgate, and Talmage to Weyburn.

R. CHISHOLM, Inspector of Agencies, C.N.R., Winnipeg, has had his territory re-arranged as follows,—all C.N.R. lines west of Armstrong, Ont., west of and including Port Arthur, Ont., to, and including, Edmonton, Alta.; Stony Plains, St. Albert, Athabaska and Oneway Subdivisions, and all G.T.P.R. lines east of, and including, Edmonton, Alta.

F. J. CREIGHTON, heretofore City Ticket Agent, C.N.R., Winnipeg, has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

J. W. CONNELL has been appointed Assistant Freight Claim Agent, Loss and Damage Claims. Office, Winnipeg.

W. G. CONNOLLY, heretofore City Passenger and Ticket Agent, G.T.P.R., Vancouver, B.C., has been appointed City Passenger Agent, C.N.R. and G.T.P.R., there.

G. A. CUNCLIFFE has been appointed Superintendent, with jurisdiction over the following lines: Brandon to Regina; Maryfield to Radville; Luxton to Estevan; Radville to Bengough; Verdun to Belmont; and M. & B. Jct. to Hartney Jct. Office, Brandon, Man.

A. DAVIDSON, heretofore Commercial Agent, G.T.P.R., Vancouver, has been appointed Division Freight Agent, C.N.R. and G.T.P.R., with supervision over Grand Trunk Pacific Coast Steamship Co.'s traffic. Office, Vancouver, B.C.

J. E. DAVISON has been appointed Assistant to Chief Engineer, C.N.R., Western Lines, and G.T.P.R., Winnipeg.

L. V. DRUCE, heretofore Division Freight Agent, G.T.P.R., Edmonton, Alta., has been appointed Commercial Agent, C.N.R. and G.T.P.R., there.

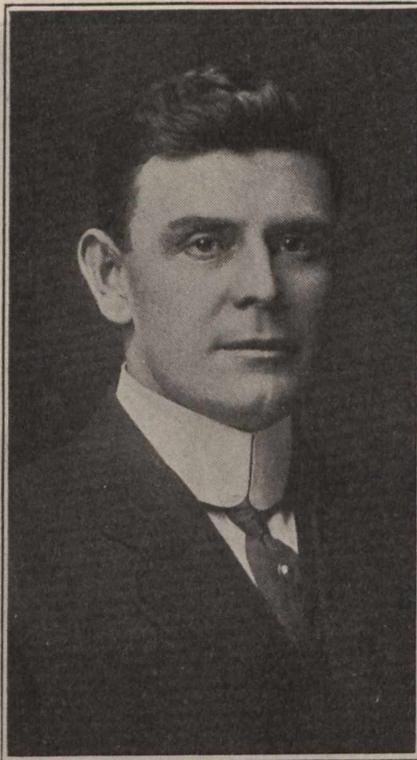
C. F. EARLE, heretofore City Passenger and Ticket Agent, G.T.P.R., Victoria, B.C., has been appointed District Passenger Agent, C.N.R. and G.T.R., there.

L. A. FONGER, heretofore chief clerk, Freight Department, C.N.R., Winnipeg, has been appointed Division Freight Agent, C.N.R., and G.T.P.R., Port Arthur, Ont., vice J. R. Scott, promoted.

H. K. GAYS, heretofore City Freight Agent, C.N.R., Winnipeg, has been appointed Division Freight Agent, C.N.R. and G.T.P.R., Brandon, Man.

S. M. GREENE, heretofore City Passenger and Ticket Agent, G.T.P.R., Regina, Sask., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

E. HACKING, heretofore Master Car Builder, G.T.P.R., Transcona, Man., has



W. U. Appleton,
General Superintendent of Rolling Stock, Eastern
Lines, Canadian National Railways.

been appointed Assistant Master Car Builder, C.N.R. and G.T.P.R. Office, Winnipeg.

R. HAY, heretofore City Passenger and Ticket Agent, C.N.R., Vancouver, B.C., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

G. M. HEMSWORTH, heretofore City Ticket Agent, C.N.R., Victoria, B.C., has been appointed Travelling Freight Agent, C.N.R. and G.T.P.R., there.

J. IRWIN, heretofore Superintendent, Edmonton Division, Western District, C.N.R., Edmonton, Alta., has been appointed Superintendent, C.N.R. and G.T.P.R., with jurisdiction over the following lines: Edmonton to Biggar, including Biggar, Tofield to Calgary, Biggar to Loverna, Oban to Battleford, and Battleford to Carruthers. Office (temporary), Edmonton, Alta.

C. E. JENNEY, heretofore General Agent, Passenger Department, G.T.P.R.,

Vancouver, B.C., has been appointed District Passenger Agent, C.N.R. and G.T.P.R., there, with supervision of Grand Trunk Pacific Coast Steamship Co.'s traffic.

G. F. JOHNSTON, heretofore City Passenger and Ticket Agent, G.T.P.R., Prince Rupert, B.C., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

R. E. JOHNSTON has been appointed City Freight Agent, C.N.R. and G.T.P.R., Vancouver, B.C.

W. H. KILBY has been appointed Fire Inspector, with jurisdiction over all C.N.R. lines west of Armstrong, Ont., west of and including Port Arthur, Ont., to and including Edmonton, Alta.; Stony Lake, St. Albert, Athabaska and Oneway subdivisions and all G.T.P.R. lines west of and including Edmonton. Office, Winnipeg.

A. KILPATRICK, Superintendent, G.T.P.R., Smithers, B.C., having been transferred, that position has been abolished, J. P. KIRKPATRICK, Assistant Superintendent, C.N.R. and G.T.P.R., there, now reports to the Assistant General Superintendent, C.N.R. and G.T.P.R., Prince Rupert, B.C.

W. A. KIRKPATRICK, heretofore Trainmaster, C.N.R., Neepawa, Man., has been appointed Superintendent of Transportation, Prairie District, C.N.R. and G.T.P.R., Saskatoon, Sask.

A. F. LENON, heretofore City Passenger and Ticket Agent, G.T.P.R., Saskatoon, Sask., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

A. C. LIPSETT, heretofore City Passenger and Ticket Agent, G.T.P.R., Calgary, Alta., has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., there.

J. H. CORMICK, Signal Engineer, Western Lines, C.N.R., Winnipeg, has had his jurisdiction extended over all G.T.P.R. lines east of and including Edmonton, Alta.

T. W. McDONOUGH, heretofore Travelling Passenger Agent, G.T.P.R., Winnipeg, has been appointed Chief Terminal Passenger Agent, C.N.R. and G.T.P.R., Winnipeg.

J. F. McGUIRE, heretofore acting General Agent, C.N.R., Seattle, Wash., has been appointed General Agent, Passenger Department, C.N.R. and G.T.P.R., with territory, Washington and Oregon. Office, Seattle, Wash.

K. E. McLEOD, heretofore District Passenger Agent, C.N.R., Vancouver, B.C., has been appointed District Passenger Agent, C.N.R. and G.T.P.R., there.

R. F. McNAUGHTON, heretofore City Ticket Agent, C.N.R., Regina, Sask., has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., there.

G. A. McNICHOLL, heretofore Assistant General Freight and Passenger Agent, G.T.P.R., Prince Rupert, B.C., has been appointed Assistant General Freight and Passenger Agent, C.N.R. and G.T.P.R., there.

J. MADILL, heretofore District Passenger Agent, C.N.R., Edmonton, Alta., has been appointed District Passenger Agent, C.N.R. and G.T.P.R., there.

B. R. MARSALES, heretofore Division Freight Agent, C.N.R., Saskatoon, Sask., has been appointed Division Freight Agent, C.N.R. and G.T.P.R., there.

C. F. MARTIN has been appointed Superintendent of Transportation, with jurisdiction over G.T.P.R. between Edmonton (not including Edmonton) and Edson, Alta., and all C.N.R. and G.T.P.R. lines west of Edson, including Vancouver Island lines, reporting to N. B. Wal-

ton, Assistant General Superintendent, on matters pertaining to lines between Edmonton and Prince Rupert. Office, Vancouver, B.C.

R. H. MERRITT, heretofore City Passenger and Ticket Agent, G.T.P.R., Seattle, Wash., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

R. M. MILLIKEN, heretofore Division Freight Agent, C.N.R., Regina, Sask., has been appointed Division Freight Agent, C.N.R. and G.T.P.R., there.

L. F. MUNCEY, heretofore Assistant Superintendent, C.N.R., Vancouver, B.C., has been appointed Superintendent, with jurisdiction Red Path Jct. to Vancouver, vice J. E. Nelson, transferred. Office, Kamloops Jct., B.C.

W. I. MUNRO, Superintendent, C.N.R., Saskatoon, Sask., has had his jurisdiction extended over the following C.N.R. and G.T.P.R. lines: Saskatoon to Prince Albert, Prince Albert to Big River, Shelbrooke to Denhome, Humbolt to North Battleford, including Humbolt, Saskatoon to Kindersley, Delisle to Lucky Lake, Elrose Jct. to Eaton, Dalmeny to Carleton, Watrous to Biggar, Yonge to Prince Albert, including Prince Albert.

J. E. NELSON, heretofore Superintendent, Division 1, Pacific District, C.N.R., Kamloops Jct., B.C., has been appointed Superintendent, C.N.R. and G.T.P.R., Edmonton, Alta., with jurisdiction over the following lines: C.N.R. and G.T.P.R. terminals at Edmonton; North Battleford to Lobstick Jct., including North Battleford, North Battleford to Turtleford, Battleford Jct. to Battleford, Edmonton Jct. to Stony Plains, St. Albert to Athabaska, Peace River Jct. to Sangudo, Vegreville Jct. to Big Valley, Warden to Brazeau, Terminal Jct. to Camrose Jct., South East Jct. to Alliance, and St. Paul Jct. to Spedden.

F. L. NORMAN, heretofore Commercial Agent, G.T.P.R., Seattle, Wash., has been appointed Commercial Agent, C.N.R. and G.T.P.R., there.

G. A. NORTH, heretofore City Passenger Agent, C.N.R., Winnipeg, has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., St. Paul, Minn.

J. H. NORTON, heretofore City Passenger Agent, C.N.R., Calgary, Alta., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

JOHN PAUL, heretofore Division Freight Agent, C.N.R., Winnipeg, has been appointed Division Freight Agent, C.N.R. and G.T.P.R., there.

J. S. PECK, heretofore City Ticket Agent, C.N.R., Edmonton, has been appointed City Passenger Agent, C.N.R. and G.T.P.R., Edmonton, Alta.

J. F. PHILP, heretofore City Passenger and Ticket Agent, G.T.P.R., Edmonton, Alta., has been appointed City Ticket Agent, C.N.R. and G.T.P.R., there.

T. E. P. PRINGLE, heretofore City Passenger and Ticket Agent, G.T.P.R., Winnipeg, has been appointed City Passenger Agent, C.N.R. and G.T.P.R., there.

W. J. QUINLAN, heretofore District Passenger Agent, G.T.P.R., Winnipeg, has been appointed District Passenger Agent, C.N.R. and G.T.P.R., there.

D. ROBERTSON, heretofore General Storekeeper, G.T.P.R., Transcona, Man., has been appointed Assistant General Storekeeper, C.N.R. and G.T.P.R., Winnipeg.

P. A. ROONEY, heretofore Travelling Passenger Agent, C.N.R., Winnipeg, has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., there.

W. A. B. RUSSELL, heretofore Com-

mercial Agent, G.T.P.R., Regina, Sask., has been appointed Division Freight Agent, C.N.R. and G.T.P.R., Calgary, Alta.

B. G. RUTLEY has been appointed Assistant Terminal Passenger Agent, C.N.R. and G.T.P.R., Winnipeg.

J. SCHOFIELD, heretofore Architect, C.N.R., has been appointed Architect, C.N.R., Western Lines, and G.T.P.R., Winnipeg.

J. R. SCOTT, heretofore Division Freight Agent, C.N.R., Port Arthur, Ont., has been appointed Assistant General Freight Agent, C.N.R. and G.T.P.R., Vancouver, B.C.

C. A. SKOG, Division Freight Agent and District Passenger Agent, C.N.R., Duluth, Minn., will also act as District Passenger Agent, G.T.P.R.

WM. STAPLETON, heretofore District Passenger Agent, C.N.R., Saska-



L. C. Thomson,
General Storekeeper, Eastern Lines, Canadian
National Railways.

toon, Sask., has been appointed District Passenger Agent, C.N.R. and G.T.P.R., there.

H. A. STUART, heretofore Division Freight Agent, C.N.R., Brandon, Man., has been appointed Division Freight Agent, C.N.R. and G.T.P.R., Victoria, B.C.

M. D. THOMPSON, heretofore Assistant Superintendent, G.T.P.R., Regina, Sask., has been appointed Superintendent, C.N.R. and G.T.P.R., with jurisdiction over the following lines: Regina to Saskatoon, Moose Jaw to Moose Jaw Jct., Avonlea to Gravelbourg, Regina to Northgate, Talmage to Weyburn, Regina to Riverhurst, and Regina to Melville. Office, Regina, Sask.

H. F. TILLEY, heretofore Travelling Passenger Agent, G.T.P.R., Edmonton, Alta., has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., there.

T. TURNBULL, heretofore Engineer, Maintenance of Way, Western Lines, C.N.R., has been appointed Engineer, Maintenance of Way, with jurisdiction over all C.N.R. lines west of Armstrong, Ont., west of and including Port Arthur, Ont., to and including Edmonton, Alta.,

Stoney Plains, St. Albert, Athabaska and Onoway subdivision, and all G.T.P.R. lines east of and including Edmonton. Office, Winnipeg.

W. A. VANALSTINE, heretofore Travelling Passenger Agent, C.N.R., Saskatoon, Sask., has been appointed Travelling Passenger Agent, C.N.R., and G.T.P.R., there.

N. B. WALTON, heretofore Superintendent, G.T.P.R., Edmonton, Alta., has been appointed Assistant General Superintendent, with jurisdiction over G.T.P.R. lines between Edmonton (not including Edmonton), and Prince Rupert. Office, Prince Rupert, B.C.

W. WALKDEN, heretofore Bridge Engineer, Western Lines, C.N.R., Winnipeg, has been appointed Assistant Bridge Engineer, C.N.R. Western Lines and G.T.P.R. Office, Winnipeg.

T. P. WHITE, heretofore Superintendent of Car Service, G.T.P.R., Winnipeg, has been appointed Superintendent of Transportation, Central District, C.N.R. and G.T.P.R. Office, Winnipeg.

E. G. WICKERSON, heretofore City Ticket Agent, C.N.R., Saskatoon, Sask., has been appointed Travelling Passenger Agent, C.N.R. and G.T.P.R., there.

A. WILCOX, General Superintendent, Central District, C.N.R., Winnipeg, has had his jurisdiction extended over G.T.P.R. lines, Watrous to Winnipeg, including Watrous, and Melville to Canora.

F. YATES has been appointed City Ticket Agent, C.N.R. and G.T.P.R., Seattle, Wash.

Canadian Pacific Ry.—Lt. Col. C. C. STIBBARD, D.S.O., has been appointed Trainmaster, Lethbridge, Alta., vice E. M. Smith, transferred.

B. FAUGHNAN has been appointed General Freight Car Foreman, Angus shops, Montreal, vice H. R. Naylor, promoted.

H. R. NAYLOR, heretofore General Freight Car Foreman, Angus shops, Montreal, has been appointed Assistant Works Manager, Angus car shops, Montreal, vice L. C. Ord, resigned. Office, Montreal.

E. M. SMITH, heretofore Trainmaster, Lethbridge, Alta., has been appointed Trainmaster, Red Deer, Alta., vice W. S. Hall.

F. A. WINTERSON, heretofore Assistant Superintendent, Montreal Terminals Division, Quebec District, has been appointed Assistant Superintendent, Farnham Division, Quebec District, vice H. J. Main, transferred. Office, Farnham, Que.

Dominion Atlantic Ry.—J. R. H. CHIPMAN has been appointed acting Engineer, vice M. K. McQuarrie, who has returned to C.P.R. service at Revelstoke, B.C.

Duluth, South Shore & Atlantic Ry.—W. L. MARTIN, Vice President, Traffic, W. R. CALLAWAY, Passenger Traffic Manager, and H. M. LEWIS, General Passenger Agent, Duluth, Minn., are reported to have resigned.

Edmonton, Dunvegan & British Columbia Ry., Central Canada Ry.—E. J. BULGIN, heretofore Divisional Accountant, C.P.R., Winnipeg, has been appointed General Auditor, E., D. & B. C. R. and C. C. R. Office, Edmonton, Alta.

J. A. MACGREGOR, heretofore Superintendent, Edmonton Division, Alberta District, C.P.R., Edmonton, Alta., has been appointed Manager, E., D. & B. C. R. and C. C. R., as reported in a previous issue. Office, Edmonton, Alta.

Grand Trunk Ry.—E. O. DUNN, Trainmaster, Durand, Mich., has had his jurisdiction extended over District 25 (C. S. & M.), Durand to Bay City, Mich.

Mrs. E. H. GAUDEN has been appointed Welfare Superintendent, female clerical staff, general office, Montreal, the management desiring to make the environment of office life as healthy and happy as possible; she will have charge of the luncheon room and rest room, and will extend her help to the homes of girls in case of sickness.

JOHN GREER has been appointed Assistant Engineer, Portland Division, vice R. F. Nicholson, resigned. Office, Portland, Me.

H. HULATT, Manager of Telegraphs, Canadian Lines, Montreal, has also been appointed Consulting Manager of Telegraphs, Western Lines.

The Detroit Terminals have been separated from the Detroit Division, Western Lines, and District 25 (C. S. & M.) has been transferred from the Chicago Division to the Detroit Division.

T. KING, Superintendent, Detroit Division, has the following jurisdiction: District 25 (C. S. & M.), Durand to Bay City; District 27, State Fair to Grand Haven, and Milwaukee terminals; District 28, Ashley to Muskegon; District 29, double track switch, east end of Gillen yard to Tappan; District 29 (M.A.L.), Richmond to Jackson; P.O. & N., Pontiac to Caseville; D. & H., Cass City to Bad Axe, and car ferries between Grand Haven and Milwaukee. Office, Durand, Mich.

E. F. GORMAN, Superintendent, Detroit Terminals, has the following jurisdiction: District 27, Brush St. station to State Fair; District 29, West Detroit to double track switch, east end of Gillen yard. Office, Detroit, Mich.

F. L. SAMPLE has been appointed Assistant Superintendent, Detroit Terminals, Western Lines. Office, Milwaukee Jct., Wis.

Grand Trunk Pacific Ry.—See Canadian National Rys.-G.T. Pacific Ry., also Canadian National Rys., Western Lines-G.T.P.R.

Grand Trunk Pacific Ry. Telegraphs.—In pursuance of authority issued by the Receiver under which the management of the Grand Trunk Pacific Ry. has been placed under the Canadian National Rys. Board, the jurisdiction of G. D. PERRY, General Manager, Great North Western Telegraph Co., has been extended over G.T.P.R. lines. Office, Toronto.

Quebec Oriental Ry., Atlantic, Quebec & Western Ry.—C. A. STARK has been appointed Master Mechanic, vice R. Lindsay, resigned. Office, New Carlisle, Que.

The Car Shortage Situation.

The Railway Association of Canada issued the following circulars Sept. 17:

No. 9.—In times of shortage of equipment, to protect freight loading, it is necessary that railways apportion available equipment amongst shippers located on their lines, on an equitable basis. In this connection it should be borne in mind that industries making cars empty on their sidings are not entitled to any more favorable treatment than that accorded other shippers. In cases where a shipper makes empty a larger number of cars than he is entitled to, for loading on an equitable distribution basis, the railway shall call upon such shipper to turn back empty cars in excess of the number to which he is entitled, for other distribution.

No. 10.—The present acute car shortage makes it incumbent upon the railways to increase in every way possible, freight car efficiency. Shippers and consignees are being urged to load cars

promptly, and to capacity, to place their orders for carload lots, and release equipment promptly at destination. In this connection the attention of the railways is called to the importance of following out these suggestions to shippers and consignees in connection with the ordering and unloading of o.c.s. material, and it is recommended that the handling of o.c.s. material in revenue freight car equipment should be closely checked by the railways, with a view to avoiding waste of car capacity and reducing delays in unloading to the minimum.

Circular 8, Supplement 1.—In carrying out the requirements of circular 8, it is recommended that the following loading of 40 ton cars with flour be adhered to:—

In 80 lb. sacks	1175 sacks a car
In 98 lb. sacks	940 sacks a car
In 140 lb. sacks	650 sacks a car
In 220 lb. sacks	400 sacks a car

Thirty ton cars can be loaded to capacity, viz., 66,000 lb.

Occupancy of Toronto New Union Station Offices.

Canadian Railway and Marine World for September stated that a number of Canadian National, Canadian Pacific and Grand Trunk Railways' officials would remove their offices to the new union station, Toronto, about Sept. 15. Owing to unforeseen delays, particularly in regard to the installation of telegraph and telephone service, the removals had to be postponed, and it is now expected that they will be effected early in October.

The names of the C.P.R. and G.T.R. officials who will remove were given in Canadian Railway and Marine World for September. The following Canadian National Rys. officials will also remove:—D. Crombie, General Superintendent; G. A. Hoag, Superintendent of Transportation; J. H. McAlpine, Master Mechanic; W. C. Moore, Assistant Master Mechanic; W. H. Long, General Car Foreman; G. P. MacLaren, District Engineer; W. H. B. Bevan, Assistant Engineer; R. B. Jennings, Division Engineer; C. L. Harris, Superintendent; W. L. Buller, Assistant Superintendent; W. D. Marshall, Chief Dispatcher; O. Kerr, Bridge and Building Foreman; V. Davies, Boarding Car Supervisor.

It is expected that the Post Office Department will take possession of the eastern block early in October.

Change in Canadian Marconi Co.'s Control.

As a result of changes in the organization of The Marconi Wireless Telegraph Co. of Canada, Ltd., it is now entirely under Canadian control. Some months ago, a merger was effected in the United States between the American Marconi Co. and the General Electric Co.'s wireless interests, the merged interests being incorporated as Radio Corporation of America. As a result of that merger, the Radio Corporation became stronger than either of its constituents, separately, could ever have hoped to become, as it gained control of all the wireless patents of the American Marconi and General Electric Companies. As a side issue of that merger, the various Marconi interests of the British Empire, elsewhere than in Canada, became entitled to the use of all the wireless patents owned and controlled by the General Electric Co. Canada was not included, as the Canadian equivalents of

the wireless patent of the General Electric Co. were owned by the Canadian General Electric Co., which is not under the control of the General Electric Co.

By changes which have taken place recently in its organization, the Canadian Marconi Co. becomes affiliated with the Canadian General Electric Co. Senator Frederic Nicholls, Sir William Mackenzie and Mr. A. E. Dymont, directors of the Canadian General Electric Co., having been elected directors of the Canadian Marconi Co., the board of which is now constituted as follows:—Senator Frederic Nicholls, President; Senator G. Marconi, Vice President; A. E. Dymont, Vice President; R. Bickerdike, Vice President; Sir William Mackenzie, Godfrey C. Isaacs, G. M. Bosworth, C. Greenshields, K.C., A. H. Morse, A.M.I.E.E. (London), Mem. I.R.E. (New York), Managing Director. The authorized capital of the Canadian Marconi Co. will be increased to provide additional working capital and for the acquisition of the wireless patents controlled by the Canadian General Electric Co., which patents include those on the Alexanderson alternator, the manufacture of the Fleming valve, the Alexanderson multiple aerial, etc.

Canadian Ticket Agents' Association's Annual Meeting.

The Canadian Ticket Agents' Association held its 34th annual meeting and outing at Montreal, Sept. 22 and 23. At the annual meeting at the Windsor Hotel, Sept. 22, G. T. Bell, Passenger Traffic Manager, G.T.R.; W. S. Cookson, General Passenger Agent, G.T.R., and W. H. Snell, General Passenger Agent, C.P.R., addressed the members.

The curtailment of free transportation to ticket agents and their dependents was discussed at length, a committee reporting that under the railway act of 1919 it is illegal to extend free transportation to ticket agents not wholly employed in transportation business. A resolution was passed expressing sympathy with F. W. Churchill, for many years town ticket agent, C.P.R., Collingwood, Ont., who has resigned from membership owing to having lost his eyesight.

The officers were re-elected as follows: President, J. Ransford, Clinton, Ont.; First Vice President, J. A. McDonald, Valleyfield, Que.; Second Vice President, A. C. Rorabeck, North Bay, Ont.; Third Vice President, C. G. Millard, Coldwater, Ont.; Secretary-Treasurer, E. de la Hooke, London, Ont.; Auditor, W. E. Hall, Blenheim, Ont.; executive committee, W. Jackson, Clinton, Ont.; A. M. Hare, Tillsonburg, Ont.; C. B. James, Orillia, Ont.; W. J. Moffatt, Toronto; W. H. C. MacKay, St. John, N.B.

On the evening of Sept. 22 the members had a theater party. On Sept. 23, in the morning, they were taken over some of the Montreal Tramways Co.'s lines in a special car; in the afternoon they were given a motor ride around Mount Royal, and afterwards went on board the s.s. Saturnia, of the Anchor-Donaldson Line, where they were welcomed by R. W. Reford, President; W. I. Gear, Vice President, and other officials of the agents, the Robert Reford Co. While the members were being entertained on board, they presented mementos of the outing to E. T. Boland, Manager, Robt. Reford Co., Toronto, and J. J. Brignall, Travelling Passenger Agent, C.P.R., Toronto.

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Canadian National Railways Directors' Inspection Trip.

Between Sept. 16 and 27, D. B. Hanna, President, Canadian National Rys., made an inspection trip over some of the eastern lines, accompanied by the following other directors: A. P. Barnhill, K.C., Major Graham A. Bell, C.M.G., Deputy Minister of Railways and Canals, Thos. Cantley, Robt. Hobson, Sir Hormidas Laporte, R. T. Riley and E. R. Wood. There were also in the party R. P. Ormby, Secretary; S. J. Hungerford, Assistant Vice President, and F. P. Brady, General Manager, Eastern Lines. Among other officials who travelled with the party, through their respective jurisdictions, were W. A. Kingsland, Assistant General Manager, Eastern Lines, and C. B. Brown, Chief Engineer, Moncton, N.B., and the local superintendents, etc.

The itinerary included Montreal, Quebec, McGivney Jct., Fredericton, St. John, N.B., Moncton, Sydney, Tormentine, Port Borden, Summerside, Charlottetown and Halifax.

At the principal points visited the railway properties were gone over. At St. John, N.B., special attention was paid the new yard area on Marsh Road, and to the harbor development and drydock work, being done in Courtenay Bay, by the St. John Drydock & Shipbuilding Co. The members of the party were entertained at luncheon at the Union Club, and afterwards went over the harbor on a tug. At Halifax, Mr. Hanna had conferences with delegations from the city council and board of trade.

Chief Interchange Car Inspectors' and Car Foremen's Association.

The Chief Interchange and Car Foremen's Association of America's annual meeting was held in Montreal, Sept. 14, 15 and 16. The association's object is the advancement of knowledge relating to safe and economical railway car interchange, to the construction and maintenance of cars in shops, to secure a fair and uniform understanding of the American Railway Association's rules on the general interchange situation, with international harmony, honesty and unity of action.

The members of the association were welcomed by representatives of the City Council. The meeting on Sept. 14 was devoted to a discussion of the A.R.A. Rules of Interchange with particular attention to the changes adopted at the June convention. This discussion was continued on Sept. 15, and at the conclusion a paper on the Transportation of Explosives was read by J. E. Grant of the Bureau of Explosives. An address on the same subject was given by J. O'Donnell, also representing the Bureau. The influence of the work of the car department on the elimination of loss and damage to freight was discussed by E. Arnold, Freight Claim Agent of the G. T.R.

Two papers were presented at the meeting on Sept. 15, the first on the Lubrication of Freight and Passenger Equipment, by M. J. O'Connor; the second on the Best Methods of Repairing Cars in Train Yards, by O. E. Sitterly. An interesting feature of this session was the showing of moving pictures illustrating proper and improper practices in designing and maintaining brake beams and brake shoes, prepared by the Chicago Railway Equipment Co. The

meeting on Sept. 16 was devoted to the reports of committees, the election of officers and miscellaneous business.

The following officers were elected:—President, Edward Pendleton, General Car Foreman, Chicago & Alton Ry., Peoria, Ill.; First Vice President, A. Armstrong, Chief Joint Car Interchange Inspector, Atlanta, Georgia; Second Vice President, W. F. Westfall, Special Inspector, New York Central Ry., Cleveland, Ohio; Secretary-Treasurer, W. R. Elliott, General Car Foreman, St. Louis, Mo., terminals. W. H. Sherman, Car Foreman, G.T.R., was elected a member of the Executive Committee.

The ladies who accompanied the delegates were entertained by Montreal railwaymen to drives around the city, and other festivities included a reception and dance and a theatre party.

The Rehabilitation of the Reid Newfoundland Co.'s Railway.

The Commission appointed by the Newfoundland Government under an act passed at the Legislature's last session has started work. Among the recommendations, according to a press report, affecting the operation of the railway already made, is one for an increase in passenger fares and freight rates, the percentage of which had not been fixed Sept. 16. The granting of passes, which it is stated had assumed "enormous proportions," is reported to have been abolished. To this regulation, it is said, there are to be no exceptions whatever, the privileges heretofore granted to members of Parliament and to most of the company's officials being abolished.

The Legislature last session voted \$1,000,000 to be immediately expended on the line and its equipment, which was appropriated as follows:—\$300,000 for purchase of fish plates to connect the rails, \$250,000 for additional terminal facilities at St. John's and Port aux Basques; and \$450,000 to be paid to the Reid Newfoundland Co. to buy 6 locomotives, 50 box cars and 50 flat cars. Orders are reported to have been given for 6 locomotives, and enquiries are said to have been made for cars.

Arrangements are reported to have been made for considerable expenditures at Port aux Basques, the work to include the rebuilding and enlargement of some of the existing structures. This is the port whence the Reid Newfoundland Co.'s steamers run to Sydney, N.S.; and the report adds that T. A. Hall, the Government's engineer, is visiting Canada to secure the co-operation of Canadian National Rys. officers for the improvement of terminal facilities at Sydney, which are said to be inadequate. Another report states that the Commission visited Port aux Basques recently to select a site for new freight sheds, that the sheds will extend from the present shed to the railway office, and provide for handling of express and baggage and the Customs work.

Provision, it is said, is being made for a new terminal for the south coast steamships at Argentia, with railway facilities. The present terminals are at Placentia, and the steamships serve Port aux Basques, Argentia and the inner bays on the south shore. Argentia is on a bay a short distance west of Placentia, and is open all the year round. The proposed new terminal will also be used by the Anglo-Newfoundland Development Co., and other pulp and paper exporters. (Aug., pg. 434.)

Commutation Fares to Beaches in Winnipeg District.

Assistant Chief Railway Commissioner S. J. McLean gave the following judgment July 29:—Complaint is made by the Winnipeg Beach Community Club, Winnipeg, alleging an excessive increase in fares for passengers travelling between the City of Winnipeg and the summer resort of Winnipeg Beach and adjoining beaches. As developed at the hearing, the matter turned on the question of the alleged excessive increase in commutation rates. It is also set out in the application that the conditions considered by the Board, as outlined in order 29,512, dated April 1, 1920, are not the same as those which exist in connection with the summer residents at Winnipeg Beach, and that a special tariff should be put into effect for the summer residents of Winnipeg Beach and adjoining beaches.

Application was also launched on behalf of Matlock Beach, it being set out that Matlock has a large summer population, that the C.P.R. insisted upon campers resident at Matlock Beach purchasing commutation tickets to Winnipeg Beach, and that Matlock Beach has had commutation ticket privileges ever since the Beach was opened up as a summer colony; and the applicants claim that having had such privileges for over 12 years, if the Matlock rate is to be in accord with that fixed by order 29,512, then it should be based on the actual Matlock mileage; in other words, there should be a specific commutation rate for Matlock. As indicated below, the commutation rate which has applied to Matlock has been the Winnipeg Beach rate.

Winnipeg Beach is 49 miles from Winnipeg. The beaches mentioned at the hearing were Winnipeg Beach, Matlock Beach, Whytefold, Boundary Park, and Sandy Hook. Gimli, which is 59 miles from Winnipeg, was also referred to. Matlock and Whytefold are intermediate to Winnipeg Beach. Boundary Park and Sandy Hook are beyond Winnipeg Beach, Sandy Hook being the second station beyond. In addition, Ponemah and Dunnottar were mentioned. Ponemah is intermediate to Winnipeg Beach. Dunnottar is not shown in the company's timetable or folder. There are relatively short distances intervening between the points mentioned.

The tariffs have been checked and show commutation rates between Winnipeg and Winnipeg Beach and between Winnipeg and Gimli. The tariffs on file do not show commutation rates between Winnipeg and the other points mentioned. Apparently the traffic has been handled, so far as commutation traffic is concerned, by the passenger purchasing transportation either to Winnipeg Beach or Gimli in respect of the point intermediate to either of the commutation destinations aforesaid. The figures for 1919 passenger business as between Winnipeg and the points concerned show the following:—Excursion tickets, \$97,872; week-end tickets, \$9,634; commutation tickets, \$28,366; total, \$135,872. Of this business 72.04% was carried on excursion tickets, while 20.08% represents the commutation movement. There were issued in connection with the commutation traffic in question during 1919, 2,556 10-trip tickets and 338 55-trip tickets; a total of 2,894, therefore, the predominant type of commutation ticket is not one concerned with daily travel, but with less frequent movements which normally would appear to be of the week-end type.

The discussion at the hearing turned primarily upon an alleged difference of conditions existing in connection with the traffic herein concerned and the traffic involved under order 29,512. Applicants submitted that the commutation rates had existed so long that they had been regarded as, so to speak, standard commutation rates. They stated that when the increase took place under the Fifteen Per Cent Case, which percentage increase applied to commutation rates as well, they had no objection to this, but that they objected to any further increase. It may be pointed out in this connection that the same condition existed in Eastern Canada; commutation rates had existed for a period of time, and under the Fifteen Per Cent Case they were subjected to a 15% increase.

It was argued that the traffic concerned in the Board's judgment in the Commutation Rates Case was related to an established suburban traffic, and that the consideration of this overshadowed the matter of summer traffic; and it was stated that in the case herein involved summer traffic was the predominant feature. It is to be pointed out that in the case of the complaint of the Gatineau Resident's Association against the C.P.R., which was dealt with in the judgment, what was concerned was the matter of summer traffic, there being no winter commutation rates on the Gatineau,—the commutation fares of summer residents on the Gatineau line are limited to the period beginning May 1 and ending Oct. 31 of each year; and the judgment in dealing with the rates specifically sets out detail regarding rates and mileages in connection with the summer traffic up the Gatineau river.

Reference was made to the volume of excursion traffic between Winnipeg and Winnipeg Beach as having a bearing upon the proper level of commutation rates, and as a matter to be considered in connection with the contention that a special commutation rate basis should be in place on the traffic in question—a rate basis distinct from and lower than that authorized in the Board's order above referred to. The typical commutation rate, it seems to me, is that concerned with the 55-trip ticket as it was, which was reduced under the Board's order to a 50-trip basis. This is concerned with a daily movement. On account of the limitation of time within which it has to be used, it has that element of assured frequency of movement which is a fundamental factor in connection with the granting of commutation rates. In the application dealt with in the judgment, which was implemented by the Board's order 29,512, this 55-trip ticket business, now 50-trip, played a very large part. In the case of the present applications, it is to be noted that it is of very minor importance.

The geographical situation of the different points as adjacent to Winnipeg Beach has been referred to. As already pointed out, these points, as distinct from Winnipeg Beach and Gimli, have not in the past carried specific commutation rates, and the tariffs now in force do not provide for them. It is contended that since the points involved are not being quoted commutation rates, proportioned to their respective mileages, they are being discriminated against. In the Board's judgment, the matter of discrimination was very fully considered by Commissioner Boyce. There were before

the Board applications to extend the commutation passenger fares to territory which did not have commutation rates. It was pointed out in the judgment that under The Railway Act, sec. 345, subsec. 2, "the duty is cast upon applicants to the discretion of the Board to make out such a case as will of itself induce the Board to see the fitness of granting the application by the strength of the case, and not merely by suggestion or statement as to the necessity of such a service." It was indicated that the object of the legislation as referred to was simply to give the Board a remedial power. The decision in the Commutation Rates Case did not require the installation of commutation rates at points at which at the time of the application commutation rates were not installed; and as pointed out in the various instances in which applications were made for the exercise of the Board's remedial powers, such a showing of discrimination was not made as would justify the Board's intervention.

The case as presented was concerned with two positions: (1) that the traffic conditions involved were dissimilar from those before the Board in its judgment on commutation rates; (2) the question of discrimination. In general, on the question of the nature of the traffic and of the earnings, taking into consideration the conditions as to railway costs which are referred to in Commissioner Boyce's judgment, and which are of general application, a case has not been made out for putting in such a special rate basis as asked for. As to the question of discrimination alleged, the matter falls within the reasoning and conclusions of Commissioner Boyce as above referred to. I am, therefore, of the opinion that the situation as developed is not one which on the facts before us is taken out from under the provisions of the Board's judgment in the Commutation Rates Case.

Commissioners Goodeve and Rutherford concurred.

Grand Trunk Railway Construction, Betterments, Etc.

Ottawa Office and Store Building.—A recent press report stated that a contract was about to be let for the erection of an office and store room at Ottawa.

London Reclamation Yard.—A press report states that plans are being prepared for the construction of three buildings at East London, Ont., for use in connection with a reclamation or salvaging yard, and that the total cost of the plant is put at \$300,000. It is also reported that one track from the St. Marys branch to the new yard has been laid, that the other track has been started, and that building supplies, etc., are in course of delivery for the general construction work.

Chinese Railway Club Ltd. has been incorporated under the British Columbia Companies Act, with authorized capital of \$2,000 and office at Prince George, to establish and maintain a club house.

Ties for Great Britain.—A press report states that orders for 20,000,000 ft. of railway ties for Great Britain and Ireland has been placed with the British Columbia Lumber Export Association.

Birthdays of Transportation Men in October.

Many happy returns of the day to:

A. Aitken, Assistant Superintendent, Toronto Terminals, C.P.R., Toronto, born at Decewsville, Ont., Oct. 12, 1872.

E. W. Beatty, K.C., President, C.P.R., Montreal, born at Thorold, Ont., Oct. 16, 1877.

Major Graham A. Bell, C.M.G., Deputy Minister of Railways and Canals, Ottawa, Ont., born at Perth, Ont., Oct. 13, 1874.

L. S. Brown, General Superintendent, Maritime District, Canadian National Rys., Moncton, N.B., born at Nelson, N. B., Oct. 19, 1864.

F. F. Busted, Assistant Engineer, C. P.R., Vancouver, B.C., born at Battery Point, Que., Oct. 10, 1858.

J. M. S. Carroll, Sales Manager, Canadian Consolidated Rubber Co., Montreal, born at Ballarat, Australia, Oct. 22, 1875.

C. E. Cartwright, ex-Division Engineer, C.P.R., Vancouver, B.C., born at Toronto, Oct. 13, 1864.

J. W. Corbett, Purchasing Agent, Canadian Government Merchant Marine Ltd., Montreal, born there, Oct. 4, 1887.

A. F. Dion, Traffic Manager, Quebec Harbor Commission, Quebec, born at L'Islet, Que., Oct. 1, 1871.

H. A. Dixon, Chief Engineer, Western Lines, Canadian National Rys., Winnipeg, born at Sand Hill, Ont., Oct. 7, 1878.

J. W. Doyle, General Manager, Cape Breton Ry., St. Peters, N.S., born at Summerside, P.E.I., Oct. 12, 1872.

L. V. Druce, Commercial Agent, Canadian National and Grand Trunk Pacific Rys., Edmonton, Alta., born at London, Eng., Oct. 20, 1873.

R. G. Edwards, Assistant Superintendent, Windsor Division, Ontario District, C.P.R., London, Ont., born at Maitland, Ont., Oct. 10, 1883.

A. C. Egan, Assistant to Comptroller, Canadian National Rys., Toronto, born at Winnipeg, Oct. 6, 1883.

C. E. Friend, Comptroller, Canadian National Rys., Toronto, born at Brighton, Eng., Oct. 12, 1871.

W. P. Fitzsimmons, Commissioner of Industries, G.T.R., Montreal, born at Detroit, Mich., Oct. 27, 1868.

G. Gordon Gale, Vice President and General Manager, Hull Electric Co., Hull, Que., and Vice President, Canadian Electric Railway Association, born at Quebec, Que., Oct. 9, 1882.

C. N. Ham, Secretary, Express Traffic Association of Canada, Montreal, born at Winnipeg, Oct. 21, 1884.

G. Hodge, Assistant to Vice President, Eastern Lines, C.P.R., Montreal, born there, Oct. 2, 1874.

J. H. Hughes, Assistant Superintendent, Ottawa Division, Quebec District, C.P.R., Ottawa, Ont., born at Charlottetown, P.E.I., Oct. 7, 1865.

H. Irwin, Consulting Right of Way and Lease Agent, C.P.R., Montreal, born at Newgrove, County Down, Ireland, Oct. 27, 1847.

W. B. Johnson, Master Mechanic, Halifax Division, Maritime District, Canadian National Rys., Truro, N.S., born there, Oct. 8, 1872.

W. B. Lanigan, Freight Traffic Manager, C.P.R., Montreal, born at Three Rivers, Que., Oct. 12, 1861.

O. M. Lavoie, Superintendent, Laurient Division, Quebec District, C.P.R., Montreal, born at St. Cyril de Wendover, Que., Oct. 16, 1884.

A. E. McMaster, Treasurer, Whalen Pulp & Paper Mills Ltd., Vancouver, B.C., born at Perth, Ont., Oct. 22, 1885.

Sir William Mackenzie, President, Toronto Ry., Toronto, born at Kirkfield, Ont., Oct. 30, 1849.

C. Malcolm, chief clerk, Auditor of Stores and Mechanical Accounts, Alberta District, C.P.R., Calgary, Alta., born at Tatamagouche, N.S., Oct. 18, 1881.

W. T. Marlow, General Freight Agent, Canadian Pacific Ocean Services, Ltd., Montreal, born at Limerick, Ireland, Oct. 25, 1872.

C. R. Moore, General Superintendent of Car Service, G.T.R., Montreal, born at Hamilton, Ont., Oct. 12, 1867.

Hugh Paton, President, Shedden Forwarding Co., Montreal, born at Johnstone, Renfrew, Scotland, Oct. 5, 1852.

J. W. Porter, ex-Chief Engineer, Hudson Bay Ry., Winnipeg, Man., born at Aberdeen, Scotland, Oct. 15, 1877.

T. F. Rahilly, ex-Superintendent, Algoma Eastern Ry., now of Sault Ste. Marie, Ont., born at Diorite, Mich., Oct. 6, 1892.

H. G. Reid, General Master Mechanic, Western Lines, Canadian National Rys., Winnipeg, born at Pembroke, Ont., Oct. 27, 1863.

W. S. Rollo, agent, G.T.R., St. Johns, Que., born at Dundee, Scotland, Oct. 8, 1852.

O. J. Rowe, Local Freight Agent, Grand Trunk Pacific Ry., Edmonton, Alta., born at Binghamton, N.Y., Oct. 11, 1879.

J. K. Savage, General Superintendent, Quebec District, C.P.R., Montreal, born at Forreton, Ill., Oct. 5, 1876.

Right Hon. Lord Shaughnessy, K.C. V.O., Chairman, C.P.R., Montreal, born at Milwaukee, Wis., Oct. 6, 1853.

T. Duff Smith, Fuel Agent, Grand Trunk Pacific Ry., Winnipeg, born at Barking, Essex, Eng., Oct. 2, 1868.

C. E. Stockdill, Assistant to Vice President, Western Lines, C.P.R., Winnipeg, born at London, Ont., Oct. 25, 1881.

D. A. Storey, ex-Freight Traffic Manager, Canadian Government Railways, Moncton, N.B., now of Kingston, Ont., born at Halifax, N.S., Oct. 26, 1853.

E. N. Todd, General Foreign Freight Agent, C.P.R., Montreal, born at Huntingdon, Que., Oct. 17, 1879.

J. H. Valteau, Secretary-Treasurer, Thousand Islands Ry. and Oshawa Ry., Gananoque, Ont., born at Selby, Ont., Oct. 14, 1889.

J. A. Vallerand, Superintendent and General Freight and Passenger Agent, Roberval - Saguenay Ry., Chicoutimi, Que., born at Quebec, Que., Oct. 21, 1878.

R. Walton, Division Master Mechanic, Farnham Division, Quebec District, C.P.R., Farnham, Que., born at Peterborough, Ont., Oct. 16, 1880.

New Hotel for Montreal.—Arrangements are reported to have been completed for the formation of the Mount Royal Hotel Co., with \$10,000,000 authorized capital, to build a 1,000 room hotel in Montreal. The site of the old High School, in the block surrounded by Peel, Burnside and Metcalfe streets, just above St. Catherine St., is said to have been secured for the new building. Among those interested in the company are:—F. A. Dudley, President, United Hotels Co. of America; Hon. W. J. Shaughnessy, a C.P.R. director; H. G. Kelley, President, G.T.R.; Senator L. C. Webster, President, Webster Steamship Co. and Quebec Ry., Light & Power Co.; W. W. Butler, President, Canadian Car & Foundry Co.; A. D. MacTier, Vice President, Eastern Lines, C.P.R.

Traffic Orders by Board of Railway Commissioners.

Increases in Railway Freight and Passenger Rates.

General order 308, Sept. 9, general order 309, Sept. 9, and general order 310, Sept. 15, are given in full under "Increases authorized in Railway Freight and Passenger Rates" on pages 532 and 533 of this issue.

Reconsigning Rates and Penalty Charges.

General order 307, Sept. 1.—Re reconsigning rules and penalty charges for detention of equipment in interstate traffic passing through Canada, and general order 305, Aug. 19, 1920: It appearing that the Interstate Commerce Commission has suspended clause 2 of the emergency penalty charges authorized by its special permission 50,321, July 31, 1920, the clause reading as follows:—"On all open top cars, and on all cars loaded with coal or coke, not released within the free time as prescribed in the National Car Demurrage Rules, J. E. Fairbanks, I.C.C. no. 8, supplements thereto or reissues thereof, a storage charge of \$10 a car per day or fraction of a day will be made until car is released." It is ordered that general order 305 be amended accordingly.

Automobile Tire Chain Rates.

30,030. Aug. 17.—Re application of American Audit Co., Spokane, Wash., for a ruling as to the legal rate on automobile tire chains, in less than carloads, from Victoria Park, Ont., to Vancouver, B.C., on June 29, 1918, via rail, lake and rail: Upon hearing the application in Ottawa, on May 18, 1920, in the presence of counsel for the Canadian Pacific and Grand Trunk Railway, the Canadian Freight Association being represented at the hearing, and what was alleged; and upon reading the report of the Board's Chief Traffic Officer, it is declared that the rate applicable to automobile tire chains, in less than carloads, from Victoria Park, Ont., to Vancouver, B.C., on June 29, 1918, via rail, lake and rail, was the second class rate shown in Canadian Freight Association tariff 2-A, C.R.C. no. 10, effective April 20, 1918, viz., \$3.10 per 100 lb., in accordance with item 28, page 6, supplement 5 to Canadian Freight classification 16, reading as follows, viz., "Chains: automobile tire, in boxes or barrels, i.e.l., 2nd class."

Coal Shipments by Water to United States.

General order 312, Sept. 24.—Re question of coal supply in Canada: and an order amending general order 301, dated July 22, and the powers conferred upon the Board by chap. 66 of the Acts of Parliament of Canada, 1920. Upon its appearing to the Board that a permit system is essential to render more effective the intent and purpose of general order 301, and in pursuance of the powers conferred by the said Act, the Board doth order that the general order 301 be amended by the addition thereto of the following words, viz., "And in the case of each shipment by water to the United States an export permit must first be secured from this Board."

Hamilton's Railway Problems.—N. Cauchon, C.E., Ottawa, who is advising Hamilton, Ont., City Council on civic improvements in which the routes of the railways entering the city are involved, is reported to have had an interview with H. G. Kelley, President, G.T.R., who expressed his willingness to discuss the question.

Railway Development, Projected Lines, Surveys, Construction, Betterments, Etc.

Albert & Great Waterways Ry.—A press report states that the Alberta Government has entered into an agreement with the Northern Construction Co. for putting the A. & G. W. Ry., from Lac la Bertie to McMurray, into a condition suitable for operating through trains in 1921. The A. & G. W. Ry. starts from Carbondale on the Edmonton, Dunvegan & British Columbia Ry., and has been in operation for three years or more to Lac la Biche, 113.2 miles, and track has been laid to within 12 miles of McMurray, at approximately mile 294. (Aug., 1919, pg. 431.)

Atlantic, Quebec & Western Ry.—A press report states that a long high trestle east of Newfort, Que., has been rebuilt, the work being rendered necessary by a forest fire. During the reconstruction trains were run to either end of the trestle, and passengers were transferred by ordinary vehicles.

Boston & Maine Rd.—The Board of Railway Commissioners has authorized the rebuilding of the overhead highway bridge 93, at mile 0.1 north of Smiths Mills station, Que. While Smiths Mills is mentioned in the order, the name of the station has been changed to Tomitobla, and it is situated at mile 30 from Sherbrooke, Que., on the line to Newport, Me.

Burrard Inlet Tunnel & Bridge Co.—The following directors are reported to have been elected at the annual meeting at North Vancouver, B.C., Sept. 8:—Reeve E. H. Bridgeman, President; Mayor Vance, Vice President; J. Loutet, Alderman Townsley, P. Ward, J. McNaught, Reeve Vinson, Mayor Gale, Alderman Woodside; Secretary-Treasurer, E. Cockerell. The shareholders are the cities of Vancouver and North Vancouver, and the adjoining municipalities, and the directors are their representatives. The company has a Dominion charter to build a bridge across the second narrows of Burrard Inlet, a tunnel and railway connecting with the trunk railways lines. (June, pg. 297.)

Canadian Niagara Bridge Co.—A recent press report stated that engineers were working from boats in the Niagara River, making test holes in the river bed for foundations for the proposed new bridge across the Niagara River near Grand Island. All the preliminary work on the United States side of the river is said to have been completed, and all the land necessary for the bridge and the railway approaches is said to have been secured. It is said the bridge will span the river from Black Rock to Grand Island on the Canadian side, and from Grand Island to near the Wickwire steel plant on the U.S. side of the river.

The Board of Railway Commissioners has approved a route map showing general location of the company's proposed bridge and railway from the International Boundary opposite Grand Island, in the Niagara River, to connect with the Michigan Central Rd., about 3.15 miles northeast of Welland, Ont. (July, pg. 386.)

Edmonton, Dunvegan & British Columbia Ry.—In connection with the taking over of the Edmonton, Dunvegan & British Columbia Ry. and the Central Canada Ry. for operation, we have been officially advised that it is at present difficult to give any specific information as to the betterments required or proposed

to be undertaken. It is well known that, on account of financial conditions, the property is badly run down, and the first duty of the new management will be to catch up with arrears in the renewals; to make provision for sliding banks, along the Peace and Smoky Rivers; to surface and ballast the Grande Prairie branch; to erect suitable section houses and other buildings for the maintenance staff, and in a general way to bring the road up to ordinary railway branch line standard. Several contracts are reported to have been let for ties, steam shovels and ditching machines are reported to have been distributed along the line, and to be at work.

It is expected that the present terminal arrangements with the Grand Trunk Pacific Ry. at Edmonton, Alta., will be cancelled and that a new terminal arrangement will be made with the C.P.R. (May, pg. 235.)

Esquimalt & Nanaimo Ry.—Some matters of detail in connection with the construction of the bridge at Johnston St., Victoria, B.C., are before the Board of Railway Commissioners, and it is probable that they will be finally adjusted when the Commission sits at Victoria, Oct. 11. The bridge is being built by the city and the railway company. (Sept., p. 489.)

Grand Trunk Ry.—A press report states that additional siding accommodation is about to be provided at Thorold, Ont., at an estimated cost of \$15,000.

A press report says that double tracking of Air Line Division from Bridgeburg to Windsor, Ont., under lease to the Wabash Ry., is under consideration, but that no work will be done on it until 1921 at the earliest.

Kettle Valley Ry.—A recent press report stated that good progress had been made with grading the line from Penticton to Dog Lake, B.C., and that the grading would be completed by the end of September. It is expected that track laying will be started immediately grading is completed. (Sept., pg. 489.)

Manitoba.—A press report states that the Manitoba Government is about to take steps for the construction of a railway into the northern Manitoba mineral belt. The explored mining area follows a chain of lakes and waterways from Lake Athapuskow east through Schist and Flin Flon Lakes to Herb Lake, about 90 miles. In part of the Lake Athapuskow district are large deposits of copper sulphide ore; in the Herb Lake region gold is the predominating mineral. (See Flin Flon Mining Proposition, June, pg. 297.)

Margaree Coal & Ry. Co.—The Nova Scotia Government has revoked the registration of the Margaree Coal & Ry. Co., which was incorporated some years ago under the Nova Scotia Companies Acts. An act was passed by the N.S. Legislature at the 1903-4 session incorporating the Margaree Coal & Ry. Co., to build a railway from the Chummy Corner mines, Inverness County, to Chummy Corner Cove, Margaree Harbor and Cheticamp, and from Margaree Harbor via Margaree River valley and Lake Ainslie to the projected Harbor & Gulf Ry. (if built) or if that railway was not built, the line was to be carried on to Orangedale on the Intercolonial Ry., and from Orangedale to Caribou Cove or Inhabitants Bay, near Point Tupper. The company was also authorized to build

branch lines. The line from Margaree to Cheticamp, the act provided, was not to be built if the Inverness Ry. & Coal Co. built its projected line from Broad Cove to Cheticamp. An agreement was entered into between the company and the Nova Scotia Government in 1907 for the construction of the line, and in 1910 the Dominion Parliament vote a subsidy at the usual rate and on the regular terms for building a line from Margaree to Chummy Corners, to Orangedale and to Caribou Cove, 50 miles, which subsidy was renewed in 1913. No construction has been done on the projected lines. (July, 1913, pg. 331.)

Nova Scotia Steel & Coal Co.—A press report states that the company has started construction on a spur line of two miles, from the existing line at Scotia no. 4 colliery to Banner Head, in connection with the opening up of a new colliery there, and that there is a probability of the line being extended three miles further to Point Acme colliery.

Pacific Great Eastern Ry.—The British Columbia Government, under an act passed last session of the Legislature, has sold \$3,000,000 of provincial bonds at 98.91, the proceeds of which will be utilized for construction on the P.G.E.R. The estimated cost of completing the line to Prince George, which is the immediate objective, is \$4,000,000, and the loan authorized was to make up that amount.

Track is laid to Deep Creek, the viaduct across which was expected to be completed by Sept. 30, and it is expected to have track laid from that point to Quesnel, and from Prince George to Quesnel (as work is being proceeded with from both ends) by Dec. 31.

The question of the extension of the line from Prince George to a connection with the Edmonton, Dunvegan & British Columbia Ry. in the Peace River Valley, is reported to be again under consideration, and survey parties are reported to be in the field preparing route maps and reports as to the character of the territory to be opened up.

A press report recently stated that A. F. Proctor, Chief Engineer of the B.C. Railway Department, expected that an additional 84 miles of track on the P.G.E.R. would be handed over by the contractors to the operating department during September. This additional mileage will give the railway a line from Squamish to Deep Creek, 294 miles.

A. B. Buckworth, the recently appointed General Manager, is reported to have completed his first official trip of inspection over the line Aug. 17, and to have said that rapid progress was being made with the viaduct at Deep Creek.

Pacific Great Eastern Ry.—The Premier of British Columbia returned recently to Victoria after a trip of inspection over this railway under construction to Prince George and a visit to the Peace River country and Edmonton, Alta. Settlers in the Peace River country urged the construction of the line from Prince George to a junction with the Edmonton, Dunvegan & British Columbia Ry. at the interprovincial boundary. The B.C. Government has the matter under consideration.

A recent press report stated that freight trains would be operated through from Squamish to Williams Lake by Sept. 15. (July, pg. 386.)

Pere Marquette Rd.—A recent press report stated that the Sarnia, Ont.,

Chamber of Commerce was about to take up with the Pere Marquette Rd. Co. the question of the provision of larger and more modern terminal facilities there.

Porcupine-Rand Belt Electric Ry. Co. was incorporated by the Ontario Legislature in 1912 to build a railway to be operated by steam, electricity or any other motive power from the eastern boundary of Ontario in McGarry Tp., westerly to Larder City, through other townships to Dane, crossing the Timiskaming & Northern Ontario Ry., and on to the headquarters of the Montreal River, and to the eastern shore of the Matagami River at Kenogamesse Lake, and to connect at various points with the T. & N. O. Ry. and to build branch lines. After some attempts had been made to arrange for the building of the line by the original company, the charter is reported to have passed under the control of the Associated Goldfields Mining Co., Ltd., which has large interests in the Kirkland Lake mining district. This company is reported to have been interested in the endeavor, referred to elsewhere in this issue, to induce the Ontario Government to build a branch of the T. & N. O. Ry. from Swastika to the Kirkland area. The government, before deciding as to the construction of the suggested line, desired to make an independent investigation of the mining areas to be served, but failing to secure the Associated Goldfields Mining Co.'s cooperation in the matter, decided not to build.

G. A. Mackay, President A. G. M. Co., wrote the Ontario Minister of Mines July 27 as follows:—"In pursuance of our conversation of today, and our interview with the Premier a few days ago, I have taken up the matter with the directors of Associated Goldfields Mining Co., and those of the Porcupine-Rand Belt Ry., which charter, as you know, this company owns. It was originally our directors opinion that our transportation needs would be served more quickly if our company were to build its own line of railway, and at the same time we would be able to locate it at such points as would serve our interests best, and it was only with the idea of serving as many of the other deserving operators in the district as possible that the course of the road was more or less diverted to the Kirkland Lake-Swastika route. It is our directors' opinion that only a very comprehensive investigation of our ore bodies would be fair to the province, and figuring all the assistance which we would be able to give the men in charge, this investigation would still entaile several months time. Coupling this with the fact that the Kirkland Lake-Swastika route would be more than twice as long, our directors feel that our requirements could be more speedily served by the company constructing its own line of railway from at or near Boston Creek to Larder Lake. Presuming from our conversation that your government has no objection to our following this course, we have decided to send our engineers at once over the short route and give us facts and figures as to the cost of this line." (Nov., 1916, pg. 460.)

Queens County Ry.—The Nova Scotia Government has revoked the registration of the Queens County Ry. Co., incorporated under the Nova Scotia Companies Acts. The Nova Scotia Legislature passed an act in 1909 incorporating the Queens County Ry. Co., to take over the railway, switches, etc., of the Sable Lumber Co. from Wilkins Siding, Queens County, to the Sable Lumber Co.'s lands

and to extend the railways on these lands and to buy or build a railway or tramway from between Liverpool and Shelburne, on the Halifax & Southwestern Ry. to the limits. (June, 1912, pg. 302.)

St. George, Nfld., Coal Areas.—A press report states that the Newfoundland Railway Commission visited the St. George coalfields at Robinsons recently and looked over the route for the proposed railway therefrom to the sea. (April, pg. 176.)

Sydney & Louisburg Ry.—The Dominion Coal Co., which owns the Sydney & Louisburg Ry., has deposited with the Dominion Minister of Public Works under the Navigable Waters Protection Act, a description of the site and plans of repairs to the rest pier and ice protection work in connection with the swing

span of the railway bridge over the Nura River, Cape Breton County, N.S., and has applied for leave to build the same. W. C. Richey, Sydney, is the company's Engineer of Maintenance and Way. (Mar., pg. 137.)

Timiskaming & Northern Ontario Ry. A press report of Sept. 6 stated that the Kirkland Lake district mine owners had been advised by the Ontario Minister of Mines that the Government had decided not to build a spur line from the Timiskaming & Northern Ontario Ry. at Swastika to serve the Kirkland and Larder Lake mining areas. The mine owners are reported to be very much dissatisfied with the communication and are said to be considering a proposition to build a line for themselves. (See also Porcupine-Rand Belt Line Ry.)

Canadian Pacific Railway Construction, Betterments, Etc.

St. John Bridge.—The St. John, N.B., City Council was advised Aug. 30 that some members of the Board of Railway Commissioners expected to be in the city during the third week in September in connection with the erection of the new C.P.R. bridge at the reversible falls, St. John River.

Timiskaming-Ville Marie - Des Quinze Falls line.—A press report states that an early start upon the extension of the Timiskaming-Kippawa line, along the east shores of Lake Timiskaming to Ville Marie, and on the Des Quinze Falls is looked for. Surveys for the uncompleted portion of the line to the Falls are reported to have been completed.

Chalk River Subdivision.—The Board of Railway Commissioners has authorized the company to rebuild bridge 32.7, Chalk River Subdivision, Quebec District.

Port McNicoll Subdivision.—The Board of Railway Commissioners has authorized the company to fill in bridge 58.2, Port McNicoll Subdivision, Trenton Division, Ont.

Windsor Improvements.—A press report of Sept. 21 stated that the Board of Railway Commissioners had under consideration the question of the closing of a street in Windsor, Ont., in connection with the projected yard improvements there, and that until this was settled work was being held up.

North Bay Subdivision.—The Board of Railway Commissioners has approved plan of proposed alterations to masonry to suit new reinforced concrete span crossing highway at bridge 21.12, North Bay Subdivision, Algoma District, Ont.

Cartier Subdivision.—The Board of Railway Commissioners has authorized the replacing of the present 60 ft. deck plate girder bridge at mile 38.92, Cartier Subdivision, Ont., by two 32 ft. reinforced concrete spans.

Jack Pine River Bridge.—The Board of Railway Commissioners has authorized the company to rebuild bridge 46.4 over Jack Pine River, Nipigon Subdivision, Algoma District, Ont.

For William Coaling Plant.—Work is reported about to be started on an extension of the company's coal handling facilities at Island 1, Fort William, Ont. About 6,000 piles are to be driven in connection with the work, which will include the laying out of a new dumping ground. S. McKenzie is reported to be the contractor for the piling work.

Amulet to Dunkirk Branch.—The Board

of Railway Commissioners has approved route map showing location of branch line from Amulet to Dunkirk, Sask., mile 0, in Tp. 7, Range 21, to mile 60.2, in Tp. 12, Range 28, west 2nd meridian.

Asquith to Cloan Branch.—The Board of Railway Commissioners has approved of route map showing location of branch line Asquith to Cloan, from Tp. 36, Range 10, to Tp. 42, Range 20, west 3rd meridian, mile 0 to 84.2. Asquith is on the line from Saskatoon to Wilkie, and Cloan is on the line from Wilkie to Cutknife, Sask.

Rosetown Southeasterly Branch.—The Board of Railway Commissioners has approved route map showing general location of the branch from Rosetown southeasterly to Keppel, Sask., mile 0, in Tp. 30, Range 15, to mile 37.2, in Tp. 2, Range 13, west 3rd meridian.

Lanigan Northeasterly Branch.—The Board of Railway Commissioners has authorized the building of the branch, under construction from Lanigan, Sask., across 23 highways between miles 47.8 and 84.32.

Kelfield Southeasterly.—The Board of Railway Commissioners has approved route map of the Kelfield southeasterly branch from Tp. 34, Range 29, to Tp. 32, Range 14, west 3rd meridian, mile 0 to 35.9. Kelfield, Sask., is the present terminus of a branch line from Wilkie, southeasterly, and it is proposed to extend it to a connection with the line running from Hawarden to Macklin at or near Anglia, Sask. The route map mentioned above covers the entire mileage of the extension.

Kipp Northeasterly Branch.—The Board of Railway Commissioners has approved of route map showing general location of the Kipp, Alta., northeasterly branch, mile 0 to 39.70.

Empress to Mildren Line.—The Board of Railway Commissioners has approved revised location of the Bassano easterly branch, mile 169.85 to 172.75, on the Empress-Mildren, Alta., section of the line, and has authorized the crossing of certain road allowances. (Sept., pg. 483.)

G.T.R. Apprentices Win Prizes.—Of six prizes awarded at the Canadian National Exhibition, Toronto, recently, for mechanical drawing, five were given to apprentices in G.T.R. shops, viz., G. Dutaub, and L. Inquire, Montreal; A. Capper and W. Grandison, Stratford, Ont., and D. Lamont, Ottawa.

Canadian National Railways Construction, Betterments, Etc.

Cape Breton Landslides.—Owing to heavy land slides on the line beyond Point Tupper on Cape Breton Island, N.S., on Sept. 13, caused by floods, traffic was suspended between Sydney and Point Tupper for several days. It is reported that the line was washed out at five or more points between Point Tupper and Orangedale, and that two trains were thrown off the tracks. Temporary repairs were effected and traffic was resumed Sept. 17.

Petitcodiac River bridge superstructure.—We are officially advised that that superstructure, for the new bridge 1.4 across the Petitcodiac River on the Albert Subdivision from Salisbury, N.S., described in Canadian Railway and Marine World for Sept., pg. 484, will be erected by the railway forces.

St. John Elevator.—Tenders were received to Sept. 12 for the manufacture, delivery and installation of a dust conveyor system for the grain elevator at St. John, N.S.

St. John Freight Yards.—A press report states that good progress has been made with enlarging the freight yards at St. John, N.B.

St. John Union Station Shed.—Considerable progress is reported to have been made with the erection of butterfly roofs at the Union Station, St. John, N.B.

Morin Heights, Que.—The Board of Railway Commissioners has ordered the building of a station at Morin Heights, Que.

Mount Royal Tunnel & Terminal Co.—The Board of Railway Commissioners has authorized the connecting of this company's tracks near Montreal with the Jacques Cartier Union Ry. This will establish a physical connection between the Canadian National Rys. terminals in Montreal and the Grand Trunk Ry.

Moirs River Bridge.—The Board of Railway Commissioners has authorized the rebuilding of the bridge over the Moira River in Madoc Tp., at mile 76.84 from Picton, Ont., and also the improvement of the grade there.

Thunder Bay District.—The Board of Railway Commissioners has authorized the rebuilding of bridge over Blackwater River, Thunder Bay District, mile 21.4 from Jellicoe, Ont.

Tie Contracts.—Tenders were received to Sept. 25 for the supply of 1,500,000 ties to be made and delivered between Dec. 1, 1920, and Nov. 1, 1921, as follows:—900,000 on the Grand Trunk Pacific Ry. in British Columbia; 200,000 on the G.T.P.R. in Alberta, and 400,000 on the National Transcontinental Ry. in Manitoba and Ontario between Winnipeg and Sioux Lookout.

Marchand, Man.—The Board of Railway Commissioners has approved location and plans for a station at Marchand, to be completed by Nov. 15.

Regina.—The Regina, Sask., City Council is reported to have approved an application for the erection of a spur track to the west side of Albert St.

Prince Albert-Paddock Wood Branch. The Board of Railway Commissioners has approved route map of the branch line under construction from Prince Albert, Sask., northeasterly, mile 0 to 26.094.

Swift Current-Gravelbourg Line.—The

President of the Swift Current, Sask., Board of Trade is reported to have received a telegram from D. B. Hanna, President, C.N.R., stating that it is intended to lay track on a further distance of 18 miles on this line during this year if the necessary labor can be obtained.

Junkins, Alta.—The Board of Railway Commissioners has approved of plans of proposed additions to the station grounds at Junkins, 4 miles westerly of Lobstick Jct., on the main line between Edmonton and Vancouver.

Kamloops - Vernon - Lumby - Kelowna Branch.—The Board of Railway Commissioners has approved of plans, profiles and books of reference of revised location through Tp. 19, Range 14, and Tp. 19, Range 15, B.C.; through lots 297 and 296, Kamloops Division, Yale District, B.C., and through Tp. 18, Range 14, west 6th meridian, and D. L. 442, G.1, Kamloops Division, Yale District. The right of way in the latter case is limited in certain places to 100 ft. wide except in certain specified places.

The Board of Railway Commissioners has approved plans showing revised locations on this branch as follows:—From mile 27 to 28, from mile 31.5, and from mile 44.7 to 46.11, all east of Kamloops Jct., B.C., and has also authorized the building of the line across Shuswap Ave., B.C.

British Columbia Buildings.—Tenders are reported to be under consideration for the erection of workmen's cottages and two cinder hoist foundations at Blue River and Boston Bar respectively; a freight shed and platforms at Kamloops; section houses at Birch Island and Matsqui; concrete retaining walls, culverts, etc., at Boston Bar and Port Mann, B.C.

False Creek Sea Wall Litigation.—A press report of Sept. 15 stated that the dispute between Champion & White and the Canadian Northern Ry. as to the construction of the sea wall at the False Creek reclamation works, Vancouver, had been settled by the payment of \$100,000 by the Canadian National Rys. Champion & White are reported to have received \$60,000, and A. B. Creelman, Ltd., the contractors, \$40,000. (Sept., pg. 484.)

Railway Car Manufacturers Association Convention.—The annual convention of the Railway Car Manufacturers Association of United States was held in Montreal Sept. 17 and 18. The association's annual dinner was held at the National Club Sept. 17, at which there were a number of speakers, including D. B. Hanna, President Canadian National Rys. The members made a trip of inspection to the Angus shops of the C.P.R., Sept. 18, going by special train, in charge of W. H. Winterrowd, Chief Mechanical Engineer, C.P.R., and subsequently were guests at a luncheon given by the Canadian Car Builders' Association, W. W. Butler, President, Canadian Car & Foundry Co., presiding.

Saskatchewan Recouped for G.T.P.R. Guarantees.—A Regina press dispatch says that the protracted negotiations between the Dominion and Saskatchewan Governments for the refund of money advanced by it to meet the interest falling due on provincially guaranteed bonds of the Grand Trunk Pacific Ry. have been completed by the Dominion Government paying the province \$862,252.

Chamber of Commerce Delegates' Tour of Ontario and Quebec.

The delegates to the Ninth Congress of Chambers of Commerce of the British Empire, which met in Toronto during the fourth week in September, left Toronto Sept. 24 on a tour of Ontario and Quebec, travelling over Canadian National, Canadian Pacific, Grand Trunk, Timiskaming and Northern Ontario Railways. The trip was scheduled to occupy seventeen days and to give them an opportunity of inspecting the agricultural, industrial and mining regions of the two provinces. For the information of the delegates the four railways interested in the movement had prepared a handsome book descriptive of the route to be traversed. On the cover, in black and gold, are coats of arms of the various commonwealths and dependencies of the British Empire represented at the congress. The book is profusely illustrated, the scenic beauties and industrial enterprises of the provinces being features. The foreword of the book gives a resume of the resources of the two provinces and each center of importance on the 2,500 miles of railway embraced in the trip. Accompanying the book is a map showing the natural resources, transportation and trade routes of the whole of Canada. The delegates will be able to take away with them in this book a very complete and accurate synopsis of what Ontario and Quebec offer to the investor, manufacturer and the settler.

Freight and Passenger Traffic Notes.

The Canadian National Rys. have announced a large number of changes in train service, taking effect Oct. 3.

The Montreal Harbor Commissioners will not accept shipments of explosives, export or inland, which will have to be handled over any portion of its railway.

The Canada Steamship Lines on Sept. 20 carried about 30,000 baskets of fruit from the Niagara district to Toronto, its average during the later part of September being about 25,000 baskets a day.

The Grand Trunk Ry. is reported, owing to the increasing number of thefts of freight in transit, to be about to increase its police force on the line between Montreal and Toronto. The headquarters of the extra force will, it is said, be at Brockville, Ont.

Owing to a proclamation of the Mayor of Toronto abandoning daylight saving time at midnight, Sept. 12, the C.P.R., the G.T.R. and the Canadian National Rys., which had some trains running on daylight saving time in and out of Toronto, for the convenience of business people, restored them to standard time. All other trains running on daylight time will be restored to standard time on Sunday, Oct. 3, when the daylight saving plan will have been abandoned for the year.

The Board of Railway Commissioners will hold sittings in the west as follows: Winnipeg, Man., Sept. 28; Saskatoon, Sask., Sept. 20; Edmonton, Alta., Oct. 1; Prince George, B.C., Oct. 4; Prince Rupert, B.C., Oct. 6; Victoria, B.C., Oct. 11; Vancouver, B.C., Oct. 12; Nelson, B.C., Oct. 18; Calgary, Alta., Oct. 20; Medicine Hat, Alta., Oct. 22; Regina, Sask., Oct. 23; Winnipeg, Man., Oct. 25; Port Arthur, Ont., Oct. 27.

Railway Rolling Stock Orders and Deliveries.

The Timiskaming & Northern Ontario Ry. is in the market for 4 Pacific type locomotives.

The C.P.R., between Aug. 15 and Sept. 16, received 3 passenger locomotives and 8 vans from its Angus shops, Montreal.

The C.P.R. has ordered 15 Mikado (2-8-2) locomotives from Montreal Locomotive Works.

The Reid Newfoundland Co. has ordered 200 trucks from Canadian Car & Foundry Co., for delivery in November.

The Pacific Great Eastern Ry. has received 2 Mikado locomotives from Canadian Locomotive Co., completing an order for 3, details of which were given in Canadian Railway and Marine World for February, page 126.

Canadian Car & Foundry Co., between Aug. 14 and Sept. 14, made the following deliveries:—126 Hart-Otis ballast cars and 124 box cars from Montreal works, and 43 cabooses from Amherst works, to Canadian National Rys.; 7 tank cars to Imperial Oil Ltd.; and 22 air dump cars to Greater Winnipeg Water District Ry.

Canadian National Rys. has received the following rolling stock to Sept. 15:—from Canadian Car & Foundry Co., 13 observation, buffet compartment sleeping cars, completing an order for 18, 87 box cars out of an order for 1,000, and 79 cabooses out of an order for 80; from Eastern Car Co., 629 general service cars, out of an order for 1,150; from Hart Otis Car Co., 182 ballast cars, out of an order for 350; from Preston Car & Coach Co., 5 cabooses out of an order for 20; from Canadian Locomotive Co., 20 switching locomotives out of an order for 30.

The Singer Manufacturing Co. has ordered one 4 wheel locomotive (0-4-0) from Montreal Locomotive Works. Following are the chief details:—

Weight	79,000 lb.
Wheel base	7 ft.
Cylinders, diar. and stroke	14 x 22 in.
Wheel diar.	40 in.
Journals	7 x 8 in.
Boiler, type	Straight top
Boiler, diar. inside first ring	45 in.
Boiler pressure	190 lb.
Firebox, length and width	46½ x 50¼ in.
Tubes, no. and diar.	112 2 in.
Heating surface, tubes	680 sq. ft.
Heating surface, firebox	60 sq. ft.
Heating surface, total	740 sq. ft.
Grate area	16.2 sq. ft.
Tractive power	17,400 lb.
Factor of adhesion	4.5
Reverse gear	Hand lever
Cab	Wood
Valve gear	Stephenson
Tank, type	Saddle
Water capacity	1,700 gal.
Fuel capacity	1,600 lb.

La Moleunee Estate (Boos & Co.) has ordered three 4-coupled (0-4-2) locomotives from Montreal Locomotive Works. Following are the chief details:—

Weight on drivers	36,000 lb.
Weight on trailer	6,000 lb.
Weight, total	42,000 lb.
Wheel base, driving	4 ft. 9 in.
Cylinders, diar. and stroke	11 x 16 in.
Driving wheel, diar.	33½ in.
Driving journals	5 x 6 in.
Trailer wheel, diar.	18 in.
Trailer wheel journals	3½ x 6 in.
Boiler, type	Straight top
Boiler, diar. inside first ring	36 in.
Boiler pressure	165 lb.
Firebox, length and width	40 3/16 x 32½ in.
Tubes, no. and diar.	85 2 in.
Heating surface, tubes	267 sq. ft.
Heating surface, firebox	41 sq. ft.
Heating surface, total	408 sq. ft.
Grate area	9.3 sq. ft.
Tractive power	8,100 lb.
Factor of adhesion	4.4
Reverse gear	Hand lever
Cab	Wood
Tank, type	Saddle
Water capacity	700 gal.
Fuel	Oil
Fuel capacity	400 gal.

The Algoma Eastern Ry., as stated in our last issue, has ordered two consolidation (2-8-0) locomotives from Montreal Locomotive Works. Following are the chief details:—

Weight on drivers	216,500 lb.
Weight on truck	25,000 lb.
Weight, total	241,500 lb.
Wheel base, driving	15 ft. 10 in.
Cylinders, diar. and stroke	23½ x 30 in.
Driving wheels, diar.	57 in.
Driving journals, main	10½ x 21 in.
Driving journals, others	10 x 14 in.
Truck wheels, diar.	30 in.
Truck wheel journals	6½ x 12 in.
Boiler, type	Extended wagon top
Boiler, diar. inside first ring	72 7/16 in.
Boiler pressure	200 lb.
Firebox, length and width	109 x 64¾ in.
Tubes, no. and diar.	208 2 in.
Flues, no. and diar.	34 5½ in.
Heating surface, tubes	1,538 sq. ft.
Heating surface, flues	676 sq. ft.
Heating surface, f.b. tubes	27 sq. ft.
Heating surface, firebox	200 sq. ft.
Heating surface, total	2,441 sq. ft.
Grate area	49 sq. ft.
Tractive power	49,500 lb.
Factor of adhesion	4.37
Superheater	Locomotive Superheater Co., type A
Reverse gear	Raggonet
Cab	Vestibule type
Tender frame	Steel channels
Tender wheel, diar.	33 in.
Tender truck type	C. N. standard pedestal
Tender journals	5½ x 10 in.
Tank, type	Water bottom
Water capacity	6,600 imp. gal.
Coal capacity	12 tons.

The Cordoba Central Ry., Argentine, has ordered 15 Mikado (2-8-2) locomotives from Montreal Locomotive Works. Following are the chief details:—

Weight on drivers	121,500 lb.
Weight on truck	18,000 lb.
Weight on trailer	23,500 lb.
Weight, total	163,000 lb.
Wheel base, driving	13 ft. 6 in.
Cylinders, diar. and stroke	21½ x 24 in.
Driving wheel, diar.	48 in.
Driving journals, main	9 x 9 in.
Driving journals, others	8 x 9 in.
Trailer wheel, diar.	31 in.
Trailer wheel journals	6 x 12 in.
Truck wheel diar.	31 in.
Truck wheel journals	5½ x 9 in.
Boiler, type	Straight top, Belpaire
Boiler, diar. inside first ring	65 in.
Boiler pressure	180 lb.
Firebox, length and width	81¼ x 63¼ in.
Tubes, no. and diar.	27 5½ in.
Heating surface, tubes	1,458 sq. ft.
Heating surface, flues	661 sq. ft.
Heating surface, firebox	147 sq. ft.
Heating surface, total	2,266 sq. ft.
Superheating surface	570 sq. ft.
Grate area	35.6 sq. ft.
Tractive power	27,730 lb.
Factor of adhesion	4.38
Superheater	Locomotive Superheater Co.
Reverse gear	Hand lever
Cab	Steel plate
Valve gear	Walschaert
Tender wheel, diar.	31 in.
Tender truck, type	Equalized
Tender journals	5½ x 10 in.
Tank, type	Water bottom
Water capacity	5,400 gal.
Fuel	Wood
Fuel capacity	4 cords

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

Canadian Northern Ry.	Acres.
Canadian Pacific Ry. grants	719.68
Canadian Pacific Ry., roadbed and station grounds	2,860.20
Grand Trunk Pacific Ry.	4.65
Total	3,619.83

A Valuable Car Load.—C.P.R. hopper freight car 240,000 is reported to have carried from the Rothwell district, Man., to Fort William, Ont., recently, 250,000 bush. wheat, valued at \$7,150.

A locomotive appliance is said to have been invented that will record the speed made by a locomotive at each point in a run, where it stops, and how long and where it has reversed.

Grand Trunk Railway Arbitrators' Inspection of Properties.

The board of arbitrators appointed to decide the price to be paid by the Dominion Government for certain of the G.T.R. Co.'s stocks, Sir Walter Cassells, Judge of the Exchequer Court, chairman; Sir Thomas White, representing the Government and W. H. Taft, ex-President of the United States, representing the company, left Montreal Sept. 30, to inspect the G.T.R. and G.T. Pacific Ry.'s properties. They are accompanied by H. G. Kelley, President, G.T.R.; J. B. Berry, Valuation Engineer, G.T.R.; A. W. Atwater, K.C., and F. H. Phippen, K.C., of the G.T.R. counsel. Some other G.T.R. officials went along as far as Chicago. The Government's representatives on the train are E. L. Newcombe, Deputy Minister of Justice; and R. A. C. Henry, Valuation Engineer, G.T.R. The special train comprises Pullman private car Colonial; two business cars, Ottawa and Quinte; Pullman compartment car, cafe parlor car and baggage car, one car being specially reserved for the arbitrators' use, one for President Kelley and his officials, and one for the Government representatives, so that private conferences may be held en route.

President Kelley is reported to have said in an interview, just before starting:—"The object of the journey is to give the members of the arbitration board as intimate an idea as possible of the properties and condition of the G.T. R. System. It is being undertaken at the request of the G.T.R. The arbitrators will be shown all that is possible of the properties; they will be able to study for themselves at first hand the physical condition of the lines, and will learn much of the geographical condition. A number of railway, technical and other experts are being taken, so that whatever information the board requires may be given at once. The board is going to look into conditions as closely as possible, and undoubtedly it will call for the execution of a great deal of very hard work. In addition to the railway lines, the G.T. Pacific Coast Steamship Co.'s line will be thoroughly examined, that being part of the properties of the company to be taken over by the Government."

From Montreal the party proceeded to Toronto, Hamilton, Niagara Falls, London, Sarnia and Chicago, stopping at those places, and at other points, to inspect terminal and other facilities. From Chicago they went to Winnipeg, leaving there for Prince Rupert and intending to be back in Montreal during October. It start holding sittings about the middle is probable that the arbitrators will of November.

Grain Inspected at Western Points.

The following figures, compiled by the Dominion Bureau of Statistics' Internal Trade Division, show the number of cars of grain inspected at Winnipeg and other points on the Western Division during August, and for 12 months ended Aug. 20, 1920 and 1920, respectively:—

		12 mos. 12 mos.
	Aug. to Aug.	to Aug.
	1920.	31, 1920 31, 1919
Canadian National Ry...	1,284	54,329 51,182
Canadian Pacific Ry.	2,058	73,966 70,203
Grand Trunk Pacific Ry.	199	20,280 15,311
Great Northern Ry. (Duluth)	29	696 1,025
Totals	3,570	149,271 15,311

Orders by the 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 306. Aug. 27.—Approving Interstate Commerce Commission Special Permission 50,450, as amended, with respect to minimum car-load weights of grain and grain products moving from U.S. points to Canadian destinations.

30,025. Aug. 18.—Authorizing G.T.R. to connect with Canadian National Rys. on north half of Rama Island, near Washago, Ont.

30,026. Aug. 24.—Authorizing G.T.R. to build spur for Consumers Glass Co., at Ville St. Pierre, Que.

30,027. Aug. 18.—Relieving Canadian National Rys. from providing further protection at highway crossing near St. Norbert station, Man.

30,028. Aug. 21.—Authorizing C.P.R. to lay tracks to proposed freight yard, at grade, across unopened portion of Caron Ave., Windsor, Ont.

30,029. Aug. 16.—Authorizing McDougall Tp., Ont., to make public highway crossing over C.P.R. at Nobel, Ont.

30,030. Aug. 17.—Re rate on automobile tire chains from Victoria Park, Ont., to Vancouver, B.C. This order was given fully in last issue.

30,031. Aug. 25.—Approving Central Canada Ry. bylaw authorizing its District Freight Agent and District Passenger Agent to prepare and issue tariffs of tolls to be charged for carriage of freight and passenger traffic.

30,032. Aug. 26.—Rescinding order 27,134, Apr. 16, 1919, in so far as it authorizes certain G.T.R. branches to be built on Toronto Harbor Commissioners' property in Ashbridges Bay.

30,033. Aug. 24.—Authorizing C.P.R. to build spur for Ontario Lime Co., Dufferin St., Toronto.

30,034. Aug. 24.—Authorizing C.P.R. to divert road allowance on north boundary of Sec. 3, Tp. 13, Range 3, west principal meridian, and to close diverted portion within its right of way at mile 31.4, Carberry Subdivision, Man.

30,035. Aug. 24.—Authorizing G.T.R. to build spur for British American Oil Co., Hamilton, Ont.

30,036. Aug. 24.—Authorizing C.P.R. to build its Lanigan Northeasterly Branch, at grade, across three road allowances.

30,037. Aug. 20.—Authorizing G.T.R. to use bridge 221, District 4, Montreal Division, over stream on Lot 27, southwest concession of St. Regis, Que.

30,038. Aug. 25.—Authorizing Canadian Northern Western Ry. until Sept. 1, 1921, to carry traffic over its Hanna-Medicine Hat Branch from Bonar, mile 256.9 from Saskatoon, to mile 47, Hanna Subdivision, Canadian National Rys., Alta.

30,039. Aug. 24.—Approving Edmonton, Dunvegan & British Columbia Ry. bylaw 14, authorizing the District Freight Agent and the District Passenger Agent to prepare and issue tariffs of tolls to be charged for carriage of freight and passenger traffic.

30,040. Aug. 26.—Authorizing G.T.R. to remove watchman from crossing of Main St., Lucan, Ont.

30,041. Aug. 24.—Authorizing G.T.R. to build extension to siding for Swift Canadian Co., Ottawa, Ont.

30,042. Aug. 27.—Authorizing Alberta Public Works Department to make highway crossing over C.P.R. in s.w. ¼ Sec. 30, Tp. 8, Range 26, west 4th meridian.

30,043. Aug. 31.—Authorizing Grand Trunk Pacific Ry. to build wharf in block E, Prince Rupert, B.C.

30,044. Aug. 26.—Authorizing C.P.R. to rebuild bridge 32.7, Chalk River Subdivision, Quebec District.

30,045. Aug. 25.—Authorizing C.P.R. to build spur for Quaker Oats Co., Saskatoon, Sask.

30,046. Aug. 31.—Ordering G.T.R. to provide protection at Garrison Road crossing, Bertie Tp., Ont.

30,047. Aug. 28.—Approving agreement between Bell Telephone Co. and Chapleau Rural Telephone Co.

30,048. Aug. 30.—Extending for 3 months time within which spurs for Cowan Co., Toronto, may be built.

30,049. Aug. 28.—Authorizing City of Fort William, Ont., to operate its electric railway cars over crossings at intersection of Victoria Ave. and Vickers St. and at Franklin St.

30,050. Aug. 30.—Ordering Canadian National Rys. to build culvert under Y about 440 ft. east of road allowance between Secs. 28 and 29, Tp. 26, Range 8, west 1st meridian.

30,051. Aug. 30.—Authorizing Canadian National Rys. to build siding for Price Bros. & Co., Metabetchouan Tp., Que.

30,052. Aug. 28.—Authorizing Vancouver, Victoria & Eastern Ry. & Navigation Co. (G.N.R.) to build bridge over Grandview Cut, at Lakewood Drive, Vancouver, B.C.

30,053. Aug. 30.—Authorizing Mount Royal Tunnel & Terminal Co. (C.N.R.) to build connections and transfer tracks with Jacques Cartier Union Ry. (G.T.R.), near Montreal.

30,054. Aug. 30.—Authorizing Canadian National Rys. to build passing siding, extension and business siding at Proulxville, Que.

30,055. Aug. 30.—Authorizing International Coke & Coal Co. to build bridge over C.P.R. at Coleman, Alta.

30,056. Aug. 28.—Authorizing Canadian National Rys. to divert and close road allowance on south boundary of Sec. 5, Tp. 28, Range 15, west 5th meridian.

30,057. Aug. 28.—Approving changes in location of sidings for Lake Simcoe Ice Supply Co., Belle Ewart, Ont.

30,058. Aug. 24.—Extending to Oct. 15 time within which Canadian National Rys. may install bell at crossing of main road to Red River, St. Jean Baptiste, Man.

30,059. Aug. 26.—Approving route map showing general location of Canadian National Rys. Prince Albert Northeasterly Branch, mile 0 to 26.094.

30,060. Sept. 1.—Approving revised location of portion of C.P.R. Bassano Easterly Branch (Empress to Mildren), mile 169.85 to 172.75, and authorizing it to cross certain road allowances.

30,061. Aug. 30.—Extending to Oct. 15 time within which Canadian National Rys. may install protection at crossing of Francis St., Fort William, Ont.

30,062. Sept. 1.—Approving plan and specifications of work on Shearer drain, Elma Tp., Ont.

30,063. Sept. 3.—Approving form containing conditions governing acceptance of messages for the United Kingdom routed via Marconi.

30,064, 30,065. Aug. 30.—Extending to Oct. 15 time within which Canadian National Rys. may install wigwags and automatic bell at crossings of Brock St. and Amelia St., Fort William, Ont.

30,066. Sept. 4.—Authorizing C.P.R. to build spur for Reynolds, Moore & Bentz, Vernon, B.C.

30,067. Sept. 3.—Ordering Canadian National Rys. to build station at Morin Heights, Que.

30,068. Sept. 2.—Authorizing G.T.R. to build extension to siding for Canadian Fairbanks-Morse Co., Toronto.

30,069. Sept. 2.—Authorizing Canadian Northern Ontario Ry. to rebuild bridge over Blackwater River, Thunder Bay District, Ont., mile 21.4 from Jellicoe.

30,070. Sept. 7.—Approving location and plans of proposed Canadian National Rys. station building at Marchand, Man.; work to be completed by Nov. 15.

30,071. Sept. 7.—Amending order 21,290, Jan. 29, 1914, re G.T.R. highway crossing near Hastings station, Ont.

30,072. Sept. 7.—Ordering Canadian National Rys. to appoint station agent at Notre Dame de Lourdes, Man., by Oct. 1.

30,073. Sept. 2.—Authorizing G.T.R. to operate over spur, serving The Randolph Macdonald Co., Toronto.

30,074. Sept. 2.—Approving route map of general location of C.P.R. Kipp Northeasterly Branch, mile 0 to 39.70.

30,075. Sept. 3.—Approving Canadian Niagara Bridge Co. route map from International Boundary opposite Grand Island, Niagara River, to connection with Michigan Central Rd., about 3.15 miles northeast of Welland, Ont.

30,076. Sept. 4.—Approving plan and specifications of work to be done under G.T.R. on Lot 10, Con. 1, Hibbert Tp., Ont.

30,077. Sept. 4.—Authorizing G.T.R. to build spurs for Holmes Foundry Co., Point Edward, Ont.

30,078. Sept. 9.—Ratifying and confirming telegram sent by Chief Commissioner to Collector of Customs at Port Hastings, N.S., as follows: "Refuse clearance s.s. Lydia until further order," and declaring same to be of same force and effect as if expressly authorized by order of the Board.

30,079. Sept. 2.—Authorizing C.P.R. to build spur for Standard Lime Co., Ste. Elizabeth parish, Que.

30,080. Sept. 7.—Authorizing C.P.R. to build two spurs and additional siding for Canadian Packing Co., Peterborough, Ont.

30,081. Sept. 2.—Rescinding order 10,163, Apr. 13, 1910, re G.T.R. construction of spur on plan 5,912.

30,082. Sept. 2.—Authorizing C.P.R. to divert road allowance on north boundary of n.w. ¼ Sec. 16, Tp. 13, Range 19, west principal meridian, and to close within right of way diverted portion of same at mile 24, Rapid City Subdivision.

30,083. Sept. 9.—Approving location and detail plans of G.T.R. proposed station at Marysville, Ont.

30,084. Sept. 4.—Authorizing C.P.R. to rebuild bridge 46.4 over Jack Pine River, Nipigon Subdivision, Algoma District, Ont.

30,085. Sept. 8.—Authorizing C.P.R. to fill in bridge 58.42, Port McNicoll Subdivision, Trenton Division, Ont.

Superintendents of Transportation Appointed on Canadian National Railways.

The Canadian National Railways has made a departure by creating the office of superintendent of transportation, the intention being to have one for each general superintendent's district. The duties of the superintendents of transportation are to supervise transportation on the district generally; receive from the superintendent of car service, all car service orders and transmit them to district officers concerned; distribute cars between various divisions of the district and generally supervise car supply on the district; distribute locomotives between divisions (master mechanic to select the individual locomotives of each class involved); see that freight trains and cars are properly loaded, check up overtime and delays and be responsible for the economical operation of train service generally; prepare and distribute working time tables; arrange for special passenger trains; supervise the examination of train and locomotive men in connection with vision and hearing, also knowledge of train rules, and brakes, car heating and lighting, etc., and perform such other duties as the general superintendent may specify from time to time.

The following appointments of superintendents of transportation have been made up to date:—J. J. Sunderland, heretofore Superintendent, Montreal Division, C.N.R., Montreal, appointed at Quebec, for Quebec District.

G. A. Hoag, heretofore Superintendent, Nipissing Division, C.N.R., appointed at Toronto, for Ontario District.

T. P. White, heretofore Superintendent of Car Service, Grand Trunk Pacific Ry., Winnipeg, appointed at Winnipeg for Central District, C.N.R. and G.T.P.R.

W. A. Kirkpatrick, heretofore Trainmaster, C.N.R., Neepawa, Man., appointed at Saskatoon, Sask., for Prairie District, C.N.R. and G.T.P.R.

C. H. Brown, heretofore Assistant Superintendent, Grand Trunk Pacific Ry., Edmonton, Alta., appointed at Edmonton, for Western District, C.N.R. and G.T.P.R.

C. F. Martin, heretofore Operating Inspector, C.N.R., Winnipeg, has been appointed at Vancouver, for Grand Trunk Pacific Ry. from Edmonton to Edson, Alta., and C.N.R. and G.T.P.R. west of Edson, including Vancouver Island lines.

C.P.R. British Information Bureau.—The recently organized information bureau, in London, Eng., established by the C.P.R., was formally opened during August by Sir George McLaren Brown, European General Manager. The office is in charge of Major Duan Moore, and any information relative to Canada will be supplied. Attached to the office is an extensive library, containing books of reference relating to Canadian and general literature.

Esquimalt & Nanaimo Ry. Lands.—Judgment was given recently in the British Columbia High Court in favor of the Esquimalt & Nanaimo Ry. Co. in its suit against Wilson, McKenzie and others, respecting the title to certain coal lands within the area granted by the Crown to the company. Stay of execution, pending appeal, was granted Sept. 6, the appellants to pay into court \$75,000 as security, with permission to mine 100,000 tons, such tonnage not to be exceeded without a court order.

Electric Railway Department

Increases in Electric Railway Passenger Fares.

Cape Breton Electric Co., as stated in Canadian Railway and Marine World for Sept., pg. 502, has put in operation, under an order of the Nova Scotia Public Utilities Commission, a new and increased schedule of fares on its electric railways in Sydney, North Sydney and Sydney Mines, and on its suburban line to Glace Bay. The company made its application to the Commission on Mar. 22 for power to charge increased fares, and the Commissioner's order was made Aug. 6, the new fares becoming operative Aug. 15.

On Mar. 15, 1919, a straight 6c. fare was fixed, the company using a metal ticket 0.780 of an inch in diameter. The new fare schedule is a 10c. cash fare in the City of Sydney, and the Towns of North Sydney, Sydney Mines and Glace Bay, and on each zone of the interurban line from Sydney to Glace Bay. Tickets are sold 2 for 15c., and in even multiples of 2 at the same rate, each ticket being accepted in lieu of a single 10c. cash fare. On the Friday previous to Aug. 15 the company announced that it would continue to use the old tickets, selling them at the 6c. rate as long as they lasted. We are advised that although the company never had more than about 7,500 outstanding up to that time, over 20,000 were sold within a few hours, and as not more than 10 tickets were sold to any one person, they were widely distributed.

The Public Utilities Commission's order directs the sale of tickets at the rate of 10 for 40c., to children under 16 years of age, upon production of a certificate from the school principal that they are bona fide pupils, such tickets being available only between 8 a.m. and 5 p.m. on regular public school days.

Fort William Municipal Ry.—On Sept. 1, under the Ontario Railway and Municipal Board's authority, the cash fare on the municipally owned electric railways in Fort William and Port Arthur were increased to 7c., four tickets being sold for 25c. Fares on the interurban line connecting the two cities is reported to have been increased in accordance with the new rate in the cities.

London St. Ry.—In connection with the increased fare and increased wages matters which have been fruitful of much agitation for months past, the Mayor of London, Ont., is reported to have stated recently that no bylaw increasing fares on the railways will be passed by the council this year for ratification by the ratepayers.

Port Arthur Civic Ry.—See Fort William Municipal Ry.

Saskatoon Municipal Ry.—A press report states that the Saskatoon, Sask., City Council passed a resolution, Sept. 13, authorizing the charging of a 10c. fare, with 4 tickets for 25c., on the municipal railway, the new fares to go into effect Oct. 1, and that 8 tickets for 25c. will continue to be sold to school children.

Winnipeg Electric Ry.—As stated in Canadian Railway and Marine World for Sept., pg. 502, the Manitoba Public Utilities Commission gave judgment Aug. 23 on the Winnipeg Electric Ry., the Winnipeg, Selkirk & Lake Winnipeg Electric Ry., and the Suburban Rapid Transit Co.'s

application for power to charge increased fares. The judgment is a very lengthy one, reviewing the whole circumstances of the investigation since the filing of the application by the Winnipeg Electric Ry. in Oct., 1918, which was followed by that of the W., S. & L. W. E. Ry. Co. in Dec., 1918, and by the S. R. T. Co. in Sept., 1919. Following the presentation of the W. E. Ry. Co.'s application a temporary increase of rates was granted, the old and the new temporary rates being as follows:—

Cash fare	Old Temporary.	5c.	5c.
Tickets	6 for 25c.	Abolished.	
Workmen's tickets, limited	8 for 25c.	6 for 25c.	
School children's tickets, limited	10 for 25c.	7 for 25c.	

A temporary increase of fares was granted to the Suburban Rapid Transit

return is not a difficult one to settle. To ensure continuance of a satisfactory service the rate must be such as will be attractive to investors, for the business is one that constantly requires additional capital. In my judgment, 8% is the proper rate to fix." The increased fares granted on the W. E. Ry. are estimated to produce sufficient to pay operating expenses, an 8% return on the above mentioned valuation, and leave a surplus of \$71,868, which the Commissioner says is "a reasonable sum in the circumstances."

As to the Winnipeg, Selkirk & Lake Winnipeg Electric Ry., the judgment said: Operating costs are estimated at \$145,320.00. A return of 6% on a capital of \$1,095,870.47 amounts to \$65,760.20. Total, \$211,080.00. The estimate of returns from increased fares is based only on the percentage of increase of the total receipts, and amounts to \$211,184. The rate of return on this section of line will be not over 6%.

In the case of the Suburban Rapid Transit Co., the judgment said:—Operating costs are estimated at \$131,608. A return of 7.7% on a capital of \$388,350.83 amounts to \$29,902. Total, \$161,510. The estimate of receipts from the increased fares is \$161,950. Yielding a return of less than 8%, with no margin for surplus.

The Commissioner fixed the fares on the Winnipeg Electric Ry. as follows:—Cash fare, 7c.; tickets, 4 for 25c.; children's tickets, 7 for 25c. These fares are within the present city limits, and to the following places outside the city limits: To Deer Lodge, and to the loop past the entrance to Assiniboine Park; to Templeton Ave., West Kildonan; to John Black Church, East Kildonan; to Berrydale Ave., St. Vital; to the end of the present line, known as the Morse Park extension. The East Kildonan line is divided into 2 zones, and the St. Norbert line into 4 zones, the cash fare of each zone being 5c., tickets good for one fare, 25 for 7c., and for children under 16 years, for the purpose of attending school on school days only, half the regular cash fare. In the company's advertisements announcing the change of fare, school children's tickets are quoted 10 for 25c.

On the Suburban Rapid Transit Co.'s line the cash fare is 5c. a zone; tickets good for one zone, 6 for 25c., or 25 for \$1; school children, half cash fare. The company in this case also offers to issue tickets at 10 for 25c. The Headingly line is divided into 5 zones, and the Charleswood line into 2 zones.

On the Winnipeg, Selkirk & Lake Winnipeg Ry. the fare from Winnipeg to Selkirk and Winnipeg to Stonewall is raised from 50c. single and 80c. return to 75c. single and 90c. return. The company is authorized to sell accommodation tickets, in books of 20, at the rate of 10 tickets the single fare, with a maximum of \$6; to issue students' tickets to students under 18 attending school, in books of 30 tickets at the same price as the regular commutation fare; children between 5 and 12 to be carried at one-half of the regular fare.

The new rates went into effect Sept. 1, the company redeeming all outstanding tickets issued under the old rates.

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, Manager, 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.

Co. in Oct., 1919, the single cash fare being increased to 6c., with 5 tickets for 30c., and 9 for 50c., good at all hours; workmen's limited tickets, 5 for 25c., and school children's limited tickets, for 25c.

In reference to the City of Winnipeg's questioning of his jurisdiction, the Commissioner, after discussing the matter in its various aspects, said: "This Commission feels fully justified in continuing its course of altering rates, even though fixed by contract, where the public interest requires it."

The Commissioner had a valuation made of the company's property to ascertain a sum which would be equitable, as between the shareholders and the patrons of the railway, to consider as the amount of capital investment in the enterprise. These valuations as given in the judgment were:—

W. E. Ry. Co.	\$9,199,307.40
W., S. & L. W. E. Ry. Co.	1,095,870.47
S. R. Transit Co.	388,350.83

Upon the question of the rate of return, the judgment said:—"The rate of

The acting City Solicitor, in a lengthy communication to the Winnipeg City Council, upon the order, criticized it in detail, and suggested points upon which it might be advisable to appeal. The council authorized an appeal, and a press report of Sept. 18 stated that an attempt would likely be made to have all the matters between the city and the municipalities and the company settled by special legislation at the Manitoba Legislature's next session.

Chief Justice Perdue, on Sept. 21, granted the Winnipeg City Council, and the councils of other interested municipalities, leave to appeal against the Public Utilities Commission's judgment. The appeal will, it is said, be confined entirely to the question as to whether or not the Commissioner had jurisdiction to make the order granting the increase. The question as to whether the Public Utilities Act is constitutional or not cannot be brought up.

Improvements in Winnipeg Electric Railway Co.'s Properties.

The Manitoba Public Utilities Commission's decision authorizing the Winnipeg Electric Ry. Co. and its subsidiary companies to increase their passenger fares, which is dealt with fully on another page of this issue, is another success for the vigorous and persistent effort to put the company on its feet which has been made by A. W. McLimont, now Vice President, since he took charge of the property as General Manager in Oct., 1917. The success achieved can best be gauged by contrasting conditions now with what obtained in 1917, when jitneys were on the streets, making inroads into the company's revenues to the extent of \$1,000,000 a year and street car fares were the same as provided in the original franchise, average 3.85c. a revenue passenger. Public opinion towards the company was not of the friendliest, and labor troubles were a continuous threat. In the winter of 1917-1918 Mr. McLimont conducted a campaign against the jitneys, which resulted in their complete elimination from the streets in April, 1918. Incidentally he accomplished reforms in the matter of service, such as the inauguration of the skip-stop system, re-routing, and other improvements, which resulted in the revenue per car mile being increased very appreciably.

Four months after the elimination of the jitneys the company applied for increased fares. An interim increase was granted. The Public Utilities Commission decided to make an appraisal of the company's property in order to fix a fare "which will produce revenue sufficient to cover operating costs and ensure a fair return being paid those whose money is in the property." In Oct., 1919, while the appraisal was still being made, the company was granted an increase to 6c. cash fares and also an increase in the rate for tickets. Now comes the 7c. fare, with the elimination of all but two classes of tickets and the assurance from the Commissioner that these fares will be sufficient to permit adequate service being given, keep the road in first class condition and provide a return of 8%.

Starting in the spring of 1918, Mr. McLimont embarked on a programme to rehabilitate the rolling stock. Much progress has been made in this regard, the cars being equipped with new motors, front and rear exits, and other improvements which make for more economical operation. Forty new cars have been

bought, 30 of which are in operation. Approximately \$1,000,000 has been applied to this rehabilitation programme during the past three years.

The Winnipeg Electric Ry. Co. also operates the gas utility in Winnipeg, and two increases in the price of gas have been granted since Mr. McLimont took charge, the last increase of 25c. a 1,000 cu. ft. having been authorized Aug. 23.

Operation of One-Man Cars in St. Thomas.

The Board of Railway Commissioners passed order 29,876, July 13, authorizing the City of St. Thomas, Ont., to operate p.a.y.e. one-man cars of its street railway over the London & Port Stanley Ry. on Elm St., for three months from date of order, the city, at its own expense, to erect a semaphore in the angle of the crossing, with a single arm and light, arranged so that it will stand normally clear for the London & Port Stanley Ry. and against the St. Thomas St. Ry.; and that, before street cars proceed over the crossing, the car operator shall stop his car 30 ft. clear of the nearest rail of the London & Port Stanley Ry. and go forward and set the signal against that line, then take his car across, stop it again the same distance (30 ft.) clear, and restore the signal to its normal position before leaving.

The Board also passed an order on the same day authorizing the city to operate similar cars over the Pere Marquette Ry. on Wilson Ave., provided that in addition to the watchman employed at the crossing by the Pere Marquette Ry., the city, at its own expense, provide a watchman between 6 and 12 p.m., or until such time as it ceases operating its cars.

Quebec Railway, Light, Heat & Power Co.'s Annual Report, Etc.

The following report for the year ended June 30 was presented at the annual meeting in Montreal recently:—The gross earnings from operation for the year were \$2,372,034.69, an increase of \$294,413.26. The operating and maintenance expenses were \$1,769,563.41, an increase of \$325,047.33, leaving the net earnings from operation \$602,471.28, a decrease of \$30,634.07. After adding miscellaneous income and deducting fixed charges, taxes and depreciation for equipment placed out of service, there remains a deficit of \$44,703.75. The balance at credit of surplus account on June 30, 1919, was \$682,464.29, and after charging the deficit above mentioned, together with \$55,555.70 in connection with recent Privy Council judgment, there remained a balance at credit of surplus account at June 30, 1920, of \$582,704.84.

During the year 9 new p.a.y.e. double truck latest type cars were added to the rolling stock of the city street railway department, the operation of which have given great satisfaction to the travelling public. One more car of the same type was placed in service during this year, completing order placed for 10 cars.

The Lotbiniere & Megantic Ry., operating between Lyster, Megantic County, and St. Jean Deschailons, Lotbiniere County, and which connects with the G. T.R. at Lyster and Canadian National Rys. at Villeroy, was acquired by the Dominion Government, and its operation was taken over by Canadian National Rys., effective April 1, 1920.

Extensive alterations and improve-

ments of the intake and the installation of new steel head gates at the main dam on the Montmorency River, were carried out during the year, the results of which, when completed, will prove most satisfactory in the operations of the power division. There was expended during the year on capital account \$266,818.38, which included the extension of the city street railway on Beauport Road to the city limits, also 9 new double truck cars above referred to.

The President is reported to have stated at the meeting that negotiations were in progress for the disposal of the Quebec and Montmorency line. In addition to an electric car passenger service over this line, the company operates a freight service with steam locomotives.

The directors and officers were re-elected as follows:—Hon. Lorne C. Webster, President; Hon. D. O. L'Esperance, Vice President; C. A. Lavigne, T. J. Stewart, M.P., P. Galibert, L. J. Tarte, J. N. Greenshields, K.C., C. G. Greenshields, K.C., A. Picard, Hon. Jules Tessier and Brig.-Gen. A. E. Labelle. W. J. Lynch was re-appointed General Manager, and Arthur LaMoine, Secretary.

Electric Railway Employes' Wages, Working Conditions, Etc.

Hull Electric Co.—Under the agreement between the company and its employes, which expired July 1, motormen and conductors were paid from 34c. to 41c. an hour, according to length of service. The new agreement asked for by the men provided for an all round rate of 65c. an hour. Failing a settlement, the men asked for a board of conciliation, which was authorized, the board consisting of G. D. Kelley, Ottawa, representing the company; Jos. Gibbons, Toronto, representing the men, and W. P. Grant as chairman. The board opened its sittings at Hull, Que., Aug. 3. G. Gordon Gale, Vice President and General Manager, appeared for the company. A majority report was signed by W. P. Grant and G. D. Kelley Aug. 26, recommending the following wages per hour for passenger motormen and conductors:

First six months	41c.
Second six months	44c.
Second year	46c.
Third year and thereafter	48c.

Listed spare men reporting for duty three times each day to be paid a minimum of \$30 a half month, but if they work in excess of the hours to cover this amount they to be paid at the schedule rate per hour.

Freight crews, 10 hour day, per hour:	
Conductors	52c.
Motormen	52c.
Brakemen	45c.
Trolley men	41c.

The report recommended that these rates be paid from July 1, and that they continue in force for a year from that date. A minority report was presented by Jos. Gibbons, recommending the following wages per hour:

Passenger car men:	
First six months	45c.
Second six months	48c.
Second year men	50c.
Third year men	52c.
Freight crew:	
Motormen and conductors	56½c.
Brakemen	47c.
Trolley men	45c.

The majority report recommended increases to other employes, but not to the same extent as did the minority report. The percentage of increases granted in the majority report varied from 17% to 26%. The majority report was accepted by the company and its employes after some discussion, and a new agreement for the year July 1, 1920, to June 30, 1921, was made accordingly.

The United States Commission's Report on the Electric Railway Industry.

On May 15, 1919, the United States Secretary of Commerce and the Secretary of Labor recommended to the President of the U.S., that, in view of the serious financial position of electric railways throughout the country, a commission to study and report on the entire problem. On May 31, 1919, the President appointed a commission, composed as follows:— C. E. Elmquist, President and General Solicitor, National Association of Railway and Utilities Commissioners; E. F. Sweet, Assistant Secretary of Commerce, representing the Department of Commerce; P. H. Gadsden, representing American Electric Railway Association; R. Meeker, Commissioner of Labor Statistics, Labor Department, representing that Department; L. B. Wehle, General Counsel, War Finance Corporation, representing the Treasury Department; C. W. Beall, of Harris, Forbes, & Co., bankers, New York, representing Investment Bankers' Association of America; W. D. Mahon, President, Amalgamated Association of Street and Electric Railway Employees of America, representing that association; L. Baker, Mayor of Portland, Oregon, representing American Cities League of Mayors. The commission has recently presented an exhaustive report, including the following recommendations:—

The electric railway furnishing transportation upon rails is an essential public utility, and should have the sympathetic understanding and co-operation of the public if it is to continue to perform a useful public service.

The electric railway has been, and will continue to be, a public utility, subject to public control as to the extent and character of the service it renders, and as to the rates it charges for such service.

It is of the highest importance that both the total cost of the service and the cost to the individuals who use it shall be kept as low as possible without injustice to those who take part in producing it.

The electric railway industry as it now exists is without financial credit and is not properly performing its public function.

This condition is the result of early financial mismanagement and economic causes, accentuated by existing high price levels of labor and materials, and of the failure of the uniform unit fare of five cents, prescribed either by statute or by local franchise ordinances or contracts to provide the necessary revenues to pay operating costs and to maintain the property upon a reasonable basis.

The industry can be restored to a normal basis only by the introduction of economies in operation, improving its tracks, equipment and service, and securing a reasonable return upon the fair value of its property used in the public service when honestly and efficiently managed.

The electric railways must expand to meet the growing needs of their communities; therefore, the first essential is to restore credit in order to obtain necessary new capital for the extension and improvement of service.

Restoration of credit involves a readjustment of relations which will remove public antagonism, provide public co-operation, and ensure to the investor the integrity of his investment and a fair rate of return thereon.

Effective public co-operation should be

exercised by eliminating, in so far as it is practicable, special assessments for sprinkling, paving, and for the construction and maintenance of bridges which are used by the public for highway purposes.

Extensions into new territory resulting in special benefits to the property in that vicinity should be paid for by assessments on such property in proportion to the benefits received, and that the amount of such assessments should not be added to the physical value of the corporate property.

The great increase in the use of private automobiles, the jitney and motor buses, has introduced a serious, although not a fatal, competition to the electric railway. These forms of public motor conveyance when operated as public carriers should properly be subject to equivalent regulatory provisions.

The full co-operation of labor is essential to the highest prosperity and the usefulness of the industry. The employes engaged in this occupation should have a living wage and humane hours of labor and working conditions. They should have the right to deal collectively with their employers, through committees or representatives of their own selection. All labor disputes should be settled voluntarily or by arbitration, and the award of such a board should be final and binding upon both parties. It is intolerable that the transportation service of a city should be subject to occasional paralysis, whether by strikes or by lockouts.

A private industry should not be subsidized by public funds, unless it is imperatively necessary for the preservation of an essential service, and then only as an emergency measure.

Unless the usefulness of the electric railways is to be sacrificed, public control must be flexible enough to enable them to secure sufficient revenue to pay the entire cost of the service rendered, including the necessary cost of both capital and labor.

There can be no satisfactory solution of the electric railway problem which does not include the fair valuation of the property employed in the public service, and, where that is done, the companies should voluntarily reduce any excessive capitalization to the basis of such value.

There is no insuperable objection to a large, wide-awake city having exclusive jurisdiction over the rates and services of public utilities.

The necessity for scientific and successful regulation of systems, whether large or small, and especially those which operate through several cities and villages and in rural territory, leads to the conclusion that local regulation should generally be subject to the superior authority of the state, whether as a matter of original jurisdiction or through the medium of appeal.

Cost of service contracts are in the experimental stage, but, where tried, they seem to have secured a fair return upon capital, established credit, and effected reasonably satisfactory public service. Such contracts may safely be entered into where the public right eventually to acquire the property is safeguarded.

The right of the public to own and operate public utilities should be recognized, and legal obstacles in the way of its exercise should be removed.

While eventually it might become ex-

pedient for the public to own and operate electric railways, there is nothing in the experience thus far obtained in this country which will justify the assertion that it will result in better or cheaper service than privately operated utilities could afford if properly regulated.

Public ownership and operation of local transportation systems, whether or not it be considered ultimately desirable, is now, because of constitutional and statutory prohibitions, financial and legal obstacles, the present degree of responsibility of our local governments, and the state of public opinion, practicable in so and operation must as a general rule be few instances, that private ownership continued for an extended period.

If the reforms incident to public regulation which we suggest in this report should not result in making private ownership satisfactory to the public, such reforms should at least enable public ownership to be established upon a just and equitable basis.

Electric Railway Notes.

Calgary, Alta., City Council has been considering plans for rerouting some of the cars on the municipal railway, and otherwise improving the service before winter sets in.

The British Columbia Electric Ry. pays municipal taxes on its properties on Vancouver Island in four municipalities, the total for 1920 being \$19,899.48, as against \$18,804.18 in 1919 and \$16,285.41 in 1918.

The Toronto Suburban Ry., and the Toronto & York Radial Ry., which have been running on summer time since daylight saving went into operation in the early summer, resumed running on standard time Sept. 13.

The Saskatoon, Sask., City Council is reported to have authorized the submission to the ratepayers at the municipal elections in December of a bylaw to provide for the operation of one-man cars on the municipal railway.

The Winnipeg Electric Ry. Co.'s employes, who voted recently to join with the One Big Union, have formed a street railwaymen's unit of the same, and are reported to have elected Alderman H. Jones, President, and R. D. Clarke, Vice President.

An agitation has been started in Regina, Sask., to have another vote taken at the municipal elections in December, on the question of operating one-man cars on the Regina Municipal Ry. The ratepayers voted quite recently against the operation of such cars by 428 to 321.

Ottawa City Council had under discussion on Sept. 20 a motion for the securing of legislation to permit the council to withdraw from its agreement to buy the Ottawa Electric Ry. should the valuation price be too great. The motion was sent on to the Board of Control for consideration.

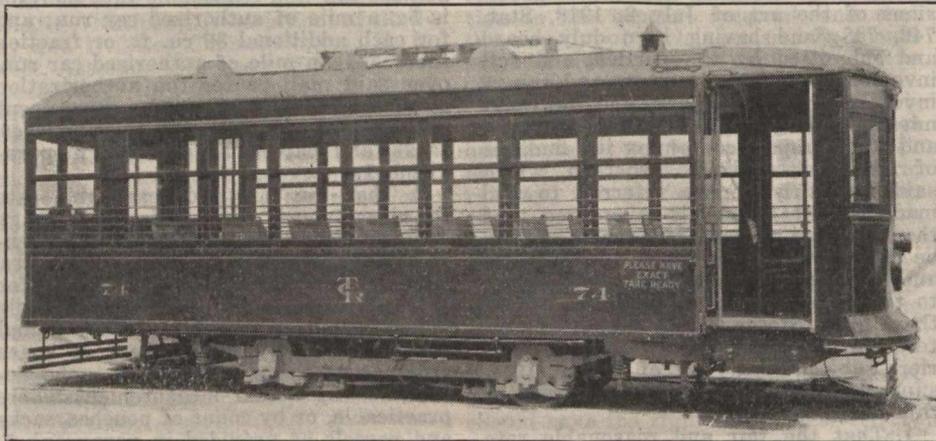
Montreal Tramway Co.'s employes, as a body, have heretofore been affiliated with the international union—the Amalgamated Association of Street and Electric Railway Employes. A number of the employes are reported to have withdrawn from this organization and to have formed the National Catholic Union, with a view to affiliate with the National Catholic Unions of Montreal.

employes handle the mails, is $1\frac{1}{2}c.$ a linear foot per mile of authorized travel in cars 20 ft. or less in length, inside measurement; and in cars more than 20 ft. in length, inside measurement, $1\frac{1}{2}c.$ a lin. foot per mile of authorized travel for the first 20 ft. and $\frac{3}{4}c.$ a lin. foot or fraction thereof per mile of authorized travel for each additional foot or fraction thereof.

4. That the fair and reasonable rate for railway postoffice cars and railway

ploye performing the service, based on the time actually consumed, and the named in the statement plus 3% shall constitute the basis of payment for the next ensuing year, unless in special cases, and for good cause, the Postmaster General may require further statements and verifications from any particular railway company at other periods of the year.

7. That from time to time, as often as he may deem it necessary, and at least once in two years, the Postmaster Gen-



One-Man Car, of which 25 have been put in operation on Toronto Civic Ry. recently.

postoffice apartments in cars, in which postal employes handle the mails, is $1\frac{1}{4}c.$ a lin. ft. per mile of authorized travel in cars or apartments in cars 20 ft. or less in length, inside measurement, and in cars or apartments in cars more than 20 ft. in length, inside measurement, $1\frac{1}{4}c.$ a lin. ft. per mile of authorized travel for the first 20 ft. and $\frac{3}{4}c.$ a lin. ft. per mile of authorized travel for each additional linear foot or fraction thereof.

5. That the minimum rate of payment on any electric railway mail route shall be \$175 a year.

6. Where the railroad companies are required by the Department to perform side, terminal, or transfer service they shall be separately compensated for such service, unless the service is performed directly contiguous to railway terminals and depots. The amount to be paid therefor shall be measured by the amount paid by the railway to contractors, plus 3%; and where the service is performed by agents or employes of the railway companies the payment shall be for the value of the pro rata time of such agents or employes while engaged in rendering the service, including cost of vehicular service that may be necessary, with the addition of 3%. Where the railway companies contract for such service contracts shall be let to the lowest bidder upon advertisement. Readjustments for such service shall be made annually. The railway companies shall submit certified copies of each contract to the Postmaster General on or before July 1 of each year, showing the rate of payment for the ensuing year, and the amounts specified in such contracts plus 3% shall be accepted as the basis of payment by the Postmaster General heretofore prescribed. The railway companies shall also furnish the Postmaster General each year, on or before July 1, a detailed statement of the daily time consumed in handling the mails by their agents or employes at each point where side, terminal, or transfer service is performed, which statement shall be verified by a responsible official of the company conversant with the facts; and such verified statement shall compute the pro rata payment of the agent or em-

eral, upon notification to the railway, and with their presence and assistance, shall conduct tests to determine the number of pouches, sacks, and outside packages that will fill 30 cu. ft. of space in a car or compartment of a car, and the results thereof shall be reflected in changes in rules, when necessary, in the count of pouches, sacks, and packages as the basis of measurement.



One-Man Car, Toronto Civic Ry.

8. That the provisions of the existing postal regulations, with respect to carriage of mails by electric railways, except as herein modified, shall remain in force and effect.

9. That payments for transportation of mails by electric railways and the service connected therewith shall be made each month after the service has been performed.

Answers to Questions on Electric Railway Topics.

Answers to questions submitted to the American Electric Railway Association's question box have been given by Canadian electric railway officials as follows:

Motor bearings.—In connection with the reabbtting of motor bearings, have any roads had experience with the use of the cheaper lead-base alloys?

D. E. Blair, Superintendent of Rolling Stock, Montreal Tramways Co.—Many careful experiments on this system have shown definitely that the use of the cheaper lead-base alloys is not economical.

Swinging Motor Leads.—What methods are being used to protect the swinging motor leads from being broken or insulation being worn and grounding?

D. E. Blair, Superintendent of Rolling Stock, Montreal Tramways Co., Montreal.—A very simple method to protect swinging motor leads is to fasten split wooden blocks to the floor of car close to the bolster and to the motor case above axle. These split blocks have four holes slightly smaller than the lead wires at the parting line. The axes of holes in both blocks are in vertical position and wires are constrained to hang in definitely spaced positions out of contact with any grounded metal. This method is very satisfactory.

Special Track Work.—Is there any objection to opposite joints in curved portions of special track work layouts through which cars are operated at comparatively low speeds?

W. F. Graves, Chief Engineer, Montreal Tramways Co.—No real objection to opposite joints in curved portions of special track work.

Track Labor Efficiency.—It has been claimed that the efficiency of track labor has decreased since the war. Have you any statistics to prove or disprove this assertion?

W. F. Graves, Chief Engineer, Montreal Tramways Co.—The following statistics compiled from observations on various jobs of track work indicate that all track labor has appreciated since

1917. To complete 1 ft. of track in 1917 required 12.99/100 hours; to complete 1 ft. of track in 1920 required 10.80/100 hours. Over the same period the average wage had risen from 37.81c. to 43.1c. an hour.

Advantages of Air and Magnetic Track Brakes.—What are some of the advantages from the standpoint of maintenance of car equipment of having cars fitted with air brakes? What has been your experience as to the upkeep of cars fitted with magnetic track brakes?

The Crisis in British Tramway and Light Railway Companies' Affairs.

A conference of tramway and light railway companies in Great Britain has issued the following statement: The financial position of electric tramways companies in Great Britain is a source of increasing anxiety. The repeated increases in wages, the improvement in the working conditions of the employees, the rise in the cost of materials for track and equipment, and the impossibility of carrying out repairs and renewals during the war have multiplied the burdens on tramways to a degree which, in spite of increases in traffic, has undermined the financial stability of the whole industry. By the recent award of the interim court of arbitration, the total war bonus paid to every tramway worker over and above his basic rate of wages has been increased to 34 shillings a week. In addition, the agreement of March, 1918, for a reduction of the working hours to 48 a week without a corresponding reduction of wages has further increased the cost of labor, so that the wages bill alone amounts to more than double the pre war figure. It is well known that the price of such materials as steel, oil, coal, and wood, which are amongst the principal requirements of the tramway industry, has risen to a crushing extent.

In the case of any ordinary industry supplying a public need, increases in cost are met by raising the price of the service. It is fully recognized by tramway companies that tramwaymen must be paid wages which will bring them on a level with men in similar occupations elsewhere, but it follows that the fares paid by the travelling public must be adequate to provide this higher standard of remuneration and to maintain the undertaking in a sound physical and financial condition. The companies are, however, subject to statutory limitation of fares and the obligation imposed by parliament in the infancy of the industry, when conditions were radically different from those of the present day.

The injustice of maintaining these limitations of fares intact was so patent that, as a result of the report made by a select committee of the House of Commons, the Board of Trade granted a measure of relief under the Statutory Undertakings (Temporary Increase of Charges) Act, 1918. It is no more than partial and temporary relief, limited to a period of two years after the war. Before a tramway company can get any relief at all it must prove that it has been adversely affected by war conditions and the utmost it can obtain is permission to raise its fares to a point calculated to enable it to pay two-thirds of its pre war dividend. In other words, the mischief must be done before any remedy becomes possible, and the official remedy is temporary and incomplete for

D. E. Blair, Superintendent of Rolling Stock, Montreal Tramways Co.—All cars are now equipped with air brakes, but we have no knowledge of any advantage from the maintenance point of view, although it is likely that the "reverse" method is not used so often for making stops.

No experience with magnetic track brakes, except experiments made some years ago which show great difficulty with track brake shoes over intersections and special work having raised guards.

a trouble which is permanent and likely to grow more serious.

Municipal tramways, on the other hand, are by this act enabled to increase their fares to such an extent as will ensure their full interest and sinking fund. It is, moreover, open to them at any time to cover any losses by drawing upon the rates, although there are weighty objections to such a course. No such recourse is available to tramway companies. They are, further, subject to purchase by local authorities at certain period on terms which involve the provision of substantial reserves to meet the eventual loss on capital account at purchase. It has been the custom of tramway companies to set aside reserves for this purpose and for renewals, and their investments on this account have suffered the war depreciation of about 30% in the value of gilt-edged securities.

Apart from limitations on fares tramway companies work under serious disabilities which are not realized by the general public. They are legally bound to maintain, not only the rails they use, but the surface and substructure of the roadway between and bordering the rails. Many tramway companies are, in fact, under obligation to maintain the whole width of the roadway, frequently for the benefit of competing traffic. This burden of maintenance has more than doubled since the beginning of the war.

It is important also to bear in mind that most tramway undertakings are obliged to carry workmen at a statutory fare of ½d. (1c) a mile, or at even cheaper rates adopted at a time when the purchasing power of money was double its present value. Workmen's fares were never really remunerative, and today they involve a heavy loss which has to be made up by increase of fares within the statutory limits to the ordinary passengers.

The maintenance of an efficient and progressive tramway industry is a matter of national importance. In the year before the war tramways in Great Britain carried close upon 3,500 millions of people—nearly three times the number of third class railway passengers. Since then tramway traffic has grown, and still further demands will be made upon the industry. At a time, therefore, when tramway undertakings find themselves called upon to reconstruct their track and equipment after the inevitable delays of war, to improve and develop their services, and to adjust their finances to the new conditions created by the demands of labor, they are refused any material relief from the restrictions and burdens of pre-war days. Unless something is done, and done swiftly, tramway services must deteriorate, to the loss not only of tramway shareholders,

but of the whole travelling public. The inevitable end—assuming the existing tendencies to continue acting—is bankruptcy, first of the weaker undertakings and later even of the strongest. Already in America, where somewhat similar conditions as to fares and wages prevail, over 13% of the electric tramway undertakings fell recently into the hands of receivers, and a special commission has been appointed to save the situation for the whole industry.

If the tramway industry is to continue to pay the additional wages imposed under parliamentary authority, to provide a thoroughly efficient service, and to assist housing schemes by rapid transportation, it must be put on such a basis as will enable it to yield a fair return on the capital already spent, and to attract fresh capital for the developments required in the public interest.

There are two directions in which the government is called upon to secure reasonable conditions for tramway companies. One is to amend the antiquated limitations on maximum fares. The other is to relieve the undertakings of road maintenance and other expenses which do not properly belong to the tramway service.

Electric Railway Projects, Construction, Betterments, Etc.

British Columbia Electric Ry.'s new station at Marpole, on the Vancouver-Steveston line, has been completed. It is a similar structure to the one at Granville St. Bridge, Vancouver. (May, pg. 257.)

Calgary Municipal Ry.'s new intersection for installation at Center St. and Eighth Ave., Calgary, Alta., was expected to be delivered by the middle of September, when it would be at once installed. It weighs 168,000 lb. (Sept., pg. 503.)

Grand River Ry.—The Board of Railway Commissioners has authorized the rebuilding of bridge 4 over Spring Creek, Preston Jct., Ont. (Sept., pg. 503.)

Hamilton St. Ry. is, we are officially advised, about to build 4,073 ft. of double track on King St. West, Hamilton, Ont., from Margaret St. to Paradise Road. (Sept., pg. 503.)

Hydro Electric Ry., Essex Division.—A press report states that work has been started on building a second track upon a section of the old Sandwich, Windsor & Amherstburg Ry. in Windsor, Ont. This section, we were advised recently, is on London St., and is about a mile long. (Sept., pg. 502.)

Lake Erie & Northern Ry., according to a press report, proposes to build a spur line on Frank St., Brantford, Ont. (Sept., 1919, pg. 501.)

London & Port Stanley Ry.—A press report states that it is proposed to erect a foot bridge over the Thames River at London, Ont., and a brick shelter at the Westminster Hospital. (June, pg. 316.)

Nova Scotia Tramways & Power Co. is reported to have notified the Halifax, N.S., City Council that it cannot raise the money necessary for work on its lines on the streets which the city is paving this year, and as a result the council decided to suspend all paving work until May, 1921, except such as was actually in progress. (Jan., pg. 34.)

Quebec Ry., Light & Power Co.—W. J. Lynch, General Manager, informed the Quebec City Council recently that the

company had done all it could in regard to the extension of lines, and that if there had been any delay in building the St. Valier St. and Bell's Road extensions this was due to the neglect of the Board of Railway Commissioners to grant permission to go over the C.P.R. and C.N.R. lines. Recently there had been changes suggested in regard to streets where lines should be laid, and if the city council chose Margaret Bourgeois St. instead of Poirier St., the work could be started immediately in that section, and cars would be operated before the middle of November. After some discussion, further consideration was postponed. (Sept., pg. 503.)

Three Rivers Traction Co.—We are officially advised that the company is having a car barn, with room for 9 cars, built at Three Rivers, Que., by the Shawinigan Engineering Co.

Toronto Civic Ry.—We are officially advised that the building of a double track line on Bloor St., from Quebec Ave. to Runnymede Road, Toronto, is under way. (Sept., pg. 503.)

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry. and allied companies:—

	July, 1920	July, 1919
Gross	\$740,200	\$642,090
Expenses	565,515	492,981
Net	174,685	149,109

Calgary Municipal Railway.—

	1920.	1919.
Car earnings	\$72,549.79	\$68,962.35
Miscellaneous earnings	4,606.32	1,425.14
Total	\$77,156.11	\$70,387.49
Operating expenses	69,176.25	52,844.18
Net revenue	\$7,979.86	\$27,543.31
Passengers carried	1,289,736	1,431,738
Car miles	257,397	273,959
Revenue per car mile	29.97c.	25.172c.
Operating expenses car mile	26.875c.	19.289c.
Operating expenses, car hour	\$2.623	\$1.890
Average fare	5.6c.	

Edmonton Radial Ry.—A press report states that there was a net deficit of \$50,529 on the Edmonton, Alta., public utilities for June, the Edmonton Radial Ry. being responsible for approximately \$40,000 of this.

London & Port Stanley Ry.—A press report states that the report for the past fiscal year shows a gross revenue of \$499,656. The gross expenses were \$350,740.61. Income increased \$81,000, but expenses had increased \$88,000. J. E. Richards, Manager and Treasurer, stated that the road was putting aside over \$19,000 a year in a depreciation account. He also stated that the road would, after Dec. 31, make its report of operations coincide with the calendar year instead of from July 1 to June 30, as heretofore.

Toronto Railway.—

	1920		1919	
	Receipts	City percentage	Receipts	City percentage
Jan.	\$ 652,850	\$110,950	\$ 588,923	\$ 88,339
Feb.	595,861	119,172	545,771	96,563
Mar.	745,706	149,141	615,526	123,105
Apr.	653,340	130,668	600,231	120,046
May	644,458	132,892	620,063	124,014
June	544,833	108,966	431,082	86,217
July	641,793	128,539	534,412	128,359
Aug.	631,521	126,304	629,540	125,908
	\$5,129,862	\$1,006,452	\$4,565,553	\$892,551

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

	7 mos. to July 31, 1920		7 mos. to July 31, 1919	
Gross	\$1,189,315	\$977,262	\$8,235,063	\$7,110,558
Expenses	982,960	695,027	5,633,578	4,338,323
Net	206,355	282,235	2,601,485	2,772,235

Winnipeg Electric Ry. and allied companies:—

	7 mos. to July 31, 1920		7 mos. to July 31, 1919	
Gross	\$391,709	\$337,978	\$3,036,386	\$2,212,615
Expenses	284,954	283,014	2,252,881	1,741,501
Net	106,755	54,964	783,505	471,117

The surplus, after allowing for fixed charges, for June, for \$57,415.26, and for July, \$45,377.06.

Winnipeg Electric Railway Omnibus Service.

The accompanying illustration shows a new type of motor bus just placed in service by the Winnipeg Electric Ry. These busses were designed by the company's own engineers, and were built in Winnipeg by the Sterling Body & Carriage Co. The chassis is a 1½ ton Sterling truck. The body accommodates 20 people seated, and 15 standing. The bus is operated by one man, who, of course, operates the entrance and exit doors, which are at his right.

Quite a novel device in the construction of this bus is the auxiliary rear exit, to be used in cases of emergency only. The step for this emergency exit is connected with the door, and when the door is released by the driver, it is forced open by a spring, which automatically slides the step into position.



Winnipeg Electric Railway Omnibus.

The interior is heated from the exhaust of the engine.

The Winnipeg Electric Ry. Co. is operating two bus routes as auxiliaries to the car service. It has decided to adopt the new type of bus as standard for all bus lines.

The London Street Railway Situation.

Some progress appears to have been made by the London, Ont., city council in its endeavors to effect a settlement of the several questions at issue between it and the London St. Ry. Co. As a result of discussions which have taken place during the last three or four months, the council's special railway committee is reported to have agreed on Sept. 20 to recommend that a vote of the ratepayers be taken on five separate questions, including the question of cancellation of the franchise and purchase of the road by the city; the purchase of the road by the Hydro Electric Power Commission of Ontario, with the bonds guaranteed by the city; asking the Ontario Railway Board to continue to operate the road until the expiration of the franchise, but at a service at cost plan; operation of the road by the company under a service

franchise with the consequent initiation of some scheme for a municipally owned transportation system. If any of the first four is approved the council may take the nincrease the fares. It is suggested that these questions should be submitted to the ratepayers during October.

Mainly About Electric Railway People.

Mrs. W. G. Murrin, wife of the Assistant General Manager, British Columbia Electric Ry., Vancouver, has been elected Vice President for B.C. of the Association of Canadian Clubs.

C. L. Wilson, Assistant Manager, and F. S. Livingstone, Traffic Manager, Toronto & York Radial Ry., have been elected Worshipful Master and Senior Warden, respectively, of Metropolitan Lodge, A.F. & A.M., Toronto.

The New Brunswick Electric Power Commission received tenders to Sept. 21 for the construction of earth dams and other work on the east and west branches of the Musquash River, about 12 miles from St. John, and about one mile from the New Brunswick Southern Ry.; and for the construction of an earth dam and

other works on the Shogomoc River, about 40 miles north of Fredericton, on the line of the St. John & Quebec Ry. This is the first instalment of the work to be undertaken by the New Brunswick Government for the development of water powers and the distribution of electrical power. The Commission consists of three members, Hon. C. W. Robinson, member of the N. B. Government without portfolio, Chairman; Reid McManus, Secretary; and C. O. Foss, Chief Engineer.

Chatham, Wallaceburg & Lake Erie Ry.—A press report states that steps are being discussed to petition the Ontario Government for the taking over of this electric railway and having it operated by the Hydro Electric Power Commission of Ontario. It is stated that a satisfactory service is not being given, and that the present owners have no funds available for its extension. (Sept., pg. 503.)

Montreal Harbor Railway Electrification.—A press report states that about 42 miles of the Montreal Harbor Commissioners railway, which is in process of electrification, will be ready for operation next spring, and that the electrification of the remaining 16 miles will be done later. Some particulars of the work were given in Canadian Railway and Marine World for September, pg. 473.

charges. \$182,401, against \$231,754; net profits, \$301,215, against \$517,563.

Prince Rupert Drydock & Engineering Co., Prince Rupert, B.C.—It was reported a few months ago, and mentioned in Canadian Railway and Marine World at the time, that this company was negotiating for a contract to build 20 large oil tank steamships. In this connection Newman Erb, Chairman of the Board, New York, N.Y., wrote us as follows:—"The negotiations for tankers to be constructed at our Prince Rupert yard were dependent upon legislation being enacted authorizing the Dominion Government to assist in extending credit to the buyers. I am afraid that the act authorizing a credit of 50%, payable during a period of five years, and by way of a government guarantee of the deferred payments, will not be sufficiently attractive, in view of the United States Shipping Board's policy of extending a 10 years credit and otherwise more favorable terms to purchasers of cargo vessels built by the U. S. Shipping Board and which aggregate 1,700,000 tons, with which you are doubtless familiar. A credit of 66 2/3% would, in our judgment, be sufficient attractive to give Canadian shipyards sufficient orders to keep them occupied for 18 months to come, at least."

An Ottawa press dispatch of Sept. 15 said:—"A form of proposed contract between the Mexican Government and the

liquidation proceedings of this company, the French Government has applied to the Practice Court at Montreal for the possession of five wooden steamships, named Bouzonville, Brumath, Cattenon, Cernon and Douxwiller, now lying at Quebec. The claim asserts that the French Government ordered 10 of these ships from the Anderson Co. of New York, and that this order was passed on to the Three Rivers Shipyards Ltd., a subsidiary of the National Shipbuilding Corporation, of Wilmington, Del. Five of the ships have been delivered, and the whole 10 have been paid for, at \$322,500 each, there being an amount of about \$200,000 still to be paid for minor changes and repairs on the five, the possession of which is now being sought.

Victoria (B.C.) Shipowners Ltd., Victoria, B.C.—Instructions have been given for the laying of the keel of the fourth wooden ship which this company is building under special financial aid from the Dominion Government. It was at first anticipated that only three of these ships would be undertaken, although the agreement provided for four. It is expected that the first will be ready for launching during November.

Wallace Shipyards Ltd., North Vancouver, B.C.—With reference to the report that the C.P.R. had given this company an order for a steamship for the British Columbia Coast Service, as men-

Canadian Notices to Mariners.

The Marine Department has issued the following:—

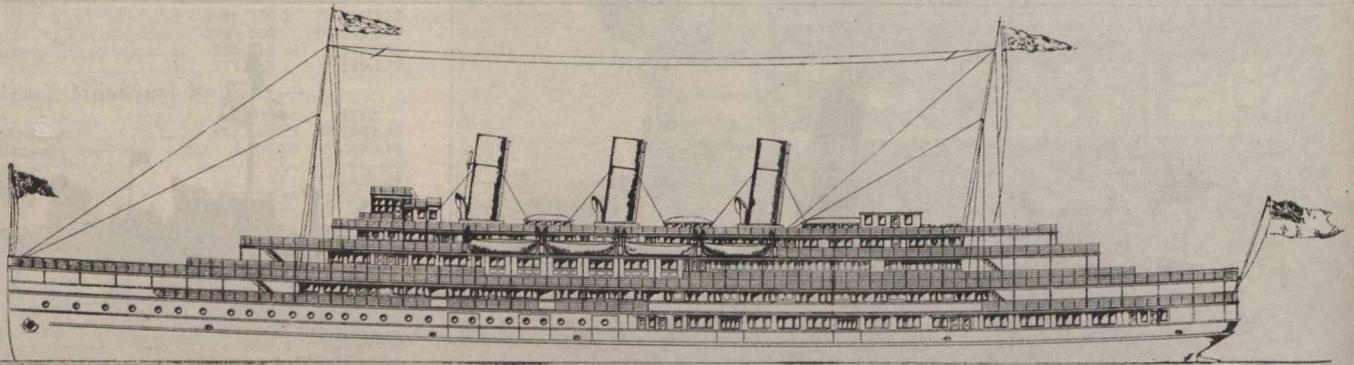
British Columbia.—The fixed white light near the north end of Pilot Point, Pilot Bay, Kootenay Lake, has been replaced by an unwatched occulting white light automatically occulted at short intervals.

The fixed red light on Hospital Rock buoy, Victoria Harbor, formerly maintained from Nov. 1 to Mar. 31, only, will be maintained throughout the year.

New Brunswick, Bay of Fundy.—A larger fog bell and mechanism have been installed on the northwest point of Cherry Island in Passamaquoddy Bay, giving one stroke every 20 seconds, instead of one stroke every 15 seconds, as formerly.

Nova Scotia, Halifax Harbor.—The Sambro lightship 15 at Sambro outer bank at the entrance to Halifax harbor, will without further notice, on or about Oct. 1, be removed from her station to undergo necessary overhaul. While she is away her station will be marked by a combined gas and whistling buoy painted black, showing an occulting white light, and further notice will be given when the lightship is replaced.

Northumberland Strait.—The revolving white light at the west end of Pictou Island will be replaced, without further



Steamship, with capacity for 4,000 passengers, to be built for Canada Steamship Lines Ltd., Toronto-Niagara Falls Service.

For description, see Canadian Railway and Marine World for September, pg. 522.

Prince Rupert Dry Dock & Shipbuilding Co. is before the Marine Department for approval. It contemplates the construction of 37 vessels, tankers, coast patrol, freight and passenger boats. Newman Erb, a New York financier, is conducting the negotiations. The department has been asked to examine the contract, but no application for financial aid under the act of last session has yet been made, though it is expected." Another dispatch of Sept. 16 said the shipbuilding company had applied for government aid, but we were advised by the Marine Department Sept. 22 that no such application had then been received.

J. H. Pillsbury, acting Manager of the company's plant at Prince Rupert, was reported to have stated in Vancouver, B.C., recently, that the company had an order for 5 steel oil tank steamships and that the steel would probably be obtained from Sydney, N.S.

Southern Salvage Co., Liverpool, N.S. This company's shipbuilding plant was destroyed by fire Sept. 17, the damage being estimated at \$20,000. The company built one of the "war" type of wooden steamships for the British Government, under order from the Imperial Munitions Board.

Three Rivers Shipyards Ltd., Three Rivers, Que.—In connection with the li-

tioned in our last issue, we were officially advised Sept. 2 that while the contract had not yet been signed, there was every reason to believe that it would be. The dimensions of the new ship will be,—length b.p. 317 ft., beam 48 ft., depth of hold 18 1/2 ft. She will have cellular double bottom, and the hull will be divided by 8 transverse bulkheads. She will be single screw, driven by reciprocating engines, balanced on the Yarrow, Schlick and Tweedie system, for a speed of 16 knots an hour. She is designed for an all round service on the coast. The accommodation will be arranged for about 200 first class passengers, with carrying capacity for about 600 tons of cargo. She will be equipped to burn oil fuel, and will be easily convertible into a coal burning ship. She will be built to the British Corporation class, fully equipped in accordance with Canadian inspection requirements, amply lighted, and provided with hot and cold running water in every stateroom, with every modern convenience. The cost of the ship completed and fully furnished, will be about \$1,500,000.

Work was commenced Sept. 17 on an attempt to raise the s.s. Vinemount, which was sunk at Cascade Point, near the foot of the Soulanges Canal, some time ago.

notice, by a flashing white catoptric light, showing 2 flashes every 30 seconds, with an interval 7 1/2 seconds between each.

Ontario, Georgian Bay.—The color of the octagonal lantern on Brebeuf Island back range, Beausoleil Island, will be changed from red to white, without further notice.

Lake Erie.—The occulting acetylene light, on the outer end of the east breakwater pier, Rondeau harbor, will be replaced by a fixed white light; the occulting white acetylene light on the inner end of the east pier will be replaced by a flashing white light, showing a flash every 8 seconds; and the occulting white light on the outer end of the west breakwater pier will be changed to an occulting red light, on or after Sept. 1.

The occulting white acetylene light, shown from a lens lantern on a pole, on the southern extremity of Pointe aux Pins, about 2 1/2 miles east of Rondeau harbor, will be slightly increased in power, on or after Sept. 1.

Northern Pulpwoods & Transport Co. Ltd. has been incorporated under the Ontario Companies Act, with \$500,000 authorized capital and office at Toronto, to carry on a general lumber and pulpwood business, and to own and operate ships.

Canadian Pacific Railway Co's Twin Screw Steamship Montcalm.

Canadian Railway and Marine World for August announced the launching at Clydebank, Scotland, on July 3, of the twin screw steamship Montcalm, being built for the C.P.R., to run under the management of Canadian Pacific Ocean Services Ltd., in its cabin service, between Canada and Liverpool, Eng. The following fuller information has been received since:—The Montcalm is the first of three ships now being built for the C.P.R., two being under construction at Clydebank, and one at Govan, Scotland. She is being built to Lloyd's highest class to meet all the Board of Trade requirements as a passenger ship. Her principal particulars are as follows: Length on waterline, 563 ft.; breadth moulded, 70 ft.; depth to C (shelter) deck, 43¼ ft.; depth to boat deck, 68 ft.; gross tonnage, about 16,200 tons.

The ship is of the shelter deck type, with the bridge deck extending almost the full length, and long erections above. She has a cruiser stern, 2 masts, and 2 funnels, which will give her when complete a most imposing appearance. Twelve watertight bulkheads, extending to C deck, divide the ship into 13 watertight compartments, and provide a high standard of subdivision. The cellular double bottom, in which will be stored oil fuel and reserve feed water, extends fore and aft the complete length, and is carried well up the bilges, giving additional protection; while the machinery spaces are further shielded by longitudinal bulkheads and inner skins. Oil fuel will be stored in these compartments also, at the side of the machinery spaces. Fresh water tanks are built alongside the shaft tunnels.

Spacious accommodation for 454 cabin passengers is provided amidships on B and C decks, the staterooms being arranged for 2 and 4 passengers and furnished most comfortably. The cabin dining saloon, a spacious apartment extending the full breadth of the ship and providing ample seating accommodation, is located on D deck, amidships, convenient to the main entrance, and has a large well overhead. The decoration is in Georgian style and the walls are painted white, while the ceiling is finished with artistic mouldings. A large number of tables are arranged for small parties. At the forward end of A deck is the cabin lounge, decorated in Georgian style and arranged in small bays and cosy corners, with separate writing room and card room at the forward end. The raised deck over, in conjunction with the large windows, give this room a spacious appearance. The floor is finished in oak, laid on springs, for dancing. A large tapestry panel is fitted over the fireplace, and the walls and ceiling are painted white. Just abaft the after funnel hatch, on the same deck, is the cabin drawing room, with raised deck over, and a large bay window on one side. This room is also decorated in Georgian style and finished in white. Next to the cabin drawing room is the library. The cabin smoking room is at the aft end of A deck. Its style is Jacobean, and the walls are framed in oak. As with the lounge and drawing room, this apartment is fitted with a large electric fireplace, which greatly adds to its comfort and appearance. Extensive promenading space for cabin passengers is provided on A and B decks. On A deck the promenade encircles the deck houses, and extends the whole length of the deck,

allowing plenty of space for games, clear of the actual promenade, and sheltered recesses are arranged for deck chairs.

Most comfortable permanent third class accommodation is provided on D and E decks in 2, 4 and 6 berth rooms, where there is also portable accommodation for an additional number of passengers. The third class dining saloon is on D deck aft. Two smoking rooms and two lounges are fitted, a large one of each on B deck aft, with smaller ones on C deck forward. The lounge on B deck aft is finished and decorated after the style of a Parisian cafe.

The captain is accommodated on the navigating bridge, the officers on A deck forward, and the engineers on C deck aft, complete with cabins, bathrooms, lavatories, etc. The seamen and boiler attendants are berthed amidships on C deck. The galleys, pantries and bakery for first and third class accommodation are amidships on D deck, between the dining saloons, thus ensuring quick service. All the latest improvements for cooking, etc., have been supplied.

The heating and cooling is on the thermotank system, which will ensure a temperature of at least 65° Fahr. under the coldest weather conditions. Ten thermotanks are fitted, sufficient to change the air in any of the compartments to which they are connected at least 8 times an hour.

The cargo will be handled by means of steel tubular derricks, fitted on the masts and derrick posts. Each hatch is supplied with 3 derricks, worked by 14 electric winches.

Ample lifeboat accommodation, to the standard of the International Convention, is provided for all passengers and crew. Two rows of nested boats are fitted on sliding chocks, so that they can be moved from one side of the ship to the other, and are placed under Babcock & Wilcox (Wylie) patent double-acting davits. The remaining lifeboats are worked by Australis patent davits, specially designed to enable the boats to be got out and lowered with the least possible delay and without manual labor. A complete system of wireless telegraphy and fire extinguishing service have been fitted. Pneumercator tank gauges have been fitted in all oil fuel and fresh water tanks, with indicators in the machinery space, so that the tanks are always under the supervision of the engineers.

The propelling machinery fitted in one engine room, consists of two sets of steam turbines of the latest Brown-Curtis marine type, arranged to work with superheated steam, and driving twin screws through double-reduction helical gearing. Each set of turbines consists of one high-pressure and one intermediate pressure turbine, in tandem, driving through one portion, and one low pressure turbine driving through the other portion of the gearing. Astern turbines are incorporated in the casings of the intermediate and low pressure ahead turbines. Adjusting blocks of the Michell type are fitted to the turbines, and the bearings of the turbines and gearing are arranged to work under forced lubrication. One condenser of the underhung type is fitted for each set of turbines, and bolted direct to the exhaust branch of the low pressure turbine. The main shafting is of ingot steel and is finished bright all over. Each line has a main thrust block of the Michell type fitted next to the gearing to take up the propeller thrust.

The propellers are of the built type, with four manganese bronze blades to each. The bosses are of cast steel, and cast iron cones are fitted over the propeller nuts. A very full equipment of auxiliary machinery is fitted, comprising 2 centrifugal circulating pumps, 2 Weir dual air pumps, 2 pairs of Weir feed pumps, 2 hot-well pumps, 1 Weir surface and one direct-contact feed water heater, 2 feed water filters of gravitation type, and also an outfit of forced lubrication, sanitary, freshwater and other service pumps, together with complete evaporating and distilling plant and auxiliary condenser and pumps.

The steam-generating installation consists of 10 single-ended cylindrical boilers, arranged for burning oil fuel, and suitable for a working pressure of 215 lb. per sq. in., and fitted with smoke-tube superheaters. Each of the boilers has three furnaces, and Howden's type of forced draught is fitted. The boilers are placed in two compartments, and each boiler room is equipped with a working, and a stand-by, oil fuel installation, complete with the necessary pumps, heaters and strainers. The forced draught fans are electrically driven, there being two fans and motors to each boiler room. The machinery and boilers have been built to the requirements of the Board of Trade, Lloyd's Survey, and Canadian Government regulations.

The ship was designed by Hugh Macdonald, Naval Architect, C.P.O.S., and is being built by John Brown & Co., under the supervision of the owner's consulting naval architects, J. H. Biles & Co., of London and Glasgow.

We are advised that the s.s. Montcalm is expected to be ready for service by March, 1921.

Panama Canal Traffic.

The Panama Canal completed 6 years of operation on Aug. 14, having been opened to commerce on Aug. 15, 1914. During the 6 years the total number of commercial ships making the transit was 10,573. Their aggregate net tonnage, according to the rules of measurement, was 34,540,266. The cargo they carried totaled 40,313,629 tons of 2,240 lb.

This traffic was made up of 4,934 ships, of 16,145,434 net tons, carrying 16,576,778 tons of cargo from the Atlantic to the Pacific, and 5,639 ships, of 18,394,832 net tons with 23,736,851 tons of cargo from the Pacific to the Atlantic.

The canal was opened shortly after the beginning of the late European war. This and the interruptions of traffic due to slides, the last serious one of which came to an end on April 15, 1916, interfered with the normal use of the canal in its earlier years, and government requisitioning, high freights, scarcity of tonnage, financial and industrial uncertainties, and fueling difficulties have since the signing of the armistice delayed the establishment of what may be considered the conditions of unrestricted commerce. A distinct and healthy growth of the traffic is, however, discernible, especially in the calendar year 1919 and the fiscal year 1920. Each of these, in ships and net tonnage, exceeded all previous years; and the fact that the traffic in the month and a half of the current fiscal year, beginning July 1, 1920, has been at a rate greater than that of any of the preceding years, indicates a continuing upward trend.

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

Passenger Accommodation for West Indian Trade.—It has been decided to change the upper structure of the s.s. Canadian Fisher, and the s.s. Canadian Forester; Marine Department contracts 15 and 16; builder's yard nos. 7 and 8; each approximately 5,100 d.w. tons; under construction by Tidewater Shipbuilders Ltd., Three Rivers, Que., so as to provide for 28 passengers on each ship. These ships will be used in the West Indian service.

Launching of Steamships.—Since Canadian Railway and Marine World for September was issued we have been advised of the following launching of steel cargo steamships for Canadian Government Merchant Marine:—

Sept. 4, s.s. Canadian Mariner; Marine Department contract 21; builder's yard no. 1; approximately 3,390 d.w. tons, Halifax Shipyards Ltd., Halifax, N.S.

Sept. 20, s.s. Canadian Forester; Marine Department contract 16; builder's yard no. 8; approximately 5,100 d.w. tons, Tidewater Shipbuilders Ltd., Three Rivers, Que.

Delivery of Steamships.—In addition to the steamships mentioned in Canadian Railway and Marine World previously, the following delivery has been made:—

Aug. 25, s.s. Canadian Victor; Marine Department contract 50; builder's yard no. 77; approximately 3,390 d.w. tons, Canadian Vickers Ltd., Montreal. This ship sailed from Montreal, Sept. 2, with general cargo, for Liverpool.

Officers of Steamships.—The following officers have been appointed to Canadian Government Merchant Marine steamships since those mentioned in our last issue:

Masters.—Canadian Adventurer, Capt. C. S. Hill, vice Capt. W. Wyman, transferred; Canadian Conqueror, Capt. H. E. Webb, formerly on Canadian Seigneur; Canadian Pioneer, Capt. M. Robertson, vice Capt. T. R. Coffin, transferred; Canadian Runner, Capt. W. Wyman, formerly on Canadian Adventurer; Canadian Seigneur, Capt. J. E. Faulkner, formerly on Canadian Trapper, vice Capt. H. E. Webb, transferred; Canadian Trapper, Capt. J. D. MacKenzie, vice Capt. J. E. Faulkner, transferred; Canadian Victor, Capt. T. E. Coffin, formerly on Canadian Pioneer; Canadian Winner, Capt. W. Wingate.

Engineers.—Canadian Carrier, W. Fotheringham; Canadian Farmer, R. H. Murphy; Canadian Fisher, T. J. S. Ray; Canadian Mariner, S. Evans; Canadian Observer, F. Stanley; Canadian Planter, W. O. Beavers; Canadian Raider, T. Fraser; Canadian Recruit, G. Stephen; Canadian Runner, C. Thompson; Canadian Sealer, J. Hoey; Canadian Squatter, W. Cunningham; Canadian Voyageur, R. Cook; Canadian Warrior, John Prys.

Ontario Freight Office.—A Canadian Government Merchant Marine office has been opened at the corner of King and Toronto Sts., Toronto, in the room occupied formerly by the C.N.R. ticket office. It is in charge of F. G. Wood, General Ontario Freight Agent.

Appointment of Officials.—J. P. Doherty, heretofore Port Agent, C.G.M.M., at St. John, N.B., is reported to have been appointed Assistant General Freight Agent, at Montreal, and Harold E. Kane, heretofore his assistant at St. John, is reported to have been appointed Port Agent there.

West Indian Representatives.—The following representatives have been appointed for Canadian Government Merchant Marine and Canadian National Rys.: Bridgetown, Barbados, Gardner Austin & Co.; Georgetown, Demerara, Sandbach, Parker & Co.; Kingston, Jamaica, Jamaica Shipping & Trading Co.; Trinidad, Geo. F. Huggins & Co.

East Indian Service.—Canadian Government Merchant Marine has made an arrangement with the British India Steam Navigation Co. under which Canadian Government Merchant Marine and the British India Steam Navigation Co. will each have an equal number of the latest steel cargo steamships in joint service between eastern Canadian ports and India, the Straits Settlements and Java. During St. Lawrence navigation, Montreal will be the Canadian port and during the winter this traffic is to be handled through Halifax, N.S., and St. John, N.B. The agents of the British India S. N.

Dominion Marine Association.

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.

Executive Committee, W. E. Burke, Canada Steamship Lines, Montreal; T. R. Enderby, Montreal Transportation Co., Montreal; L. Henderson, Montreal Transportation Co., Montreal; W. J. McCormack, Algoma Central Steamship Line, Sault Ste. Marie, Ont.; G. J. Madden, George Hall Coal Co. of Canada, Montreal; E. W. Oliver, Niagara, St. Catharines & Toronto Navigation Co., Toronto; W. H. Smith, Ontario Car Ferry Co., Montreal; J. F. Sowards, Sowards Coal Co., Kingston, Ont.; J. F. M. Stewart, Point Anne Quarries Ltd., Toronto; Jno. Waller, Keystone Transportation Co., Montreal; Lorne C. Webster, Webster Steamship Co., Montreal; J. Wilkie, Imperial Oil Ltd., Toronto; A. A. Wright, honorary member, Toronto.

General Counsel, Francis King, M.A., Kingston, Ont.

Official Organ, Canadian Railway and Marine World, Toronto.

Co. will handle Canadian Government Merchant Marine ships in the far east and will secure cargoes for the return voyages to Canada, and the British India S. N. Co. ships will be handled in Canadian ports by Canadian Government Merchant Marine. Traffic beyond Canadian seaports to interior points in Canada will be handled over the Canadian National Rys. When the Canadian Government Merchant Marine places ships in service from Vancouver to India, the Straits Settlements and Java, the agents of the British India S. N. Co.s agent will handle these ships as well. The C.G.M.M. s.s. Canadian Pioneer sailed from Montreal for British India, Java, and the Straits Settlements on Sept. 11, and the British India S. N. Co.'s s.s. Boyne is scheduled to sail from Montreal about the end of October.

Oriental Service.—Canadian Government Merchant Marine has made an arrangement with Alfred Holt & Co., of the Blue Funnel Line, of Liverpool, Eng., for the establishment of a joint steamship service between Vancouver, B.C.,

and the Orient, each company having a like number of ships for joint service. Both companies will be represented in the Orient by Alfred Holt & Co.'s agents, Butterfield, Swire & Co., who have offices in all important places in China and Japan, and who will also act as agents for both Canadian Government Merchant Marine and Canadian National Rys.

The s.s. Canadian Recruit, which, as stated in our last issue, is being repaired by Fraser Brace Shipyards Ltd., Montreal, after having been wrecked on Vache Reef, at the mouth of the Saguenay River, Dec. 20, 1919, will, we are advised, be completed ready for loading at Montreal, before the close of St. Lawrence navigation. The work in progress covers complete overhaul and renewal where necessary. Practically the whole of the bottom plating, floors, etc., and a considerable portion of the side plating, will be replaced, and new deck winches, derricks and gear will be supplied. The accommodation for passengers and the officers and crew will be practically renewed. A complete new cast steel stern post and rudder will be fitted, and the main engines, boilers, propellers, shafting and auxiliaries will be thoroughly overhauled. The work will cost about \$300,000.

British American Shipbuilding Co., Welland, Ont.—The two sections of the s.s. Canadian Squatter; Marine Department contract 45; builder's yard no. 5; approximately 4,575 d.w. tons, which were launched on July 20 and 26 respectively, left Welland, on Sept. 18, in tow, for Montreal, where they will be joined together at Canadian Vickers Ltd. plant.

Canadian Vickers Ltd., Montreal, delivered the steel cargo steamship Canadian Victor; Marine Department contract 50; builder's yard no. 77; approximately 3,390 d.w. tons, to the Marine Department. She was transferred to Canadian Government Merchant Marine, Aug. 25, loaded with general cargo, and sailed, Sept. 2, for Liverpool.

The Dominion Shipbuilding & Repair Co. Ltd., Toronto, when it assigned, on July 31, had under construction, for Canadian Government Merchant Marine, two steel cargo steamships, Canadian Pathfinder and Canadian Engineer, Marine Department contracts 48 and 49; builder's yard nos. 10 and 11; each approximately 3,500 d.w. tons. They were both in frame, awaiting shell plates, before further erections of the hulls could be proceeded with. The interim liquidator, Osler Wade, has intimated to the Marine Department his willingness to cooperate, so that the loss sustained by the Government may be reduced to the minimum, either by the liquidator continuing the work, on a cost plus basis, or by permitting the Government to proceed itself.

Halifax Shipyards Ltd., Halifax, N.S., launched the s.s. Canadian Mariner; Marine Department contract 21; builder's yard no. 1; approximately 3,390 d.w. tons, Sept. 4, the christening being performed by Mrs. R. M. Wolvin, wife of the building company's Vice President and Managing Director. This ship is the first steel cargo steamship to be built at Halifax. The keel was laid Feb. 24, 1919, but there was considerable delay in construction owing chiefly to the shortage of steel plates.

Halifax Shipyards Ltd., expects to launch the steel cargo steamship Canadian Explorer; Marine Department con-

Mainly About Marine People.

tract 22; builded's yard no. 2; approximately 8,390 d.w. tons, for Canadian Government Merchant Marine early in December.

Midland Shipbuilding Co., Midland, Ont., which is building the steel cargo steamship Canadian Logger; Marine Department contract 54; builder's yard no. 10; approximately 3,890 d.w. tons, for Canadian Government Merchant Marine, the keel of which was laid June 9, advised Canadian Railway and Marine World, Sept. 15, that the date of launching was very indefinite, as it still had to get 625 tons of steel plate from Nova Scotia and had no assurance as to when it would be received. This material was to have been delivered at Midland by the middle of April.

Prince Rupert Drydock & Engineering Co., Prince Rupert B.C., which is building two steel cargo steamships for Canadian Government Merchant Marine, viz., Canadian Reaper and Canadian Thrasher; Marine Department contracts 42 and 43; builder's yard nos. 1 and 1; each approximately 8,390 d.w. tons, advised Canadian Railway and Marine World, Sept. 10, that Canadian Reaper would probably be launched early in November and Canadian Thrasher about a month later.

Tidewater Shipbuilders Ltd., Three Rivers, Que., launched the steel cargo steamship Canadian Forester; Marine Department contract 16; builder's yard no. 8; approximately 5,100 d.w. tons; for Canadian Government Merchant Marine Ltd., Sept. 20.

United States Shipping and Shipbuilding Notes.

The U.S. Shipping Board has authorized American Shipbuilding Co. to sell 10 steel steamships of approximately 3,700 d.w. tons each, for transfer to foreign registry. The Board stated it had been informed that the company would receive about \$662,700 each for the ships, which approximates \$171 a d.w. ton.

President Wilson has refused to notify foreign governments of the intention to abrogate commercial treaties, under the section of the Merchant Marine Act, which was designed to terminate treaties which prevent the imposition of discriminating duties on imports carried in foreign ships and discriminatory tonnage dues on foreign ships.

The U.S. Shipping Board offered for sale recently, 1,200 steel steamships, to private interests, at a fixed scale of prices, but failed to obtain any bids. It is now reported that about 100 ships will be selected and bids invited for them, the Board reserving the right to reject any bids. It is stated by some U.S. ship-owners that the Board will have no difficulty in selling the ships, provided that it is willing to accept their value, but this, it is admitted, would involve a loss of over \$1,000,000,000, basing the cost on \$220 a ton.

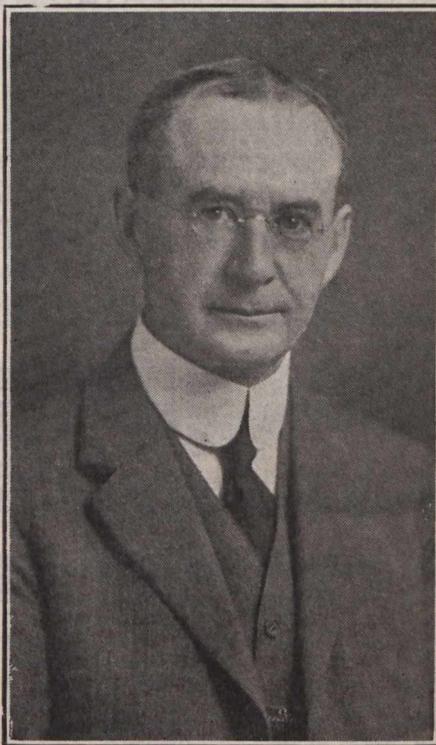
The s.s. American, registered in the name of the Jamaica Steamship Co., Kingston, Jamaica, was offered for sale by public auction towards the end of September by the sheriff at Halifax, N.S., in connection with the claim of I. H. Mathers & Son, against the owners for wages and disbursements. She was built at Middlesbrough, Eng., in 1890, and is screw driven by engine of 110 h.p., and has the following dimensions,—length 194.9 ft., breadth 25.7 ft., depth 20.7 ft.; tonnage, 971 gross, 588 net.

Hon. C. C. Ballantyne, Minister of Marine and Fisheries and of Naval Service, has been elected an honorary vice president of the Meighen Club, which has been established in Montreal for political purposes. Senator Lorne C. Webster, President Webster Steamship Co., etc., has been elected an honorary counsellor of the club.

G. M. Bosworth, Chairman, Canadian Pacific Ocean Services, and Mrs. Bosworth, will leave Montreal early in October for a visit to Virginia Hot Springs.

Lieut. Commander C. P. Edwards, General Superintendent, Radiotelegraph Branch, Naval Service Department, Ottawa, has been made an officer of the order of the British Empire, as a reward for war services.

E. H. James, who has been appointed Resident Engineer, for the construction



Horace Bruce Smith,

President, Northern Navigation Co., Collingwood Shipbuilding Co., Davie Shipbuilding & Repairing Co., Halifax Shipyards, Ltd., etc.

of the Ballantyne pier, Vancouver, B.C., was, prior to the war, engaged in harbor and dock construction in eastern Canada, and since then has been engaged in connection with the litigation re the expropriation of the Halifax Graving Dock Co.'s property. He served with the Canadian Engineers during the war and had four years active service in France, and at the signing of the armistice was Assistant Bridge Engineer at General Headquarters, Royal Engineers.

Alex. Johnston, Deputy Minister of Marine and Fisheries, will, it is reported, resign shortly to enter the British Empire Steel Corporation's service.

J. B. McAndrew, formerly on active service overseas, has been appointed Structural Engineer, Welland Ship Canal, at an initial salary of \$2,700 a year.

Miss Mabel Robb, daughter of Thos. Robb, Manager, Shipping Federation of Canada, was married at Montreal Sept. 22 to G. W. Blaicklock.

Horace Bruce Smith, who has been Pre-

sident of the Collingwood Shipbuilding Co. for some years, has recently also been elected President of Davie Shipbuilding & Repairing Co., Lauzon, Que., and of Halifax Shipyards Ltd., Halifax, N.S. The three shipbuilding companies mentioned are to be included in the British Empire Steel Corporation merger. Mr. Smith was born in Owen Sound, Ont., and practiced law there until 1889, when he went into business, becoming principally interested in the North American Bent Chair Co. He is also President of the Northern Navigation Co. of Ontario, North American Furniture Co., Owen Sound Chair Co., Steam Navigation Co. of Canada, Vice President, Kilburn Co., and a director of Canada Steamship Lines, Dominion Steel Corporation, and several other companies. He removed from Owen Sound recently, and is living in Toronto.

Richard Welsford is reported to have been appointed Resident Managing Director, Union Steamship Co. of British Columbia, Ltd., Vancouver, succeeding the late E. H. Beazley. He is a son of J. H. Welsford, of J. H. Welsford & Co., Liverpool, Eng., which controls the Union Steamship Co. of British Columbia. It is stated that he will enter upon his new duties Jan. 1, 1921. He was in Vancouver during August and returned to England early in September.

Coal Exportation and the s.s. Lydia.—An interesting case developed recently following on the Board of Railway Commissioners order respecting the exportation of coal from Canada. The s.s. Lydia, at the time the order was issued, was loading 4,500 tons of coal at Port Hastings, N.S., and it was stated that the coal was for a U.S. port, and thus was not affected by the order. Suspicions were aroused as to the actual destination of the coal, which was stated to be a European port, the coal of the ship at New York being alleged to be merely a subterfuge. The Board of Railway Commissioners therefore ordered the detention of the ship and it was ultimately admitted that the coal was intended for a European port. It was announced Sept. 10 that the ship had been released, after having deposited \$10,000 as a bond that the coal was to be sold and delivered to a Canadian or Newfoundland port, or discharged and consumed in a U.S. port. A report from Sydney, N.S., Sept. 12, stated that the Lydia ran ashore at Bear Head, in the Strait of Canso, Sept. 10, while bound for a foreign port with coal from Port Hastings. She released herself the following day, with apparently no damage, and proceeded on her voyage.

Strike of Steamship Employees on Great Lakes.—A strike of seamen engaged on Great Lakes steamships took place Sept. 16, for an increase of 20% in wages and some changes in working conditions. On Sept. 17, the C.P.R. announced that its steamship service between Port McNicoll, Owen Sound and Fort William was cancelled for the remainder of the season on account of the strike.

The other companies operating on the Great Lakes had their service interfered with more or less. After some negotiations, the men, it was reported Sept. 24, accepted an increase of \$10 a month, and resumed work. The C.P.R. service was not resumed, the order cancelling it for the balance of the season remaining effective.

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 figures given in the column headed "Long tons d.w." and which are preceded by an asterisk (*) show the total deadweight capacities as determined after the ships have been completed. The other figures in that column, not preceded by an asterisk, show the approximate total deadweights, subject to modification as they may vary above or below the figures given and as may be ascertained after the ships are completed, and of course, the total prices will vary accordingly.

Where the total price does not agree with the finally ascertained deadweight tons multiplied by the price per ton, the extra amount is for changes from specifications, additional equipment, accommodation, etc.

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, forecastle.

Contract no.	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 Voyageur	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	*8,408	180.	1,513,440	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 Shipbldg. Co., C'wood.	61	*8,995	205.	818,975	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	*4,495.75	207.	930,620.25	2.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	*4,640	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	2.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	2.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 Shipbldg. Co., C'wood.	62.	*3,964	205.	812,620	Lake, s.d., p., b. and f'c's'le	Bri. Corp.	9	Jan. 3, 1919	May 3, 1919	June 7, 1919
11	Oct. 17, 1918	Canadian Signaller	"	63	*3,975	205.	814,926.25	2.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	*3,978	205.	815,541.25	2.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	*4,850	200.	967,000	2.d., p., b. and f'c's'le	"	11	Jan. 10, 1919	Nov. 1, 1919	July 11, 1920
15	Jan. 24, 1919	Canadian Fisher	"	7	*5,100	200.	1,020,000	2.d., p., b. and f'c's'le	"	11	Sept. 20, 1919	Aug. 14, 1920	.....
16	Jan. 24, 1919	Canadian Forester	"	8	*5,100	200.	1,020,000	2.d., p., b. and f'c's'le	"	11	Nov. 1, 1919	Sept. 20, 1920	.....
17	Sept. 4, 1918	Canadian Trapper	Davie Shipbuilding & Repairing Co.	459	*4,992	200.	998,400	2.d., p., b. and f'c's'le	"	12	Mar. 11, 1919	Oct. 9, 1919	June 24, 1920
18	Sept. 4, 1918	Canadian Hunter	"	460	*4,992	200.	998,400	2.d., p., b. and f'c's'le	"	12	Mar. 23, 1919	May 7, 1920	Aug. 10, 1920
19	Sept. 4, 1918	Canadian Trader	Port Arthur Shipbuilding Co.	39	*3,341	205.	684,905	Lake, s.d., p., b. and f'c's'le	"	10 1/2	Dec. 9, 1918	May 5, 1919	July 18, 1919
20a	Mar. 1, 1919	Canadian Adventurer	"	41	*3,408	210.	715,680	Lake, s.d., p., b. and f'c's'le	"	10	Mar. 31, 1919	Sept. 8, 1919	Oct. 29, 1919
20	Sept. 4, 1918	Canadian Sailor	"	40	*3,357	205.	688,185	Lake, s.d., p., b. and f'c's'le	"	10 1/2	Dec. 10, 1918	May 31, 1919	Aug. 7, 1919
20a	Mar. 1, 1919	Canadian Sower	"	42	*3,406	210.	715,207.50	Lake, s.d., p., b. and f'c's'le	"	10	Mar. 31, 1919	Oct. 9, 1919	Nov. 18, 1919
21	Sept. 13, 1918	Canadian Mariner	Halifax Shipyards Ltd.	1	*3,890	195.	1,636,050	2.d., p., b. and f'c's'le	"	10	Feb. 24, 1919	Sept. 4, 1920	.....
22	Sept. 13, 1918	Canadian Explorer	"	2	*3,890	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	*4,581	215.	984,915	2.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	*3,882	188.	1,575,816	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	*3,891	188.	1,577,508	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	*3,890	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	*3,893	188.	1,577,884	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	*3,899.80	188.	1,579,068.40	2.d., p., b. and f'c's'le	"	11	May 10, 1919	Nov. 22, 1919	Dec. 27, 1919
29	Jan. 24, 1919	Canadian Winner	Harbour Marine Co. Ltd.	1	*3,890	198.	1,661,220	2.d., p., b. and f'c's'le	"	11	July 14, 1919	June 29, 1920	.....
30	Jan. 24, 1919	Canadian Traveller	"	2	*3,890	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	*3,972.50	205.	855,348.54	2.d., p., b. and f'c's'le	Bri. Corp.	9	Apr. 7, 1919	Dec. 10, 1919	May 11, 1920
32	Mar. 1, 1919	Canadian Runner	Port Arthur Shipbuilding Co.	43	*4,350	215.	935,250	2.d., p., b. and f'c's'le	"	11	Aug. 29, 1919	May 8, 1920	.....
33	Mar. 1, 1919	Canadian Carrier	"	44	*4,350	215.	935,250	2.d., p., b. and f'c's'le	"	11	Aug. 29, 1919	June 26, 1920	.....
34	Nov. 22, 1918	Canadian Importer	J. Coughlan & Sons	11	*3,881	198.	1,659,438	2.d., p., b. and f'c's'le	Lloyd's	11	Apr. 26, 1919	Dec. 6, 1919	Feb. 5, 1920
35	Nov. 22, 1918	Canadian Exporter	"	12	*3,880	198.	1,659,240	2.d., p., b. and f'c's'le	"	11	May 3, 1919	Dec. 27, 1919	Mar. 6, 1920
36	Nov. 22, 1918	Canadian Inventor	"	13	*3,850	198.	1,653,300	2.d., p., b. and f'c's'le	"	11	July 24, 1919	Jan. 24, 1920	July 17, 1920
37	Nov. 22, 1918	Canadian Prospector	"	14	*3,850	198.	1,653,300	2.d., p., b. and f'c's'le	"	11	Sept. 26, 1919	Feb. 24, 1920	June 15, 1920
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.	5	*2,776.50	210.	583,065	S.d., p., b. and f'c's'le	"	8 1/2	Mar. 27, 1919	Oct. 8, 1919	Dec. 20, 1919
41	Mar. 31, 1919	Canadian Miner	"	6	*2,778	210.	583,380	S.d., p., b. and f'c's'le	"	8 1/2	Mar. 31, 1919	Apr. 3, 1920	May 7, 1920
42	Feb. 21, 1919	Canadian Reaper	Prince Rupert Dry Dock & Eng. Co.	1	*3,890	198.	1,661,220	2.d., p., b. and f'c's'le	Bri. Corp.	11	Sept. 27, 1919	.....	.....
43	Feb. 21, 1919	Canadian Thrasher	"	2	*3,890	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	2.d., p., b. and f'c's'le	"	11	Mar. 29, 1919	Apr. 13, 1920	Aug. 18, 1920
45	Jan. 23, 1919	Canadian S-uatter	"	5	*4,575	215.	983,625	2.d., p., b. and f'c's'le	"	11	July 14, 1919	July 26, 1920	.....
46	Sept. 11, 1919	Canadian Farmer	Collingwood Shipbldg. Co., C'wood.	65	*3,954	180.	711,720	2.d., p., b. and f'c's'le	"	11	Sept. 3, 1919	Dec. 27, 1919	Apr. 23, 1920
47	Sept. 11, 1919	Canadian Observer	"	66	*3,981.75	180.	712,910	2.d., p., b. and f'c's'le	"	11	Sept. 12, 1919	May 8, 1920	June 15, 1920
48	Sept. 2, 1919	Canadian Pathfinder	Dominion Shipbuilding & Repair Co	10	*3,500	180.	630,000	Lake, s.d., p., b. and f'c's'le	Lloyd's	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	*3,890	170.	1,426,300	2.d., p., b. and f'c's'le	Lloyd's	11	Dec. 10, 1919	July 22, 1920	Aug. 25, 1920
51	Sept. 18, 1919	Canadian Conqueror	"	78	*3,890	170.	1,426,300	2.d., p., b. and f'c's'le	"	11	Jan. 17, 1920	June 27, 1920	.....
52	Sept. 18, 1919	Canadian Commander	"	79	*3,890	170.	1,426,300	2.d., p., b. and f'c's'le	"	11	June 2, 1920	.....	.....
53	Sept. 18, 1919	Canadian Leader	"	80	*3,890	170.	1,426,300	2.d., p., b. and f'c's'le	"	11	June 29, 1920	.....	.....
54	Feb. 26, 1920	Canadian Logger	Midland Shipbuilding Co.	10	*3,890	182.50	709,925	2.d., p., b. and f'c's'le	Bri. Corp.	11	June 9, 1920	.....	.....
55	Mar. 18, 1920	Canadian Highlander	Wallace Shipyards Ltd.	103	*3,890	167.50	1,405,325	2.d., p., b. and f'c's'le	Lloyd's	11	.....	.....	.....
56	Mar. 18, 1920	Canadian Skirmisher	"	104	*3,890	167.50	1,405,325	2.d., p., b. and f'c's'le	"	11	.....	.....	.....
57	Mar. 13, 1920	Canadian Rover	Collingwood Shipbldg. Co., C'wood.	67	*3,890	182.50	709,925	2.d., p., b. and f'c's'le	Bri. Corp.	11	June 5, 1920	.....	.....
58	Mar. 13, 1920	Canadian Coaster	Collingwood Shipbldg Co., Kingston	16	*3,890	185.50	709,925	2.d., p., b. and f'c's'le	"	11	May 6, 1920	.....	.....
59	.....	Canadian Sopper	Nova Scotia Steel & Coal Co.	8	*2,800	190.	532,000	2.d., p., b. and f'c's'le	Lloyd's	8 1/2	May 4, 1920	.....	.....
60	Feb. 2, 1920	Canadian Challenger	Davie Shipbuilding & Repairing Co.	476	*3,890	167.50	1,405,325	2.d., p., b. and f'c's'le	"	11	May 14, 1920	.....	.....
61	Feb. 26, 1920	Canadian Transporter	Port Arthur Shipbuilding Co.	45	*3,890	182.50	709,925	2.d., p., b. and f'c's'le	Bri. Corp.	11	Mar. 30, 1920	.....	.....
62	April 7, 1920	Canadian Transporter	J. Coughlan & Sons	20	*3,890	167.50	1,405,325	2.d., p., b. and f'c's'le	"	11	.....	.....	.....
63	April 7, 1920	Canadian Freightier	"	21	*3,890	167.50	1,405,325	2.d., p., b. and f'c's'le	"	11	.....	.....	.....

379,296.80 \$72,818,073.19

Atlantic and Pacific Ocean.

The schooner Clarence A. Moulton, from Cape Breton for Nantes, France, was reported, Sept. 13, to have been burned at sea, the crew having been saved.

Furness Withy & Co. have advised us that they have not bought the s.s. Royal George from the Cunard Steamship Co., as reported in a press dispatch mentioned in our last issue.

The schooner Maid of Brazil, which sailed from Cape Breton recently with coal, was reported to have put into Cherbourg, France, Sept. 13, with fire in her cargo. She was bound for Rotterdam.

Canadian Pacific Ocean Services' s.s. Tunisian, which was damaged in a collision with Manchester Liner's s.s. Manchester Division, in the River St. Lawrence, near Quebec, Aug. 8, has been repaired, and returned to service, Sept. 17.

Canadian Pacific Ocean Services' s.s. Empress of Britain arrived at Quebec, Sept. 8, on her maiden trip, after having been reconditioned and refitted on the conclusion of her war service. As stated in a previous issue, she has been changed to burn fuel oil, and is thus the first oil burning passenger steamship to come up the St. Lawrence. The voyage from Liverpool to Quebec was made in 5 days, 22 hr., 20 min., an average speed of 18.5 knots an hour. She brought 1,282 passengers.

White Star-Dominion Line's s.s. Regina, which is under construction at Belfast, Ireland, is expected to be ready to reopen that company's St. Lawrence season in May, 1921. She is of the single cabin type, approximately 16,000 tons. A sister ship, the s.s. Calgary, is also under construction at Belfast, and is expected to be ready for service during 1921. The company's s.s. Rimouski, which was used for transport purposes during the war, and afterwards as a cargo ship, is being fitted up at Belfast for passenger service.

The Admiralty Court at Halifax, N.S., delivered judgment Aug. 27 in the case of the Nova Scotia schooner Frances A. against the Ulster Steamship Co.'s s.s. Downshire Head for damages for the sinking of the schooner in collision off Yarmouth, N.S., in 1919. The judgment awarded \$21,681 to the owner of the schooner and a similar amount to the widow of the captain, who was drowned in the collision. The balance of \$70,000, which was the total of the damages, is being paid as compensation to relatives and other members of the crew who lost their lives and to survivors for the loss of their effects.

Canadian Robert Dollar Co. has issued a schedule of its steamship sailings for the winter of 1920-21, from New York, Vancouver, Karatsu, Shanghai, Hong Kong and Singapore, for the steamships Grace Dollar, M. S. Dollar, Melville Dollar, Harold Dollar, Bessie Dollar and Esther Dollar. The last named ship was purchased in Great Britain recently, and was formerly named Parisian. She is being operated on the company's general route between New York and the Orient, via the Panama Canal and Vancouver, B.C. The dimensions of the Esther Dollar are,—length 483½ ft., beam 57 ft., tonnage 7,548 gross, 4,648 net, 11,544 deadweight. She has a speed of 11 knots an hour, with a cubic capacity of 707,328 cu. ft., and fuel capacity of 13,400 barrels of oil. She is fitted with Marconi wireless telegraph equipment.

Maritime Provinces and Newfoundland.

The Lunenburg schooner Charles A. Ritecy, while bound from France to Lunenburg, struck on Rose Point, near the entrance to Lunenburg harbor, Sept. 14, and sank, the captain being drowned.

The s.s. Sebastapool is to be placed on the Newfoundland northwest coast route, replacing the s.s. Meigle. It is announced that the Newfoundland Government will place a second steamship on the same route during October.

A St. John, N.B., press report states that a contract for dredging the deep water berths at West St. John, approximately 22,100 cu. ft., scow measure, of sand, gravel and clay, has been awarded to J. A. Gregory, West St. John, at 32c. a cu. ft.

The Dominion Government s.s. Aranmore, which went ashore on the west coast of Newfoundland in Dec., 1919, while on her way to lighthouse stations along the coast, with supplies, has been refloated. She was released by her own power, and proceeded, under her own steam, to Quebec.

The schooner Mary L. Oxner, 200 tons register, which was launched by Chester Basin Shipbuilding Co., Chester Basin, N.S., at the end of June, for W. Duff, M.P., Lunenburg, N.S., and which sailed from Lunenburg for St. John's, Nfld., July 29, was wrecked and became a total loss at Silver Cays, Sept. 13.

The suction dredge Toronto, which was towed from Norfolk, Va., for use in the Courtenay Bay development work, and which arrived at St. John, N.B., Aug. 4, as stated in Canadian Railway and Marine World for September, was built in Toronto by Polson Iron Works, and was bought recently by the St. John Drydock & Shipbuilding Co. from the Canadian Stewart Co.

The Nova Scotia Registrar of Joint Stock Companies has given notice that he has revoked the registration of the following companies, at their own request:—Colchester Steamship Co., Stella Maris Steamship Co., Argus Steamship Co., McKenzie Shipping Co., Yarmouth Shipbuilding Co., Schooner Lavonia Ltd., Relwood Shipping Corporation, Inverness Barging Co., Westport Shipbuilding Co., Overseas Shipping Co., Hero Steamship Co., St. Lawrence Shipping Co., Halifax-Le Have Steam Packet Co., Margaree Coal & Ry. Co., Pontiac Steamship Co.,

Noel Shipbuilding & Transportation Co., Magdalen Island Steamship Co., Merchants Transportation Co., Fowler Head Shipbuilding Co., Halifax Graving Dock Co., Falmouth Shipbuilding & Transportation Co.

Province of Quebec Marine.

An order in council has been passed approving regulations for ferry service across the Ottawa River between Sand Point, Ont., and Norway Bay, Que. The passenger fare each way is fixed at 25c., and for automobiles with chauffeur each way \$1.25.

The River St. Lawrence, which has been exceptionally low all summer, is reported from Montreal to have reached the lowest level in four years on Sept. 25, when the 33 ft. channel gauge indicated a depth of 28 ft. 11 in., a drop of 4 ft. 1 in.

The construction of shed 19 on Victoria pier, Montreal, which commenced Aug. 18, is proceeding rapidly, and it is expected that the shed will be completed and ready for use early in October. It is 900 by 100 ft., 2 stories high, with a floor load on the first story of 600 lb. a sq. ft., and it has a flat roof, for cargo purposes, with a floor load of 250 lb. a sq. ft. It is one of three sheds, nos. 17, 18 and 19, under construction. The first two, although not yet finished, have been used during this year.

Ontario and the Great Lakes.

The British Construction Co., which planned to build a drydock at Sault Ste. Marie, has abandoned the project, and has asked for a refund of the \$25,000 which it deposited with the city as a guarantee.

Works is proceeding on the reconstruction of the pier at Cobourg, Ont., the old wooden pier being removed and replaced by a concrete one. W. B. Russell, Toronto, and H. Croft, Cobourg, are the contractors.

An Owen Sound press report states work will be commenced almost immediately on a dock on the east side of the harbor, the dock to be of concrete, approximately 1,000 ft. long, and that the contract has been let to contractors at Peterborough for approximately \$89,700.

The London Railway Commission is reported to be considering the possibil-

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals during August, 1920:

Articles	Canadian Canal	U.S. Canal	Total
Lumber	2,380	88,869	41,249
Flour	168,781	869,440	1,038,221
Wheat	3,381,575	4,130,935	7,512,510
Grain, other than wheat	994,000	1,321,909	2,315,909
Copper	3,736	8,275	12,011
Iron Ore	171,036	8,613,735	8,784,821
Pig Iron	117		117
Stone	7,350	3,200	10,550
General Merchandise	1,337	5,608	6,945
Passengers	7,949	4,739	12,688
Coal, soft	31,846	2,501,768	2,533,614
Coal, hard		341,690	341,690
Iron Ore		24,640	24,640
Manufactured Iron and Steel	1,021	6,293	7,314
Salt	1,799	14,593	16,392
Oil		60,256	60,256
Stone		89,913	89,913
General Merchandise	38,028	35,372	73,400
Passengers	8,323	5,093	13,416
Summary			
Vessel Passages	Number	717	2,199
Registered Tonnage	Net	714,998	7,731,024
Freight—Eastbound	Short tons	332,903	8,945,168
Freight—Westbound	Short tons	72,694	3,074,525
Total Freight	Short tons	405,597	12,019,693
	Short tons		12,425,290

ity of establishing a steamship service between Port Stanley and Windsor, Ont., Detroit, Mich., and Buffalo, N.Y., in connection with the operation of the London & Port Stanley Ry. It is stated that a combination freight and passenger service is being considered.

The U.S. Lake Survey reports the stages of the Great Lakes for August, in feet above mean sea level, as follows:—Superior, 602.93; Michigan and Huron, 581.01; St. Clair, 575.66; Erie, 572.65; Ontario, 245.62. Compared with the average August stages for the past 10 years, Superior was 0.35 ft. above; Michigan and Huron 0.15 ft. above; Erie the same, and Ontario 0.92 ft. below.

The s.s. Keystorm, which was owned by Keystone Transportation Co., which was wrecked and sank in deep water off Grenadier Island, near Brockville, in 1913, and which was abandoned to the underwriters, will not be raised this year. Numerous attempts have been made to salvage her, but without success. Her cargo of coal was removed last year, and it has been deemed impracticable to proceed further with the recovery of the wreck this year.

The s.s. Algona, owned by W. W. Cline, Massena, N.Y., and operated for some years between Ogdensburg and down river points in the passenger and freight business, is reported to have been sold to Canadian parties. She was built at Buffalo, N.Y., in 1880, and has an oak hull with the following dimensions,—length 95 ft., breadth 18 ft., depth 5 ft., tonnage 92 gross, 63 net. She is equipped with Steeple compound engine, with cylinders 10 and 18 in. diam. by 14 in. stroke, 150 i.h.p., at 150 r.p.m., and supplied with steam by a single firebox boiler 4½ ft. diam. by 10 ft. long at 133 lb.

British Columbia and Pacific Coast.

The Grand Trunk Pacific Coast Steamship Co. commenced its autumn and winter schedule between Vancouver, Prince Rupert and Queen Charlotte Islands, with the steamships Prince Albert and Prince John, Sept. 5. The s.s. Prince Albert is running without schedule between Vancouver and Prince Rupert, transacting such business as may be assigned her, and arriving at Prince Rupert on Wednesdays, to take up her schedule to Massett Inlet, while the s.s. Prince John has taken over the Stewart-Anyox service.

The C.P.R. s.s. Princess Sophia, which was lost in the Lynn Canal at the end of 1918, and attempts to salvage which were made during the summer, has now been definitely abandoned, the only result achieved being the rescuing of the purser's safe, containing about \$12,000. It is stated that, from the start, the proposal to salvage the vessel was not considered feasible, and Canadian salvage companies had so decided, but the operations were undertaken by a Seattle concern which raised funds by public subscription.

Steamship Macoris Corporation Ltd., and Steamship Sagua Corporation Ltd., incorporated recently under the Dominion Companies Act, with offices at Montreal, are being organized for interests connected with the Pure Cane Molasses Co., Montreal. It is said that the steamships Macoris and Sagua, of U.S. register, have been acquired for the respective companies and that they will be transferred to Canadian register.

Wreck Commissioners' Enquiries and Judgments.

Enquiries have been held and judgments delivered in connection with the following casualties.

Manchester Division—Tunisian Collision.

Held at Montreal, Aug. 24, before Capt. L. A. Demers, Dominion Wreck Commission, assisted by Capt. J. B. Henry and M. H. Robertson, as nautical assessors, into the collision between Manchester Liners' s.s. Manchester Division and Canadian Pacific Ocean Services' s.s. Tunisian, near Morin shoal, in the River St. Lawrence, on Aug. 14, while the s.s. Manchester Division was at anchor. The court found that the s.s. Manchester Division could not be held to blame for the collision, but on the contrary commended the master, Capt. P. Linton, for his prompt action in slacking out the cable, which allowed his ship to give way at the time of the impact, thereby reducing the shock, and which action impressed the court most forcibly that master and officers were on the alert. The court found that the pilot, Auguste Santerre, of the s.s. Tunisian, made an excusable error of judgment in not completing the order he gave, but that order being at once countermanded by the master, the ship did not have time to evolve on the first order. The pilot was therefore cautioned. The court was of the opinion that the order, full speed astern, given by the master of the s.s. Tunisian, Capt. C. W. Hodder, was the only possible order in such a situation, and in such a short space of time, and therefore concluded that the collision was inevitable. It suggested that while a proper lookout was kept, meeting the requirements of article 29 of the Rules of the Road, perhaps a man in the crow's nest, with one on the fore-castle deck, would have been more effective, but no fault was found for the two men being in the bows. The court quoted Marsden, defining an "inevitable accident" as used in Admiralty practice, as being "a collision which occurs without negligence of either ship and which could not be prevented by ordinary care or skill." Ordinary skill, care and prudence were observed on both ships.

Stranding of s.s. J. A. McKee.

Held at Montreal, Sept. 13, before Capt. L. A. Demers, Dominion Wreck Commission, assisted by Capt. C. Lapierre and C. J. Stuart, as nautical assessors, into the stranding of the Dominion Government's s.s. J. A. McKee, on Lark reef, near the mouth of the Saguenay River, Aug. 26. The evidence of the master, Capt. J. Lintlop, showed that he placed entire confidence in the pilot, whom he thought fit to take on at Father Point, notwithstanding that his ship was exempt by the Shipping Act and by bylaws from payment of pilotage dues, and also that he himself had been several times up and down the St. Lawrence. On this point the court had no criticism to offer, but on the contrary thought that a master in such a position could, when weather conditions permitted, obtain a well deserved rest. Nevertheless it is not anticipated, nor permitted, and not usual for the master to leave full responsibility to a pilot. The master is the only individual upon whom responsibility rests. In this case the pilot elected to negotiate the northern passage from Red Island with the view of saving time, which the court considered foolhardy on his part, as the channel between Red and Green Islands is the proper one

to follow, and the court failed to see any good excuse for not taking the proper channel. It could not accept his plea that he had shaped a right course, when he had not taken such observations as would have given him the exact position of his ship, and his statement that some attraction on land may have affected his compass was considered an attempt to find an excuse. The court considered that the master and pilot should have been united in ordering that the speed of the ship be reduced, that soundings be taken and that the ship come to an anchor during the fog which obtained at the time of the stranding. The court therefore found that the master, Capt. J. Lintlop, failed to exercise the judgment which his responsibility demanded and suspended his certificate for two months from Sept. 13. With respect to the pilot, E. Baquet, the court was reluctant, on principle, and on account of his youth, to suspend his license, but owing to the seriousness of the case, it did so for the remainder of the navigation season.

Thomas Robb, Manager, Shipping Federation of Canada, brought to the court's attention the fact that notwithstanding that coasting ships are exempt from payment of pilotage dues, and the taking of a pilot, yet agents, owners and masters are prohibited from engaging an individual conversant with the river, when they need one, to relieve momentarily, and enable the master to rest, unless the said individual is a licensed pilot. This matter, the court agreed, to submit to the consideration of the officer dealing with pilotage matters.

Stranding of s.s. Tuscarora.

Held at Quebec, Que., Sept. 7, before Capt. L. A. Demers, Dominion Wreck Commission, assisted by Capt. C. Lapierre and J. Couette, as nautical assessors, into the stranding of the U.S. Coast-guard light cruiser Tuscarora, on White Island reef, in the St. Lawrence River, Aug. 31, while in tow of two tugs. The court found that the pilot, E. Pouliot, erred in judgment, in not making sufficient allowance for the strong ebb tide which he was encountering, by not steering a more northerly course till well clear of White Island. Being a young man, the court believed that the suspension of his license at this stage would be detrimental to the service, and therefore, in lieu of suspension, ordered him to pay the costs of the investigation, \$150, to the Marine Department by Oct. 1. The court stated that it was not conversant with the methods of discipline followed in the U.S. Navy, but expressed the opinion that the authorities will agree that the bridge should not have been left solely in charge of a warrant officer, viz., the gunner, who was unacquainted with navigation problems, especially in strange pilotage waters, and who, prior to, and at the time of the grounding, was steering. Having no jurisdiction in the matter, the court submitted the comment for the information of the U.S. authorities.

Stranding of s.s. Metagama.

Held at Montreal, Sept. 16, before Capt. L. A. Demers, Dominion Wreck Commission, assisted by Capt. J. B. Henry and C. J. Stuart as nautical assessors, into the stranding of Canadian Pacific Ocean Services' s.s. Metagama in the Contrecoeur traverse, in the River St. Lawrence, while passing the s.s. Wisley at anchor, Sept. 12. The court found,

after hearing the very straightforward evidence given by all witnesses, that the pilot, W. Gauthier, in passing astern of the s.s. Wisley, followed the natural impulse and ordinary usage of taking the right hand side of the channel, thus avoiding crossing the bow of an anchored vessel when there was a possibility of fouling her cable, hence failing to recognize in time that he was taking a more limited space, and thus committed, in the court's opinion, an excusable error of judgment. The master of the s.s. Metagama, Capt. J. B. Turnbull, and his officers on duty, were exonerated from all blame, and pilot J. B. Angers and Capt. T. S. Bowen of the s.s. Wisley were also held blameless. The court could not criticize their action in anchoring at the place they did, but recommended to all pilots that whenever possible they should anchor in such a place where passing ships will be free from any apprehension as to which side would be the best to select. The evidence showed that all lights and aids to navigation were in order.

St. John, N.B., Pilotage District Regulations.

A Dominion order in council was passed Aug. 25, confirming bylaws recommended by the Minister of Marine for the pilotage district of St. John, N.B., which is now under his control at pilotage authority. The limits of the pilotage district are Musquash Point light, bearing N.W. magnetic, Cape Spencer E. by N. magnetic, distance 8 miles from Part-ridge Island.

Pilotage dues are provided for allships not exempt under the Canadian Shipping Act, as follows:—

Steamships, inward and outward, \$3 a foot draft; if a pilot is required to go down the Bay of Fundy, an additional

\$2.75 a foot draft with reasonable travelling expenses;

Sailing ships, inward \$2 a foot draft, outward \$1.50 foot draft; if a pilot is required to go down the Bay of Fundy, an additional \$2 a foot draft, with reasonable travelling expenses;

If detention of ship at quarantine exceeds 3 hours, an additional \$5 for the next 24 hours or fraction thereof;

If a pilot is required to go outside of the district, the Superintendent may issue a permit in writing, upon application, naming the pilot, and the ship to be piloted, and the ship engaging such a pilot shall pay in addition to the regular dues and reasonable travelling and other expenses;

Ships under 1,000 tons shall not be required to pay moorage dues, but if a pilot be employed, \$5 a move;

All ships of 1,000 and under 4,000 tons, moorage dues, \$10; 4,000 tons and over, \$15;

Pilotage charges while compasses are adjusted, \$10; trial trips, \$15, and trial trips, where compasses are adjusted at the same time, \$20, in addition to a charge for moorage; if compass adjustment and trial trips are carried out beyond pilotage limits, and exceeding over 6 hours, \$25, and an extra \$10 for every additional 6 hours or part thereof.

Pilotage dues collected must be entered in a cash book provided by the Marine Department and deposited in an authorized bank, and receipts forwarded to the Marine Department's accountant, with a detailed statement of the dues collected. Pilotage dues must not be collected by pilots without authority.

Each pilot, under 70 years of age, at present holding a license, and in active service, shall be examined for eyesight and hearing, and on passing such examination, shall be granted a license, but no license shall be granted to any pilot of 70 years or over, and any such pilot shall be retired and his present license can-

celled. Every person desiring to become an indentured apprentice pilot shall make application in his own writing, and shall be a British subject not less than 16 years old, with the rudiments of an English education and good moral character, and with a medical certificate of physical fitness; on approval he shall be indentured to serve on pilot boats for five years, after which he shall make ocean going voyages as an articulated seaman, and shall produce certificates from the master of ships in which he sails as to his capabilities and character; he shall then appear for examination, and, if successful, a license may be issued to him to act as a pilot. Every person, not an apprentice, desiring to have examination for a pilot's license must apply in his own writing, enclosing a certificate as master of a British sea going vessel, or master in the coasting passenger trade of Canada, and certificate from last employer as to character and habits, and certificate of health from a satisfactory physician. Such applicants must be British subjects, not less than 30 and not more than 50 years old.

The board of examination shall be composed of the Superintendent of Pilots as chairman, an examiner of masters and mates, a member of the pilots' committee, and such other persons as the Minister of Marine may appoint.

When a licensed pilot attains the age of 65, if he is found competent to continue, he may be granted a new license for one year and from year to year so long as he is found competent, until he reaches 70, but such license shall be cancelled upon his failure to pass an examination at least twice in each year.

Temporary pilots may be appointed at a stated sum per day.

Provision is also made for the management of the superannuation fund, under the administration of the Minister of Marine, and penalties are provided for breaches of the bylaws by pilots.

Ships Registered in Canada During June, 1920.

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 ships of less than 100 tons register.

STEAM.

No.	Name	Port of Registry	Where and when built	Length	Breadth	Depth	Gross Tons	Reg. Tons	Engines, Etc. N.h.p.	Owners or managing owners
141,761	Canadian Observer*	Montreal	Collingwood, Ont. 1920	251.0	43.6	23.6	2410	1460	124 Sc.	Minister of Marine and Fisheries, Ottawa.
141,729	Canadian Prospector*	Vancouver, B.C.	Vancouver, B.C. 1920	400.0	52.4	28.8	5492	3380	266 Sc.	Minister of Marine and Fisheries, Ottawa.
141,759	Dougaldmac(1)	Montreal	Cleveland, O. 1881	344.9	36.6	18.4	1457	883	98 Sc.	Sincennes McNaughton Line, Ltd., Montreal.
141,758	John F. Morrow	"	Toledo, O. 1890	246.0	40.6	20.7	1850	1160	105 Sc.	George Hall Coal Co. of Canada, Ltd., Montreal.
141,768	Maplecourt(2)	"	Cleveland, O. 1894	365.4	44.8	23.4	3388	2010	144 Sc.	Davie Shipbuilding & Repairing Co., Montreal.
141,762	Mapledene	"	Lauzon, Que. 1920	219.2	36.9	19.3	1445	876	92 Sc.	Davie Shipbuilding & Repairing Co., Montreal.
141,808	Margaret Coughlan*	Vancouver, B.C.	Vancouver, B.C. 1920	411.5	54.1	27.5	5704	3531	266½ Sc.	Canadian Western Steamships Ltd., Vancouver, B.C.
141,757	St. Lawrence	Montreal	Clayton, N.Y. 1884	154.2	26.0	7.2	275	95	34 Sc.	Kingston Navigation Co., Kingston, Ont.
141,756	Thousand Islander	"	Pictou, Ont. 1915	166.4	31.9	8.3	587	206	75 Sc.	Canada Steamship Lines, Ltd., Montreal.
141,663	Torontonian*	Toronto	Toledo, O. 1912	166.4	31.9	8.3	587	206	75 Sc.	Canada Steamship Lines, Ltd., Montreal.
141,764	W. J. Carter	Montreal	Toronto 1920	251.0	43.6	20.7	2239	1349	1250 Sc.	Dominion Shipbuilding & Repair Co., Toronto.
141,764	W. J. Carter	Montreal	Milwaukee, Wis. 1886	122.0	27.8	9.6	317	170	36 Sc.	W. L. McDougald, Montreal.

(1) Formerly Columbia. (2) Formerly Northwest. *Equipped with wireless.

SAILING.

No.	Name	Port of Registry	Rig	Where and when built	Length	Breadth	Depth	Gross Tons	Tons Reg.	Owner or Managing Owner.
141,692	F. S. Burgoyne	Lunenburg, N.S.	Schr.	Mahone Bay, N.S. 1920	130.5	28.3	10.0	179	143	Ernst Shipbuilding Co., Mahone Bay, N.S.
141,624	Frederick H.	Parrsboro, N.S.	"	Port Greville, N.S. 1920	148.0	34.5	12.3	466	426	K. J. Cochrane, Port Greville, N.S.
141,540	J. C. 27	New Westminster	Scow	New Westminster, B.C. 1920	76.3	28.0	7.1	129	129	J. Crane, New Westminster, B.C.
141,641	Olive Moore	Liverpool, N.S.	Schr.	Liverpool, N.S. 1920	120.0	25.8	11.6	190	158	J. Moore, St. John's, Nfld.
141,640	W. H. Eastwood	La Have, N.S.	Schr.	Liverpool, N.S. 1919	153.8	27.0	12.4	400	357	F. Gray, La Have, N.S.

Canal Statistics for August.

The Dominion Bureau of Statistics, Transportation Division, has issued the following particulars of traffic through canals during August:—The number of ships passing through all Canadian canals was 4,892, with a net tonnage of 1,928,260, an increase of 45,200 tons over Aug., 1919. Passengers carried were 81,567, against 90,770. Cargoes, 1,459,032 tons, against 1,224,110 in Aug., 1919. To these totals should be added the traffic through the U.S. locks at Sault Ste. Marie as follows:—Ships, 2,199, net tonnage 7,731,024; passengers, 9,832; cargoes, 12,019,693 tons.

Sault Ste. Marie Canal.—The total number of ships through both Canadian and U.S. locks was 2,915, net tonnage 8,446,022; cargoes, 12,425,372 tons, against 2,103 ships, 5,138,200 net tonnage; 6,609,961 tons cargoes in Aug., 1919. Through the Canadian lock.—Ships, 716; net tonnage, 715,583; passengers, 16,275; cargoes, 405,679 tons. There was a big increase in the down traffic through the Canadian and American locks over Aug., 1919. Total down, Aug., 1920, 9,279,286 tons; Aug., 1919, 6,609,961 tons. The increases were chiefly 4,056,827 tons of iron ore and 6,025,292 bush. of wheat.

For the season there has been 33,573,707 tons of iron ore against 29,407,053 tons down in 1919, an increase of 4,166,654 tons and 39,099,711 bush. of wheat against 56,106,225 bush. in 1919. The ore shipments in 1919 were affected by the strikes. The decrease in the wheat shipments is partially explained by an increase of 5,765,000 bush. by rail east from Fort William and Port Arthur to July 31 over last year. The August shipments by rail and the rail shipments through from the west are not yet available.

There was an increase in the up traffic of 1,617,909 tons, principally in soft coal. Soft coal up, Aug. 1920, 2,533,614 tons; Aug., 1919, 1,189,558 tons. The total soft coal shipments for the season are 5,376,364 tons, against 8,149,369 tons in 1919. The hard coal shipments for the season are 1,124,860 tons, against 1,148,176 tons in 1919.

There is one lock on the Canadian side of the river and four on the U.S. side, two of which are larger than the Canadian lock. The fourth lock was opened Sept., 1919. This explains the great difference in traffic through the Canadian and U.S. locks.

The total freight through the Welland Canal was 346,976 tons down, 22,744 tons up, total 369,720 tons, against 336,337 in Aug., 1919, and 362,626 in July, 1920. Compared with 1919 there were decreases in grain, oil and steel, but an increase of 126,770 tons in soft coal. For the season there has been a net decrease up and down of 95,926 tons, made up chiefly by decrease of 4,695,500 bush. of grain, 59,711 tons of oils, and 14,373 tons of steel, and an increase of 120,555 tons of soft coal. There was an increase of 39,202 tons of soft coal in August over July going down.

On the St. Lawrence Canals there was a decrease from July of 99 ship passages, but an increase of 3,666 passengers and 40,920 tons of freight. Compared with Aug., 1919, there was a decrease of 4,204 passengers and an increase of 87,731 tons of freight. The totals are, passengers up, 5,872; freight, 100,759 tons; down, passengers, 16,441, freight, 430,703 tons.

Compared with Aug., 1919, there was a decrease down of 125,900 bush. of barley, 11,090 tons of oil, and an increase of 108,917 tons of soft coal. The coal shipments were: August 256,916 tons, July 232,995 tons, Aug., 1919, 147,999 tons. For the season there have been 543,500 tons of soft coal (mostly all down), against 579,840 tons in 1919.

Ottawa Canal.—241 ships, cargoes up 2,815 tons, down 37,257, total 40,072 tons, against 40,880 in Aug., 1919.

Chambly Canal.—280 ships, cargoes up, 40,646 tons; down, 18,009; total, 58,655 tons, against 39,963, Aug., 1919.

Trent Canal.—1,431 ships, cargoes up, 2,169 tons; down, 6,009 tons; total, 8,178 tons, against 10,205 tons, Aug., 1919.

Rideau Canal.—232 ships, cargoes up, 5,001 tons; down, 5,003 tons; total, 10,014 tons, against 17,109 tons, Aug., 1919.

Murray Canal.—200 ships, cargoes up, 24,088 tons; down, 757 tons; total, 24,845 tons, against 17,539 tons, Aug., 1919. There were 2,649 passengers, against 579 in Aug., 1919; this increase was due to excursions from off the Trent Canal.

St. Peters Canal.—184 ships, cargoes up, 1,221 tons; down, 7,956 tons; total, 9,177 tons, against 8,979 tons in Aug., 1919.

St. Andrews Canal.—31 ships, cargoes up, 1,229 tons, against 1,039 tons in Aug., 1919.

St. John Dry Dock & Shipbuilding Co.'s Bonds.

A public offer was made recently of \$884,276.50, St. John Dry Dock & Shipbuilding Co.'s 1st mortgage 5½% serial gold bonds, dated July 5, 1919, maturing serially from 1920 to 1954, interest payable half yearly, the yields ranging from 6 to 6.125%. Following are extracts from the prospectus:—"The St. John Dry Dock & Shipbuilding Co. Ltd., was organized to build, at St. John, N.B., a graving dock of the first class, together with a shipbuilding yard. The graving dock will accommodate ships of the largest size afloat, and will alone cost \$5,500,000. In order to assist in the promotion and construction of this immense work the Dominion Government, under authority of The Dry Dock Subsidies Act, 1910, and The Dry Dock Amendment Act, 1917, provides a subsidy of \$247,500 a year, payable half yearly. This subsidy is sufficient to meet the principal and interest on the total issue of bonds, amounting to \$3,826,272.34, with interest at 5½%, of which the present issue is the first series. Work having progressed sufficiently, the company is entitled to draw a portion of this subsidy amounting to \$28,599.43 half yearly. This subsidy has been absolutely assigned to

the trustee, and is sufficient to meet interest and principal on bonds amounting to \$884,276.50, which we are now offering and which are a part of the total authorized issue.

"The subsidy paid by the Dominion Government is irrevocable and assigned absolutely to the trustee, The Montreal Trust Co., to meet the interest and principal on these bonds, and this subsidy cannot be diverted, reduced, changed, or in any way dealt with, but is absolutely the property of the holders of these bonds. In addition, the bonds when issued are a first and only mortgage on all the company's works, plant and equipment. The following paragraph appears on the back of each bond: 'The Minister of Public Works of Canada has consented to the issue of the first series of the within bonds totalling \$884,276.50, bearing interest at 5½% per annum, of which this bond is one, and has agreed to pay to Montreal Trust Co., trustee, for the benefit of the holders of the said bonds, \$28,599.43 half yearly on each of the first days of January and July for 35 years hereafter, making in all 70 payments as a subsidy payable to St. John Dry Dock & Shipbuilding Co. Ltd., for work heretofore completed on its dry dock at Courtenay Bay, N.B., in respect to which this first series of bonds is issued.'

"This bond issue is purely a capitalization of a semi-annual subsidy which the Dominion of Canada covenants to pay, and therefore places this security practically on the same level as Victory Loan bonds. In the case of Victory Bonds, the Government pays interest and principal to the holders direct through the banks. In the case of the St. John Dry Dock & Shipbuilding Co., the Government pays interest and principal to the holder of the bonds through the trustee, The Montreal Trust Co., who in turn pay through the Royal Bank of Canada."

Marine Public Works Contracts.—The Dominion Public Works Department has awarded the following contracts:—Aug. 9, Frontenac Dredging Co., Toronto, dredging at Cobourg, and Kingston, Ont., above Catarqui bridge and on harbor front, class B, at 50c. a cu. yd; Aug. 1, F. Cogle and H. Perryleake, Proctor, B.C., floating wharf at Kuskanook, B.C., \$7,950; Aug. 21, C. S. Boone Dredging Co., Toronto, dredging at Oakville, Whitby and Bowmanville, Ont., class B, 65½c., 64½c. and 64c. a cu. yd., respectively; Aug. 23, A. Guigere, Shawinigan Falls, Que., repairs to landing pier, Pointe aux Trembles, Que., schedule of prices; Aug. 27, O. Poliquin, Portneuf, Que., repairs and reconstruction of public wharf, Ste. Famille, Que., schedule of prices; Aug. 28, Miramichi Dredging Co., dredging at Grande Anse, N.B., class B, 63½c. a cu. yd.

Ships Added to and Deducted From the Canadian Register During June, 1920

	Steam.		Sailing.	
	No.	Tonnage—Registered.	No.	Tonnage—Registered.
Added.				
Built in Canada	24	18,050	11	1,552
Purchased from foreigners.....	6	7,874	.....	.....
Transferred from British Possessions	4	207	.....	.....
Totals	34	26,131	11	1,552
		15,784		1,401
Deducted.				
Wrecked or otherwise lost.....	1	379	5	881
Broken up or unfit for use.....	6	147	8	743
Transferred from British Possessions	1	26	12	2,141
New registers .....	.....	.....	5	236
Other vessels .....	.....	.....	1	11
Totals	8	552	31	3,985
		365		839
				712
				1,792
				225
				11
				3,579

Speeches on the Shipbuilding Industry, Cost of Operation of Steamships etc.

Canadian Railway and Marine World for September contained an account of the launching at Govan, Scotland, on Aug. 17, of the Canadian Pacific Ry.'s s.s. Empress of Canada, which is to be operated on the Pacific Ocean under the Canadian Pacific Ocean Services management. We have since received fuller reports of the speeches at the luncheon which followed the launching, and which are reproduced below, as they contain a large amount of valuable information in regard to the shipbuilding industry, cost of operation of steamships, etc.:

R. A. Workman, Chairman, Fairfield Shipbuilding & Engineering Co., said that a wide conception and anxious thought by the owners had resulted in the largest liner yet built by the Fairfield Co. being launched that afternoon, a ship whose size was probably not exceeded by any other passenger ship at present building in Great Britain, and whose launching weight was about 12,000 tons. Her gross tonnage was expected to be about 22,000 tons, and her dimensions were 653 ft. length, 77½ ft. breadth and depth to bridge deck 53½ ft., and her speed at sea 18 knots. She would carry a crew of 550, and would have accommodation for 500 first class passengers, 100 second class, and 240 third class, and in addition would be able to carry 930 Asiatic steerage passengers. The engines are two sets of Brown-Curtis turbines driving twin screws through double reduction gearing—the double reduction gearing being the largest which had so far been constructed. In every way the vessel is a credit to the skill and enterprise in design of Hugh Macdonald, naval architect to the C.P.O.S. Had the Chairman of the C.P.O.S. (G. M. Bosworth) been present, he would have reminded him of a conversation he had with him before the war, when they were discussing the uses of oil fuel. He admitted that the time would come when large passenger vessels would be driven by internal combustion engines, but not in their lifetime. The Empress of Canada would be fitted with boilers designed to burn oil fuel, which was a step superseding coal, and he was not so sure that the day was so very far distant when internal combustion engines would be fitted in ocean liners.

Commander Sir Thos. Fisher, R.N., General Manager, C.P.O.S., said Mr. Workman had referred to the expansion of the C.P.R.'s Pacific fleet. He thought it might interest some of those present to hear a little of its history. Almost coincident with the completion of the railway the C.P.R. chartered a sailing vessel which left Shanghai for Vancouver with a cargo of tea. He believed her name was the W. B. Flint; that was in 1886, and it was astonishing to think that in such a short time the service had developed to enable the company to build a steamer of the class of the Empress of Canada. He thought it spoke volumes for the enterprise and energy of the C.P.R. as to justify its building of the largest steamship at present being built in any British yard. The service developed a great deal after the W. B. Flint, for he believed the company chartered three steamships, the Batavia, Parthead, and Abyssinian. For some short time the service was run by these ships, and they then laid down three ships which were without equal, and one of these is still running, the famous Empress boats.

These ships entered the service in 1891, and one of them, the Empress of Japan, is still running with the same boilers that she had when she was built, which, he thought, spoke volumes for British shipbuilding, and he only hoped the Empress of Canada would have an equally long and prosperous life. The service was continued for many years by these three ships. In 1906 it was found necessary to add a fourth ship, the Montagle. Later it was decided by the directors, on the advice of G. M. Bosworth, who had been director for many years of the company's steamship interests, to lay down two other ships, and the Empress of Russia and Empress of Asia were built in that year, and they have proved themselves very successful. They are the finest ships on the Pacific, and they would only be excelled by the ship just launched. The Empress of Russia still held the record for the Pacific. She made the voyage across in 9 days 10½ hours, and he believed that record was not likely to be excelled by the Empress of Canada. The trans-Pacific route was of great interest to business men in Great Britain, because it afforded by far the most rapid means for reaching the far east. He understood under ordinary circumstances they could reach Yokohama in 28 days across Canada, thanks to the C.P.R.'s enterprise in putting on a trans-continental train. It was 28 days, against which it took 55 days to reach Yokohama via the Suez Canal and the eastern route.

One of the directors of the Fairfield Co. had said it was a pity that they were not building another ship similar to the Empress of Canada. He agreed and he was quite sure if the thing were at all possible the C.P.R. would lay down such a ship, but under present conditions it was absolutely unthinkable to lay down a ship of that class today. He had a few figures drawn out to show the difficulties under which shipowners and liner companies labored. The public generally did not realize how great those difficulties were. Some years before the war the Fairfield Co. built a fine steamship for the Atlantic trade. Her cost was \$550,000. He believed the cost of the Empress of Canada would run into \$1,700,000. That was a very serious difference, but it was still more serious looking at it from the point of view of maintenance than it was of capital. He estimated that to cover the difference between these two ships running in the North Atlantic—one built today and one built before the war—insurance, depreciation and interest on capital, would involve a charge on every voyage made across the Atlantic and back of \$20,000. The difference between the pre-war and the present day ship running expenses were even more serious. Taking a ship of the type of the Calgarian, coal before the war was about \$4,500, now it was \$24,000. Repairs for a round voyage would be \$1,700 and now it would be \$7,700; provisions before the war were \$3,000 and now they cost \$8,000. Wages before the war were \$2,500 and now they were \$9,000. That was not the whole rise in wages. There was another allowance to be made, which was the accommodation taken from passengers for the greater comfort of the crew. In the Empress of France, a sister ship of the Calgarian, they had had to give up 266 berths from the earning power of the ship to hand them over for the well-being of the crew. Assuming those berths were only full on one-half

of the voyage the ship made, it meant a further loss of \$5,000. The net effect of these charges meant that the ship now built would cost \$60,000 a round voyage more than a similar ship runing and built before the war. All that money had to be recovered from the passengers, because freight was infinitesimal in comparison with the passengers.

He had heard a great deal of grumbling about the high cost of trans-Atlantic travel at the present time. He said quite frankly that the cost was not half as high as it ought to be in relation to the expenses of the operations and the capital cost of shipping. The Calgarian type of ship passenger rates were today, he believed, first class, \$50 10s.; second class before the war, \$11, was now \$28; third class before the war, \$6 10s., now \$19. He gave those figures with all reserve, but they gave a fair and general statement of the situation at the present time. The passenger rates had not increased by more than 180%, whereas the cost of operations, allowing the capital cost involved, had certainly not been less than 350%. That, honestly, was a position that could not be expected to continue for an indefinite period, and the result would be that a very large number of fast ships would necessarily be laid up. One might say, "Well, the shipowner could get it back by raising the fares." When they considered what it meant to pay \$50 for a first class passage to get one berth in a three-berth room, the ordinary minimum rate of \$50 to cross and \$50 to come back and \$28 for the second class, it was very serious, but it was far more serious to pay \$19 for a steerage. He could not conceive anything worse than to charge these immense sums for a man and his family going to Canada or the United States \$19 per person, and yet he had shown this was not sufficient. It meant in the first place that the communication between the different parts of the Empire would be seriously impeded, together with that good feeling that came of knowledge of other people. While the increase in the cost of ocean travel, if it was not stopped, would mean the disintegration of the Empire, it meant there must be fewer emigrants, and if there were fewer emigrants to Canada the tendency would be for them to cross the border rather than to go from the United Kingdom, which, he thought, would be a very disastrous thing for the Empire. Moreover, they could not be spared across the border, and he could not see how it could be filled up from the continent. There would not be sufficient labor to cultivate the fields for the population of Europe to be fed; therefore it seemed to him essential that shipbuilders and shipowners should adopt some means of getting back to less extravagant prices for ocean travel. It was essential for this country.

He was convinced that some economy could be effected in shipbuilding by better organization, and combinations which had been brought about recently in the shipbuilding world; by improved methods of standardization, and possibly by some reduction in profits. At any rate he commended to shipbuilders the necessity for reducing costs. For his own part he did not believe that any directors would lay down ships unless they knew what they were going to cost, and he thought the first thing was for shipbuilders to so stabilize the building that the

owners would know what it would cost. He believed the C.P.R. had adopted the most enlightened policy of any shipping company at the present time. By this policy they had a programme of two intermediate ships to be built at Clydebank and two passenger ships at Fairfield. Mr. Bosworth came over to Great Britain two years ago and sized up the position very carefully. He replaced an order for two first class ships with these other ships. The economies which could be effected in substituting a smaller class of ship for the costly ship they had launched that day was very great. The principal economy was in speed. Speed in ships was, without doubt, the most costly single item. They knocked four knots off an Atlantic liner and it meant 24 hours in getting to the other side, but the 16 knot ship was more economical than not travelling at all. That was the policy of the company as laid down by its Chairman, and he believed it was a very sound one.

Mention had been made by the chairman of the internal combustion engine. It had made immense strides, and he had no hesitation in saying that within five years they would be having a similar gathering to that one to celebrate the launching of a passenger liner driven by internal combustion engines. They halved the fuel bill by reducing to 16 knots, and they halved it again by the conversion from coal to oil fuel. He thought if they adopted these economies, a smaller ship, a slower one, and a ship driven by internal combustion engines, they would be able to get back nearer to the pre-war position, and he was quite sure the Fairfield Co. would be ready to co-operate to bring it about.

The s.s. Empress of Britain.

Subsequently, on board the re-conditioned s.s. Empress of Britain, on her trip from Glasgow to Liverpool, Sir Thos. Fisher proposed the health of the guests, and, in the course of his remarks, said there had been a great deal of work done on that ship and a very large sum of money had been expended. Four times the work had been done on that ship as on other ships which had been re-conditioned. Those who remembered the Empress of Britain in days past would no doubt have affectionate recollections of her comfort and seagoing qualities, but it could not be denied that she was hardly a first class ship, according to present day standards. So far as their ships were concerned they had become accustomed to a style of decoration altogether different to the ordinary ship. He felt they should not have been content to have a first class ship running if it was not up to their standard. An old ship had been made to look like new, and with a minimum expenditure of money. They had provided reasonable and economical accommodation in the third class, and the C.P.R. was the first of any line to introduce a proper system of spring mattress for their third class passengers, and doing away with the obsolete mattress full of straw and rubbish. The principal improvement brought about in that ship during the time she had been re-conditioned was the conversion from a coal burner to an oil burner. He was informed that when these ships were originally designed by the Fairfield Co. they were to be 50 ft. longer than at present, and the C.P.O.S. board wishing the boats to go to Montreal cut out this 50 ft. and that meant the stokehold was extremely cramped, and they, therefore, decided to convert her into an oil burner. They had had a trial on deep draft and she had

done 19 knots with a horsepower of some 20,000, which his technical advisers informed him could easily be exceeded. He therefore looked forward with complete confidence to her doing a regular 18 knots across the Atlantic which, he thought, would be sufficient for all practical purposes. There was another novel feature, and that was a new system of boat davits which they had introduced. They were the invention of an Australian engineer who was seized with the idea that it was a good thing to save life at sea in the event of an accident. There were two and they would put boats into the water with a speed and certainty which was not approached by any other system of davits available. It was expensive, but it was the best they could find.

At the launching of the Empress of Canada it was not convenient for him to refer to the amount of business done by the C.P.O.S., but he was proud to do it on one of its own ships. Many of those present came from London, and they were under the impression that the C.P.O.S. was a picayune compared with the other big British lines. He could assure them that was a very big mistake. If they judged the importance by the passengers carried across the Atlantic, then this company stood second to none. Up to July 31 this year they had carried backwards and forwards no less than 100,000 people. The number of complaints was trifling, and such as they were, they related to the older ships which they had not yet had time to bring up to the standard they had set before themselves to attain. One hundred thousand passengers in the first seven months of this year. In the seven months they had landed in Canada actually more passengers than had ever been landed by any steamship organization, and of those passengers 99.1% were of British birth. They set out to carry Britons to the dominions overseas, to strengthen the Empire and ensure the food supply for this country. It was well known to all the steamship trade that the foundation of the business was the third class, and excluding the Mediterranean traffic, they had carried within 350 of the total carried by all the other British lines together. It might, perhaps, be said it was pure luck, but that was not so. The fact was, a great many ships had been leaving this country partially filled, and the fact that they had been able to carry this large number, almost a majority, was due to the great efficiency of their passenger department under Wm. Baird, and he took that opportunity of congratulating Mr. Baird. They had many interests represented on board the ship, including the Board of Trade, and he did not think it would have been possible to have installed the davits on board had it not been for the co-operation and assistance of the Board of Trade officials. It was quite an erroneous view to think that the work of the Board of Trade was destructive. It did its duty with a view to seeing that the ships were efficient and life was made secure at sea, and he was proud to testify that they had had nothing but assistance from the Board of Trade in introducing these davits.

Sir E. Mackay Edgar, one of the Fairfield Co.'s directors, said that Sir Thos. Fisher had referred to the cost of shipbuilding, and remarked that they should endeavor to persuade shipbuilders that they must bring down their costs in order to enable the owners to successfully operate the ships. He could assure Sir Thomas that their group of Fairfield shipbuilding yards endeavored every day

to find means to make it possible to do this, and he could assure them that his associates were going to no end of expense, trouble, and energy to further the internal combustion engine for ship transport which, he was perfectly satisfied, was a solution of the future of the shipbuilding industry.

Alex. M. Kennedy, Managing Director of the Fairfield Co., said that the time occupied in building the Empress of Canada had been longer than anticipated, but they had been, and still were, passing through trying times. The position of the shipbuilding and engineering industry, after so many years of war, was not what they would like, nor was it what it should or could be. Advantage was not being taken of the splendid opportunities which the termination of hostilities made possible, and unless something was done to put a stop to the increase in the cost of production they might come very near to bringing ruin on their industry. Unfortunately there was a good deal of unrest in labor circles, but he believed this to be confined to a section of the workers only, and he had great hopes that before long the better side of the British working man would reassert itself and allow the industry to proceed on sound economic lines. The unrest to which he had referred was partly due to the war, but there were other disquieting influences at work, and government control had also been a contributing cause. He thought employers and employees were agreed on the last point. Recent indications on the part of labor to be freed from industrial arbitration courts and to be allowed to revert to the former method of adjusting differences direct with the employers, should help to put matters on a better footing. The workman was certainly worthy of his hire, and was entitled to a higher standard of living, and no employer would seek to deprive him of either, if only a corresponding return was assured in the way of production. Only by such means would economy be secured and more orders obtained. Shipowners, under present circumstances, were finding it hard to make ends meet, and they could not well afford to pay what builders required to keep their establishments going. The limitation of output was a fatal mistake and was bound to react on those who resorted to it. The effect of it was to increase the cost of everything. By pursuing such a policy, a condition of affairs might arise when there would be little or no work to put restrictions upon. Employers and employees were mutually dependent on each other and both were concerned in the future of the industry. Mutual trust and co-operation between the management and the men were the only sound principles by which true success could be obtained. The men must give of their very best and employers must see that every possible facility was provided to enable them to do so.

The Dominion Government steam yacht Speedy II has been sold by the Marine Department to T. M. Kirkwood, Montreal, for \$6,500. She was built at Leith, Scotland, in 1896, and is screw driven, by engine of 88 h.p. Her dimensions are,—length 115 ft., breadth 20.6 ft., depth 10.6 ft., tonnage 252 gross, 145 net.

The C.G.S. Montcalm.—We have been officially advised that the report that a contract for repairs to this ship, amounting to approximately \$100,000, has been awarded to Canadian Vickers Ltd., is without foundation.

The Dominion Shipbuilding and Repair Co's Affairs.

Osler Wade, F.C.A., interim liquidator, has made the following report on the affairs of the Dominion Shipbuilding & Repair Co. Ltd., Toronto, which went into liquidation on July 31.

Upon taking possession of the assets, I found the company had been operating upon three ships under contract, one for the Gulf Navigation Co. Inc., and two for the Dominion Marine Department. In addition to this, there was a small contract recently commenced, for a yacht for Geo. H. Gooderham, of Toronto, and two stock hulls, nos. 12 and 13, upon which also only a small amount of work had been done.

The contract with the Gulf Navigation Co. contained a penalty clause, providing for \$1,000 a day upon default, and, on July 31, \$46,000 of penalties had accrued and been deducted from payments on account. To complete this contract would have involved a loss of at least \$60,000 to the ordinary creditors, apart from the question of further penalties, and to complete the contract with the Marine Department would have involved a loss of at least \$200,000 to the ordinary creditors. This loss would have been taken out of dividends due to the unsecured creditors, for the benefit of another class of creditors, and, of necessity, the work was abandoned by the liquidator. The cash received on account of the Gulf Navigation Co. was secured by a mortgage on its ship and the material delivered and allocated to it. The owner, under power given in its contract, is now proceeding with the completion of its ship at its own expense and under an arrangement approved of by the court. The moneys received from the Marine Department were not secured by a mortgage, but under the statutes and orders in council, the government claims ownership of the two ships and the material delivered and allocated to them. The liquidator has intimated to the Marine Department his willingness to co-operate, so that any loss sustained by the government may be reduced to the minimum, either by the liquidator continuing the work on a cost plus basis, or by permitting the government to proceed itself, all, on the understanding that the ownership of the ships and materials delivered and allocated as of July 31 is to be determined by the court. The parties interested under these two contracts may have considerable claims against the estate for damages, and this is reflected in the statement of affairs.

It will be some time before inventories of stores and material on hand are completed, and of necessity the figures reflected in the statement of affairs are taken from the costing records, but may be considered as approximately correct. The same remarks apply to the tools. No depreciation has been written off the original cost of machinery, plant and equipment and the company has never paid any dividends.

Provided the Government shops are completed at the estimates given in the statement of affairs, the contracts will represent a profit to the insolvent company of \$182,000, being the difference between the monies received to date on account of same, and the charge for work done to July 31, plus the ranking liability of \$237,000. This profit of \$182,000 forms a part of the surplus in the statement of affairs.

Under a direction of the court, the liquidator attended at New York and

interviewed Christoffer Hannevig regarding the question of his indebtedness, and as to any suggestions, or proposals, from him, regarding a settlement with the creditors and the re-opening of the plant. Mr. Hannevig informed the liquidator that he had purchased all the share capital in the Pusey Jones Co., of Wilmington, Del., for \$6,000,000, which he paid in cash, and, that shortly afterwards the plant had been taken over by the United States Government; that during the interim he had not received any returns from the United States Government apart from advances of \$5,000,000 for enlargements to the works, etc.; and that the U.S. Shipping Board had awarded him \$2,000,000 as compensation over and above the \$5,000,000 previous advanced. The whole question of this transaction is now the subject of litigation in U.S. courts, the government claiming a set off on the award of about \$3,800,000. Mr. Hannevig claims to have considerable other interests, including sole ownership of Hannevig & Co., bankers, New York, N.Y., but that being tied up, he could do nothing regarding his account. Upon declaring his inability to attend this meeting and upon refusing to deliver up the monies on deposit in his bank, the court issued an order to commence proceedings for the recovery of the amounts. Mr. Hannevig stated that his reason for refusing to release the monies on deposit in his private bank was looking to the fact that he had guaranteed to the Equitable Trust Co. deliveries of steel, aggregating \$110,000, and was holding the amount on deposit as a set-off against the guarantee. This excuse is remarkable, for the reason that this guarantee was arranged for the purpose of reducing Mr. Hannevig's indebtedness to the company, and the liquidation of this guarantee to the trust company on steel deliveries would have represented a total reduction of over \$400,000 in his account since May 31 and left free for the purposes of the company the amount on deposit in his private bank.

In discussing an arrangement with creditors, Mr. Hannevig confined himself to reorganization on the basis of: (1) Canadian Government help for the erection of a dry dock to take care of the business on the Great Lakes. (2) Installation of paper making and pulp machinery to take care of the Canadian trade, covering which the Pusey Jones Co. held orders which he could turn over to Toronto, along with the necessary experts. (3) Discussed, as arguments in favor of reorganization, a large order to be placed by the French Government in Canada for building of some 60 ships, and orders to be placed by the Argentine Government. To these suggestions Mr. Hannevig had nothing to offer as support from his end, in the way of cash, not even the liquidation of his own account.

The immediate cause of this failure was insufficient liquid assets to retire the wage claims of some \$106,000, but there were three factors which contributed to the company's failure, and if the directors' meeting is to consider the appointment of a committee to enquire into the question of reorganization, the following factors are worthy of consideration: (1) Insufficient capital. (2) Labor and management. (3) Inability to collect amounts due.

The capital invested in this business was \$1,000,000, as compared with \$1,600,000 invested in fixed assets for the plant,

etc. It is quite obvious that, instead of having any working capital, the company has a liability to the extent of \$600,000, or that the working capital was \$600,000 less than nothing, making it necessary to rely upon loans and advance payments on contracts to conduct operations.

The labor and material costs per ton on hulls laid down to July 31 were as follows:—

	Labor.	Material.
1918	\$40 a ton.	\$76 a ton.
1919	49 a ton.	116 a ton.
1920	61 a ton.	95 a ton.

and on the last hull in 1920 the labor cost \$73 a ton and material \$94 a ton, the net result being that the last hull was laid down at a loss of \$300, to which must be added penalties of \$72,000, increasing the loss to \$72,300.

The arrangements with labor at the time of closing down was for a 5-day week of 44 hours, with double time for Saturdays, and overtime. The management is to be congratulated for dropping ships in the water as rapidly as it did, but from the figures which are quoted it is quite apparent the policy of a closed shop has had its effect on labor costs, which were constantly increasing, while the cost of material has been decreasing since the peak last year. There may be considerable argument in favor of the closed shop theory, when conditions are universal, provided it is not in restraint of trade; but the shipbuilding industry, in so far as ocean traffic is concerned, is quite distinct from most other industrial enterprises, for the reason that ships built at one point upon the globe, compete for freight traffic with ships built at any other point on the globe, the competition being exclusively in the charges made for carrying freight. Of necessity, the capital expenditure on ships built in any one market must be on a basis to compete with the capital expenditure of ships built in any other market. Therefore, if the shipbuilding industry in Canada is to succeed, the capital outlay in construction must be on a competitive basis with the capital outlay in construction in any other markets, or failing in this, a government subsidy to equalize any differences. Shipbuilding labor appears to have overlooked this factor in Canada and the result is going to be that if the condition is not faced by labor and by management, the industry cannot succeed and compete with ships built at a lesser cost at other points. This factor, and a survey of the plant by competent experts, regarding the question of sufficiency, adaptability, etc., should be considered in any re-organization.

Without making any provision for immediate payment to the ordinary creditors, it would require at least \$500,000 or \$600,000 to carry out a reorganization, one-half to retire the secured and preferred claims, and the balance for working capital. If this cannot be realized from the accounts receivable, then it might be by an issue of debentures sufficient to retire these secured claims, and the balance might be raised by an issue of preferred shares. These shares could be preferred in any distribution of assets among shareholders, and issued to control management, provided the present shareholders were considered to the extent of their equities, after making proper depreciation on the plant and etc. The ordinary creditors, apart from the Marine Department, might make

some arrangements for the payment of their debts, by taking a second issue of debentures, payable over a period of time, or, in the alternative, by taking an issue of debentures for a portion of their claims and preferred shares for the balance, the preferred shares to have the same privileges as would be offered to those investing cash in the business for preferred stock. If the industry is to be continued as a going concern, all parties must combine in a spirit of give and take, otherwise it may not be possible to arrive at a scheme that is reasonable enough to save a big loss, or a long delay in a tedious liquidation of the assets.

Statement of Affairs.

ASSETS.		
Cash on hand	\$ 1,069.20	
Cash on deposit with Hannevig & Co., bankers....	12,462.27	\$ 13,531.47
Victory bonds (assigned to bank)	68,600.00	
Bills receivable	100,000.00	
Accounts receivable	533,874.48	
Stores and supplies on hand and assigned to bank under sec. 88 of Bank Act: General supplies, estimated	258,780.26	
Work in progress (yacht)	1,471.31	
Work in progress (hulls 12 and 13)	129,068.55	
		389,320.12
Office furniture and fittings at 50%	6,000.00	
Drafts, patterns and moulds	10,000.00	
Buildings on leasehold land (cost)	532,624.24	
Machinery (cost)	317,907.45	
Yard equipment (cost)	615,026.99	
Underground equipment (cost)	104,591.28	
		1,570,149.96
Total assets	\$2,691,476.03	
LIABILITIES.		
Secured—		
Bank	\$158,805.22	
Rent of leasehold	15,300.00	
H. W. Petrie & Co. lien	5,299.33	
Burroughs Adding Machine Co. lien	250.00	
Canadian General Electric Co. lien	1,383.70	
City of Toronto, taxes	22,962.46	\$204,000.71
Preferred—		
Workmen's compensation	\$ 5,225.00	
Dominion Government sale tax	585.62	
Wages	106,252.32	
		112,062.94
Ordinary—		
Creditors	\$520,349.26	
Gulf Navigation Co., estimated to rank for	60,000.00	
London Guarantee Co., on performance bond to Marine Department	137,800.00	
Marine Department, estimated to rank for	100,000.00	
		818,149.26
Total liabilities	\$1,134,212.91	
Apparent surplus	1,557,263.12	
		\$2,691,476.03

Notes:—No provision has been made for government income or war profits tax. Wages have been paid on a liquidator's bond, charging all the assets as security. In preparing statement the liquidator does not admit or dispute any liability. Authorized assignment dated July 31, 1920; winding up order issued Aug. 3, 1920.

Trader Steamship Co. Ltd. has been incorporated under the British Columbia Companies Act, with \$25,000 authorized capital and office at Victoria, to purchase the s.s. Trader, owned formerly by the Gulf Steamship & Trading Co., Victoria, and to carry on a general lumber and steamship business. The s.s. Trader was built at Vancouver, in 1901, and is screw driven, by engine of 17 h.p. Her dimensions are,—length 101 ft., breadth 22.6 ft., depth 8.2 ft., tonnage 167 gross, 114 net.

The British Government control of shipping came to an end Aug. 31, when general licenses were issued, allowing all ships to proceed anywhere on and after Sept. 1.

Additional Drydock for Esquimalt, B.C.

The Dominion Public Works Department has invited tenders up to Dec. 9 for the construction of a drydock in Skinner Cover, Esquimalt, B.C., a short distance from the present government drydock. It will have the following dimensions:—Length from outer caisson stop to head wall, 1,150 ft.; width of entrance, 125 ft. on sill, and 135 ft. at coping level; depth on sill at ordinary high water spring tides, 40 ft. The dock will have two inner sills located 400 ft. and 750 ft. from the entrance sill respectively. The outer and inner entrances will be closed by stop or floating caissons, two being provided.

The works to be performed by the contractor are as follows:—

Construction of a substantial cofferdam to enclose the area within which the works are to be built; the unwatering and keeping free from water of the enclosed area during the construction of the works.

Excavation, both earth and rock, over the area to be occupied by the dock, part of entrance pier and channel, the work to include excavation for pump well, drains, culverts, etc.

Dredging an entrance channel, or any other area, to a depth of 33 ft. below low water.

Construction of a dock complete, of concrete walls, provided with bollards and keel blocks, etc. Stairs are to be built in the walls of the dock, two at each end of the dock. Sixteen ladders are to be built of galvanized iron and placed on the side walls. Ladders shall also be placed in each sump.

Build two timber slides, to be built longitudinally with and at each end of the north side wall of the dock. The sliding faces shall be built of granite 18 in. thick.

Build a roadway, 50 ft. wide, on both sides of the dock and around the head.

Build elevator shaft and tunnels, furnish and install elevator and enclosed stairs. The elevator is to be of the drum type, with a capacity of 4,000 lb., or about 25 passengers.

Build landing wharf, 750 ft. long, to the west of the dock entrance, and a bulkhead, 100 ft. long, south of the entrance wall, to be built of timber cribs sheathed with reinforced concrete and filled with stone ballast, with a mass concrete superstructure.

Build a line of standard gauge railway track on each side of the dock, and along the landing wharf, to be laid with standard section, 80 lb. rails.

The contractor is to enclose the area within which the works are to be built, by a substantial cofferdam, and to unwater the site and keep it free from water during construction.

The floating caissons, all mechanical equipment, and the buildings required therefor, will form part of a separate contract.

The estimates for the year ending Mar. 31, 1921, passed at the Dominion Parliament's last session, contained an item, "New dry dock at Esquimalt, \$500,000."

Radio Direction Finding Station for St. John, N.B.

The Naval Service Department's Radiotelegraph Branch has received authority to install a radio direction finding station at the port of St. John, N.B., at an estimated cost of \$25,000, to assist in the Bay of Fundy navigation, which, especially in winter, calls for great care by ship masters, and the installation will doubtless be of material assistance to them.

The station will be a duplicate of those which have proved so successful at Cape Race, Canso, and Halifax, which have a receiving range of from 500 to 600 miles and a transmitting range of 200 miles. The station will operate on a wave length of 800 meters, which is being reserved exclusively for direction finding operations. The call signal of the station when placed in operation will be V.A.R.

Tests are being made to secure a good site in the entrance to the harbor, and the station will be so arranged that ships may run up on the bearings until opposite the harbor entrance. Apparatus and materials are being assembled at St. John, and the station will be in operation in time for winter navigation.

Grain Shipped from Fort William and Port Arthur During the Crop Year 1919-1920.

The following table, compiled by the Board of Grain Commissioners, shows the quantities of each kind of grain shipped from Fort William and Port Arthur, Ont., during the crop year 1919-1920, the ports at which they were unloaded, the quantities carried in Canadian and U.S. ships, and the quantities carried to Canadian and U.S. ports.

	Wheat. Bush.	Oats. Bush.	Barley. Bush.	Flax. Bush.	Rye. Bush.
To Canadian ports—					
Depot Harbor	658,029-20				
Goderich	9,352,622-10	3,038,761-00	348,551-44	81,882-08	120,282-29
Midland	9,038,522-10	2,707,634-29	1,912,611-32		675,484-52
Montreal	458,263-40	1,609,484-31	1,475,641-40	21,713-42	109,133-30
Port Colborne	19,183,544-20	216,556-02	766,405-01		
Port McNicoll	29,549,167-20	2,713,200-14	1,540,091-12	72,822-32	109,427-01
Tiffin	11,196,424-30	730,344-11	24,440-03		54,349-07
Total to Canadian ports	79,436,573-30	11,015,981-19	6,067,741-36	176,418-26	1,068,677-07
To U.S. ports—					
Buffalo	300,442-40	4,960,937-28	417,162-46	196,409-0	
Chicago	50,000-00	418,213-08	144,803-04	36,797-28	
Duluth-Superior			40,612-19	323,434-23	121,421-27
Port Huron	1,016,943-50				
Toledo					90,769-37
Total to U.S. ports	1,367,386-30	5,379,151-02	602,578-21	556,641-35	212,191-08
Grand total	80,803,960-00	16,395,132-21	6,670,320-09	733,060-05	1,280,868-15
495 cargoes in Canadian ships	80,158,684-40	13,114,928-12	6,067,741-36	313,613-46	1,068,677-07
33 cargoes in U.S. ships	645,275-20	3,280,204-09	602,578-21	419,446-15	212,191-08
528 cargoes	80,803,960-00	16,395,132-21	6,670,320-09	733,060-05	1,280,868-15
To Canadian ports	79,436,573-30	11,015,981-19	6,067,741-36	176,418-26	1,068,677-07
To U.S. ports	1,367,386-30	5,379,151-02	602,578-21	556,641-35	212,191-08
Total	80,803,960-00	16,395,132-21	6,670,320-09	733,060-05	1,280,868-15

Increases Authorised in Freight and Passenger Rates on Atlantic Coast, Gulf of Mexico and Great Lakes.

The United States Shipping Board gave the following decision, Aug. 24, on the application of water carriers, operating on the Atlantic coast, Gulf of Mexico and Great Lakes, for authority to increase rates:—This proceeding was instituted by the Board of its own motion, to determine the justness and reasonableness of certain proposed advances in the rates, fares and charges of water lines engaged in interstate commerce, on the Atlantic coast, Gulf of Mexico and Great Lakes. The tariffs and applications naming the rates, fares and charges in question were filed with the Board on and subsequent to Aug. 11, and were proposed to be made effective on Aug. 26, contemporaneously with the effective application of the rates, fares and charges approved by the Interstate Commerce Commission, as to rail and water traffic, in its ex parte docket 74 (See Canadian Railway and Marine World for September, pg. 478).

Sec. 18 of the Shipping Act of Sept. 7, 1916, imposed upon common carriers by water in interstate commerce, subject to the Board's jurisdiction, an obligation to give to the public and the Board 10 days notice of proposed advances. By the terms of the act such advances cannot become effective until their approval by the Board.

Prior to the expiration of the statutory period, following the receipt by the Board of the tariffs and applications here under consideration, protests against the operation of the same were lodged with the Board by shippers and commercial organizations. The Board thereupon directed that the tariffs then on file, together with those which thereafter might be filed, be suspended, and that all applications for permission to advance rates be consolidated. An order was so entered on Aug. 12, instituting a general investigation in the premises, and the matter was set down for hearing on Aug. 18. Commercial organizations, shippers, and the public were notified by telegraph, by mail, and through the press, of the time and place of the hearing, and all interested parties were given an opportunity to be fully heard. Notwithstanding the protests which had been filed with the Board in advance of the hearing, however, it developed at the hearing that there was no concerted opposition to a general increase in rates. Representatives of shippers stated frankly that they did not object to reasonable advances in rates, as they realized that carriers had been and were confronted with increases in the cost of operations, including labor, materials and other items; and they recognized the fact that in many, if not in most, instances, some increases should be made in the rates, in order that the carrier's revenues might be fairly remunerative. Most of the testimony on behalf of shippers was directed towards specific situations, which they conceived to be discriminatory, or detrimental to their respective interests. It will be recognized, of course, that howsoever important these matters may be to individual shippers, such evidence is not illuminative in determining whether or not the proposed advances in rates as a whole are reasonable and will yield a fair return, or more than a fair return, upon the value of the property of the carriers devoted to the public service.

Atlantic Coast and Gulf Lines. — The

general advances proposed by the lines operating between Atlantic Coast and Gulf ports were as follows:

	Freight.	Passenger.
Between ports on Atlantic Coast north of Norfolk, Virginia ..	40%	20%
Between Norfolk and New Orleans, La.	25%	20%
Between New Orleans and the Mexican border	35%	20%

These applicants seek to justify the proposed advances, on the ground that the present rates are not sufficiently remunerative, in view of the prevailing high operating costs, and that the rates should be advanced to enable them to earn a reasonable return upon the value of their property devoted to the public service. Inasmuch as the Board is not empowered to prescribe accounting rules and systems to be observed by the carriers subject to its jurisdiction, the financial and statistical data submitted in support of the proposed advances were in varied and dissimilar form, not susceptible of reduction to a common basis. It has, therefore, been necessary to consider such data by individual carriers rather than en bloc. The operating results reflected by these varied statistics are substantially identical, however, and may be illustrated by the following summaries:—

An examination of the exhibits and testimony submitted by the Merchants & Miners Transportation Co. shows that on June 30 the book value of its property devoted to the public service, including floating equipment, wharves, and other necessary terminal property, was \$3,842,419.56; that for the six months ended June 30 its total operating revenues were \$3,021,971.31, and that its total operating expenses during the same period were \$3,574,972.46, leaving an operating deficit for the six months of \$553,001.15. After making allowances for miscellaneous income and expenses, this deficit was increased to \$694,196.25. Figures submitted by this carrier showed an insured valuation of the above described property of more than \$6,000,000.00, which it was stated represent only 80% of its actual value. The advances proposed by the Merchants & Miners Transportation Co., in addition to those allowed that carrier by the Interstate Commerce Commission, assuming that the volume of traffic to be handled by it does not diminish, were estimated to yield, for six months, increased revenues of \$1,019,051.95, practically all of which it was anticipated will be absorbed by operating expenses. It was asserted that the Merchants & Miners Transportation Co.'s revenue requirements, as a matter of fact, necessitate a larger increase than that petitioned for, but that any greater increase would seriously disturb existing rate relationships and thereby retard the movement of traffic. The six months covered by the above statistics were represented as comprehending a period when the company was operating at maximum capacity; and it was stated that the volume of traffic handled at any other period would not be nearly so heavy. It was testified that the costs of operation resulting from increases in the cost of materials, fuel, supplies, labor and every other element of transportation, were abnormally heavy and that there was no present indication that they would decline to any great extent in the very near future.

Conditions governing the operations of other Atlantic coast and Gulf lines are substantially similar to those above set forth, except that at some ports not served by the Merchants & Miners Transportation Co. conditions are even more unfavorable. The record shows that for the period ended June 30, 1920, the Eastern Steamship Lines, Inc., sustained a loss of \$539,831.07, and that for the year ended Dec. 31, 1919, the operating deficit of the Clyde Steamship Co. was \$1,357,953.00, and of the Mallory Steamship Co. \$643,165.00. Applications and data submitted by certain carriers in respect of water line operations between New York, on the one hand, and the Canal Zone, the Virgin Islands and Porto Rico on the other hand, reflect the operating conditions shown above, including unprecedented costs and inadequate returns with resultant losses.

Great Lakes Lines.—The advances proposed by the Great Lakes carriers approximate 40% on freight and 20% on passenger traffic. It appears from the record that expenses incident to the operation of vessels on the Great Lakes have increased substantially to the same extent as on the Atlantic coast. For example, it was shown that the carriers are now paying for bunker coal approximately 100% more than they paid in 1919, and they claim to be receiving a poorer quality than was then available. These carriers also claim that they are paying 60% more for materials and supplies, and 40% more for labor, than they paid in 1919. A situation existing on the Great Lakes which does not confront the carriers operating on the Atlantic and Gulf coasts, is that the Great Lakes operations are seasonal, and during several months of the year some of the carriers are obliged to discontinue operations on account of weather conditions. During this non-operating period the overhead and fixed charges of the carriers remain fairly constant.

Some stress was laid by shippers upon the fact that the past performances of a few of the Great Lakes Lines had shown substantial returns on their property. It must be borne in mind, however, that we are dealing with present conditions, and, whatever those statistics may show for past years, they cannot be said to reflect the results of operations under the high costs and other unfavorable conditions existing at the present time. The book value of the terminal facilities and fleet operated by the Great Lakes Transit Corporation is \$4,087,887.00, according to the record. For the six months ended June 30, its gross revenue was \$1,077,295.00, and its operating expenses were \$1,194,411.38, a deficit of \$117,116.38. It was claimed that the market value of the company's property is \$10,000,000. The Cleveland & Buffalo Transit Co. showed a net loss to June 30 of \$193,115.89. The Goodrich Transit Co. sustained a net loss of \$77,905.83, for the year ended June 30. These figures fairly represent the results attained by other Great Lakes carriers in the operation of their respective lines. There is ample evidence of record to support the claims of the Atlantic, Gulf, Great Lakes and territorial lines, regarding the increased costs of their operations, and their need for additional revenue; and the increases for which they have respectively applied will produce not more, and

in all probability less, than a reasonable return upon the value of their properties devoted to the public service.

Port-to-Port and Proportional Rates.—We are urged to allow the proposed advances to become effective on Aug. 26, contemporaneously with the increased rates authorized by the Interstate Commerce Commission in its ex parte docket 74 (58 ICC 220); this, it is claimed, being necessary to preserve proper rate relationships. If the instant increases should be denied, the carriers would, of course, be confronted with the unnatural and objectionable situation of having port-to-port rates which would be lower than their proportional water rates, between the same ports on traffic handled in connection with rail lines. It was also indicated that such a state of affairs would permit shippers so to handle their freight as to avail themselves of the preferential port-to-port rates, instead of paying the higher proportional rates, thereby tending to deplete the revenues which should properly accrue to the carriers from through rail and water business. As against this situation it is shown that the cost of handling port-to-port traffic is generally in excess of the cost of handling through traffic.

Shippers' Complaints.—Some evidence was introduced by shippers tending to show that the lines in certain instances have not given to commercial organizations and to shippers sufficient notice of proposed embargoes, and that the carriers' equipment has been inadequate to handle the traffic offered. It is, of course, desirable that close co-operation be maintained between the carriers and the shippers, with a view, at all times, to acquainting the latter with the fact of proposed embargoes, as in this way only is it possible to prevent unnecessary movement of freight to wharves and terminals. It is also important that carriers shall exert every effort to provide a transportation service that will fully meet the needs of the shipping public. In this connection, representatives of several of the carriers expressed themselves as willing to improve their facilities, if it should hereafter develop that their financial condition will so warrant.

Decision.—After careful consideration of the applications, and supporting statements, and all the facts and evidence of record in the instant case, the Board concludes and decides that, to the extent hereinafter indicated, the advances proposed to be made have been shown to be just, reasonable and necessary. The rates, fares and charges of the water carriers operating in the sections involved may be increased as follows:

Freight. Passenger.	
Between Norfolk, Virginia and ports on the Atlantic coast north thereof	40% 20%
Between Norfolk and New Orleans, Louisiana	25% 20%
Between New Orleans and the Mexican border	35% 20%
Between ports on the Great Lakes	40% 20%
Between New York and the Canal Zone	10% 33 1/3%
Between New York and the Virgin Islands	33 1/3%
(No freight rates involved)	
Between New York and Porto Rico	20% 20%

The increases authorized on freight traffic may be made applicable to weighing, lightering, storage, floating, transfer, diversion, reconsignment, switching, and transit services; and the passenger fares increases authorized may be applied also to excess baggage.

On the Atlantic and Gulf Coasts the through rates between ports located in different coastal sections, which are made

on a combination basis, should be increased by applying to each factor of the through rates its respective percentage.

Local or joint through rates between ports in one coastal section and ports in any other coastal sections should be increased 33 1/3%.

For rate making purposes, Norfolk, Virginia, will be considered in the Norfolk-North Atlantic section, to and from ports in said section; and in the Norfolk-New Orleans section, to and from ports within the latter section; New Orleans, Louisiana, will be considered in the Norfolk-New Orleans section to and from ports within said section and within the New Orleans-Mexican border section to and from ports within the latter section.

With regard to increases in terminal charges, Norfolk will be considered in the Norfolk-North Atlantic section, and New Orleans will be considered in the New Orleans-Mexican border section.

The increases in rates, fares and charges herein authorized may be made effective not later than Jan. 1, 1921, on one day notice to the public and the Board. An order will be entered accordingly.

The Quebec Steamship Co. was represented at the hearing by A. J. Outerbridge.

New Marine Oil Engine.

A new type of marine engine has been introduced in Great Britain. The ordinary type of oil engine has a single piston in each cylinder, this piston compresses a mixture of air and oil vapor against the end of the cylinder and the consequent ignition forces the piston outward and thus provides the driving power of the engine. In this new type the ignition takes places between two pistons in one cylinder, forcing the pistons apart. Each piston is connected to the crankshaft—an arrangement which gives a very even-turning movement to the shaft. Other advantages are claimed, including a very marked saving in space, which is very important on board ship, and improved "scavenging" (clearing the products of combustion out of the cylinder). The design lends itself to the replacement of steam engines in ships without alterations of the shafts or propellers, as the double piston arrangement gives the low propeller speed of 110 revolutions a minute with an actual piston speed of 450 ft. a minute, equivalent to 900 ft. a minute in the ordinary type of oil engine. Two 1,000 h.p. engines of the new type are being built.

Canadian Defence Device.—London, Eng., cablegram, Sept. 13.—To H. A. Clift, a Canadian engineer, is given the credit for the construction of two "mystery towers," built to the order of the British Admiralty for defence purposes during the war, and one of which was towed yesterday from Shoreham to Portsmouth. It will be used there chiefly as a mark for navigation, but originally, it is said, it was one of 16 between which anti-submarine nets were to have been spread, and which were to be crowned with powerful searchlights. These towers are erected on ships of 10,000 tons each, but after being floated to their new positions, their air spaces will be filled with concrete and they will be allowed to settle on the bed of the ocean.

Germany will, it is said, after delivering up the ships required by the peace treaty, have a total of 501,910 tons, compared with 5,108,600 in August.

Dockyard Foremen's Positions.

The Civil Service Commission gave notice recently that applications would be received from persons qualified to fill the positions of dockyard foremen at an initial salary of \$2,400 a year, which will be increased, upon recommendation for efficient service, at the rate of \$120 a year until a maximum of \$2,760 has been reached. This initial salary will be supplemented by the bonus provided by law for the present fiscal year.

Duties.—Under direction of the Chief Engineer (Dockyard) to have charge of the work performed in the shops and yard of a government dockyard; to supervise construction of and repairs to ships; and to perform other related work as required.

Qualifications.—Education equivalent to high school graduation; either graduation in engineering from a school of applied science of recognized standing, with at least three years of experience in naval dockyard work, or a complete term of apprenticeship with a large well established engineering firm and at least five years experience in charge of engineering, construction, and repairing ships in a dockyard; preferably training in naval work and procedure; thorough knowledge of hull and machinery construction and repairs, and the construction and repairs of yard equipment; ability to handle and direct men, and to organize and execute dockyard work; tact and good judgment.

Examination.—Subjects and weights as follows: education and experience, 3; oral interview, if necessary in the Commission's opinion, 2.

A list of eligibles will be established for vacancies in the above class throughout the Dominion, but the only vacancy required to be filled at present is that of Dockyard Foreman, Halifax Dockyard, N.S., Naval Service Department. In the case of this position, preference will be given to residents of Nova Scotia.

The U.S. Shipping Board has adopted a resolution providing, under the Merchant Marine Act, that steamship owners may be relieved from war and excess profits taxes under certain conditions; that all departments, bureaus, boards and commissions of the U.S. Government are directed to recognize the American Bureau of Shipping as their agency for classification of ships owned by such bureaus, and for such other purposes in connection therewith as are proper functions of a classification bureau; that in all cases the Board's approval of type and kind of ship shall be on condition that said ships shall be constructed in accordance with the American Bureau of Shipping's rules.

Canada Steamship Lines' s.s. T. P. Phalen, which was sunk near Iroquois Point in the St. Lawrence River during August, and which was abandoned to the underwriters, has been finally given up as a total loss. Of her cargo of 64,000 bushels of wheat about 22,000 bus. of dry grain were saved and a considerable quantity of wet wheat. The equipment and fittings have been removed as far as possible, and further attempts at saving the hull have been given up. It is stated that there was \$200,000 insurance on the whole, \$40,000 disbursement insurance and \$7,500 trip freight insurance.

The name of the s.s. Captain Hemans, owned by A. Sutherland, Port Arthur, Ont., has been changed to A. B. Sutherland.

Transportation Conventions in 1920

- Oct. 5-7—Maintenance of Way Master Painters' Association, Detroit, Mich.
- Oct. 11 to 15.—American Electric Railway Accountants Association, Atlantic City, N.J.
- Oct. 11 to 15.—American Electric Railway Engineering Association, Atlantic City, N.J.
- Oct. 11 to 15.—American Electric Railway Transportation and Traffic Association, Atlantic City, N.J.
- Oct. 14, 15.—American Association of Passenger Traffic Officers, Chicago, Ill.
- 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.
- Canadian Electric Railway Association—A. Eastman, 70 Bond Street, Toronto.
- Canada Freight Association (Eastern lines)—G. C. Ransom, 909 Shaughnessy Bldg., Montreal.
- Canadian Freight Association (Western Lines)—W. E. Campbell, 805 Boyd Block, Winnipeg.
- Canadian Railway Board of Adjustment No. 1—R. Chapple, 263 St. James Street, Montreal.
- Canadian Railway Club—W. A. Booth, 131 Charron St., Montreal. Meetings at Montreal 2nd Tuesday, each month, 8.30 p.m., except June, July and August.
- Canadian Traffic League, A. H. Thorpe, 25 Balsam Ave., Toronto.
- Dominion Marine Association—F. King, Counsel, Kingston, Ont.
- Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.
- Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.
- Engineers' Club of Montreal—C. M. Strange, 9 Beaver Hall Square, Montreal.
- Engineers' Club of Toronto—R. B. Wolsey, 94 King Street West, Toronto.
- Engineering Institute of Canada—F. S. Keith, 176 Mansfield St., Montreal.
- Express Traffic Association of Canada—C. N. Ham, Montreal.
- Great Lakes and St. Lawrence River Rate Committee—A. E. Storey, 310 G.T.R. General Offices, Montreal.

Hydro-Electric Railway Association of Ontario—T. J. Hannigan, Guelph, Ont.
 International Water Lines Passenger Association—M. R. Nelson, 89 Chatham Ave., Buffalo, N.Y.
 Niagara Frontier Summer Rate Committee—James Morrison, Montreal.
 Quebec Transportation Club—A. F. Dion, Harbor Commissioner's Office, Quebec, Que.
 Railway Association of Canada—C. P. Riddell, Montreal.
 Shipping Federation of Canada—Thos. Robb, Manager, 42 St. Sacramento Street, Montreal.
 Transportation Club of Toronto—W. A. Gray, 257 Roxton Road, Toronto.
 Transportation Club of Vancouver—C. E. Blaney, Travelling Passenger Agent, Canadian Pacific Ocean Services Ltd., Vancouver, B.C.

The Robert Hicks Coal & Towing Co. Ltd. has been incorporated under the Dominion Companies Act with authorized capital of \$25,000, and office at Cobourg, Ont., to deal in coal and other fuels, to own and operate ships, docks and wharves, and to engage in general towing, salvaging and wrecking.

Canadian Pacific Ocean Services' s.s. Metagama, inward bound from Liverpool, Eng., Sept. 12, grounded on a sandbank about 25 miles from Montreal during a heavy fog, and was released the following morning without any apparent damage. The majority of passengers had disembarked at Quebec.

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.

Canadian Locomotive Co., Kingston, Ont., made a profit of \$367,969.02 for the

year ended June 30. Its highest profits were \$892,976.33, in 1918-19, and the lowest \$134,613.89, in 1914-15, the average from 1912-13 to 1919-20 being \$492,698.51 a year. The annual report states that the strike of 1919 extended into 1920, completely cutting off production for the first three months, which, together with the great difficulty in securing materials owing to the strike and embargoes on U.S. railways, affected the company's output very materially. Sufficient contracts are on hand to keep the works going up to Jan. 1, 1921, before which time undoubtedly further contracts will be closed. The directors for this year are: F. G. Wallace, President; J. L. Whiting, K.C., Vice President; Aemilius Jarvis, Chairman of the Board; W. Casey, General Manager; Jas. Carruthers; M. J. Haney; W. Harty, Jr.; Robt. Hobson, W. Y. Soper.

Flannery Bolt Co., Vanadium Building, Pittsburg, Pa., has issued a catalogue of the F.B.C. welded flexible staybolts, and tools for installation.

Franklin Railway Supply Co. of Canada, Transportation Building, Montreal, has issued Bulletin 975, describing and illustrating the locomotive booster.

The Holden Co. Ltd., Montreal, railway supplies, etc., has appointed D. M. Brown, manager for Ontario, with office at 342 Adelaide St. West, Toronto.

The Superheater Co., Transportation Building, Montreal, has issued a set of bulletins, dealing with stationary and marine superheaters, as follows:—Superheater on small locomotive; superheater for stationary power plants; advantages of the Elesco method of superheating; advantages of superheated steam; results from superheating a power plant on the Nickle Plate; fire tube marine superheaters, steamship Pearl Shell; marine pyrometers; higher superheated

For Sale and Classified Advertising

ADVERTISING RATES.

Rates for advertisements set in uniform style in six point under
 Positions Wanted and Positions Vacant, 3c. per word.
 Equipment for Sale advertisements, 4c. per word.
 Allow five words where replies are to be sent to a box number. Minimum order—\$1.
 Rates under other headings and for display advertisements on application.

Under this heading Canadian Railway and Marine World will place advertisements for Positions Wanted, Positions Vacant, Equipment for Sale, Tenders Wanted, Dividend, Annual Meetings, Legal Notices, etc.

FOR SALE

Three steam tugs and one stern wheeler, about September 1st, now plying on the Saskatchewan River, between The Pas and Sturgeon Landing.
 S.s. "Minasin," length 60 ft., width 13.2 ft., registered tonnage, 26.16, n.h.p., 6, speed about 9 miles, screw propelled.
 S.s. Sam Brisbin, screw propelled, length 47.5 ft., width 11 ft., n.h.p. 4.2, registered tonnage 7.48, speed about 7 miles.
 S.s. Notin, screw propelled, length 48 ft., width 10 ft., registered tonnage 12.56, n.h.p. 4.16, speed 8 miles.
 S.s. City of Prince Albert, stern wheeler, length 96 ft., width 20 ft., registered tonnage 88.92, n.h.p. 6.6, speed 8 miles an hour.
 Any further information as to price, or further description, of these boats will be furnished on application to the Mandy Mining Company, G. R. Bancroft, Superintendent, The Pas, Manitoba.

**FOR SALE
At a Bargain**

Steam screw wood steamer of 64.73 registered tonnage.
 Built in 1890 in New York. Length 115.8', breadth 23.9'.
 Two covered decks and one awning deck. Compound engine 12½" x 24" x 17" of 150 I. H. P., built by Monierief McLay Company in 1890.
 Horizontal Internal Marine Boiler, diameter 90", length 11'-3½", 115 pounds working pressure. Built by Robb Engineering Company in 1906.
 Engine, shafting and pumps in good condition.
 Boiler needs a few repairs. Last test 115 pounds—two years ago.
 Hull not in best of condition.
 Address all enquiries to the
**Cape Breton Electric Co., Limited,
Sydney, Nova Scotia.**

Position Vacant

Wanted for a small Electric Railway in the Canadian West, a manager with all-round knowledge of electric railway work. One who can handle employes and get on well with the public. Must furnish first class references as to character, habits, etc. Please address Cunningham & Company, Booth Building, Ottawa, stating salary and if services available about November 1st.

It Pays

to carry an advertisement in the Canadian Railway and Marine World every issue of the year because you obtain proportionately better

Results

steam in marine power plants; marine superheaters.

Whiting Corporation. — The Whiting Foundry Equipment Co., of Harvey, Ill., and the American Foundry Equipment Co., of New York, N.Y., have been consolidated as Whiting Corporation, with authorized capital of \$5,000,000. J. H. Whiting, President, Whiting Foundry Equipment Co., becomes Chairman of the Board, and V. E. Minich, President, American Foundry Equipment Co., Sand Mixing Machine Co., and Foundry Equipment Manufacturers Association, becomes President. As the lines of manu-

facture of the component companies do not overlap, it is the intention to maintain all present manufacturing facilities. The Whiting plant at Harvey will retain the manufacture of cranes, cupolas, hoists, tumbling mills, core ovens and all other items of the Whiting line, together with sand blast equipment and dust arresters. Sand cutting machines, charging trucks, core machines and steel flasks will comprise the bulk of work at the new American Co.'s plant at 2935 West 47th St., Chicago, under the direction of E. A. Rich, Jr. Moulding machines, jolts, flask specialties and pattern

mounting materials will continue to be manufactured at the American Co.'s plant at York, Pa., in charge of R. S. Buch. The plans include maintaining and enlarging the present offices of the American Foundry Equipment Co., 366 Madison Ave., New York, as the eastern sales and export office of the combined lines.

Wilt Twist Drill Co. of Canada, Walkerville, Ont., has published an elaborate catalogue of drills, reamers, and cutters, giving descriptions of the different styles and types, with suggestions for their proper uses.

Taylor & Arnold Engineering Company, Ltd.

— AGENTS FOR —

Farnley Stay-Bolt Iron
Brown Bayleys Spring Steel
Armco Welding Wire
Manitoba Steel Foundries, Limited
Otis Steel Company, Etc.

Montreal Toronto Winnipeg

WALTER LAMBERT

Naval Architect, Marine Surveyor

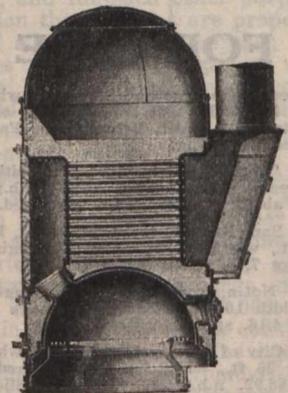
14 Place Royale Phone Main 4199 Montreal

Sole Canadian Agent for

Loveridge Marine Equipment.
Frameless Wooden Ship Construction.
Fleming & Ferguson, Ltd., Dredgers
Cochran Boilers.

FOR SALE — Twin Screw Steel Tug, 500 H.P., with Passenger Accommodation, \$100,000.

Single Screw Wood Tug, 200 H.P., \$17,000.



The Cochran Donkey
Boiler, Coal or
Oil Fired.