

Canadian Railway and Marine World

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Reports of the Board Appointed to Enquire into the Canadian Railway Situation.

The reports of the board appointed by the Dominion Government in July, 1916, to enquire into the railway situation in Canada were submitted to Parliament on May 2. The reports, with appendices, make up a book of 191 pages, 6½ x 9½ in. The board as originally appointed consisted of A. H. Smith, President, New York Central Rd., New York; Sir Henry L. Drayton, Chief Commissioner, Board of Railway Commissioners, Ottawa, and Sir George Paish, of London, Eng. formerly editor of *The Statist*. Sir George Paish having resigned, on account of inability to undertake the work, W. M. Acworth, of London, Eng., a college lecturer and author of some works on railway subjects, was appointed in his place. The three members of the board presented a brief report, which after reciting the matters to be enquired into says:—

In Sept. and Oct., 1917 two of the commissioners, the Chairman, A. H. Smith, and Sir Henry Drayton, spent some weeks inspecting the railways, travelling upwards of 10,000 miles, visiting all important points from Halifax to Vancouver and Prince Rupert, and taking the opportunity of meeting and conferring with many representative citizens. We desire to express our appreciation of the manner in which the officers of the various companies facilitated our journey and assisted us to obtain a knowledge of local conditions. We have had a physical examination made, in such detail as circumstances have permitted, of the Canadian Northern and the Grand Trunk Pacific Railways, by a corps of engineers under the supervision of Prof. Swain of Harvard University and the Massachusetts Institute of Technology. In addition to the information which we have obtained from our own enquiries and inspections and those of our staff, we have received voluminous reports and statistics from the different companies in reply to our enquiries on specific points. Two of our number have held formal hearings in Toronto into the affairs of the Canadian Northern Ry. Co., and in Montreal into the affairs of the Grand Trunk and Grand Trunk Pacific Companies. Since Mr. Acworth's arrival we have frequently met in Ottawa and in New York for discussion of the remaining matters referred to us. We have taken the situation as it is, and find ourselves in agreement as to the necessity for constructive aid to bring the railways through the present crisis. We differ, however, as to the extent and method of government help desirable, and as to the increase and character of government liability and interest now and for the future. It has, therefore, been found necessary to submit a report of the two concurring commissioners, with a brief statement of the minority recommendation.

THE DRAYTON-ACWORTH REPORT.

The report signed by Sir Henry L. Drayton and W. M. Acworth, covers 82 pages of the book, in which the subject

is dealt with under the following headings:—

1.—Canadian Railways—Mileage, capital, and state aid; apportionment of mileage; revenue, gross and net; investment in road and equipment; return on capital; government aid in general—to Canadian Northern, to Canadian Pacific, to Grand Trunk, to Grand Trunk Pacific; total public investment; proportion of public investment; growth of Canadian railways.

2.—The Grand Trunk System—Grand Trunk Pacific finance; Grand Trunk liability for Grand Trunk Pacific; Grand Trunk Co.'s proposal; the Grand Trunk case; inception of the National Transcontinental; letter from the President of the Grand Trunk; hearing of Grand Trunk officials at Montreal; Grand Trunk Pacific case; commission's conclusions; the parent Grand Trunk Co.; Grand Trunk maintenance expenditure; Grand Trunk capital expenditure required; effect on Canadian business; commissioner's recommendation.

3.—The Canadian Northern System — Position in 1914; annual report for 1916; estimates for 1914 and 1917; comparison with Canadian Pacific; prospective requirements of Canadian Northern; value of Canadian Northern undertaking—cash investment, physical basis, going concern; conclusion as to Canadian Northern.

4.—Possible methods of public control—Government operation discussed and rejected; the Canadian Pacific position one obstacle; further reasons against government operation; receivership discussed and rejected; transfer to a new body recommended; suggested transfer of all the railways to the Canadian Pacific discussed; suggested transfer of the whole or a portion of Canadian Northern to Canadian Pacific discussed; possibility of forming a commercial company discussed—the Mexican precedent, the New York Subway precedent; Canadian railways should be under Canadian control.

5.—The Dominion Ry. Co.—Government operation not recommended; recommendation of independent board of trustees; constitution of board, and tenure of office; board to be non-political; board to be permanent and self-perpetuating—Australian experience; railways not a proper subject for direct parliamentary control; growth of extra-parliamentary functions of the state; private interests and public interest; control of Dominion Railway by Railway Commission; relation between trusts and their employes; incorporation of the Dominion Ry. Co.; Transfer of stocks to trustees; the Canadian Northern shareholders; charges of misappropriation unfounded; Canadian Northern successes and failures; arbitration recommended; the Grand Trunk shareholders—terms of purchase recommended, real value of Grand Trunk property; the Intercolonial and National Transcontinental—transfer of National Transcontinental recommended, transfer of Intercolonial recommended (in the

local interest, in the general interest, in the interest of good management), minor recommendations, legal position of trustees; operation and finance of Dominion Ry. Co., operation to be on a commercial basis, wide powers to be given to trustees, financial responsibility of government, prospects of Dominion Railway, specimen economics resulting from combination.

6.—The Dominion and the provinces—publicity—general—Railway Commission control; Commission to report on charters, and on subsidies and guarantees; overlapping of Dominion and provincial control; audit and publication of accounts; railway councils; railways in excess of existing requirements; highway improvement; the Hudson Bay Ry.; steamship connections; tendency of railway rates to rise; necessity for immediate action.

Sir Henry L. Drayton and W. M. Acworth summarize their conclusions and recommendations as follows:—

The mileage of Canadian railways is very great in proportion to the population of the country. It has increased out of proportion to the increase of population. Canada's natural waterways make railways less absolutely necessary than in other countries. The net return is so low as to prove that more railways have been built than can be justified on commercial grounds under present conditions.

The public investment in railways is very large. The total amount of public capital involved in direct construction of Government lines, and cash aid, land grants and guarantees to private companies, is \$968,451,000, not counting the value of lands still unsold. Public aid to the principal companies, including subsidies, land grants, and guarantees, amounts to over \$680,000,000. In the case of the Grand Trunk Pacific it amounts to nearly two thirds of the total investment; in the case of the Canadian Northern to over three quarters. There have been three phases of company development: unaided enterprise, assistance by subsidies and land grants, assistance by guarantees. A guarantee policy is dangerous and its wisdom questionable. The development of Canada justified two transcontinental lines. It did not justify three. The Grand Trunk and Canadian Northern should have been amalgamated.

The Grand Trunk Pacific system has cost nearly \$200,000,000. The interest charges amount to over \$8,800,000 a year. The net income last year was \$826,653. The liability of the Grand Trunk Co. for interest amounts to over \$5,000,000 a year at present, and will rise to over \$7,000,000 in 1923. We cannot recommend that the Grand Trunk Co. be unconditionally released from their liability. The responsibility for the National Transcontinental line rests mainly with the Government, but that for the Grand Trunk Pacific proper belongs primarily to the Grand Trunk. The Government has voluntarily relieved the Grand Trunk of all responsibility for the National Trans-

continental. In respect to the Grand Trunk Pacific proper the government is fully entitled, morally, as well as legally, to call upon the Grand Trunk Co. to fulfil its contract. The Grand Trunk Co. proper has made unjustifiable charges to capital. Its lines have not been adequately maintained. More than \$21,000,000, which ought to have been spent on maintenance in past years, has not been spent. New capital expenditure of over \$30,000,000 is immediately required. The country is suffering from the company's inability to give adequate service. The G.T.R. ought to be managed in Canada, and not from London. We recommend that the control both of the Grand Trunk Pacific and of the Grand Trunk be assumed by the people of Canada on terms hereafter set out.

The Canadian Northern has been financed mainly by the issue of guaranteed securities. Till 1914 it met the interest from its own resources. Since that date the government has assumed very heavy obligations on behalf of the company. There is little prospect that the company would be able in the near future to relieve the government of these obligations. The company's estimate of its future capital requirements is too low; and its estimates of probable growth of earnings have been and still are unduly sanguine. We estimate that as a separate undertaking it would require fully \$70,000,000 of new capital within the next five years. We do not recommend that further public aid be given to the Canadian Northern as at present constituted. The Canadian Northern common stock represents no cash investment, and has no present value, either on the basis of the cost of reproduction of the property, or on the basis of its earning power. We recommend that the public take control of the Canadian Northern Co. on terms hereafter set out.

On the assumption that the people of Canada take control of the Grand Trunk, Grand Trunk Pacific, and Canadian Northern, we consider possible methods of management and operation. We do not consider that operation by a minister directly responsible to parliament would be in the public interest. It would not secure better service or lower rates. If the Government operated these railways, it would be bound in fairness to the Canadian Pacific shareholders to take over their railway also. The Canadian Pacific gives good service and should not be interfered with. Special objections to direct government ownership and operation are: That Canadian railways operate more than 7,000 miles of line subject to the foreign jurisdiction of the United States; that the Canadian government resources are required for war purposes. We therefore reject the idea of direct government ownership and operation.

We do not recommend that the Grand Trunk, Grand Trunk Pacific and Canadian Northern Companies be allowed to go into the hands of a receiver. We recommend that the control of these three companies be transferred to a new body.

We have discussed and rejected the following suggestions:—Transfer of all three railways to the Canadian Pacific; transfer of the Canadian Northern or a portion of it to the Canadian Pacific. There is no possibility of forming a new commercial company to take over the three railways. Neither the Mexican precedent, under which the government becomes a majority shareholder, nor the New York Subway precedent, under which the public authority shares the profits with the private shareholder, is applicable to this case.

Having come to the conclusion that di-

rect ownership and operation by the government is to be avoided, and that ownership and operation by a commercial company is not possible, we recommend that a new public authority, a board of trustees be incorporated by act of parliament as the "Dominion Railway Company"; and that the Canadian Northern, Grand Trunk and Grand Trunk Pacific be transferred to this body. We recommend that the Government assume responsibility to the Dominion Railway Co. for the interest on the existing securities of the transferred companies. We recommend that the Intercolonial and National Transcontinental be also transferred to the Dominion Railway Co., for reasons which we give hereafter. We recommend that the whole of the Dominion railways be operated by the trustees as one united system, on a commercial basis, under their own politically undisturbed management, on account of, and for the benefit of, the people of Canada.

We recommend that there be five trustees, three railway members, one member selected on the ground of business and financial experience, and one as specially possessing the confidence of railway employes; that the original trustees be named in the act constituting the board; and that their tenure of office be substantially the same as that of judges of the Supreme Court. We recommend that the original trustees retire after 3, 4, 5, 6, 7 years, respectively, according to a prescribed scheme; that they be eligible for reappointment; and that all appointments subsequent to the original statutory appointments be by the Governor General in Council on the nomination of the trustees themselves. We lay stress of the importance of the board being non-political, permanent, and self-perpetuating; and in this connection point to the experience of the Australian State Railways.

We give reasons for concluding that railways are not a proper subject for direct parliamentary control. We point to a general tendency in modern democracies to withdraw certain subjects from this control. And we show that under parliamentary control the general interest of the whole community tends to be subordinated to the particular local and individual interests. We recommend that the Board of Railway Commissioners be extended to include the Dominion Railway Co.'s system. We give the reasons for our recommendation that one of the trustees shall be appointed on the ground of his possessing the confidence of the railway employes.

We recommend the transfer to the trustees of the common stocks of the Canadian Northern, Grand Trunk and Grand Trunk Pacific subject to certain conditions and reservations made hereafter. We recommend the transfer to the trustees of the Intercolonial and National Transcontinental Railways for reasons which we give hereafter.

We deal with the question of the compensation to Canadian Northern shareholders. We find the charge that Messrs. Mackenzie and Mann have misappropriated public moneys unfounded. We find that the Canadian Northern shareholders possess a system of which the lines are well located and economically constructed, and that they have raised the necessary money with considerable financial skill and at moderate rates of interest, but that they erred in unwisely duplicating lines and reaching out into unremunerative territory. We recommend that the question be considered whether Canadian Northern shareholders shall be permitted to retain a moderate proportion of the \$60,000,000 shares which they

now hold; that the precise proportion, if any, and the relation of that proportion to their share of any future profits of the Dominion Railway Co. be fixed by arbitration.

We recommend that the entire share capital of the Grand Trunk, guaranteed, preference and ordinary, be surrendered to the trustees in exchange for an annuity based on a moderate but substantial proportion of \$3,600,000, the average sum paid as dividend in the last 10 years; and that this annuity should increase by 40 or 50% after the first seven years. We recommend that the precise figure be fixed by agreement and that it be left to the directors of the Grand Trunk Co. to apportion the annuity among the five classes of Grand Trunk shareholders, and to procure such assents of their shareholders as are legally required to complete the transfer. We give reasons for considering that this recommendation is generous to the Grand Trunk shareholders, and why the shareholders in their own interest will do well to accept it.

We recommend the transfer to the trustees of the National Transcontinental, in order that it may take the place it was built to take as part of a great inter-ocean highway, and because its financial position would be hopeless if it terminated in a dead end at Winnipeg. We recommend the transfer of the Intercolonial, in the interest of the Maritime Provinces to which the Intercolonial at present can only give a local service with no adequate terminals beyond Montreal; in the interest of the taxpayer who has a right to demand efficient and economical expenditure of his money; and in the interest of the railway staff who will secure the wider opportunities of a great system. We recommend that in future the Intercolonial be required to pay local taxes on the same basis as the other railways; and that the inhabitants on the line receive statutory protection against increase of local railway rates.

We make recommendations as to non-railway property of the transferred undertakings, getting in minority holdings of shares and outstanding titles to land, arrangement with the holders of Canadian Northern 5% convertible income debentures. We deal with the legal position of the trustees; and point out that the Canadian Northern, Grand Trunk and Grand Trunk Pacific companies will continue to exist; and that consequently the rights of their security holders will remain undisturbed. We recommend that the trustees take over each railway as soon as the transfer can be effected, with the purpose of ultimately operating them all as a single unified system. We deal with the finances of the Dominion Railway Co. and point out that the Intercolonial, with no bonded indebtedness, has a considerable net revenue, and offers security on which new capital can be raised. We recommend the creation of a general and refunding mortgage of unlimited amount, to be issued as required. We recommend that the act of parliament provide that the operation of the company shall be on a commercial basis, and that the trustees make no general reduction in rates until the property earns a reasonable net return. We recommend that there be given to the trustees the widest powers in the management of property.

We have endeavored to estimate the annual liability of the government to meet interest unearned during the first few years of the new scheme, and we put it at about \$12,500,000 a year. We think this amount should diminish steadily but not slowly; and that with proper econo-

mic and politically undisturbed management the attainment of a satisfactory financial result is only a question of time. We give specimens of the large economies which should result from combined operation.

We recommend the enlargement of the functions of the Board of Railway Commissioners, that it have jurisdiction over all Dominion railways; and report to parliament on all proposed grants of charters, subsidies, and guarantees. We deal with the conflict of Dominion and provincial jurisdictions. We recommend that, to prevent this in future, the Governor in

Council should in certain cases disallow provincial acts, and that no railway company should operate under both Dominion and provincial charters. We recommend that there be a continuous public audit of the Dominion Railway accounts, and that full and comprehensive reports be made annually to parliament. We recommend the establishment of railway councils to bring together the railway management and representatives of public interests.

We point out that the existing railways are in excess of public requirements and show how much traffic is required to make a railway profitable. We show that

the cost of hauling grain to the station is sometimes as great as that of carriage from the station to Liverpool, and recommend that the question of highway improvement and motor haulage be taken into consideration.

We recommend that future expenditures on the Hudson Bay Ry. be reduced to the lowest possible amount.

We point out that railway rates are more likely to rise than fall in future. And we lay stress on the necessity for immediate action lest Canada should suffer from railway congestion even worse than that of the past winter.

Report of the Chairman, Alfred H. Smith.

Following is the report presented by the Chairman, A. H. Smith, President, New York Central Rd.:—

This commission was asked to report upon the general problem of transportation in Canada. Several subdivisions of the subject quite naturally suggested themselves, and were made a part of the problem to which the commission was requested to give attention. Practically all of the subdivisions have received consideration, but the general problem is essentially a question of what to do with the railways of Canada. To a constructive solution of this important problem, the commission has given its attention.

The General Problem of Transportation in Canada:—For a proper understanding of the problem, a knowledge is necessary of the history of railway development in Canada, especially as affected by the public policy, which has found expression in governmental acts. Canada early recognized that its growth depended upon the construction of railways. The large productive areas of the country could be served only in a limited way by its splendid system of waterways. Even before the Eastern provinces became united into the Dominion of Canada, the Grand Trunk had become an important railway line, serving the people both of Canada and the United States. The Intercolonial, as is well known, was constructed out of public funds, and largely for the purpose of bringing more closely together, commercially and politically, two more or less separated sections of the Dominion. Long in advance of its justification upon a commercial basis, an all-Canadian transcontinental line was projected by the government and completed with extensive public aid by a private company as the Canadian Pacific. Because of the great distances which separate parts of Canada's producing territories from the consumers' market, development of the country's resources depended upon railway building, while cheap transportation was necessary to enable the people to compete with other producers. The people of Canada, therefore, gave such aid as was necessary to procure for themselves railway lines that would bring the country's resources into use and keep themselves in touch with the outer world.

Cheap transportation depends upon careful investment and efficient management. In the usual case, these are most likely to be found where private initiative and proper incentive to effort are employed. So far, Canada, for the most part, has pursued the policy of leaving to private enterprise the management of its transportation machinery. The Intercolonial, which has been under governmental control since its beginning, is an exception. But this line, I am informed, usually pays nothing to the govern-

ment as a return upon money invested in the property. On the contrary, it has frequently called upon the government for aid in meeting expenses of operation. The investment in this line is large, some authorities placing it as high as \$348,000,000, including loss of interest. Evidently its rates are too low or its expenses are too high, but the use of this line, at the rates enforced, is regarded in some quarters as a right of the people in the Maritime Provinces. If the Canadian people have ever made an agreement, or adopted a policy which may be construed as creating that right, the contention may be correct; it is, at any rate, within the power of government to grant such a privilege. The fact is referred to merely to point out in connection with what I shall say later that a railway may be built either as a commercial enterprise and for ordinary commercial purposes, or as a public undertaking and for other purposes, which are within the proper scope of Government. The two should not be confused. But it should be kept in mind that when government builds and operates a railway which does not pay its way, including proper maintenance and interest upon investment, taxation is relied upon to support transportation upon that line. The burden is shifted from the user to the general public, but the processes by which this is done are often so complex as to obscure the facts, and actual costs are not ascertainable.

The Canadian Pacific affords a later example of the internal development policy of the government. That road had its beginning in a transcontinental project that was proposed to be carried out directly by the government. At an early date, and it seems to me wisely, that purpose was altered; it was decided to have the road completed by a private company. But the undertaking was large, the population sparse, the prospect of profit remote, so that the government not only turned over to the company the uncompleted road upon which it had expended a large sum, but it also extended to the company generous aid in the shape of land grants, cash subsidies, guarantees, and loans. It is true that value was given to the land grants largely through the building of the road and the opening of the territory to settlement. The important point here is that the Canadian Pacific owes its later and continued success, not only to the skill and enterprise of its builders and managers, but to the fact that through liberal direct aid, it was able to begin business with a small charge against its earnings on account of borrowed capital. Thus favorably started, the company was able to devote its energies and surplus income to the development of the road and the country.

A new transportation problem arose with the settlement of the prairie pro-

vinces, where the land is devoted chiefly to raising grain and live stock. Owing to the long hauls that intervene between the producer and consuming markets, freight charges absorbed a considerable part of the proceeds. The Great Lakes afforded the least expensive route to the east and tidewater. But these lakes are open only part of the year, and navigation closes before the season's crops can be moved from the lake ports. With the filling up of the country and consequent increase in production, came a general demand for additional means of transportation. While land speculation probably had no little influence, the farmer felt the effect of inadequate facilities, and any project that promised relief appears to have found approval among citizens who were able, through their legislatures, to bring public aid to the development of these enterprises. Railways, therefore, were not only actively in demand, but railway builders were popular and had little or no difficulty in obtaining public support for proposed new lines. The Canadian Pacific stood as an example of success to be repeated by newer railways. Unfortunately, too little attention appears to have been given to the underlying facts which actually made that road what it was. Experienced men apparently believed that a second Canadian Pacific might be had if they could but lay a transcontinental road, build great hotels, passenger terminals, and operate ocean steamers. These things were only the outward evidences and not the cause of Canadian Pacific's prosperity. It may even be that they contributed little to the strength of that company's financial condition, if due account be taken of all the costs, investment as well as operating, involved in carrying on such enterprises.

In May, 1903, a royal commission on transportation, of which Sir William Van Horne was chairman, was appointed "to consider questions affecting transportation of Canadian products to the markets of the world through and by Canadian ports, with a view of placing the Canadian producer in a position to compete, and compete successfully, through all Canadian ports with the producers and exporters of other countries." The report of this commission is interesting. It clearly reflects the effect of the outlook which great opportunities and a land boom had upon the minds of the people. All kinds of transportation projects were recommended. For instance, the Grand Trunk Pacific was to be extended to Moncton; the Intercolonial was to be extended to Georgian Bay, etc. New canals were to be built, and old ones widened and deepened. This commission also recommended a bounty for Canadian-built ships, toll-exempt canals, additional waterways to be opened at public expense, and the acquisition of water terminal

lands out of public funds. In other words, it was clearly the intent that transportation should be stimulated by subsidies from the public treasury. It would now seem that there could not have been in sight enough traffic to justify the extensive development here recommended. However, many of the things proposed in this report have been done, and other ambitious schemes not here mentioned have since been brought out. The point in mind is that without making a specific declaration of the fact, as far as I know, Canada's policy for years appears to have been to promote the public welfare by means of building or aiding in the building of transportation lines throughout the Dominion.

It is unfortunate that Canada did not have a policy of regulation in this period which could have prevented needless duplication of lines and facilities. Competing lines have been built where effective regulation could have saved a large part of the investment, while completely satisfying every reasonable and proper need for service. Instead of co-ordination and conservation under government supervision, railways were permitted to duplicate plant in fields not yet productive enough to support the one; the government, on the other hand, was, in one way or another, aiding both projects, if it had not indeed itself promoted either or both projects. Very naturally, it has not and could not have obtained the benefit which should have followed a correct programme of government aid. The policy of government aid makes the need for regulation of railway building more necessary even than where private capital is depended upon, for in the latter case the proposal must at least have a promise of commercial success before capital can be induced to come in and give it support. To the absence of such regulation must be charged responsibility for no small part of the railway problem of today.

We may well enquire here as to the effect of this policy upon the three principal systems. The Grand Trunk Ry. Co., feeling no doubt that its own traffic field had been invaded by the government-aided Canadian Pacific, desired in turn to enter the promising western territory. Accordingly, it proposed to build a line from North Bay to the Pacific coast. Public aid was required and granted in a way to ensure the building of the road. If any serious thought was given to co-ordinating existing or proposed roads, and to utilizing them for the public good, it did not find public expression in any constructive way. The G.T.R. Co. evidently felt confident in the success of its plans, for it pledged its own credit in aid of the extension, and entered into contracts which it now finds quite beyond its ability to carry out.

Canadian Northern interests, directed by Mackenzie, Mann & Co., who since an early date had been operating local lines in Manitoba, seized the opportunity afforded them for expansion and rapidly extended their rails throughout the prairie region. The records show that the Canadian Northern had a large mileage on the prairies before the projection of the Grand Trunk Pacific; so that when the extension plans of the Grand Trunk became a part of the national policy, as they did become, the Canadian Northern was added to the number of those which wanted to own a transcontinental system and one as fully complete and self-contained as was that of the Canadian Pacific. Hence, we find two new companies, both built largely upon public credit,

striving for first place in a field which, as for transcontinental transportation, or even as for connecting Eastern and Western Canada, was already occupied. Besides having the Great Lakes waterway, there could have been barely enough business to support one additional line, and that only by the exercise of economy in operation and prudence in investment.

The Canadian Pacific, enjoying splendid credit, with adequate powers and resources, and keenly alive to the possibilities of losing business to competitors challenging its supremacy everywhere, then entered the contest by undertaking to build new lines in an effort to protect its sources of revenues. The stimulation felt throughout the country by the influx of settlers and by the importation of so much new capital not only created a boom, but it quite naturally affected prices for labor and materials, sending these soaring; the increased prices in turn contributed largely to the higher costs which are now reflected in the construction accounts of the new roads.

This brings us fairly to a recognition of the fact that while the policy of public aid to railways had originally been founded on the urgent need for transportation to open up a new county, to develop its resources, and to unify Canada commercially and politically, it was carried far beyond the limits warranted by the original exigency. It appears to me that the responsibility is as much the government's as the private companies'. Without enabling legislation and the extension of government credit from which all received their essential support, the companies could not have expanded and overbuilt. This policy, in so far as it aimed at the development of Canada, appeals to me as sound, and fully justified in its inception, but it needed to be supplemented by some form of supervision that would have ensured to the people the benefits of that policy without the losses that have followed the effort to assist development indiscriminately.

The situation must be faced as it exists. It is not possible to undo what has been done; the money which has been spent cannot be recalled. The immediate and obvious thing to do is to adopt a constructive and discriminating programme, first, for correcting the conditions which necessitate the continuing loss and waste, even where that would require the abandonment of useless property, and, second, for controlling new construction. The scrap heap is frequently the most economical disposition available for inefficient plant and machinery.

Status and Usefulness of the Three Transcontinental Railway Systems:—The Canadian Pacific Ry. System; the Grand Trunk Ry. System (including the Grand Trunk Ry., the Grand Trunk Pacific Ry. and their several branches); the Canadian Northern Ry. System.

The Canadian Pacific Ry. is essentially self-contained and self-sustaining. I agree with my colleagues as to its financially strong position. It has world-wide commercial strength. As a result of the aid and privileges extended by government, together with the prudence and progressiveness of its management, which has extended its field of activity over nearly all Canada, and through its steamship lines and commercial organizations throughout a large part of the world, it is a success. The C.P.R. is well built, well maintained and has adequate terminals and equipment. It is efficiently operated. It is somewhat at a disadvantage in crossing the mountains, and elsewhere it has gradients that, compared with more re-

cently built lines, do not make for as good trainload and operating efficiency. It is assumed that the C.P.R. will make improvements as the need for them arises, for it is fully able to do so. Accorded reasonable treatment, that company will continue, I am sure, to give good service, and I believe the best interests of Canada will be served by continuing the present status of the C.P.R. The introduction of government railway competition, which might have no regard for investment or cost of operation, would be unfair and, in the end, would react disastrously upon the Canadian people. The regulating power affords to the people of Canada adequate protection in the matter of rates and services, and such power should likewise protect the company.

The Grand Trunk Railway Co.'s fortunes are bound up with the Grand Trunk Pacific. It stands as guarantor for large sums of money invested in the railway, and has advanced millions from its own resources in an effort to develop the western line and its subsidiary properties. The Grand Trunk Pacific Development Co. has absorbed many millions of Grand Trunk capital without definite prospect of return, and to the Grand Trunk Pacific Branch Lines Co. large construction advances have been made. Not only is the Grand Trunk committed for many millions, but the government has directly invested large sums of money in this property and guarantees other large sums, the total of which exceeds \$127,000,000.

The Grand Trunk Pacific was located on a scale that would do credit to any single track line. There is not enough business to justify such an outlay, and the prospect for business which will warrant the cost seems quite remote. For long distances, sections of this line parallel one or more other lines. That part of the Grand Trunk Pacific lying between the Rocky Mountains and the Pacific coast is in a country which appears to have abundant natural resources. In time, these may be developed to the advantage of this road. The port of Prince Rupert is suited for a large ocean traffic, which is non-existent. The development of Alaskan trade seems to present the most immediate possibility for this port and railway. The road west of Winnipeg has some disadvantages on account of expensive trestles and instability of embankments. It has good grades, but inadequate terminals at important places. It has sufficient equipment but lacks feeders. From the Rocky Mountains to Winnipeg, the presence of a parallel road raises a question as to whether the Grand Trunk Pacific line is not the best adapted by location and physical condition to handle the trunk line traffic. If it is not the best, then the disposition of this part of the road, with its branches, naturally depends upon its usefulness as a road serving local interests. From Winnipeg east to North Bay and Port Arthur, the Transcontinental and Grand Trunk Pacific railways together can give efficient service as a connecting link between the railways of Eastern and Western Canada. This road also affords a good line for traffic moving via the Great Lakes. In fact, it is probably the best route of any for hauling bulk commodities at low costs.

Officers of the Grand Trunk Ry. Co. claim that the government is morally bound to relieve the company of the Grand Trunk Pacific, because the government is responsible for the failure of the project, having permitted a rival company to enter the field. The rival line, however, has been constructed at a lower cost per mile, and manages to get enough

traffic to pay its operating expenses and a large part of its fixed charges, which cannot be said of the Grand Trunk's system west of North Bay. I feel that I am not called upon to discuss the merits of the Grand Trunk's claim against the government. I have no doubt the government has observed at least the letter of its contract. Standing alone, with efficient operating conditions imposed, there is no reason, within my knowledge, why the Grand Trunk Ry. proper should not become a profitable operation. It occupies a good territory, reaching some of the best traffic centres in the United States and Canada, and has American connections that ought to contribute to its welfare. The company needs terminal improvements in cities and modern equipment, especially locomotives. The need for equipment is pressing, and should be met.

The Canadian Northern Lines, particularly in the prairie provinces, appear to be advantageously located in view of traffic conditions. Inspection of the property brings out the fact that this road was built with proper regard for economy, and the creation of a permanent public service utility. In some instances, the system has extended its lines where it should have obtained a traffic interchange agreement or the joint use of facilities instead, at least until the traffic had grown enough to justify further expansion. A public policy intended to develop and serve the country as a whole, at the lowest cost, would have enforced arrangements which would have obviated the needless duplication of facilities. The line from Yellowhead Pass to Vancouver, in part at least, may be unnecessary, but it is there by the joint action of government and the company. The character and capacity of this line through the Fraser River Canyon, where it is alongside the Canadian Pacific for about 200 miles, would suggest that no more money should be spent for double tracking or revising grades on either of the railways for years to come. From Yellowhead Pass to Edmonton, the proximity of the Grand Trunk Pacific places two lines where one affords abundant capacity.

The invasion of the east by the Canadian Northern now appears to have been unwise, but condemnation thereof must be tempered with a knowledge of the conditions which forced this extension. There was a public demand for railways. All Canada was enthusiastic over the prospects of a rapid growth in wealth and population. Railways were on a competitive basis, and the public stood ready to back any new railway enterprise, since that meant a rival carrier, and, incidentally, a new business in construction. There was no regulation which enforced co-operation among rival lines. The Canadian Northern, seeking to expand and become a profit earner, quite naturally desired to get all the traffic it could, and to hold all it got for as long a haul as possible. As a result, it undertook to do what appeared to be necessary under the conditions then existing—that is, to extend its line to both oceans.

An inspection of this company's property shows that generally it is of a type of construction well suited to its needs, and that the builders have installed it at a cost which, by comparison, seems small. Nowhere was there evidence of waste in the construction work itself. It is true that the company had some construction under way, or planned, that appeared wasteful because unnecessary, but this is due, I understand, to the unregulated competitive system, or to bargains with

public authorities. The building of expensive terminals in cities already supplied with adequate facilities affords an example of duplication for which the public must eventually pay. However, in the absence of restraint and regulation by consistent public authority, it is difficult to determine how the company could have avoided this.

The precarious financial situation of the Canadian Northern is due, in part, to its uncompleted condition, and to the fact that needed capital cannot be obtained on its own resources, especially during the period when capital is so greatly in demand by powerful governments. This system is not at present able to earn all of its fixed charges. As important parts of the system have but recently emerged from the construction period, it would be truly remarkable if it were able to do so. It does earn a very large proportion of such charges, and probably could earn all of them but for the burden of eastern extensions and duplications that have been placed upon it. Practically all commercial enterprises, and particularly railways, must go through a development period. The Canadian Northern is short of equipment. With the return to normal conditions, and provided with the capital necessary for equipment and for additional local facilities, this road can, in my judgment, work its way out in a reasonable time.

Reorganization.—We are asked to make suggestions in regard to "the reorganization of any of the said railway systems or the acquisition thereof by the state; and in the latter case, the most effective system of operation, whether in conjunction with the Intercolonial Ry. or otherwise." The first practical question is, therefore, the need of reorganization of any of these three transcontinental systems; the second is whether they should be acquired by the state; and the third is whether the status of the Intercolonial can be changed; and, if so, can the road be advantageously grouped with either of the three systems.

In such suggestions as I shall make, I am influenced by consideration of the public policy as evidenced by past governmental acts. I further assume that the existence of these roads through the direct government aid and sanction is conclusive evidence of the fact that the people really desire them. That they were built in advance of their need for ordinary commercial uses—a fact which is emphasized by the present abnormal economic situation—does not appear to me a sufficient reason for condemning the policy of national development, or the wisdom and integrity of those who have built the roads under that policy. Neither do I think that there exists any condition to warrant taking up a new and untried public policy, which may lead to greater difficulties than those which are now faced.

The history and standing of the Canadian Pacific Ry., and its public service as a carrier today is sufficient assurance that it does not need reorganization. The scope of its business, extending to other lands by steamships and commercial connections, and the control of many thousand miles of railways in the United States, would afford sufficient reasons, if none other existed, for dismissing the idea of its acquisition by the state. So much of the Intercolonial as is serviceable to the Canadian Pacific appears to be now used by it, either as a local connection or through trackage rights. Moreover, the two have existed separately for many years as competitors and no new

reason appears why the relations of the Intercolonial and Canadian Pacific should be changed for the future, unless the people of Canada are satisfied that better results would be obtained for the territory served by the Intercolonial if it were in the hands of the Canadian Pacific.

The Grand Trunk Ry. Co. has stated that it is beyond its power to assume and carry the obligations which would be imposed upon it if it should try to become such a transcontinental system as the plans of 1903 contemplated. The company has not attempted to bring about the organization of a system approximating that of the Canadian Pacific or even the Canadian Northern, nor can it do so. In view of the parent company's inability to carry out its original plans, and to discharge its obligation, the question is, what disposition is to be made of the various roads which were intended to be, but did not become parts of one operating system. My colleagues have recommended that the stockholders of the Grand Trunk Ry. Co. be paid an annuity which is to be a "moderate but substantial portion of \$3,600,000, the average dividend payment for the last ten years." This recommendation is in spite of the facts noted in the report that there are arrears in maintenance which require the expenditure of \$21,000,000, and that the company has charged to capital items which should properly have been charged against income, these facts indicating that there have been some dividends paid which have not been earned. Considering this situation and also the obligation of the company in the west, I am not impressed with the justice of paying an annuity to the stockholders in exchange for a surrender of this property. I also would be liberal to them, but I would allow them to keep their property and give them a chance to work out their own salvation. To that end, I would recommend that a settlement be effected between the government and the G.T.R. Co. The railway cannot carry out its part of the contracts, and it should be relieved of further embarrassment. On the other hand, the stockholders of the G.T.R. should be required to curtail or forego their dividends for the present, and the entire earnings be applied to the rehabilitation of the road through a term of years. The government thus gives up a present claim which the debtor cannot pay anyway; in turn, it will enjoy improved and extended service which may be worth far more to the welfare of the people. I should also give the government some claim upon the future earnings of the Grand Trunk, so that it may share in any future prosperity which this action makes possible.

Reorganization of the Grand Trunk is desirable only in so far as it shall be required to put itself in shape to discharge efficiently its functions as a carrier. Whether it shall retain all of the subsidiaries which it has accumulated through the past 50 years depends in large measure on what they can contribute to the main property. Careful study of each of the subsidiaries will lead to definite conclusions from the standpoint of the Grand Trunk and its future welfare. What the Grand Trunk needs most of all is to be relieved upon equitable terms of the embarrassment that it has incurred through the failure of the transcontinental scheme. The acquisition by the state of the G.T.R. proper presents much of the embarrassment that would obtain in the effort to acquire the Canadian Pacific, for here also, in addition to the question of equity involved, there is the problem of some 2,000 miles of railway owned in the

United States; and the fact that the Grand Trunk's principal seaport is in the U.S.

The investigation of the Canadian Northern by the commission has disclosed evidence of skill in construction and efficiency in management, considering the means and equipment available. The company even now earns a large part of its fixed charges although important parts of the system have been in operation for but a year. I think there is ample justification for confidence that the affairs of the company will improve with the return of normal conditions. I see no reason for a change of management or a reorganization, excepting as hereinafter suggested.

It may be well here to consider the relation of the Intercolonial to the other roads, and the possibility of operating it in conjunction with any of them. We have shown its relation to the Canadian Pacific. The main line of the Intercolonial is about 1,000 miles, from Montreal to Halifax. It has occupied the territory for 50 years and has become adapted to it. There are apparently no operating economies available by combining it with another system that are not available to it alone. Assuming proper regulation, there appears to be no traffic interchange that could be better assured by merger. I am informed that the Maritime Provinces consider the use of the Intercolonial as a right to which they are entitled. Moreover, the government has built the Transcontinental, a part of which was in compliance with plans of the Grand Trunk, while the rest of it is so placed that it ought to continue to be operated in conjunction with the Intercolonial. The present status of the Intercolonial and the eastern part of the Transcontinental should be continued as a government operation. The results of such operation should, however, be reported to the people of Canada in exactly the same form as is required from other railways. And these roads should be subject to the same reasonable regulation as is exercised over all other railways.

Mention might be made here of the railway that the government is building from the Saskatchewan River to Hudson Bay. The object in the construction of this road has been stated to be that of obtaining a shorter haul from the western provinces to Europe. The bulk of the traffic to follow this route must necessarily be diverted from the roads extending from Winnipeg to the east, so that the project seems to be an instance of competitive construction which cannot be justified in this case, even on the ground that it opens up new territory.

There are numerous local railway projects, within provincial limits, which at the moment seem to have little effect upon this general railway problem. Disposition of these may well await developments as to their necessity and utility when they assume operation. There is little that can be said just now as to their probable relation to the existing means of transportation.

The Great Lakes and the St. Lawrence River furnish a natural route from the western country to the east, and to the Atlantic ocean for a part of the year. Numerous steamship lines between Port Arthur and Georgian Bay or the lower lakes and St. Lawrence River ports afford adequate transportation under normal conditions, though somewhat affected by customs requirements and other factors. In view of the heavy movement of grain in the last three months of navigation, regulations governing shipping

should be as favorable as practicable, for the hauling of grain over the long distances to the eastern seaboard by an all rail route involves a problem in car supply and cost which renders such a haul unprofitable for rail lines. The success of the Canadian Pacific steamship lines has led to the suggestion by some that the other railways ought also to establish steamship lines. I do not believe that this success was primarily due to the railway ownership of the ships. Temporarily the war seems to have put a stop to plans for railway owned steamships. If, at the close of the war, it is to be tried again, it would seem advisable first to ascertain whether other ships cannot be induced to schedule sailings before railways incur the responsibility of making additional investment in ships. There are ships running in regular postal routes with subventions. Perhaps the government might well require, in connection with its subventions, that ships give equal service to the railways without discrimination among them, thus removing another cause for the employment of duplicate facilities.

In visiting the various ports, I was impressed with the facilities installed and being installed. At Halifax, particularly, important works were actively under way, necessitated, I believe, by the overseas traffic for war purposes. It is likely that the future development of steamship terminals in connection with railways will be difficult to fix until normal conditions resume. Meanwhile, the Atlantic seaports are so much involved in the emergencies of war as to place them beyond the scope of this inquiry. In any event, such works of harbor improvement and development as are the result of war measures will be there at the close of the war as a foundation for what the future may hold.

I am unable to join my colleagues in their recommendations. They propose that practically all of the railways in Canada, except the Canadian Pacific and the United States lines, shall be turned over to a corporation to be managed by a board of trustees appointed by government. They insist that this board is to be permanent and self-perpetuating. I do not know by what means one parliament can bind its successors to a given policy, especially in so simple a matter as changing the organization of a government board. My friends seek to avoid government ownership and operation, in fact condemn it as inadvisable, but propose a plan which contains so many elements of danger in the direction which is sought to be avoided that I am unable to join them. Their plan would add about a billion dollars to the direct debt of Canada. The interest on this is about \$40,000,000, adding very largely to government expenses. Judging from the experience Canada has had with its government railways, it is fair to assume that this would remain a permanent burden. Operated by private companies, this interest would ultimately be borne by the companies without recourse to the government funds, and at the same cost of service to railway patrons as would obtain under government operation.

Their plan also leaves out some of the railways. This is unfair to the investors whose property is to be subjected to government competition. It also discriminates in the method by which the respective properties are to be acquired. I cannot approve the proposed centralization of control. There are problems local to separate regions which often require prompt action and co-operation between the railways and the people served. There

is a need everywhere for that prompt and efficient service which can come only from a knowledge of local conditions and responsibility for meeting them. I cannot believe that centralization, remote responsibility and control, will ensure good service to the people of Canada. The recommendation creates a Dominion Railways Co. owned by the Dominion Government, to take over those roads. There are about 7,000 miles in the United States controlled by Canadian companies. The Canadian railways depend for no inconsiderable portion of their revenue on United States traffic. A fundamental defect of the plan, therefore, is in placing the government in the railway business, not only in Canada, but also operating railways in the United States subject to both federal and state regulation.

Through private railway management. Canada has obtained about one mile of railway for each \$30,000 of government aid or guarantees, which is but a fraction of the cost of government railway undertakings. In some instances, a large proportion of the aid was in land, the value of which was produced by the building of the railway and the settlement thereby made possible. Compared with the total outlay involved in producing railways by the government for itself, as, for instance, the case of the Intercolonial or the Transcontinental, from three to six times that amount have been used to realize equal results. This shows distinctly the value of enlisting and retaining private enterprise.

The Obvious Remedy.—Let us review the salient facts concerning each company: The Canadian Pacific is amply able to take care of itself. It can and does provide competition with the other railways. In order to be most serviceable to Canada, it should be continued, subject only to such equitable regulation as is accorded to all lines. The Grand Trunk succeeded in the east and failed in the west. The Canadian Northern succeeded in the west and was jeopardized by its eastern expansion. There is extensive duplication of lines in the west; the unsuccessful Grand Trunk Pacific lines are found among the successful Canadian Northern lines. Public policy demands the unification of these lines, for great economies could be thereby accomplished. There is extensive duplication in the east; the new Canadian Northern lines among the older lines of the Grand Trunk proper. Great economies in proposed investment and operating expenses await the joint working of these properties. There is wasteful duplication in the connecting region between North Bay and Winnipeg, where the Canadian Northern line parallels the government line. Economy awaits the joint working of these lines.

Consideration of all phases of the problem leads me to recommend the following remedies for the existing situation:—Let the Canadian Pacific alone; let the Grand Trunk operate the eastern lines now held by that company and the Canadian Northern; let the Canadian Northern operate the western lines now held by that company and the Grand Trunk Pacific system; let the government operate the connections or procure their operation by private companies; all of which should be done under arrangement that are equitable and yet look to the not distant day when the country will have survived the war and resumed its prosperous growth.

There may be several ways by which this can be brought about, but the one that has appealed to me is that which seems to be the least disturbing of values and credit and involves no untried

schemes or protracted disputes. Therefore, I beg to make the following suggestions:—Amend the regulating policy so that the Board of Railway Commissioners may have jurisdiction over all railways in the matter of maximum and minimum rates, the issuance of securities, the building of new railways, or the extension of lines, and other matters properly within the scope of governmental supervision. Create a board of trustees, consisting of two government officials and three private citizens, to act for the government in the matters hereinafter proposed.

Relieve the Grand Trunk Ry. Co. of its obligation to lease the Transcontinental, and require the company to relinquish all claims upon the Transcontinental; require it to lease to the board of trustees the Grand Trunk Pacific Ry. properties at a rental amounting to the net annual fixed charges; require it also to take under lease the Canadian Northern properties east of North Bay and Parry Sound, and pay as a rental the net fixed charges on those properties. The lease should be for 21 years. The Grand Trunk's investments, other than railway, in the west may be disposed of by the company as it may elect, and in accordance with its best interests.

Require the Canadian Northern Ry. Co. to confine its operation to the field west of Winnipeg. Relieve it of the line east of Winnipeg by leasing for 21 years to the governmental board of trustees, at a rental of the net annual fixed charges. Require it to take a lease of, and to operate for the same period the Grand Trunk Pacific Ry., and its branch lines, paying as rental the net annual fixed charges upon those properties; except that until seven years after the end of the war they shall have the immunity that was promised the Grand Trunk Pacific for a period of seven years after construction, and that they shall not be required to assume any of the extraneous investments of the Grand Trunk System in the west.

Lease the lines between North Bay and Winnipeg (except the Canadian Pacific's) for 21 years to either the Canadian Northern or the Grand Trunk (or, in event neither applies, to any other qualified company), requiring the lessee to furnish the necessary capital for new equipment, and to maintain and operate the lines on the best terms that can be made; terms that would give the best service needed at lowest cost to the government being regarded as best. Either the government or the lessee should build a connecting line of about 30 miles near Long Lake, Ont., to protect the better working of the two lines. The government and companies should have the option of terminating, after 10 years, any of the leases upon equitable terms.

The foregoing recommendations are made with a view to obtaining for Canada maximum of efficiency at a minimum outlay. The continuance of government aid, to some of the railways at least, will be necessary under any plan. The plan herein proposed seeks to reduce this to the lowest possible point and to centralize it upon those parts of the existing lines which are not self supporting, and which, in the nature of things, cannot be self supporting for years. These connecting links, "bridges," as they have been called, exist, it seems to me, as a result of that public policy which has been discussed at some length. The government may well afford to take them over and maintain them as necessary parts of the public investment in the country's development. They are not of sufficient importance to

bring about those dangers inherent in government operation of this kind on a large scale, and holding them will not endanger private enterprise. It may be necessary in working out this plan to grant some additional and temporary aid to the Canadian Northern, and it will be necessary to effect some compromise with the Grand Trunk Ry. Co. which will enable this company to continue. Aid should be extended upon the recommendation of the board of trustees, who should be charged with the duty of investigating the need of and approving the aid to be rendered by the government; they should also see that the government receives for that aid such security as will give it a reversion in case of default.

The recommendations here submitted are to be considered as a general outline of what appears to be a fair solution of the transportation problem. Enabling legislation will be required in any case, and I realize that there are many technical and legal questions which will require careful attention at expert hands. If the general plan is adopted, my thought is that the board of trustees which I have suggested be charged with the duty of acting for the government in all matters requiring new contracts, and shall protect the interest of the government in every way while leasing, operating, or financing the property under their care to the best advantage, due consideration being given to the rights of the other parties at interest.

If for any reason it should prove inexpedient to carry out the foregoing suggestions, and if the government should find it wise or necessary to possess itself of, and to hold any considerable part of the railway properties, I should recommend as an alternative plan the formation of a private company to take over other operations of those properties, either as a whole or in groups. Even where a road does not earn its fixed charges the government could profit in the long run by making the terms of an operating lease sufficiently attractive to induce private enterprise to undertake its management. The terms of the contracts would naturally depend upon the extent of the property and the prospect of earnings, but they could be so drawn as to prove attractive to private capital and at the same time relieve the government of the expense and embarrassment of government operation. Such contracts might be based upon a profit sharing plan on a fair basis, which would leave the company a hope of reward commensurate with its efforts and give the public also a share in the prosperity which they must help to create.

I should like to add one other thought. The railways of Canada are in desperate need of equipment. Whatever decision is made with reference to the railways, the transportation problem is now acute in so far as equipment is concerned. I would, therefore, recommend that the government undertake at once to provide an ample supply of freight cars and locomotives against immediate and imperative needs. These cars and locomotives may be had, if desired, under trust agreements. It will be a simple matter to turn the cars and locomotives over to the operating companies under lease, or contract of purchase which may be exercised when conditions are more nearly normal.

Concluding, I would be loath to suggest recourse to any radical changes in the domestic policy of the Dominion of Canada in this time of war and stress. Remedial measures are often more efficacious than revolutionary ones, and more

equitable. I have been impressed by the seriousness of your transportation problem, and in sincerity express my belief that the problem can be successfully and satisfactorily remedied by just and mutual recognition of difficulties and full and free co-operation between the government and the railways. Fair and broad treatment of the question will, I am convinced, bring capital and personal genius commensurate with the exigencies of the present situation, and capable of developing a happy solution. I believe that the best results hitherto have been obtained by the efficiency and economy of private initiative, energy, and capital. It is no longer assumed that the self interest of the railway investor and operator is antagonistic to the interest of the public; rather, we have all learned, governments and corporations like, that the two are inseparably linked and must stand or fall together. Upon these fundamental truths I base my firm conviction that the brightest outlook for the future of your great Dominion can be assured through the extension of private railway enterprises. The hope of honor and the reward of public approval must be open to human kind to get the best results from human endeavor.

Facing the urgency of the need, considering the part which the government has taken and the responsibility which it shares, and keenly alive to the magnitude and the importance of the tasks now placed upon the railways and the greater tasks which they will face, I see no safe alternative but that the government shall continue, with discrimination and resort to all available safeguards, and under a policy of proper regulation and co-operation of effort, to aid the necessitous railways of the Dominion until such time, which I hope and believe will not be far distant, when these will become self supporting and the problem will be solved.

President Chamberlin Questions Statements Respecting G.T.R.

E. J. Chamberlin, President G.T.R. and G.T. Pacific Ry., made the following statement May 6: "I have read the majority report of Sir Henry Drayton and W. M. Acworth, who with A. H. Smith, President, New York Central Rd., were appointed a commission to examine the Canadian railway situation. I have not, however, seen the report of Mr. Smith dissenting from the views of the other commissioners. I am extremely surprised at some of the statements made in the report with regard to the position of the G.T.R. Co., of Canada, which, with all respect to the commissioners signing the majority report, I am compelled to say are inaccurate and misleading. So far as that company is concerned its credit at the present time is high, and its financial position not at all as stated in the report.

"During the past five years the G. T. has borrowed in New York for capital purposes over \$15,000,000, and had it not been for the war, which created abnormal conditions, further capital would have been procured and expended if prices had been satisfactory and deliveries could have been obtained. In view of statements contained in the report, and calculated to impair this credit of the company, I think it only just to the holders of G. T. securities that they should be assured of the absolute safety of their investment. At a later date a full statement with regard to the company's position will be made."

Steam Railway Statistics for Year Ended June 30, 1916.

In the following table the column headed gross earnings includes passenger and freight earnings, as well as miscellaneous earnings; the latter not being shown separately; the next four columns give the operating expenses classified under their various headings, while the last gives the net earnings, which are arrived at by deducting the totals of the four columns referred to from the figures in the gross earnings column. The minus (—) mark before figures in the net columns shows that there was a deficit in the operations of the line to the extent of the figures given. The cents have been omitted in all cases, and the figures in the totals show the aggregate earnings, etc., including the cents, omitted from the detailed items.

Name of railway	Mileage	Passenger earnings	Freight earnings	Gross earnings	Maintenance of way and structures	Maintenance of equipment	Traffic and transportation expenses, etc.	General expenses	Net earnings
Algoma Central & Hudson Bay	347.71	\$ 50,745	\$ 550,119	\$ 739,270	\$ 190,924	\$ 95,448	\$ 234,779	\$ 56,696	\$ 164,441
Algoma Eastern	88.77	51,055	413,056	528,005	52,124	56,313	132,115	15,345	280,184
Atlantic, Quebec & Western	103.08	32,100	69,206	102,675	32,590	19,313	54,849	13,157	-17,147
Bedlington and Nelson	12.04								
Brandon, Sask. & Hudson Bay	69.45	21,576	24,114	51,159	69,781	8,909	46,184	4,026	-77,742
British Yukon	101.12	41,683	219,927	270,104	30,519	9,175	46,324	18,112	165,971
Canada Southern	380.54	2,915,909	7,842,339	11,422,272	1,244,547	1,287,770	3,602,567	280,286	5,007,099
Canada & Gulf Terminal	35.80	16,655	29,084	49,328	7,819	2,345	22,679	7,332	9,151
Canadian Government									
Intercolonial	1,514.10	4,000,595	10,120,807	15,686,661	2,429,871	2,411,272	8,170,307	311,731	2,363,478
National Transcontinental	2,002.09	619,954	5,030,411	5,798,516	1,547,238	960,205	2,776,212	85,405	429,454
Prince Edward Island	274.60	175,879	181,640	436,728	149,564	77,171	331,981	16,597	-138,786
Canadian Northern	9,647.23	5,454,755	26,500,937	35,476,275	5,899,540	4,090,198	14,166,532	1,087,921	10,232,088
Canadian Pacific	12,899.70	24,407,144	89,072,485	124,654,570	14,671,791	16,695,955	44,543,891	2,326,188	46,416,743
Cape Breton	31.00	6,122	8,288	15,099	6,334	1,505	10,905	3,225	-6,871
Caraguet	84.78	22,896	53,004	81,218	20,756	7,972	39,451	7,313	5,724
Central Vermont	125.20	118,487	195,973	341,672	84,802	25,130	138,049	7,785	85,902
Crow's Nest Southern	74.18	9,182	100,318	112,641	71,476	24,851	66,356	6,435	-56,478
Cumberland Ry. & Coal	32.00	14,708	67,793	87,454	22,539	8,787	41,674	3,255	11,196
Detroit River Tunnel	1.45								
Dominion Atlantic	274.16	373,543	508,251	962,066	195,141	75,795	375,769	38,596	276,763
Eastern British Columbia	14.00	1,384	28,465	31,338	11,932	3,843	15,139	1,643	-1,220
Edmonton, Dunvegan & B. C.	287.00	152,380	259,654	427,413	72,208	32,078	212,807	16,161	94,157
Elgin & Havelock	27.00	2,801	7,138	10,997	5,277	46	4,977	399	297
Esquimalt & Nanaimo	199.20	172,028	308,761	529,913	93,869	68,229	187,086	9,616	171,111
Essex Terminal	10.00		70,678	84,310	20,604	2,410	21,390	11,415	28,453
Fredericton & Grand Lake Coal & Railway Co.	35.00	6,786	61,561	69,807	10,032	3,894	28,157	3,448	24,274
Grand Trunk	3,555.85	10,261,959	25,317,784	39,155,040	4,447,664	6,161,593	16,676,872	1,495,872	10,373,027
Grand Trunk Pacific	1,963.91	1,029,880	4,959,373	6,963,188	1,557,939	1,264,007	2,748,942	331,953	1,060,345
Hereford	52.18	16,913	75,973	97,063	36,793	14,979	51,035	3,635	-9,379
International of N.B.	111.30	39,140	74,420	116,227	59,103	11,400	46,309	2,616	-3,204
Inverness Ry. & Coal Co.	60.91								
Kent Northern	27.00								
Kettle Valley	302.92	44,621	272,000	330,426	165,300	28,880	126,170	8,901	1,172
Klondike Mines	31.81								
Lotbiniere & Megantic	30.00	5,648	28,558	36,073	9,667	4,611	9,917	5,364	6,512
Magnetawan River	1.91								
Maine Central (Princ. Br.)	5.10	10,640	6,585	18,362	2,379	2,168	9,253	787	3,773
Manitoba Great Northern	91.77	5,803	31,415	38,087	66,842	7,918	36,218	3,709	-76,602
Maritime Coal, Ry. & Power	15.00	6,742	82,303	90,341	15,544	11,028	24,840	2,166	36,762
Massawippi Valley	35.46	64,676	153,127	224,520	48,989	34,643	114,753	10,010	16,121
Montreal & Atlantic	184.40	179,222	1,050,371	1,291,419	200,624	171,885	542,184	21,196	31,161
Moncton & Buctouche	32.00	12,868	18,963	34,663	9,434	3,079	14,579	4,414	3,136
Morrissey, Fernie and Michel	10.85	11,388	108,823	120,589	13,273	12,648	42,308	21,196	31,161
Midland of Manitoba	6.40	87,839	121,639	266,305	47,084	37,302	206,110	13,171	-37,364
Napierville Junction	27.06	11,304	117,480	129,417	13,260	5,839	37,531	1,844	70,941
Nelson & Fort Sheppard	55.42	16,037	21,273	42,909	38,520	8,746	37,105	4,466	-45,929
New Brunswick Coal & Ry Co.	58.00	11,548	31,300	44,949	21,448	7,807	12,959	2,433	299
New Brunswick & P.E.I.	36.05	7,742	32,961	42,624	33,001	4,650	24,633	591	-20,252
New Westminster Southern	15.18	3,138	26,730	35,203	9,554	3,263	13,397	2,241	6,745
North Shore	8.63								
Northern N.B. & Seaboard	19.80								
Nosbonsing & Nipissing	5.50								
Ottawa & New York	56.90	78,247	151,529	250,237	81,625	37,196	154,988	9,010	-32,582
Peré Marquette	198.81	133,198	2,796,837	2,987,102	334,729	212,524	963,192	76,481	1,400,404
Phillipsburg Ry. & Quarry Co.	6.00								
Quebec Central	277.00	378,364	1,043,107	1,506,348	209,706	170,772	567,030	48,071	510,766
Quebec Oriental	100.00	45,204	86,251	138,688	47,317	15,975	52,017	14,298	9,080
Quebec Ry., Light & Power Co.	30.82	8,060	79,199	87,476	9,311	15,184	34,692	7,934	20,352
Quebec, Montreal & Southern	192.18	137,711	227,455	383,653	114,007	179,376	160,030	17,655	-87,486
Red Mountain	9.59	2,191	10,545	14,596	8,244	2,602	14,233	1,188	-12,672
Rutland & Noyan	3.39	8,723	5,936	14,956	3,659	2,170	5,527	704	2,894
Roberval-Saguenay	36.80	8,836	99,845	160,032	17,471	14,645	50,981	11,034	65,900
Salisbury & Albert	45.00	9,249	27,761	32,076	14,346	2,241	13,374	3,020	9,093
St. Lawrence & Adirondack	46.12	201,228	505,825	743,192	86,442	42,149	283,261	12,478	318,859
St. Martins	30.00	4,112	15,831	21,506	8,581	3,348	7,593	1,065	918
Sydney & Louisburg	70.27	51,398	747,862	821,385	116,138	194,563	294,910	25,659	190,113
St. John & Quebec	119.87	28,431	40,389	69,846	33,538	6,539	46,585	3,892	-20,709
St. Clair Tunnel	1.23								
Temiscouata	113.00	50,250	159,759	222,778	49,988	30,446	79,894	15,932	48,516
Timiskaming & North Ont.	328.50	555,017	1,277,440	1,992,372	364,541	228,846	861,304	77,311	462,351
Thousand Islands	6.33	8,832	21,279	38,001	5,664	777	16,787	3,469	11,303
Toronto, Hamilton and Buffalo	95.05	392,881	1,172,423	1,649,512	185,058	218,309	527,472	57,690	660,981
Vancouver, Victoria and Eastern	224.12	104,499	372,867	540,127	267,475	71,337	346,793	26,045	-171,723
Victoria and Sidney	15.79	16,345	12,236	31,934	5,332	1,106	17,931	2,904	4,660
Victoria Terminal Ry. and Ferry	.99	1,307	888	2,517	375	70	1,142	187	742
Wabash (1)		377,189	2,692,766	3,118,318	339,208	607,037	1,359,752	89,144	723,174
York and Carleton	10.50	1,865	2,928	4,987	1,356	176	2,302		1,152
Total	57,434.05	\$53,097,642	\$185,806,167	\$261,888,653	\$36,040,945	\$35,822,484	\$101,907,588	\$6,781,574	\$81,346,394

(1) The Wabash Ry., while operating in Canada, does not own any railway in the country, but runs over the G.T.R. from Windsor to the Niagara River, under a lease. It does both a through and local business in Canada, the officials and agents acting jointly for the G.T.R. and Wabash Ry.

Error in Steam Railway Statistics.

In the table of steam railway statistics on the preceding page, the total mileage in Canada at June 30, 1916, is shown as 57,434.05 miles, instead of 37,434.05 miles, the latter being the correct figures.

Passenger Train Service Ordered by Board of Railway Commissioners.

The Great Northern Ry., having applied for an order relieving it from maintaining a train service from Cloverdale North to Port Kells, B.C., and thence west to the bridge over the Fraser River, as required by order 9342, Jan. 18, 1910, as amended by order 12312, Sept. 5, 1910, the case was heard at Vancouver, June 26, 1916. The Board of Railway Commissioners gave judgment April 26, 1917, as follows: That the said orders, in so far as they direct the Great Northern Ry. to establish a train service on its Vancouver, Victoria and Eastern, and New Westminster and Southern Railways from Cloverdale North to Port Kells and from Port Kells to the Fraser River bridge at New Westminster, be rescinded, and the company is granted leave to establish a new time table covering the lines: from Sumas via Abbotsford and Cloverdale to Vancouver; from Guichon via Cloverdale to New Westminster; and from Haselmere to Abbotsford, upon the condition that the permission granted is without prejudice to the company being required, should conditions justify it, to serve the district between Cloverdale and Port Kells Jct.

Grand Trunk Ry.—On the application of the Aylmer, Ont., Board of Trade, for an order directing the G.T.R. to serve the territory between Tilsonburg Jct. and St. Thomas with its Tilsonburg Subdivision trains 263 and 268. The board ordered, May 2, that the G.T.R. be directed to extend the train now running from Brantford to Tilsonburg, arriving at Tilsonburg at 6.50 p.m. through to St. Thomas, return to Tilsonburg Jct., and there connect with the train from Hamilton, as at present arranged; the train service to be shown in the new summer time table and continued for three months as a trial service.

Victoria Jubilee Bridge Tolls.—The South Shore Board of Trade at a meeting held in St. Lambert, Que., May 2, arranged to hold a public meeting at an early date to decide what action should be taken to have the tolls on Victoria Bridge abolished. A return submitted to the House of Commons, May 1, shows that a new tariff had been agreed upon April 7, as follows: Eight tickets for foot passengers for 25c, instead of 6 tickets; a 15c rate for motor cycles; a 25c rate for automobiles, and the issue of tickets at the rate of 10 for \$2, 20 for \$3, good for one month, and 50 for \$5, good for three months. For motor trucks, the rates agreed upon were 40c for those of two tons and under, 60c for those between two tons and four tons, and 90c for all over four tons.

Safety First Pictures.—The Canadian Government Railways has converted the official car, Yamachiche, into a moving picture theatre, for giving safety first demonstrations to its employes. Demonstrations have already been given at New Glasgow, Stellarton, Pictou, Sydney, North Sydney, Truro, Halifax, N.S., St. John and Moncton, N.B.

Birthdays of Transportation Men in June.

Many happy returns of the day to:

Jas. Anderson, Manager, Sandwich, Windsor & Amherstburg Ry., Windsor, Ont., born at Ayr., Ont., June 20, 1851.

F. F. Backus, General Manager, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont., born at Rochester, N.Y., June 4, 1860.

W. C. Bowles, General Freight Agent, Western Lines, C.P.R., Winnipeg, born at Montreal, June 3, 1875.

J. H. Boyle, Superintendent, Farnham, Division, Quebec District, C.P.R., Farnham, born at Waterloo, Que., June 26, 1869.

F. P. Brady, General Manager, Lines from Quebec Bridge westerly, Canadian Government Railways, Cochrane, Ont., born at Haverhill, N.H., June 22, 1853.

H. W. Brodie, General Passenger Agent, Lines West of Revelstoke, C.P.R., Vancouver, B.C., born at Fredericton, N.B., June 8, 1874.

G. W. Coburn, Resident Engineer, C.P.R., Brandon, Man., born at Upper Melbourne, Que., June 24, 1877.

E. P. Coleman, General Manager, Dominion Power & Transmission Co., Ltd., Hamilton, Ont., and President, Canadian Electric Railway Association, born at Taunton, Mass., June 14, 1867.

W. S. Cookson, General Passenger Agent, G.T.R., Montreal, born at Port Jervis, N.Y., June 12, 1871.

E. L. Cousins, Manager and Chief Engineer, Toronto Harbor Commission, Toronto, born there, June 11, 1883.

A. Craig, City Passenger Agent, C.P.R., Hamilton, Ont., born there, June 5, 1884.

A. E. Doucet, M.Can.Soc.C.E., Quebec, ex-District Engineer, National Transcontinental Ry., Quebec, born at Montreal, June 9, 1860.

E. W. DuVal, formerly Superintendent, Saskatoon Division, Saskatchewan District, C.P.R., Saskatoon, now on active military service, born at Toledo, Ohio, June 5, 1885.

Knowlson Elliott, City Freight Agent, C.P.R., Calgary, Alta., born at Gorrie, Ont., June 26, 1884.

J. M. R. Fairbairn, M.Can.Soc.C.E., Assistant Chief Engineer, Eastern Lines, C.P.R., Montreal, born at Peterborough, Ont., June 30, 1873.

W. E. Foster, Solicitor for Ontario, G.T.R., Montreal, born at Belleville, Ont., June 27, 1866.

A. A. Goodchild, General Storekeeper, Eastern Lines C.P.R., Montreal, born at Peckham, London, Eng., June 3, 1866.

H. W. Harding, Local Secretary, Canadian Northern Ry., London, Eng., born there, June 6, 1869.

Hon. J. D. Hazen, M.P., Minister of Marine, Ottawa, born at Oromocto, N.B., June 6, 1860.

L. K. Jones, I.S.O., Assistant Deputy Minister, Department of Railways and Canals, Ottawa, born at Port Hope, Ont., June 9, 1849.

A. C. Lytle, Assistant Superintendent of Construction, Montreal Tramways Co., Montreal, born at Hemmingford, Que., June 6, 1854.

J. D. McAuley, Commercial Agent, Grand Trunk Pacific Ry., and Grand Trunk Pacific Coast Steamship Co., Ltd., Prince Rupert, B.C., born at Plantaganet, Ont., June 11, 1884.

R. S. McCormick, M.Am.Soc.C.E., Chief Engineer and General Superintendent Algoma Central & Hudson Bay Ry., Sault Ste. Marie, Ont., born at Quaker City, Ohio, June 22, 1873.

Duncan McDonald, ex-General Manager, Montreal Tramways Co., born at St. Thomas de Montmagny, Que., June 17, 1859.

S. J. McLean, Dominion Railway Commissioner, Ottawa, born at Quebec, June 14, 1871.

C. E. McPherson, Assistant Passenger Traffic Manager, Western Lines, C.P.R., Winnipeg, born at Chatham, Ont., June 7, 1861.

W. R. MacInnes, Freight Traffic Manager, C.P.R., Montreal, born at Hamilton, Ont., June 7, 1867.

J. R. C. Macredie, M.Can.Soc.C.E., Engineer, Saskatchewan District, C.P.R., Moose Jaw, born at St. John, N.B., June 13, 1880.

G. Manson, Assistant to the Vice President, C.P.R., Montreal, born at Thurso, Scotland, June 8, 1863.

J. D. Morton, Assistant Comptroller, Canadian Northern Ry., Toronto, born at London, Ont., June 15, 1857.

L. Mulkern, Division Freight Agent, C.P.R., St. John, N.B., born at London, Ont., June 18, 1871.

J. E. Pinault, General Superintendent, Canada & Gulf Terminal Ry., Mont Joli, Que., born at Rimouski, Que., June 24, 1884.

F. R. Porter, Assistant General Freight Agent, Grand Trunk Pacific Ry., Winnipeg, born at Stratford, Ont., June 13, 1875.

W. G. Powell, Freight and Passenger Agent, Grand Trunk Pacific Ry., Skagway, Alaska, born at Galt, Ont., June 27, 1891.

F. Price, Superintendent of Car Service, G.T.R., Montreal, born there, June 11, 1864.

Allan Purvis, General Superintendent, Quebec District, C.P.R., Montreal, born at Batavia, Java, June 29, 1878.

J. L. Reycraft, Solicitor, Manitoba and Saskatchewan Districts, C.P.R., Winnipeg, born in Orford Tp., Kent County, Ont., June 20, 1868.

L. G. Rogers, Yardmaster, C.P.R., Trenton, Ont., born at Richford, Vt., June 18, 1874.

J. R. Shaw, General Agent, Passenger Department, Canadian Pacific Ocean Services Ltd., Shanghai, China, born at Montreal, June 28, 1871.

J. L. Simpson, agent, C.P.R., Port McNicoll, Ont., born at Mount Forest, Ont., June 9, 1866.

H. H. Smith, Car Accountant, Canadian Northern Ry., Toronto, born at Quebec, Que., June 14, 1872.

N. Van Wyck, Freight Claims Agent, Canada Steamship Lines, Ltd., Montreal, born at Hamilton, Ont., June 29, 1883.

V. G. R. Vickers, Manager, Foreign Department, and Superintendent, Atlantic Division, Dominion Express Co., Montreal, born at Toronto, June 1, 1866.

Walter White, Trainmaster, G.T.R., Palmerston, Ont., born at Toronto, June 4, 1866.

Foot Boards for Yard Locomotives, etc.—The question having been raised as to whether a road locomotive used in joint yard and transfer service should be equipped with foot boards, as outlined in the Board of Railway Commissioners' general order 102, the board has given notice that all locomotives used in yard, joint yard and transfer service must be equipped with foot boards, as prescribed for steam locomotives used in switching service.

Railway Finance, Meetings, Etc.

Algoma Central Terminals, Ltd.—In accordance with the arrangement made some little time ago, holders of the company's 5% first mortgage 50 year gold bonds are required to forward their bonds with all unpaid coupons attached to the Bank of Montreal, London, Eng. A payment of interest at 3% per annum is to be made for the year ended Aug. 1, 1915.

The Canadian Northern Ry. Co. announces that the earning for the half year ended Dec. 31, 1916, were insufficient to enable it to pay any interest on the 5% income charge convertible debenture stock on May 2.

Lacombe & Blindman Valley Electric Ry.—The Merchants Bank of Canada is receiving at its Toronto office, to June 14, tenders for the purchase of \$547,000 of 5% 20 year gold bonds of the L. & B.V.R., guaranteed as to principal and interest by the Alberta Government.

Timiskaming & Northern Ontario Ry.—Passenger earnings for March, \$47,554.51; freight earnings, \$127,641.23; total earnings, \$175,195.74; against \$49,666.24, passenger earnings; \$165,262.27, freight earnings; \$214,928.51, total earnings, for Mar., 1916.

White Pass & Yukon Route.—Gross earnings from Jan. 1 to Mar. 14, \$54,887, against \$36,530 for same period, 1916.

Forest Fires Along Railways.—During 1916, there were reported 558 fires as originating in forest sections, within 330 ft. of railway tracks, under the Board of Railway Commissioners' jurisdiction. This was 128 less than reported in 1915. Of the total for 1916, 69% were attributed to railway causes, 18% to known causes other than railways, and 13% to unknown causes. Of the 388 fires attributed to railways, 101 were incipient fires and did no damage; 287 were larger fires which burned over 11,290 acres valued at \$35,556. The total damages from fires are estimated at \$39,482, of which railways are charged with 90%. This is stated to be a remarkably good showing, considering the unfavorable weather conditions. Of the total fires, 61% were attributed to locomotives and 8% to railway employes. The use of tank cars for fire fighting purposes by the C.P.R., Grand Trunk, Timiskaming & Northern Ontario and Canadian Government Railways, has proved effective in many cases.

The June Mechanical Conventions.—The annual conventions of the American Railway Master Mechanics' Association, and the Master Car Builders' Association, announced to be held at Atlantic City, N.J., June 13 to 20, will not be held this year. A joint meeting of the executive committees of the two associations was held at Chicago, Ill., April 30, when the general opinion was expressed that during the war emergency, it was imperative for all railway employes to remain at their posts ready to give their best services to their roads and the government. A number of the other railway associations have followed the lead given by the foregoing two associations, and have cancelled, or indefinitely postponed, their annual conventions for the present. Among those of which we have been advised are the Association of Transportation and Car Accounting Officers, and the Railway Storekeepers' Association.

The Canadian Society of Civil Engineers' council has approved of the change of name of the Regina branch, to Saskatchewan branch.

Canadian Pacific Ry. Honor Roll Nos. 21 and 22.

Adair, James	Carpenter	West Toronto	Wounded
Anderson, Henry	Clerk	Montreal	Wounded
Andrews, Frederick	Checker	Toronto	Wounded
Bain, William Wilson	Clerk	Montreal	Wounded
Beer, Harold Evans	Clerk	Toronto	Wounded
Bibby, Fred.	Checker	North Bay	Believed killed
Black, Edward Charles	Fitter's helper	Winnipeg	Wounded
Blennerhasset, A. J.	Trainman	Fort William	Killed in action.
Borley, John William	Locomotive fireman	British Columbia Dist.	Wounded
Boyd, James Ira	Wiper	Fort William	Wounded
Brown, John	Clerk	Calgary	Killed in action.
Buck, Sidney C. B.	Carpenter	Winnipeg	Wounded
Bunker, Cecil Elbridge	Fitter's helper	McAdam	Wounded
Causton, Charles	Truck repairer	Ogden	Wounded
Chalmers, James	Carpenter	Ogden	Wounded
Clark, Walter Blackie	Clerk	Winnipeg	Killed in action.
Collett, George	Fitter's helper	Lambton	Wounded
Coutts, James Russell	Operator	Goderich	Wounded
Crowthier, Frank	Fitter's helper	Winnipeg	Wounded
Cummins, Herbert	Apprentice	Ogden	Wounded
Dann, Joseph	Conductor	Fort William	Wounded
Daw, Norman	Apprentice	Winnipeg	Wounded
Devane, Guilford	Upholsterer	Field	Wounded
Douglas, James H.	Lineman	Minnedosa	Believed killed
Drummond, John J.	Porter	Fort William	Wounded
Easton, John	Trainman	Winnipeg	Wounded
Edwards, George	Wiper	Lethbridge	Wounded
Evans, David John	Floorman	Edmonton	Wounded
Faught, Thomas	Operator	Mattawa	Wounded
Foster, Edwin A.	Helper	Ogden	Wounded
Fryer, William John	Clerk	Fort William	Wounded
Gay, Aubrey H.	Locomotive man.	Calgary	Killed in action
Goodship, Lawrence A.	Wiper	Golden	Wounded
Greenless, Malcolm	Assistant cashier	Vancouver	Wounded
Harris, Benjamin G.	Clerk	Souris	Wounded
Harvey, William	Crane man	Winnipeg	Killed in action
Hayes, Stewart F.	Chainman	Kipawa	Presumed dead
Hind, Thomas	Car repairer	Ogden	Wounded
Holmes, William	Fitter	McAdam Jct.	Wounded
Humphreys, Richard	Car wheel borer	Vancouver	Wounded
Ivory, Arthur	Locomotive fireman	Winnipeg	Wounded
James, Percival Clyde	Porter	Almonte	Wounded
Johnston, Thomas A.	Clerk	Vancouver	Wounded
Kain, Charles	Helper	Winnipeg	Wounded and prisoner
Kent, Edmund Henry	Stenographer	Montreal	Wounded
Kipling, Charles	Locomotive fireman	Moose Jaw	Wounded
Laidlaw, William	Porter	Smiths Falls	Wounded
Lane, William G.	Clerk	Calgary	Wounded
Lewis, Samuel John	Locomotive fireman	Moose Jaw	Killed in action
Loveridge, Albert	Watchman	Lyleton	Wounded
Lunan, Kenneth S.	Trainman	Schreiber	Wounded
McDonald, Alistair K. H.	Brakeman	Vancouver	Wounded
McGarry, Withy Paul	Brakeman	Victoria	Wounded and missing
McGibbon, James Roy	Operator	Weyburn	Wounded
McGilechrist, William	Apprentice	West Toronto	Wounded
McKay, Angus	Clerk	Fort William	Wounded
McKenzie, Elmer J.	Chauffeur	Lethbridge	Died of wounds
McLaughlin, John	Clerk	Moose Jaw	Presumed dead
Mahaffy, William	Helper	Angus	Believed killed
March, William	Locomotive fireman	Medicine Hat	Killed in action
Miller, Cecil Everett	Yardman	McAdam Jct.	Wounded
Miller, Robert	Trapper	Lethbridge	Killed in action
Milligan, Archibald	Boilermaker	Ogden	Wounded
More, James	Leverman	Winnipeg	Wounded
Morris, Thomas J.	Specialist	Angus	Wounded
Mulhearn, William E.	Fitter	Winnipeg	Wounded
Murray, Edward J.	Car repairer	Ogden	Wounded
Niven, Gilbert	Stationary fireman	Windsor	Wounded
Nixon, Frank Stroner	Clerk	Vancouver	Wounded
Old, Harvey George	Car cleaner	Winnipeg	Died of wounds
Oliver, Thomas Edward	Wiper	MacLeod	Killed in action
Parker, Sidney Herbert	Car repairer	Toronto	Wounded
Parsons, Frank	Apprentice	Winnipeg	Wounded
Paxton, Ernest F.	Clerk	Calgary	Wounded
Pearson, Sydney	Clerk	Montreal	Wounded
Peterson, John James	Trainman	British Columbia Dist.	Wounded
Pitt, Alfred	Wiper	Sutherland	Wounded
Powles, Charles M.	Apprentice	Winnipeg	Wounded
Price, Frederick	Yardman	Montreal	Shell shock
Proven, William	Carpenter	Calgary	Died of wounds
Ratliffe, Joseph	Machinist	Angus	Died of wounds
Robertson, Andrew M.	Apprentice	Angus	Wounded
Rogers, Claude P.	Clerk	Angus	Wounded
Rowe, Henry Thomas	Porter	Port McNicoll	Died of wounds
St. Jean, Ambrose	Caller	Schreiber	Killed in action
Scott, Fred.	Cleaner	Winnipeg	Wounded
Sharman, George T.	Tuber	Ogden	Wounded
Shorrocks, Richard	Yardman	Montreal	Killed in action
Slater, John Henry	Locomotive fireman	Alberta Dist.	Wounded
Smith, Alexander	Section foreman	Strathcona	Wounded
Stevenson, Alan C.	Operator	Montreal	Wounded
Strang, Robert	Clerk	Fort William	Wounded
Taylor, Albion Lynn	Wireman	Angus	Wounded
Thomas, Herbert Henry	Car foreman	Schreiber	Wounded
Tracy, John Marius	Assistant agent	Qu'Appelle	Died of wounds
Waldock, Leonard	Clerk	Toronto	Wounded
Wallace, Henry Elliott	Switchman	Glen Yard	Wounded
Weston, Henry Fulham	Fitter's helper	Smiths Falls	Wounded
Whitefield, John	Night watchman	Lethbridge	Killed in action
Wilding, Alfred John	Locomotive fireman	Kenora	Wounded
Williams, Hugh C.	Transitman	Montreal	Wounded
Wilson, Walter	Storeman	Montreal	Wounded
Wray, Joseph	Locomotive fireman	Brandon	Wounded
Atkinson, James M.	Trainman	British Columbia Dist.	Wounded and missing
Bavester, Frank	Helper	Medicine Hat	Wounded
Berry, Chas.	Cleaner	Winnipeg	Wounded
Bissonnette, Albert	Yardman	Hochelaga	Died of wounds
Blackwell, William	Storeman	Winnipeg	Wounded.
Bottomley, William	Helper	Winnipeg	Killed in action
Boyd, James	Wiper	Kamloops	Wounded
Broom, Roy	Assistant agent	Kisbey	Wounded

Buchan, William	Clerk	Montreal	Wounded
Bull, Charles Humphrey	Boilermaker	Angus	Wounded
Calvert, Thomas	Locomotive fireman	Calgary	Killed in action
Campbell, Pius Joseph	Inspector	Calgary	Died of wounds
Carter, David	Car repairer	West Toronto	Killed in action
Chandler, William	Cleaner	Toronto	Wounded
Chittenden, Alfred	Helper	Winnipeg	Wounded
Clementson, John F.	Clerk	Winnipeg	Presumed dead
Cope, James	Cook	Montreal	Wounded
Crooks, William David	Waiter	Montreal	Killed in action
Culling, Frederick G.	Waiter	B.C. Coast S.S. Service	Died of wounds
Davidson, James	Apprentice	Winnipeg	Wounded
Davis, Albert St. Alban	Apprentice	Angus	Wounded
DeMill, Frank	Clerk	Winnipeg	Wounded
Dedgled, John	Constable	Montreal	Wounded
Dion, Joseph Alphonse	Brakeman	Manitoba Dist.	Wounded
Duncan, James Riffuth	Conductor	British Columbia Dist.	Wounded
Dunn, Joseph	Helper	Winnipeg	Presumed dead
Eades, Robert	Constable	Montreal	Wounded
Edmondson, Isaac	Locomotive fireman	Kenora	Wounded
Ellacott, James L.	Clerk	Winnipeg	Believed killed
Everest, Edwin F.	Baggage man	Yorkton	Wounded
Ferguson, Leonard C.	Trainman	British Columbia Dist.	Wounded
Frank, Charles F.	Clerk	Lacombe	Wounded
Gatehouse, Arnold	Storeman	Winnipeg	Died of wounds
George, Leo Bernard	Apprentice	Vancouver	Wounded
George, Stanley W.	Timekeeper	Kootenay Central Ry.	Wounded
Grant, Edward J.	Locomotive fireman	Winnipeg	Wounded
Hall, George	Car cleaner	Winnipeg	Wounded
Hancock, William	Helper	Winnipeg	Killed in action
Hardwicke, John T.	Fitter	Winnipeg	Wounded
Harvey, Bernard N.	Timekeeper	North Bay	Killed in action
Hayward, Harry	Locomotive fireman	Winnipeg	Wounded
Heatley, Alexander	Waiter	Montreal	Wounded
Hillier, Frank	Car repairer	Victoria	Wounded
Hourd, Albert Paget	Clerk	Winnipeg	Wounded
Howie, Samuel Currie	Clerk	Vancouver	Wounded
Hutchinson, James W.	Stenographer	Montreal	Killed in action
Irlam, Thomas	Lamp and heaterman	Winnipeg	Wounded
Jessiman, George J.	Clerk	Winnipeg	Killed in action
Jones, John	Waiter	Montreal	Wounded
Knox, William S.	Carpenter	Montreal	Wounded
Lane, Albert Edward	Clerk	Moose Jaw	Wounded
Lord, Arthur	Clerk	Brandon	Wounded
Ludeman, Fred.	Cleaner	Vancouver	Wounded
McDonald, Archibald	Cleaner	Winnipeg	Gassed and dead
McDonald, Walter A.	Clerk	Lambton	Wounded
McKay, Alexander	Brakeman	McAdam Junction	Wounded
Mackenzie, Donald	Clerk	Calgary	Killed in action
McKillop, Donald	Conductor	Vancouver	Wounded
McLeod, John A.	Miner	Cranbrook	Wounded
McNair, J.	Checker	Calgary	Wounded
McNicol, James	Clerk	Toronto	Wounded
Mason, Walter John	Clerk	Galt	Killed in action
Menard, Noel Arthur	Head bellman	Vancouver	Wounded
Miller, Joseph	Miner	Victoria	Wounded
Millican, William	Locomotive fireman	Lethbridge	Wounded
Morris, John	Wiper	Fort William	Wounded
Morris, Mark	Wiper	Moose Jaw	Wounded
Mottley, John A.	Locomotive fireman	est Calgary	Killed in action
Murdock, William H.	Brakeman	British Columbia Dist.	Wounded
Nicolson, Murdoch	Clerk	Moose Jaw	Killed in action
Park, Leslie	Brakeman	Kenora	Gassed
Parkinson, Edward R. B.	Clerk	Smiths Falls	Died of wounds
Parsons, Edward James	Locomotive fireman	Vancouver	Wounded
Pearson, George C.	Helper	Smiths Falls	Wounded
Pegg, Henry	Constable	Winnipeg	Killed in action
Pippard, Frederick G.	Locomotive fireman	Montreal	Gassed
Pitts, Walter G.	Stripper	Smiths Falls	Wounded
Plater, Ernest	Apprentice	West Toronto	Wounded
Prizeman, George A.	Cashier	Angus	Wounded
Rickards, George T.	Locomotive fireman	Shaunavon	Wounded and missing
Robinson, Hugh Miller	Locomotive man	Fort William	Killed in action
Rosby, Asa Foster	Apprentice	Cranbrook	Killed in action
Russell, John Joseph	Waiter	Ogden	Shell shock
Sands, Thomas Henry	Locomotive man	Montreal	Wounded
Savage, Charles Henry	Timekeeper	Regina	Wounded
Scott, Dave	Yardman	Farnham	Wounded
Scott, John Stewart	Clerk	Calgary	Wounded
Small, William Wallace	Locomotive fireman	Montreal	Wounded
Smythe, John William	Waiter	Winnipeg	Killed in action
Starkey, Cecil Stanley	Section man	B.C. Coast S.S. Service	Presumed dead
Stockdale, William J.	Conductor	Parry Sound	Presumed dead
Sykes, Norris	Foreman	North Bay	Wounded
Thompson, Henry	Porter	British Columbia Dist.	Wounded
Toole, Henry	Caller	Lethbridge	Wounded
Turnbull, Percy	Lampman	Winnipeg	Wounded
Wansbrough, Basil C.	Stenographer	Lethbridge	Wounded
Ward, Cyril	Car repairer	Toronto	Wounded
Welch, Maurice	Carpenter	Ogden	Killed in action
Whyte, William D.	Baggage master	West Toronto	Wounded
Wilkin, Francis A.	Surveyor	Banff	Wounded
Wilson, Willard N.	Car repairer	Winnipeg	Wounded
Wilson, William	Clerk	McAdam	Wounded
Whitney, Percy Howard	Wiper	Montreal	Wounded
		Moose Jaw	Wounded

Canadian Northern Railway Earnings, Etc.

Gross earnings, working expenses, net earnings, increases, compared with those of 1915-16, from July 1, 1916:

	Gross Earnings	Expenses	Net Earnings	Increase
July	\$3,884,200	\$2,636,800	\$1,197,400	\$ 711,000
Aug.	3,684,900	2,612,900	1,072,000	614,300
Sept.	3,187,900	2,455,300	732,600	x177,300
Oct.	3,716,800	2,496,500	1,220,300	x36,700
Nov.	3,722,300	2,472,300	1,250,000	88,600
Dec.	3,485,400	2,661,600	823,800	x378,300
Jan.	2,832,600	2,350,500	482,100	226,700
Feb.	2,358,600	2,250,400	108,200	x21,200
Mar.	3,273,200	2,655,100	618,100	251,700
Apr.	3,315,500	2,557,600	757,900	208'000
	\$33,411,000	\$25,149,000	\$8,262,400	\$1,436,800
Incr	\$6,452,500	\$6,015,710	\$1,436,800	.....

* Deficit.
Approximate earnings for three weeks ended May 21, \$2,476,900 against \$2,118,300 for same period 1916.

Canadian Pacific Railway Earnings, Etc.

Gross earnings, working expenses, net earnings, increases, or decreases, compared with those of 1916, from Jan. 1, 1917:

	Gross Earnings	Expenses	Net Earnings	Increase
Jan.	10,158,307.86	7,726,829.36	2,431,478.50	341,070.27
Feb.	9,084,276.76	7,098,227.96	1,986,048.80	x308,298.94
Mar.	11,846,542.98	7,909,225.16	3,937,317.82	516,987.46
Apr.	12,355,519.60	8,180,541.98	4,174,977.62	441,241.65

\$43,444,674.20 \$30,914,824.46 \$12,529,322.74\$ 990,005.44
Inc. \$ 4,797,702.51 \$ 3,807,697.07\$ 990,005.44

Approximate earnings for three weeks ended May 21, \$9,262,000 against \$7,965,000 for same period 1916.

Grand Trunk Railway Earnings.

The aggregate traffic receipts from Jan. 1 to April 30 are:

G.T.R.	\$14,617,203	\$13,577,901	\$1,039,302	.....
G.T.W.R.	2,807,321	2,914,947	.....	\$107,626
D.G.H. & M.R.	1,005,933	1,002,511	3,422	.....

Totals \$18,430,457 \$17,495,359 \$935,098

Approximate earnings for three weeks ended May 21, \$3,917,291 against \$3,195,883 for same period 1916.

Grand Trunk Pacific Ry. Earnings.

The approximate earnings of the Prairie Section, 916 miles, from Jan. 1 to April 21, were \$1,346,594 against \$1,411,519 for same period 1916.

Cultivating Railway's Right of Way.—Grand Trunk Pacific Ry. employes have been notified that the company's whole right of way is offered for gardening purposes without any charge to employes. Whatever crops can be raised on this land will belong absolutely to the employes who do the work. If the section man is able to lay out his garden 25 ft. wide, he needs a length of 400 ft. only to give him a garden of a quarter of an acre. City gardeners, who often get results worth while from a tenth of this space will realize the opportunity that the section man has in the way of feeding his family and possibly raising crops to sell.

Cost of Handling Freight.—The Minister of Customs stated in the House of Commons, May 3, that the cost per calendar month during the winter of 1916-17 at Pictou, Charlottetown and Georgetown, respectively, of handling freight going to and from Prince Edward Island was:—Charlottetown, Nov., 67c. per ton; Dec., \$1; Jan. 1 to 10, 73c. Georgetown, Jan. 10 to 31, 45c; Feb., 44c; Mar., 40c; April 1 to 21, 38c. Pictou, Jan., Feb. and Mar., 0.626c. At present freight is handled at Pictou for Prince Edward Island at a cost of 0.434c per ton.

The Canadian Railway Club's annual meeting was held at Montreal, May 8. Following are officers elected for the current year: President, G. E. Smart, Master Car Builder, Canadian Government Railways, Moncton, N.B.; First Vice President, C. W. VanBuren, General Master Car Builder, C.P.R., Montreal; Second Vice President, T. C. Hudson, Master Mechanic, Quebec Division, Canadian Northern Ry., Joliette, Que.; Executive Committee, J. Hendry, W. H. Winterrowd, E. J. McVeigh, C. H. N. Connell, A. Crumpton, E. A. Nix; Audit Committee, A. G. Mitchell, D. R. Arnold, G.

Whiteley; Treasurer, E. E. Lloyd; Secretary, Jas. Powell, Montreal.
C.P.R. Baggage Statistics.—During 1916 the C.P.R. handled 7,899,652 pieces of individual baggage, including 1,162,472 milk cans, and 28,309 baby carriages. The amount paid on loss was only \$1,791.79; on damage only \$1,669.08; and on pilferage only \$571.07, the cost to the company in these respects being only 5c per 100 parcels.
The C.P.R. is reported to have subscribed for \$1,000,000 of the Liberty Loan bonds issued by the United States Government.

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

Alberta-Hudson Bay Ry.—The Alberta Legislature authorized the High River & Hudson Bay Ry. to change its name to the Alberta-Hudson Bay Ry., extended the time for the building of the projected railway from High River to the Alberta-Saskatchewan boundary, and has given power to build the following additional lines: From near Black Diamond, in Tp. 20, Range 2, west 4th meridian, southerly to Lundbreck, or Cowley or the Crownsnest Southern Ry., thence to the Alberta-British Columbia boundary at the South Kootenay or Kishenckna Pass; from Lundbreck or Cowley southerly to the International Boundary near Waterton Lakes; from Lundbreck or Cowley southeasterly to Pincher Creek, Cardston and Coutts, thence easterly through Tps. 1, 2 and 3 to the Alberta-Saskatchewan boundary; from Cardston to Lethbridge; from Tps. 1 or 2, between Ranges 3 and 10, to Medicine Hat, thence northerly to Tp. 17 or 18 in Ranges 1, 2, 3 or 4, west of the 4th meridian. (May, pg. 193.)

Athabasca Valley Ry.—The Alberta Legislature has granted an extension of time for the building of the projected railway from Busby, on the Edmonton, Dunvegan & British Columbia Ry., 44.7 miles from Edmonton, northwesterly to Fort Assiniboine, 50 miles. J. D. McArthur is principally interested. (May, pg. 193.)

Central Canada Ry.—We are officially advised that the bridge being erected over the Peace River, on this railway, which is in operation from McLennan, on the Edmonton, Dunvegan & British Columbia Ry., to the river, 48.5 miles, is of the single track type, and is designed to carry highway attachments on either side when future development requires them. The length is 1,737.2 ft. between abutment parapets. The approximate height and class of material of the abutments and piers forming the substructure is: East abutment, curved, 58 ft. high, reinforced concrete; piers 1 and 2 are concrete pedestals; pier 3 is of concrete masonry approximately 48 ft. high; pier 4, masonry, 62 ft. high; pier 5, masonry, 70 ft. high; pier 6, masonry, 78 ft. high; pier 7, masonry, 82 ft. high; pier 8, masonry, 86 ft. high; pier 9, masonry, 70 ft. high; pier 10 is a concrete pedestal; while the west abutment is of reinforced concrete, buried, 29 ft. high. The superstructure consists of the following spans: two 70 ft. deck plate girders; two 80 ft. deck plate girders; six 200 ft. deck truss spans, and one 200 ft. through truss span. This latter span will give a clearance of 71 ft. above low water elevation and 54 ft. above extreme high water elevation, sufficient to meet the requirements of all northern river navigation. The deck spans will give 19 ft. clearance above high water level. The substructure is being built by the company by day labor, and a contract for the superstructure has been given to the Canadian Bridge Co., Walkerville, Ont. The cost of the entire structure will be in the neighborhood of \$1,000,000. Work on the substructure was started Feb. 1, and it is hoped to start putting up the superstructure Jan. 1, 1918, and to have traffic operating over the bridge by May 1, 1918.

The Alberta Legislature has authorized the company to build the following additional lines: An extension of the line authorized by chap 46, 1913, from Tp. 81, Range 4, west of 6th meridian, westerly to the western boundary of the Province;

to extend the same line northerly to the northern boundary of the Province, approximately parallel with Hay River; a branch line from Tp. 74, Range 17, west of 5th meridian, near High Prairie, southerly to Snipe Lake, thence westerly to 6th meridian; and a line from near Edmonton to Calgary. The line authorized to be built in 1913 was to start from Tp. 74 or 75, Range 18 or 19, west of 5th meridian, to Peace River Landing, thence to Tp. 86, Range 4, west of 6th meridian, with a branch from Peace River Landing northerly to the Brule River, near Tp. 94, Range 22, west of 5th meridian. (May, pg. 193.)

Dolly Varden Mines Ry.—This projected railway would be about 18 miles long and would extend from Alice Arm, referred to in the discussion in the British Columbia Legislature as Saltchuck, to the Wolfe mineral claims, in the Kitzault River valley. A press report states that construction will be started at once, but the plans do not appear to have been passed by the B.C. Minister of Railways. (May, pg. 193.)

Grand Lake Ry. & Transportation Co.—The railway authorized to be built by the company would extend from Christopher Lake, on Bell River, to Twenty-one Mile Bay, on the Ottawa River, and from Lake Atikamek to Rabbit Lake, on the Ottawa River. The company is authorized to carry on a general navigation business on all waters "south of the National Transcontinental Ry., and between Nottaway and Amos, on the said railway, and the Ottawa River, and elsewhere on the Ottawa River above Quinze River, and on all lakes, rivers, streams and watercourses tributary thereto," and to connect the various routes by roads, etc. The provisional directors are: Hon. Geo. Bryson, J. W. Bryson, J. R. Fraser, W. H. A. Fraser, Hon. Geo. Gordon, A. B. Gordon. (Jan., pg. 19.)

Grand Trunk Pacific Ry.—The City of Brandon, Man., is appealing to the Dominion Parliament to compel the company to complete its line into that city. The line is graded from Harte to the city boundary, and has been lying ready for the steel for four or five years. The company is applying to the Dominion Parliament for an extension of time to complete this and other lines.

Track laying is reported to be in progress from the south branch of the Saskatchewan River into Prince Albert, Sask., 25 miles. Track was laid over the bridge into St. Louis and the grading practically completed into Prince Albert during 1915. (May, pg. 193.)

Grand Trunk Ry.—The Board of Railway Commissioners has given the City of Brantford permission to construct a subway under the G.T.R. at St. Pauls Ave., the plans to be approved by the board's Chief Engineer. A subway for pedestrians is estimated to cost \$10,000, towards which the Railways Department will contribute \$2,000 from the level crossings elimination fund; and the G.T.R. will have to contribute \$4,800; the city bearing the balance of the cost. If the city desires to put in a subway for vehicular traffic, with sidewalks for pedestrian traffic, the order will issue in that form, the Dominion contribution being 20%, not to exceed \$5,000, and the G.T.R. contribution being limited to \$4,800, as the city had agreed with the company in 1905 to close the highway, ex-

cept for pedestrian traffic. (May, pg. 193.)

Greater Winnipeg Water District Ry.—Progress was reported to have been made on the construction of the extension of the line from Deacon to the Red River at the meeting of the commission in Winnipeg, May 3. Track was said to have been laid from Deacon to Maxeanch, and the culverts to have been put in on the remaining length of the line. The consent of other railways had been obtained for this line to cross them. (April, pg. 136.)

Great Northern Ry.—A press report states that R. D. Fry, said to be of the G.N.R. engineering staff, has completed a preliminary survey for a line from Pincher Creek to Cardston, Coutts and Medicine Hat, and is preparing to make a survey for a line from Cardston into Lethbridge, Alta. Another report connects these surveys with the projected Alberta-Hudson Bay Ry., formerly the High River & Saskatchewan Ry., in Alberta, and the High River & Hudson Bay Ry., under a Dominion charter, and points out that the line referred to as being surveyed would connect with the G.N.R. branch from Shelby now running into Coutts. A third report connects the surveys with the Chicago, Milwaukee & Parry Sound Ry. (May, pg. 193.)

Hudson Bay Ry.—The Minister of Railways stated in the House of Commons, April 30, that the amount spent on the Hudson Bay Ry. and the approaches thereto since Jan. 1, 1912, was \$17,790,587.74. The work on the railway, the terminals at Pas and Port Nelson were still being gone on with.

Press reports state that preparations are being made for opening up work for the season on the uncompleted portion of this railway. About nine miles of grading has yet to be completed at the Port Nelson end and about 90 miles of track has to be laid. No more track will be laid until the completion of the bridge across the Nelson River at Kettle Rapids. There are two other single span bridges to be erected. The line is expected to be completed into Port Nelson this year. (Mar., pg. 100.)

Intercolonial Ry.—The Minister of Customs stated in the House of Commons, May 7, for the Minister of Railways, that the Dominion Government proposed to build a station in Levis, Que., on the most suitable site that can be found, as early as war conditions will permit. The existing station is being put in repair. (May, pg. 193.)

Kenora & English River Ry.—The Dominion Parliament is being asked to incorporate a company with this title to build a railway from the National Transcontinental Ry. in Kenora District, west of Superior Jct., northerly and westerly, crossing the English River west of Lac Seul, thence northerly and westerly in the District of Patricia, thence westerly and southerly to and in Manitoba to Winnipeg. The office of the company is to be in Toronto; the authorized capital is \$1,000,000, and the company may issue securities for \$50,000 a mile. The provisional directors are: W. Miller, A. LeK. Williams, E. Miller, C. Flatt and A. A. Macdonald, Toronto.

Lacombe & Blindman Valley Electric Ry.—We are officially advised that although the word "electric" is included in the title, it is not really an electric railway. It is being built with a guarantee

of bonds by the Province of Alberta under the terms of an act for the building of light railways. About 36 miles of grading has been completed from Lacombe to near Rimby, the objective terminal, 39.1 miles from Lacombe, and a considerable portion of the fencing has been done. The company has on hand ties for 18 or 19 miles, and a quantity of materials, such as fastenings, switches, Y's, etc. It is hoped to complete the line during this year.

The company purchased in 1914 a car of English manufacture, operated by gas-oil hydraulic power, an illustrated description of which was given in *Canadian Railway and Marine World* for Nov., 1915. (May, pg. 203.)

Manitoba & Ontario Ry.—The Dominion Parliament is being asked to incorporate a company with this title to build a railway from near Brereton Station, Man., on the National Transcontinental Ry., to English River, between the easterly boundary of Manitoba and the 94th meridian of longitude, thence northerly to Hudson Bay between the mouths of the Albany and Nelson Rivers; to build wharves, docks, etc., there; and to connect the railway with any other railway serving the territory. Ewart, Scott, MacLaren & Kelly, Ottawa, and H. A. Stewart, Brockville, Ont., are solicitors for applicants.

Montreal Central Terminal Ry.—C. N. Armstrong, who is spoken of as Vice President and Chief Engineer, appeared before the Montreal Tramways Commission May 7, to submit the company's plans, and to suggest that arrangements be made whereby the Montreal Tramways Co.'s suburban cars should run into the Central station, which it is proposed to build. The property controlled by the company lies between St. Lawrence and Bleury Sts., from east to west, and between Vitre and Lagauchetiere Sts. from south to north. Mr. Armstrong explained the company's plans as providing for the construction of 13 or 14 miles of track, of which about eight miles would be open cut, and the remainder tunnel and subway work. The carrying out of the plans would involve the widening of Vitre St. An entrance to the proposed terminal station would be provided for the suburban cars along the projected lines. The commissioners were given a set of the blue prints to study. (April, pg. 136.)

Naas & Skeena River Ry.—The British Columbia Minister of Railways, under the authority conferred upon him by the B.C. Railway Act, has extended to May 31, 1918, the time within which the company may begin construction of its railway. The company was incorporated by the B.C. Legislature in 1911 to build a railway from Nasoga Gulf, or Naas Bay, on Portland Inlet, to the headwaters of the Skeena River. Barnard, Robertson, Hesterman & Tait, Victoria, B.C., are solicitors for the company. (Jan., 1916, pg. 10.)

Pas, Man.—We are advised by Hayden, Stone & Co., Boston, Mass., that they are not interested in any mining properties north of Pas, Man., in connection with which a press report stated a 98 mile railway was to be built. (May, pg. 193.)

Quebec & Saguenay Ry.—The British Chancellor of the Exchequer stated in the House of Commons recently that the War Cabinet would consider the possibility of Hamilton Inlet, on the Labrador coast, as an anchorage and outlet for Canadian trade. Hamilton Inlet is about

900 miles from Quebec, and provides practically the shortest route for steamships between the Canadian seaboard and Liverpool. The Q. & S.R., which was taken over by the Dominion Government last year, had a project for extending its line from the Saguenay River to Hamilton Inlet.

The Minister of Railways stated in the House of Commons recently that no money was paid by the Department in connection with the Q. & S.R., but that work to the value of \$180,000 was done on the line. It is estimated that an expenditure of \$1,000,000 is required to complete the line. (Jan., pg. 20.)

Queen's County Ry.—The Nova Scotia Legislature has extended the time for the building of this projected railway from the Halifax and South Western Ry. between Liverpool and Shelburne, to any of the Sable Lumber Co.'s timber limits. V. J. Paton, Bridgewater, N.S.; J. Walker, Newmarket, N.H.; and H. W. Anderson, New Hampstead, N.H., are primarily interested. (June, 1912, pg. 302.)

Skye Mountain Ry.—The Nova Scotia Legislature has granted an extension of time for the building of a railway in the Skye Mountain district of Inverness County. The railway projected is connected with the opening up of some collieries in the vicinity of Orangedale. (Aug., 1914, pg. 371.)

Timiskaming & Northern Ontario Ry.—We are officially advised that nothing definite has been decided with regard to the extension of the Kirkland Lake branch for which the Legislature voted \$125,000 recently.

The work of revising the original line between North Bay and Liskeard, which has been in progress, will, it is anticipated, be continued during this year. Three sections described in our last issue were selected for completion in 1916, but grading only was done on one of them. The work for 1916 will likely cover the other two sections. (May, pg. 195.)

Toronto, Hamilton and Buffalo Ry.—The two sections of the company's bill which came before the Railway Committee of the House of Commons, May 18, to which objection was taken by the Hydro Electric Power Commission of Ontario, have been withdrawn. The first of these sections extended the time for building an extension of the line from Port Maitland to Port Colborne, and the second asked for authority to build an extension of the line now terminating in Crowland Tp., Welland County, to Port Colborne, Ont. May, pg. 194.)

The Ridge Coal Co. has been incorporated under the New Brunswick Companies Act to carry on mining and certain allied businesses in the province, and in connection therewith to build or acquire wharves, vessels, barges, tramways, cars, motor vehicles, etc., and "to enter into any agreement with any railway company or companies for the construction, use and operation of a spur or siding or line of railway connecting the company's mine with any railway." The company's office is at Newcastle, N.B., its capital \$24,000, and the provisional directors are, H. H. Brewer, R. M. McCarthy, and J. A. Sinclair, St. John, N.B.

Quebec & Saguenay Ry. Sale.—The Senate on April 26, directed that a copy of all proceedings in the Exchequer Court of Canada, and the judgment of Justice Cassels concerning the value of the Quebec & Saguenay Ry., the Quebec & Montmorency Ry., and the Lotbiniere & Megantic Ry., be laid on the table.

Canadian Pacific Railway Co's Annual Meeting.

At the 36th annual meeting in Montreal, May 2, Lord Shaughnessy, who presided, in moving the adoption of the report as published in *Canadian Railway and Marine World* for May, said: The reason for the change in the date of the annual meeting recommended by the directors is explained in the report of the company's affairs that I now have the honor to submit for your consideration and approval. The practice of making the fiscal year of railway companies on this continent correspond with the calendar year will henceforth be quite universal, and the desirability of being able to compare this company's annual statements and statistics with those of other railway companies similarly situated for like periods is manifest.

The revenue statements are very satisfactory. Indeed, the earnings were much better than we had reason to anticipate in October last, but I am afraid that the substantial advance in wages, due in a large measure to the shortage of labor and the abnormal increase in the price of fuel and of all the other articles that we find it necessary to purchase, will have an important bearing on the working expenses in future.

Since the close of the half year, under an agreement with the Imperial Government, 4% consolidated debenture stock to the amount of \$40,000,000, which the company was empowered to issue and you had authorized, was issued and loaned to the Imperial Treasury for a maximum period of five years, at a premium of ½% per annum over the interest payable on the stock. Provision is made in the agreement for the sale to the British Treasury of this stock in annual instalments, should the company require money for any of its purposes in Great Britain, and the Treasury reserves the right to purchase all or any of the stock during the five years at the price of 80% of its face value. The bylaw passed by the directors giving effect to the transaction will be submitted for your sanction. The plan formulated at the request of the Lords of His Majesty's Treasury for creating and selling collateral trust bonds of the company to the amount of about \$199,000,000 against debenture stock and other securities of the company and its leased lines to be deposited by the Imperial Treasury, fully described in the annual report and in the circular to the shareholders, has, because of financial negotiations and arrangements resulting from the participation of the United States in the European war, been abandoned, for the present at any rate. In order, however, that the company may be in a position to co-operate should the occasion arise hereafter, it is proposed, at the instance of the Chancellor of the Exchequer, to ask the Parliament of Canada to grant the statutory powers for which application has been made, and the special general meeting will, with your consent, be adjourned to a later date. The willingness of the company to lend its name and credit to the Imperial Treasury in connection with financial operations at this juncture is keenly appreciated, and I am asked by the Chancellor of the Exchequer to convey to you the thanks of the Imperial Government for the important assistance that you are ready to give.

The report was unanimously adopted and bylaws were approved changing the date of the annual meeting to the first Wednesday in May in each year, respect-

ing consolidated debenture stock, and respecting preference stock.

The retiring directors, E. W. Beatty, K.C., Hon. F. L. Beique, K.C., Jas. Duns-muir, and C. R. Hosmer were unanimously re-elected.

The special general meeting of shareholders to consider the issue of collateral

trust bonds was adjourned to Aug. 13.

The board then met and re-elected officers, etc., as follows: President, Lord Shaughnessy; Vice Presidents, George Bury and E. W. Beatty; Executive Committee, R. B. Angus, E. W. Beatty, K.C., George Bury, Sir Herbert S. Holt, Sir Edmund B. Osler, Lord Shaughnessy.

straining them from further proceeding with the work of the railway; for a revision of the agreement; for specific performance of the contract; and for damages. The points upon which judgment is asked cover practically all the facts found by the committee in the report quoted above.

A motion was introduced in the B.C. Legislature, May 14, directing the government to have the necessary legislation passed to take over the company's property and assets and to take such action as may be necessary against the company or any other company, and the individuals forming the company to obtain restitution of funds wrongfully obtained; to amend the loan act so as to allow the \$5,000,000 remaining to be used towards the completion of the line; to give the Minister of Railways power to operate the line; and to apply to the Dominion Government for a bonus of \$12,000 a mile, equal to that granted the Canadian Northern Pacific Ry.

On May 15 notice of motion was given in the Legislature with a view to the appointment of a commission with power to call W. J. Bowser, R. D. Thomas, D'Arcy Tate, P. Welch, D. McLeod, E. White and any other person and to compel them to answer as to their knowledge of the payments of any money whatsoever, whether mentioned above or not, and to whom any part of said amounts were paid and for what purpose, with power to commit to gaol any person for contempt until such times as they answer any or all questions, and that R. D. Thomas and W. J. Bowser, or any other persons who refuses or refused to answer the questions put to him by the P. G. E. committee be turned over to the commission before the prorogation of the legislature; and that warrants or subpoenas issued by the speaker be continued until the parties are produced before the commission. The purpose of this investigation seems to be to ascertain what funds were used for campaign purposes, rather than to deal with the construction end of the affair.

Fortnightly Pay Day for Railway Employees.—The Dominion Parliament has under consideration a bill to amend the Railway Act by adding the following as subsect. 3 of sec. 259: "The salary or wages of every person employed in the operation, maintenance or equipment of any railway company to which the Parliament of Canada has granted aid by means of subsidy or guarantee, shall be paid not less frequently than once in each two weeks during the term of employment of such person." The bill was introduced by Senator Robertson and is reading on June 5.

Rails for Canadian Railways.—Arrangements have been made whereby the Imperial Munitions Board has agreed to release sufficient shell steel to enable the Algoma Steel Corporation, Sault Ste. Marie, Ont., to roll 10,000 tons of steel rails for the C.P.R.; 5,000 tons for the G.T.R., and 500 tons for the Timiskaming & Northern Ontario Ry. It is also said that sufficient shell steel will be released to enable the Dominion Iron & Steel Co. to roll 10,000 tons of steel rails for the Canadian Government Railways.

Sir Henry Drayton, Chief Railway Commissioner, and one of the Commissions to inquire into the railway situation, addressed the Canadian Club in Toronto, May 10, in support of the majority report made by himself and W. M. Acworth.

Investigation into Pacific Great Eastern Railway Affairs.

The committee appointed by the British Columbia Legislature to make an investigation into Pacific Great Eastern Ry affairs presented its report May 1. After recapitulating at length the main facts as to the formation of the company, which were given in detail in Canadian Railway and Marine World for May, pg. 191, the committee presented findings upon 15 distinct points, giving reasons for each finding in considerable detail. Following is a summary of the findings:—

The promotion of the company was brought about by an arrangement made in 1911 between D'Arcy Tate, K.C., and J. W. Stewart, whereby it was agreed that the former should secure the charter and guarantees from the Provincial Government, and a traffic arrangement with the Grand Trunk Pacific Ry. For this he was to receive a commission of one-fourth of the capital stock of the company and \$500,000 in cash, out of which he was to pay incidental expenses and provide campaign funds for the Conservative party. D'Arcy Tate and ex-Premier Bowser refused to give the committee any information as to the money provided for campaign purposes.

The total share capital of \$24,960,000 was issued to the promoters, Foley, Welch, Stewart and Tate, the remaining \$40,000 of stock being fully paid up in cash. The committee consider that this issue of shares was illegal and improper.

The contract for the construction of the line made with P. Welch, was in fact a contract made with the firm of Foley, Welch and Stewart, and was made with Welch to conceal the real nature of the transaction. The committee holds that the contract is invalid, and that Stewart and Foley are disqualified from acting as directors of the company. E. F. White and F. Wilson, two of the other directors, were interested in subcontracts out of which they made considerable sums without giving any apparent value therefor.

The prices fixed in the contract were excessive, which is shown by the fact that on an expenditure by the province of \$18,314,825 P. Welch appears by his own figures, made a profit of over \$5,000,000.

The government has paid out the full amount of its trust funds without proper supervision or inspection of the work. The extent to which advantage was taken of the lack of proper supervision and inspection the committee is not able to fully ascertain. Five specific matters are mentioned in respect of which the committee finds there had been over payments of approximately \$405,000.

The provincially guaranteed bonds of the company amounting to \$20,160,000 were sold for \$18,314,825, which was paid into the bank in the name of the Minister of Finance as a trust fund to be paid in accordance with Schedule A of the company's act. The total proceeds have been paid over to the company, which the committee says "was illegal and improper," as the full subsidy has been paid on a mileage of 480 miles, or 3.09 miles in ex-

cess of the actual total mileage, an overpayment of \$160,800; the full subsidy has been paid on 284 miles on which no track has been laid or bridges built and the full subsidy has been paid upon 51 miles on which no construction work whatever has been done. The over payments in contravention of statute are estimated at \$5,705,316.50 altogether, apart from overpayments for excessive profits or upon wrong classification. It is estimated it will require \$13,000,000 more to complete the line.

The bond of \$250,000 furnished by Foley, Welch and Stewart as a guarantee for the completion of the work was allowed to lapse by the late government.

There is due to the government \$85,524.93 balance of the money deducted by the company's fiscal agent in England on the sale of the guaranteed bonds.

Foley, Welch, and Stewart have defaulted in their covenant to pay interest on the bonds, upon which the Government has already paid \$1,053,827 interest. The contractors the committee state, "have defaulted in their covenant to complete the road and state their inability to complete their contract."

The province has no security for its bonded guarantee against the company's terminals or against the lands held in the Development Co.'s name.

P. Welch's contention that the contractors had lost money is not well founded, as upon the basis of their own figures they made a net profit of \$5,170,177.

The Legislature in 1916 provided a loan of \$6,000,000 to the company without provision for taking further guarantees from the contractors.

A. H. B. Macgowan, a member of the Legislature, was given a share in a subcontract by P. Welch, receiving therefor \$9,000 in cash, for which he gave no consideration either in time, money or otherwise."

The committee found its investigations hampered by its inability to secure certain private ledgers of P. Welch kept in connection with the P.G.E.R. D. McLeod, confidential representative of J. W. Stewart, also by the refusal to testify and disappearance of D'Arcy Tate, and the refusals to testify of R. D. Thomas and W. J. Bowser, M.L.A. The departure of Welch, White, and Tate was in defiance of the committee's orders. The committee feels that in view of the absence of material witnesses and its inability to act after the expiry of the session, further investigations should be by another form of tribunal.

A resolution was passed receiving the report. Warrants have been issued by the Legislature for the arrest of D'Arcy Tate, P. Welch, and E. F. White for contempt.

The B.C. Government, on May 11, filed a writ against the P. G. E. Ry., its subsidiary companies, the contractors, and the individual directors for an accounting of the sums realized from the sale of guaranteed bonds; for an injunction re-

Canadian Transportation Men, Engineers, Etc. in the War.

C.P.R. Enlistments.—Up to May, 6,692 C.P.R. officials and employes had enlisted for overseas service, of whom 293 had been killed and 611 wounded.

The 255th Battalion, Queen's Own's Rifles, Toronto, under command of Lt. Col. G. C. Royce, left Toronto, May 25, for an eastern training ground.

No. 2 Section Skilled Railway Employes, which was mobilized in Montreal, arrived safely in England early in May. A photograph of some of the officers appears on this page.

Timiskaming & Northern Ontario Railwaymen's Patriotic Association.—Up to Mar. 31, the association had contributed \$17,261.95 to the Canadian Red Cross Association; \$23,932.80 to the Canadian Patriotic Fund, and \$11,049.34 direct to enlisted employes.

A Forestry and Railway Construction Depot has been established in Ottawa, under command of Lieut. Col. Cecil Williams, where recruits for railway construction drafts from all parts of Canada will be mobilized for the forestry drafts. Those enlisted in military district 32 have been transferred to the Ottawa depot.

Canadians' Railway Work.—Sir Robert Borden, on returning from England recently, said: "The work of the Canadian railway corps has been of wonderful assistance to the allies. The rapidity in railway building by the Canadians amazed the English and French, and it was such marvellous work in construction of railways that permitted of the aggressive and continuous offensives by the allies on the west front."

PERSONAL NOTES.

Capt. Hon. W. J. Shaughnessy, son of the President, C.P.R., has been gazetted as an orderly officer, and is now in France.

Lieut. J. H. Hannaford, who was killed in action in France, May 10, was a son of R. M. Hannaford, Assistant Chief Engineer, Montreal Tramways Co.

Lieut. Geo. Lawson, who was for 10 years a C.P.R. travelling auditor, and for the past few years a customs broker in Winnipeg, has been killed in action.

Lieut. Eric M. Hersey, who is reported to be at a London, Eng., hospital, suffering from gas poisoning, is a son of Milton L. Hersey, Chemist, C.P.R. Montreal.

James Carruthers, President, Canada Steamship Lines, Ltd., has given \$100,000 to the Military Hospitals Commission, which is being used to aid returned soldiers.

Brig.-Gen. J. W. Stewart, of Vancouver, who is in charge of the Canadian railway construction forces in France, has been mentioned in Sir Douglas Haig's dispatches.

Acting Lieutenant-Colonel B. R. Hepburn, M.P., formerly President, Ontario & Quebec Navigation Co., who is overseas, has been gazetted as Assistant Director of Timber Operations.

Capt. John Baillies, of the Grand Trunk Pacific Coast Steamship Co.'s service, has entered the naval service for the war, under certain new regulations, with the rank and pay of "skipper."

Sir Edmund Osler, M.P. for West Toronto, and a C.P.R. director, has given \$2,000 to assist in the recruiting campaign which is being carried on in the

Province of Quebec by Postmaster General Blondin.

Capt. F. W. Goosons, who was on the National Transcontinental Ry. surveys a few years ago, and afterwards became a real estate agent in Winnipeg, has been killed in action. He was born in Brussels, Belgium, in 1887.

Norman S. Rankin, formerly Publicity Agent, Natural Resources Department, C.P.R., Calgary, Alta., who lost his commission as captain, owing to the breaking up of the battalion he was in, has enlisted in a signal corps at Ottawa for overseas service.

Lieut. J. Hallisey, who was killed in action, April 8, was formerly a dispatcher on the Halifax and South Western Ry., and was son of J. T. Hallisey, Superintendent, District 6, Intercolonial Division, Canadian Government Railways, Truro, N.S.

Lieut. R. N. Stuart, R.N.R., who was recently awarded the D.S.O., is a son of

Lt. Col. G. S. Cantlie, formerly General Superintendent of Car Service, C.P.R., and now of the 42nd Battalion, Royal Highlanders of Canada, C.E.F., who returned to Canada for a short leave during the winter, was invested with the D.S.O. at Buckingham Palace, London, Eng., on May 12.

Lt. Col. G. S. Rennie, M.D., formerly Surgeon in Chief, Dominion Power & Transmission Co. and Toronto, Hamilton & Buffalo Ry., who has been at Shorncliffe, Eng., for some two years, as A.D.M.S. in charge of hospitals, is reported to have received an important appointment in France.

Brigadier General A. E. Labelle, one of the Harbor Commissioners for Montreal, has received the cross of the Legion of Honor from the French Government. The announcement was made by Marshal Joffre at Montreal, May 13, when he regretted that he was unable to present the decoration personally.



Officers and Non Commissioned Officers, No. 2 Section, Skilled Railway Employes.

This illustration shows some of the officers and non commissioned officers of the above mentioned section, which was mobilized in Montreal and arrived in England early in May. Reading from left to right they are: Lieut. J. Swail, Lieut. W. W. Webster, formerly Foreman, Steel Car Shop, C. P. R., Winnipeg; Capt. R. McKillop, officer commanding, formerly Superintendent, Laurentian Division, Quebec District, C.P.R., Montreal; Lieut. J. S. Hall, Adjutant, Sergeant Major Oxley, Sergeant Major W. R. Spencer, formerly agent, National Transcontinental Railway, Cochrane, Ont.

the late Capt. Neil Stuart of Prince Edward Island, and has been in Allan Line service for several years. At the outbreak of war he was second officer on the s.s. Alsatian.

Capt. B. T. Eastway, who is reported to have been killed whilst in charge of one of His Majesty's vessels, was for several years in Allan Line service and last year was in command of the s.s. Ionian, after she was released from Admiralty service.

E. S. Scott, formerly train dispatcher, Atlantic, Quebec & Western Ry. and Quebec Oriental Ry., New Carlisle, Que., enlisted as a private with the 244th Battalion, Kitchener's Own, which went overseas in April. Over 50% of the head office staff of the railways mentioned have enlisted and are overseas.

Capt. W. B. Hanna, only son of D. B. Hanna, Third Vice President, Canadian Northern Ry., who went overseas as a lieutenant in the 92nd Battalion, Toronto Highlanders, has been appointed Commandant of the Stationery Service, Canadian Expeditionary Force, in London, Eng.

T. C. Irving, Jr., Vice President, Robert W. Hunt & Co., consulting and inspecting engineers, etc., Montreal and Toronto, has been promoted to Lieutenant-Colonel in the Canadian Engineers. He left Toronto with the first Canadian contingent as Captain in the 2nd Field Company of Engineers. He received the D.S.O. for services at the battle of Langemarck, and was promoted to Major. On the death from wounds of Lt. Col. Inksetter, he was given command of the Canadian Engineers in the fourth Canadian Division.

Harold A. Logan, formerly local manager, Great North Western Telegraph Co., Belleville, Ont., whose death was reported recently as a result of the torpedoing of a hospital ship by the Germans, served in France as a telegrapher from early in 1915. He had been wounded in both arms, and after spending some time in hospitals in France was being transferred to England. He was a native of Halifax, N.S.

Lieut. W. B. McArthur, M.C., who was killed in action recently, was, prior to enlistment, on the C.P.R. staff in London, Eng. He enlisted as a private in the Lon-

don Scottish, and after nine months in France, received a commission in the Royal Scots Fusiliers, in Nov., 1916. He received the Military Cross in May, 1916, for conspicuous determination when in charge of a working party, when with 12 men he captured and brought in as prisoners over 40 armed enemies. At the time of his death, he was acting as captain, during the absence of an officer of that rank.

Major James Arnold Delancey, B.Sc., McGill University, A.M.Can.Soc.C.E., of Vancouver, who has been killed in action, was born at Middleton, N.S., July 15, 1880. He was Assistant Engineer, United Fruit Co., Bocas del Toro, Panama, from May, 1909, to Oct. 1910, and engineer in charge from Oct. 1910 to Jan. 1, 1911. From Jan. 1, 1911 to Feb. 5, 1912, he was Chief Engineer at Paris for United Fruit Co., Bocas del Toro, Panama. Subsequently he did surveying work in British Columbia, including city surveys in Vancouver. When war broke out he returned to his native province of Nova Scotia, enlisted and went overseas as captain and adjutant in an infantry battalion. He was mentioned in dispatches and awarded the Military Cross.

Major John Campbell Galway, B.A., B.E., A.M.Can.Soc.C.E., who has been killed in action, was born at Southmolton, Devonshire, Eng., June 18, 1876. In June 1889 he graduated in engineering and arts at the Royal University of Ireland. Subsequently he was agent and engineer for Fisher & Lefarm, Belfast, Ireland, on a Belfast water works contract, including heavy concrete work and tunneling with compressed air and with shield and cast iron lining. He then laid a second line of 44 in. on the Manchester Corporation's Thirlmere aqueduct syphons. For the same firm he completed the Great Southern & Western Ry. of Ireland's Cashel branch. In 1906 he was a surveyor on the Liverpool Dock Board staff. On coming to Canada in 1907 he was employed as a transit man in the C.P.R. Irrigation Department. Then he was in charge of engineers in construction of camps of the New Canadian Co., Ltd., building the Atlantic, Quebec & Western Railway in the Gaspé Peninsula and then became chief of a survey party on that line. In April, 1912, he was appointed Resident Engineer on Eastern Lines, Canadian Northern Ry., and was shortly afterwards appointed a division engineer, remaining in the company's service until Dec. 1913, when he left on account of the completion of construction. He was subsequently in the Ottawa Water Works Engineering Department until Sept. 1915, when he received a commission as a lieutenant in one of the Canadian pioneer corps. He was soon promoted to captain, and a short time before his death was gazetted a major. He was probably killed a few days after the storming of Vimy Ridge, as A. F. Stewart, Chief Engineer, Eastern Lines, Canadian Northern Ry., received a letter from him on May 8, describing that operation.

British Columbia's Relationship with the Canadian Northern Pacific Railway.

The B.C. Minister of Railways presented to the Legislature, on May 14, a report of the auditors engaged by the government to check up the payments made to the C. N. P. Ry., out of the proceeds of the provincially guaranteed bonds. The report states that to Dec. 31, 1916, there

had been paid to the company amounts in excess of the proper value of work done, as follows: On main line, \$2,426,927.81; on branch lines, \$2,127,519.29; on terminals, \$1,117,117.52; total, \$5,671,564.62. These figures, the report states, are confirmed by the Attorney General's Department.

Subsequently a resolution was passed calling for all correspondence and memoranda dealing with the relations between the C. N. Ry. and the B.C. Government relating to the construction of lines on Vancouver Island.

Railway Rolling Stock Notes.

The British Government has ordered 50 six-wheel switching locomotives from the Baldwin Locomotive Works.

The Manville Asbestos Co., Asbestos, Que., has received 2 saddle tank locomotives from Canadian Locomotive Co.

The Canadian Northern Ry. has received 6 snow ploughs, nos. 7333 to 7335, and 7341 to 7343, from its Winnipeg shops.

Canadian Government Railways have received the last 3 Mikado locomotives, of its order for 50, from Canadian Locomotive Co.

The C.P.R. has purchased 20 air dump cars, and has also received 103 automobile furniture cars from its Angus shops, Montreal.

The Reid Newfoundland Co. is having 50 box cars, 50 flat cars, and 50 sets of draft gear, built by Canadian Car and Foundry Co. at Amherst, N.S.

The Greater Winnipeg Water District has added a second hand passenger car to its railway rolling stock. It was bought in Philadelphia, Pa.

Canadian Government Railways have received 2 Mikado locomotives from Canadian Locomotive Co., and 4 box cars, 50 tons capacity, from Eastern Car Co.

The C.P.R. has ordered 2 vans, 51 steel underframe flat cars 40 tons capacity, 70 steel underframe box cars 40 tons capacity and 5 refrigerator cars, to be built at its Angus shops, Montreal.

The Paris and Orleans Ry. (France) has ordered 50 Mikado locomotives, with cylinders, all 711 m. m. and of 200,000 lbs. weight, all equipped with superheaters, from American Locomotive Co.

The Russian Government has ordered 75 decapod freight locomotives from Baldwin Locomotive Works. In addition to these, the company has Russian orders for 150 decapod locomotives and 63 narrow gauge Mallet locomotives.

The Canadian Government Railways have purchased the following cars in the United States since Jan. 1, 1916: 500 coal, 50 sleeping, 10 dining, 18 tourist, 23 first class, 2 baggage and 2 mail and express.

The dimensions of the 50 all wood box cars, 20 tons capacity, which Canadian Car and Foundry Co. is building for the Reid Newfoundland Co., St. John's, Nfld., are as follows:

Length over end sills	30 ft.
Width over side sills	8 ft.
Length over running board	31 ft. 5 1/2 in.
Width of door opening	5 ft.
Height, bottom of sill to top of running board	8 ft. 4 in.

Canadian Government Railways have ordered 1,000 steel frame box cars, 40 tons capacity, from the Eastern Car Co., and 1,000 similar cars from Canadian Car & Foundry Co., and have bought 10 second hand locomotives and 300 second

hand 34 ft. box cars, 60,000 lb. capacity, from General Equipment Co.

Following are chief details of the 1,000 box cars which Canadian Government Railways have on order with the Eastern Car Co., for delivery in December and January:

Capacity	80,000 lb.
Length inside	36 ft.
Width	8 ft. 6 1/2 in.
Height floor to carline	8 ft. 0 1/2 in.
Width of side door opening	5 ft.
Height rail to top of brake mast ..	13 ft. 11 1/4 in.
Height rail to centre of coupler ..	2 ft. 10 1/2 in.
Body bolsters, centre to centre ..	26 ft. 10 in.
Draft gear	Twin spring
Coupler	M.C.B. 5 by 7 in.
Air brake	Westinghouse K.C. 8 by 12 in.
Axles	M.C.B. 5 by 9 in.
Wheels	M.C.B. chilled cast iron, 33 in.
Journal boxes	M.C.B.
Journal bearings ..	M.C.B. lead lined 5 by 9 in.
Wedges	M. C. B. drop forged
Truck bolsters and brake beams ..	Simplex

The Canadian Car and Foundry Co. has received an order from the Russian Government for 1,600 sets of steel work for Russian box cars, without cabs, and for 400 sets for cars with cabs, each of 1,200 pounds, approximately 20 tons, capacity. Following are chief dimensions of the cars:

Length	22 ft. 9 in.
Width	9 ft.
(Not including thickness of military wall planks.)	
Height at side wall	7 ft. 8 1/2 in.
Height at middle	8 ft. 4 in.
Projection of cars	13 ft. 1 1/2 in.

Projection of hand brake cars,	
at brake end	6 ft. 4 in.
at other end	5 ft. 6 in.
Projection of other cars, at both ends ..	4 ft. 11 in.
Outside length between the two faces of end sills,	
hand brake car	25 ft.
other car	23 ft.
Length with buffer, hand brake cars ..	28 ft. 10 in.
other cars	26 ft. 10 1/2 in.
Gauge of wheels	5 ft.
Draft gear	European type with draw bar hooks and screw couplings
Journal bearing wedges ..	Drop forged 5 1/2 x 10 in.
Dust guards	Rotary ring steel
Axles	M.C.B. 5 1/2 x 10 in.
Wheels	Cast iron 39 3/4 in.
Air brakes ..	Westinghouse Russian standard 8 in.
Roofing	Galvanized iron

Military Railway Building in France.—

The United States War Department has called for the raising of nine engineer regiments—about 10,000 men in all—under the terms of the National Defence Act of June 3, 1916, which prescribed that in time of war the army might be provided with such additional units of a special character as were required, in addition to the establishment of fighting men provided by law. The men to be enlisted will not be drafted. They will be volunteers, and appeal is being made for those who have had railway, bridge building, subway, or other engineering experience in similar or related lines. The first detachment of U.S. army engineers arrived in England, May 23.

Workmen's Compensation on the Timiskaming & Northern Ontario Ry.—From Jan. 1 to Mar. 31, 18 claims were registered with the commission, all for minor accidents. Of these, 5 were passed and paid, 6 were disallowed, and 7 were kept in abeyance. The claims paid amounted to \$248.58. The insurance cost for the period mentioned, based on premium paid in 1915, would have been \$4,416.25, or an average premium of \$883.25 to protect an average award of \$49.71.

British Columbia Railway Expenditure.—The estimated expenditure for the province for the current financial year includes the following items: Cost of Railways Department, \$100,380; Nakusp & Slocan Ry., amount required in excess of earnings to meet interest charges, \$23,000; Pacific Great Eastern Ry., to meet interest on guaranteed bonds, \$907,200. The last two items are chargeable to capital account.

26116. May 16.—Dismissing complaints of Regina Board of Trade and H. G. Smith, Ltd., Regina, Sask., against increased freight rates on canned goods and dried fruits, effective Mar. 1, from Pacific Coast points to Regina.

26117. May 16.—Ordering Grand Trunk Pacific Ry. and C.P.R., as long as they can continue to do so and as long as emergency exists, to supply cars at rate of 75 and 50 a day, respectively, to Canadian Northern Ry., at transfer at Saskatoon; cars to be taken into Goose Lake District by C.N.R., loaded and returned to G.T.P.R. and C.P.R. at Saskatoon for furtherance to elevators at head of the lakes. Through rate for joint carriage of said grain to be rates published and filed by C.N.R. for carriage of grain over its own rails, or jointly with its eastern connections as so published, east of Saskatoon, from points of shipment to same destinations; allocation of said joint rates between carriers hereby made parties thereto be arranged between themselves within one week from date or, failing such, to be settled by Board.

26118. May 16.—Approving plan and specifications showing work to be done on no. 1 drain, under C.P.R. in Lot 125, Con. 6, Bayham Tp., Ont.

26119. May 15.—Authorizing Grand Trunk Pacific Ry. to build spur for Edmonton Cement Co. in n.w. ¼ Sec. 35, Tp. 45, R. 1, west of 6th Meridian and s.w. ¼ Sec. 2, Tp. 46, R. 1, west of 6th Meridian.

26120. May 11.—Approving agreement between Bell Telephone Co. and The Admaston Rural Telephone Association, Ltd., operating in Renfrew County, Ont., April 30.

26121. May 16.—Amending order 26034, Apr. 16, authorizing Algoma Eastern Ry. to charge interswitching rate of 1c per 100 lbs. (C.R.C. 169), and amending Supplement 2 to Algoma Eastern Ry. Tariff C. R. C. 169.

26122. May 16.—Approving Maine Central Rd. bylaw, May 9; and rescinding order 25522, Oct. 10, 1916, approving bylaw passed Sept. 13, 1916.

26123. May 18.—Extending to Dec. 1 time limited by orders 23727, 24387, and 25804, respectively, May 22, and Nov. 2, 1915, May 29, 1916, and Jan. 17, 1917, during which Lake Erie & Northern Ry., pending installation of such interlocking plant, may operate cars and trains over crossing of Toronto, Hamilton & Buffalo Ry. in Brantford, Ont.; crossing to be protected by watchman, appointed and paid by L. E. & N. Ry.

26124. May 18.—Extending to July 15, time within which Great North Western Telegraph Co. place its wires on King and William Sts., Chatham, Ont., in underground conduits and remove poles on said streets.

26125. May 18.—Amending order 26076, May 3, 1913, re Vancouver, Victoria & Eastern Ry. and Navigation Co.'s fences, gates and cattle guards at certain points in B.C.

26126. May 18.—Authorizing G.T.R. to build siding and spur therefrom, for John Inglis & Co., Ltd., Toronto.

26127. May 21.—Approving revised location of Canadian Northern Ry., MacRorie Westerly Branch, west of Alsask, Sask.

26128. May 19.—Approving Western Canada Telephone Co.'s Tariff, C.R.C. 1, covering rentals and charges for service within rural exchange of Belmont, B.C.

taken up therefrom, and the sections of either line within the territory where they closely parallel each other and which are left intact for operation, to be used jointly by both lines. A lot of negotiations have been going on between the Railways Department and G.T.P.R. and C.N.R. officials, but at the time of writing, May 29, it is impossible to say definitely what will be done, further than that the taking up of rails on the G.T.P.R. has been commenced from Resplendent easterly. D. B. Hanna, Third Vice President, and M. H. MacLeod, General Manager and Chief Engineer, C.N.R., went over the company's whole main line from Vancouver to Toronto recently, and paid particular attention to the question of release of rails in the Yellowhead Pass District. Subsequently they visited Ottawa, and at the time of writing, May 29, Mr. MacLeod is still there in connection with the matter. Sir Henry Drayton, Chief Railway Commissioner, left Ottawa, May 26, for the west, to look into the situation on the spot.

Canadian Railway Rails for Use in France.

A Dominion order in Council passed Dec. 19, 1916, gave authority under certain conditions for the shipment of certain trackage from Canadian railways to France for war purposes. Under that order 800 miles of rails with the necessary turnouts, angle bars, bolts, spikes, and other track material were taken up from the Eastern Division of the National Transcontinental Ry. and shipped. Another request was received from the British Government recently for a further 300 miles of rails and accessories. The acting Minister of Railways referred the matter to the Chief Railway Commissioner, who recommended that the further 300 miles of rails be obtained from the Grand Trunk Pacific Ry., partly from the portion of the line running through the Yellowhead Pass, which closely parallels the Canadian Northern Ry., and partly from some other main track line at other points, this latter track to be replaced by other rails. An order in Council was therefore passed, under the provisions of Sec. 6 of the War Measures Act, 1914, providing as follows:

The Minister of Railways may order the G. T. Pacific Ry. to take up and deliver to him such portions of its line running through the Yellowhead Pass as may be specified by the Chief Railway Commissioner, and to deliver such other rails and track material belonging to the company as may be specified by the Chief Commissioner; and the Minister shall have the power either to relay with other rails the trackage taken up, or in lieu thereof, to grant running rights over other railways. The Minister shall have power, on the recommendation of the Chief Railway Commissioner, to take duplicate trackage belonging to any railway company in Canada for the purpose of laying all or any part of the trackage taken from the G. T. P. Ry. The Chief Railway Commissioner shall have power to compel railway companies in Canada to supply equipment for the transportation of rails in case of a shortage on the carrying line, on such terms as the Board of Railway Commissioners may order, the power to include the right not only of ordering the supplying of cars, but of locomotives to be used in the transportation of these rails to the seaboard, although

the transportation takes place over a line other than the line required to supply the equipment. The Board of Railway Commissioners shall have power to give to the company whose tracks and sidings have been taken up under authority of these regulations, or whose rails, ties, and other track materials have been taken hereunder, running rights over the railway lines and sidings of the other railway companies, upon such terms and conditions as the Board may deem just and proper. All cost, damages, and expenses under this order shall be borne by His Majesty's Government in England.

In pursuance of the authority conferred upon him by the order in council the acting Minister of Railways, on May 7, issued an order to the Grand Trunk Pacific Ry., to take up and deliver to A. Ferguson, C.E., Inspecting Engineer of the Railways Department, the rails and track material, except the ties, of the line through the Yellowhead Pass, extending from near Imrie, on the east to near Resplendent on the west, which mileage had been specified to be taken up, by the Chief Railway Commissioner. The acting Minister of Railways also granted to the G.T.P. Ry. running rights over the Canadian Northern Pacific Ry., between the points above specified, subject to terms and conditions to be determined by the Board of Railway Commissioners.

The distance between Imrie, Alta., and Resplendent, B.C., according to the company's timetables is 207 miles, but the actual mileage to be taken up under the order may be more or less, according as engineers decide the most feasible points to make the connections between the two companies' lines so that the G. T. P. Ry. may exercise its running powers over the C. N. P. R. We are advised that connections will also be made with the C. N. P. R. to give any collieries in the district, which may now be shipping over the G. T. P. R. a connection with the C. N. P. R.

Residents of Edson, Alta., a G.T.P.R. division point, 129.3 miles west of Edmonton, protested against the rails of that section being taken up, and another order was then issued, providing for taking up some rails on the G.T.P.R. and others on the C.N.R., the latter to be laid on G.T.P.R. track to replace the ones

Freight and Passenger Traffic Notes.

The Canadian Pacific Ry. started its upper lakes steamship service between Port McNicoll and Fort William, Ont., May 15.

The usual Saturday to Monday cheap tickets are being issued by the Canadian Pacific Ry., the Grand Trunk Ry., and the Canadian Northern Ry.

The first freight shipped from the east via lake and rail route reached Winnipeg, May 7, by the National Transcontinental Ry. from Fort William.

The Canadian Pacific Ry. has arranged a daily train and boat service in the Okanagan Lakes territory instead of the present six days a week service.

There will be no holiday nor excursion rates given by Canadian railways for the present, and no special trains, except those required for military purposes, will be run.

The Canadian Government Railways have restored the train and ferry service between the South Shore and Murray Bay, Que., which it was recently reported had been suspended.

The New York Central Rd. (formerly Lake Shore and Michigan Southern Rd.), passenger trains now arrive at and depart from the Michigan Central terminal at Detroit, Mich., instead of at the Brush St. terminal.

Business men of Rexton, Richibucto, and other points on the Kent Northern Ry., are urging the New Brunswick Government to consider the rates charged for freight on the line, which are alleged to be excessive, and to take steps to have them reduced.

The Grand Trunk Ry. started operating its drawing room sleeping cars from Toronto to Algonquin Park and Madawaska, Ont., Thursday, May 10, and on each succeeding Thursday, at 10.45 p.m., and from Madawaska for Toronto, at 6 a.m. on Tuesday, May 15, and each succeeding Tuesday.

A Vancouver press dispatch of May 14, said the new Great Northern Ry., and Northern Pacific Ry. terminal station, at False Creek, Vancouver, would be opened June 1, that there would be a public reception in the new building from 2 to 4 p.m., and that at the latter hour the first train would be dispatched from the station to Seattle, Wash.

Mainly About Railway People Throughout Canada.

Mrs. W. D. Matthews, wife of W. D. Matthews, director, C.P.R., died at Toronto, May 15.

E. B. Greenshields, who died at Montreal recently, was a director of the Grand Trunk Pacific Ry. Co.

W. M. Macpherson, director, Grand Trunk Pacific Ry., returned to Canada, May 14, after a lengthened visit to England.

A. W. Smithers, Chairman, G.T.R. Co., arrived in Canada, May 14, from London, Eng., accompanied by **H. Deer**, Assistant Secretary.

V. T. Boughton, Resident Engineer, C. P. R., Sudbury, Ont., has enlisted with the 1st Regiment, Reserve Engineers, United States Army.

Howard Elliott, President, New York, New Haven & Hartford Rd., has resigned, and has been succeeded by **Edward J. Pearson**, Vice President.

Geo. Stanway Mitchell, the nine year old son of **Lorne W. Mitchell**, Treasurer, Canadian Northern Ry., died in Toronto April 29, after less than an hour's illness.

G. McLaren Brown, European Manager, C.P.R., London, Eng., entertained the Canadian pressmen in London at the Newspaper Press Fund dinner there, May 12.

W. S. Miller, Travelling Passenger Agent, G.T.R., Montreal, was presented with a cabinet of silver by a number of his friends, May 5, in connection with his marriage.

F. A. Bradley, who has been appointed Contracting Foreign Freight Agent, Union Pacific Ry., New York, former lived in Ottawa, where he was at one time a page in the House of Commons.

A. Chapman, train dispatcher, C.P.R., London, Ont., was appointed general chairman of the Order of Railroad Telegraphers of Canada, at the international convention held at Seattle, Wash., in May.

Anton Balzola, President and Secretary-Treasurer, Niagara Spanish Aerial Car Tramway Co., which built and operates an aerial car line over the whirlpool at Niagara Falls, died suddenly at Niagara Falls, Ont., May 21.

J. R. C. Macredie, M.Can.Soc.C.E., of whom some biographical details were given in our last issue, was appointed Engineer, Saskatchewan District, C.P.R., at Moose Jaw, Sask., recently, and not Resident Engineer, as inadvertently stated.

J. A. Dundas, Secretary to Vice President **Ogden**, C.P.R., was presented with a cabinet of silver and a purse of money, May 5, by a number of the office staff and other employes, on the occasion of his marriage.

D. Pottinger, I.S.O., formerly Chairman, Canadian Government Railways Managing Board, with **Mrs. Pottinger**, were the guests of **Sir Collingwood and Lady Schreiber**, at Ottawa, during May, after which they went to their summer home at Shediac, N.B.

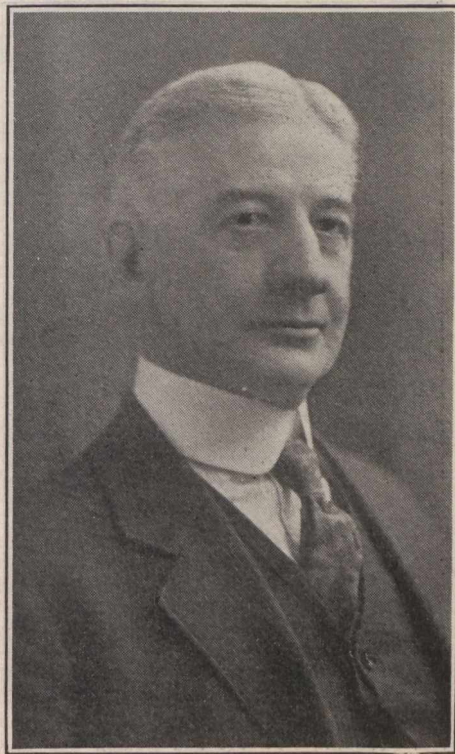
L. C. Fritch, General Manager, Eastern Lines, Canadian Northern Ry., Toronto, and **E. H. Fritch**, Secretary, American Railway Engineering Association, Chicago, Ill., received information, May 2, of the sudden death of their father, **Joseph Fritch**, on that date.

H. K. Wicksteed, B.A.Sc., M.Can.Soc.C.E., Chief Engineer of Surveys, Mackenzie, Mann & Co., Ltd., addressed the Canadian Society of Civil Engineers, Toronto

branch, on May 8, on Venezuela and the islands of the Carribean Sea, illustrating it by a number of excellent views which he secured during his various trips to the south.

G. A. Stewart, M.Can.Soc.C.E., who died at Victoria, B.C., May 13, aged 87, was engaged on the construction of some of the early railways in the Dominion. He was Assistant Engineer on the Northern Ry., from 1852 to 1854; Chief Engineer, Midland Ry., from 1868 to 1877; practising as a civil engineer in the interval. He retired from active service several years ago, and lived at Victoria since 1909.

Frank H. Alfred, who has been elected President of the reorganized Pere Marquette Ry., began railway work as a rod-



F. F. Backus,
General Manager, Toronto, Hamilton & Buffalo
Railway.

man on the construction of the Columbus, Lima & Milwaukee Ry. in 1887. After being employed on the Norfolk & Western Ry., the Cleveland, Akron & Columbus Ry., and the Wheeling & Lake Erie Ry., he became Assistant Engineer of the Pere Marquette Ry in 1900. He was made Chief Engineer in Oct., 1902, resigning on Oct. 1, 1905, to become manager of the Canadian White Co., Ltd., in Montreal. In 1908 he returned to railway service as Assistant to the President of the Cincinnati, Hamilton & Dayton Ry. In Apr., 1912, he was appointed Assistant General Manager of the Pere Marquette Ry., being made General Manager later, and then chief executive officer for the receivers, which position he held at the time of his recent promotion.

D. A. Story, who is said to have been appointed General Traffic Manager, Canadian Government Rys., Moncton, N.B., was born at Halifax, N.S., Oct. 26, 1853, and entered railway service, May 26, 1869, since when he has been successively, clerk in Audit Department, telegraph auditor, train dispatcher, and secretary to Superintendent, Nova Scotia Ry., Halifax, N.S.

After the taking over of the Nova Scotia Ry. by the Government as a part of the Intercolonial Ry., he was clerk in the General Freight Agent's office, Moncton, N.B., and, later, freight agent and accountant, Halifax station, N.S.; from July 1, 1894, to Oct. 19, 1898, he was acting agent, Halifax, N.S.; Oct. 19, 1898, to Sept. 1, 1907, Division Freight Agent, Northern Division; Sept., 1907, to June 1, 1917, General Freight Agent, Intercolonial Ry.

Ernest Baxter, who has been appointed General Storekeeper, Wabash Ry., St. Louis, Mo., was born at Delmer, Ont., Oct. 11, 1882, and entered railway service in Mar. 1903, since when he has been, to May 1903, messenger, Local Freight Office, Michigan Central Rd.; May to Oct. 1903, messenger, Algoma Central & Hudson Bay Ry., Sault Ste. Marie, Ont.; Oct. 1903 to April 1905, secretary to Superintendent, G.T.R., London, Ont.; April 1905 to Feb. 1906, consecutively, in Operating Department, Cincinnati, Hamilton & Dayton Rd., Indianapolis, Ind., same department, Missouri Pacific Ry., St. Louis, Mo.; Feb. 1906 to May 1909, secretary to General Manager, St. Louis Southwestern Ry., St. Louis, Mo.; May 1909 to June 1914, chief clerk to the President, same road; June 1914 to Feb. 1916, Purchasing Agent, same road; Mar. 1, 1916, to April 30, 1917, Service Inspector, Wabash Ry., St. Louis, Mo.

Frederick Fanning Backus, who has been appointed General Manager, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont., was born at Rochester, N.Y., June 4, 1860, and entered transportation service, June 4, 1876, since when he has been, to 1887, with Merchants Despatch Transportation Co.; 1877 to 1881, clerk, Local Freight Office, New York Central & Hudson River Rd.; 1881 to 1883, chief clerk to General Northwestern Agent, Lehigh Valley Rd., Rochester, N.Y.; 1883 to 1885, Travelling Freight Agent, same road, Buffalo, N.Y.; 1885 to Oct., 1886, Assistant Claim Clerk, General Office, Blue Line (New York Central Fast Freight Line), Rochester, N.Y.; Oct., 1886, to Apr. 7, 1887, Assistant to General Agent, same line, Toronto; Apr. 7, 1887, to Dec., 1897, General Agent, same line, and Canada Southern Ry., Toronto; Dec. 1, 1897, to July 1, 1912, General Freight and Passenger Agent, Toronto, Hamilton & Buffalo Ry., Hamilton, Ont.; July 1, 1912, to June 11, 1915, General Traffic Manager, same road, Hamilton, Ont.; June 11, 1915, to May 17, 1917, Assistant to President, same road, Hamilton, Ont.

Lafayette S. Brown, who is said to have been appointed Assistant to the General Superintendent, Intercolonial Division, Canadian Government Rys., Moncton, N.B., was born at Nelson, N.B., Oct. 19, 1864, and entered I.R.C. service, Jan. 15, 1880, since when he has been, to Dec. 20, 1881, cleaning locomotives, and machinist helper, Newcastle, N.B.; Dec. 20, 1881, to Sept. 5, 1882, shunting in Newcastle yard and learning telegraphy; Sept. 5, 1882, to Nov. 25, 1883, assistant agent, Newcastle, N.B.; Nov. 26, 1883, to Oct. 4, 1898, train dispatcher, Moncton and Ste. Flavie District, Campbellton, N.B.; Oct. 4, 1898, to Apr. 30, 1912, Chief Dispatcher, New Glasgow, N.S.; May 1, 1912, to July 31, 1913, Assistant Superintendent, Moncton and Ste. Flavie and Fredericton to Loggieville, N.B., Newcastle, N.B.; Aug. 1, 1913, to June 1, 1917, Superintendent, Truro, Sydney and Oxford District, Intercolonial Ry., latterly known as District

4, Intercolonial Division, Canadian Government Railways, New Glasgow, N.S.

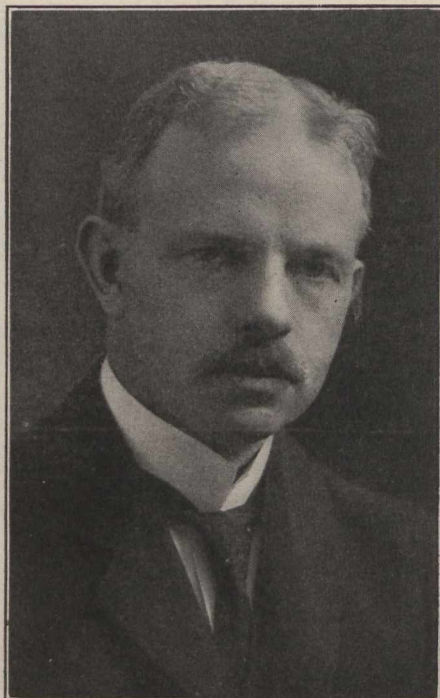
C. A. Hayes, who has been appointed General Manager, Lines Quebec Bridge and easterly, Canadian Government Railways, Moncton, N.B., was born at West Springfield, Mass., Mar. 10, 1865, and entered railway service in 1882, since when he has been, to 1884, clerk, Freight Auditor's office, Connecticut River Rd., now Boston & Maine Rd.; 1884 to Oct., 1887, similar position, Boston & Lowell Ry., Boston, Mass.; Oct., 1887, to Nov., 1890, clerk, General Freight Agent's office, Boston & Lowell Ry., and its successor, Boston & Maine Rd.; Nov., 1890, to June, 1892, General Freight and Passenger Agent, Central New England & Western Ry., Poughkeepsie, N.Y.; June to Oct., 1892, Division Freight Agent, Philadelphia & Reading Rd., while it had control of the C.N.E. & W.R., Hartford, Conn.; Oct., 1892, to June, 1896, New England Agent, National Despatch Line, Boston, Mass.; June, 1896, to July, 1899, New England Agent and acting General Manager, National Despatch Line, Boston, Mass.; July, 1899, to May, 1903, Manager, National Despatch-Great Eastern Line, Buffalo, N.Y.; May, 1903, to Apr., 1908, Assistant General Freight Agent, G.T.R., Chicago, Ill.; Apr., 1908, to Oct. 16, 1911, General Freight Agent, G.T.R., Montreal; Oct. 16, 1911, to June, 1913, Freight Traffic Manager, G.T.R., Montreal; June, 1913, to June 1, 1917, Freight Traffic Manager, Canadian Government Railways, Moncton, N.B.

Frederick Passmore Gutelius, M.Can. Soc.C.E., was has resigned as General Manager, Canadian Government Railways, Moncton, N.B., on his appointment as Vice President, Delaware & Hudson Co., Albany, N.Y., was born at Mifflinburg, Pa., Dec. 21, 1864, and graduated from Lafayette College as civil engineer in 1887. He entered railway service in 1888, since when he has been, to 1892, Assistant Engineer and Assistant Supervisor, Pennsylvania Rd., Pittsburg, Pa.; 1885 to 1898, General Superintendent, Columbia & Western Ry.; 1898 to 1900, Superintendent, C.P.R., Nelson, B.C.; 1900 to 1902, in various positions in Engineering Department, C.P.R.; 1902 to Mar., 1906, Engineer Maintenance of Way, C.P.R., Montreal; Mar., 1906, to Sept. 15, 1908, Assistant Chief Engineer, Eastern Lines, C.P.R., Montreal; Sept. 15, 1908, to Dec. 30, 1910, General Superintendent, Lake Superior Division, C.P.R., North Bay, Ont.; Dec. 30, 1910, to Jan., 1913, General Superintendent, Eastern Division, C.P.R., Montreal; Jan., 1912, to Apr. 30, 1913, one of the commissioners investigating expenditures and other matters in connection with the construction of the National Transcontinental Ry. On the abolition of the Government Railways Managing Board in May, 1913, he was appointed General Manager, Canadian Government Railways, with all powers usually vested in the executive of railway corporations, reporting to the Minister of Railways and Canals. The appointment was for a definite period of two years, and thereafter during the Minister's pleasure, at a salary of \$20,000 a year. It is said that his position with the Delaware & Hudson Co. carries a salary of \$25,000 a year.

John Duncan McNutt, appointed Inspector of Train Dispatching, Canadian Government Railways, Moncton, N.B., recently, was born at Stewiacke, N.S., Feb. 8, 1873, and entered Intercolonial Ry. service in 1889, since when he has been, to 1890, telegraph operator, Stewiacke, N.S.; 1890 to 1891, relieving agent; 1891 to 1893, operator in dispatcher's office,

Truro, N.S.; 1893 to 1896, dispatcher, Truro, N.S.; 1896 to 1898, dispatcher, Moncton, N.B.; 1898 to 1900, dispatcher, New Glasgow, N.S.; 1900 to 1904, Chief Dispatcher, Sydney, N.S.; 1904 to 1906, Chief Dispatcher, Fredericton, N.B.; 1906 to 1909, Chief Dispatcher, Newcastle, N.B.; 1909 to Mar. 15, 1917, dispatcher, and acting Chief Dispatcher, Truro, N.S.

James E. Johnson, whose appointment as Division Engineer, Canada Division, Michigan Central Rd., St. Thomas, Ont., was announced in our last issue, was born at Tipton, Ind., Aug. 25, 1883, and entered railway service, Mar. 1, 1905, since when he has been, to June 1, 1905, rodman, Cincinnati, Hamilton & Dayton Ry., Hamilton, Ohio; June 1 to Nov. 1, 1905, rodman, Lake Shore & Michigan Southern Ry., Dunkirk, N.Y.; Nov. 1, 1905, to Aug. 1, 1906, assistant on construction, Vandalia Rd., Terre Haute, Ind.; Aug. 1, 1906, to Feb. 1, 1907, transit



F. P. Gutelius, M.Can.Soc.C.E.,
Vice President, Delaware and Hudson Company.

man, Missouri Pacific Ry., St. Louis, Mo.; Feb. 1, 1907, to Oct. 1, 1912, Division Engineer, Hocking Valley Ry., Logan, Ohio; Oct. 1, 1912, to Apr. 16, 1917, Division Engineer, Pere Marquette Rd., Saginaw, Mich.

Saskatchewan Branch Can. Soc. C. E.—The following officers and committee were elected at the organization meeting in Regina, May 10: Chairman, L. A. Thornton, City Commissioner, Regina; Vice Chairman, G. D. Mackie, Moose Jaw; Secretary, J. N. de Stein, Regina; Executive Committee; H. S. Carpenter, E. G. W. Montgomery, Regina; A. H. Dion, Moose Jaw Electric Ry.; C. J. Yorath, City Commissioner, Saskatoon; Prof. A. R. Greig, Saskatoon.

St. John Valley Ry. Directorate.—Owing to the recent change of government in New Brunswick, J. D. Palmer, Fredericton; F. W. Sumner, Moncton; R. O'Leary, Richibucto, and W. S. Fisher, St. John, have resigned as directors of the St. J. V., and the following directors have been appointed: Hon. W. P. Jones, Chairman and Chief Counsel; C. O. Foss, Chief Engineer; E. S. Carter, Secretary and Treasurer; Hon. W. E. Foster and Hon. C. W. Robinson.

Canadian Pacific Railway Construction, Betterments, Etc.

Ontario District.—A press report states that the company is about to erect a bridge of three 27 ft. spans over Buell's Creek, Brockville, Ont.

The Board of Railway Commissioners has approved the plans for a second track on the line from Leaside Jct. to North Toronto. The plans provide for the erection of two bridges across the North Rosedale ravines, and for level crossings at Summerhill, MacLennan, and Bayview Avenues and on Todmorden Road. The Canadian Northern Ry. will connect with this Leaside-North Toronto line, at the east end of the West Don viaduct, from which point to North Toronto station, and west to the end of the track elevation along the north of the city, the track will be operated jointly with the C.N.R.

A press report states that the company is about to erect a bridge of three 35 ft. steel spans over London St., at Windsor, Ont.

Saskatchewan District.—A bylaw is to be submitted to Regina ratepayers to provide \$15,000, in addition to \$32,000 already voted towards the construction of a subway, instead of an overhead bridge, at the Hamilton St. crossing of the C. P. R.

The Regina City Council has approved plans for the extension of a spur track through Lots 3 and 4 in order to connect with the main spur in Block 138, subject to the company being prepared to make any necessary changes should the other lots in the block be linked up.

The recently completed line between Assiniboia and Vanguard, Sask., will, it is reported, be opened for traffic early in June, when a train service will be operated from Moose Jaw through to Shaunavon, on the Weyburn-Lethbridge line. The district between Weybridge and Assiniboia will it is stated, be served by a train making the round trip between the two points daily. The report does not say what service will be given between Shaunavon and the Saskatchewan-Alberta boundary, to which point track has been laid.

Alberta District.—The City of Lethbridge has to the credit of the 13th St. Subway account \$13,000 which it proposes to invest until such time as the C. P. R. is prepared to make the subway carry 4 tracks instead of the 2 now laid. The original plans provided for a subway carrying 4 tracks, but it was decided to lay only 2 tracks until traffic conditions warranted the additional trackage. (May, pg. 182).

Calgary Branch Can. Soc. Civil Engineers.—J. S. Dennis, Chief Commissioner of Colonization and Development, C.P.R., and President, Canadian Society of Civil Engineers, was the guest of honor at the annual dinner of the Calgary, Alta., branch, April 26. The event of the evening was the unveiling of an honor roll containing the names of the members of the branch who were absent on military service. It contains 19 names, representing one-third of the membership of the branch.

The Northwestern Elevator Co., Ltd. has been incorporated under the Ontario Companies Act, with \$250,000 capital, and office at Fort William, to build, own and operate grain elevators, warehouses, etc., and to own and operate steam and other vessels, docks, wharves, railway rolling stock, and other transportation facilities.

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NOTICE TO ADVERTISERS.

ADVERTISING RATES furnished on application. ADVERTISING COPY must reach the publishers by the 10th of the month preceding the date of publication.

TORONTO, CANADA, JUNE, 1917.

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The British Columbia Institute of Civil Engineers has formed a branch in Vancouver, B.C. The original branch of the institute was formed some months ago in Victoria.

Canadian Northern Railway Construction, Betterments, Etc.

Ontario Division.—The connecting link between the C.N.R. Toronto-Sudbury line and the Leaside-North Toronto line at present under construction, will run from the station yard at Duncan to a connection with the C.P.R. near the east end of the West Don bridge, 2.2 miles. We are officially advised that the work has been nearly completed. The junction switches at Donlands have not yet been put in, and there is still some work to be done on one highway and several private crossings, also some ditching. Other completion work is in progress. The C.P.R. line from West Don to the eastern end of the North Toronto double track grade elevation, is to be made a double track line (see C. P. R. Betterments, etc., on another page) and will be used jointly. Angus Sinclair is the contractor for the C. N. R. work.

From the east end of the C.P.R. West Don bridge a line has been located to a junction with the company's Ottawa-Toronto line near Scarboro Village, 4 miles. The Board of Railway Commissioners has been asked to approve a revision of this route, which necessitates the alteration of the plans previously prepared for the building of a viaduct over the Don River. It is expected that work will be started on this piece of line as soon as possible after the revised plans are approved.

The company's yards and terminals at Leaside will adjoin those laid out by the C. P. R.

Western Lines.—M. H. MacLeod, General Manager and Chief Engineer Western Lines, is reported to have said or inferred at Vancouver, that the most important work to be carried out during this year would be the laying of an additional mileage of heavy rails on the main-line between Winnipeg and Edmonton, in place of the present rails, which would be utilized elsewhere; the laying of track on the Oliver-St. Paul de Metis line, the completion of the Vancouver terminal, the completion and permanent opening of the ferry to Patricia Bay and the line into Victoria, and the laying of steel on the Victoria-Port Alberni line. If steel could be procured work would be gone on with on the branch from Kamloops into the Okanagan Valley.

We are officially advised that the company placed contracts for about 750,000 ties between Port Arthur and Warroad; for approximately 400,000 ties between Port Frances and Duluth, for about 600,000 ties in the vicinity of Edmonton and west of that point, and for 200,000 ties in British Columbia. Owing to labor scarcity deliveries are slow coming in, and will fall short of the requisitions.

Central Division.—The Board of Railway Commissioners has refused the company's application for a change of levels in its subway at Water St., St. Boniface, Man. The principal reason given is that it would interfere with the Provencher Ave. bridge now under construction across the Red River, on the line of Water St., by the cities of St. Boniface and Winnipeg, the Board's Chief Engineer advising that it would not be safe to lower the grade of the west end and of the Provencher Ave. bridge. The substructure for four of the pieces is reported to be practically completed, and pier 5 and the approaches are reported to be well forward. The Dominion Bridge Co. is preparing to erect the superstructure.

Western Division.—Ballasting on the Goose Lake branch was resumed at the end of April, and it is expected to complete the work this season. There is considerable work to be done on the roadbed between McGee and Kindersley, Sask., and the heaviest ballasting work has to be done between Kindersley and Calgary, Alta. About 500 Chinese are reported to be engaged in the work.

A press report states that the bridge across the Sturgeon River, on the Oliver-St. Paul de Metis branch, Alta., has been completed and that track laying has been restarted.

Pacific Division.—It is reported that a regular ferry service has been started between Port Mann, on the Fraser River, and Patricia Bay on Vancouver Island, and that a train service is being operated from Patricia Bay to Victoria. Three trips are made a day between these points by a gasoline-electric car. (May, pg. 195).

Canadian Coal Fields, Ltd., has been incorporated under the Dominion Companies Act, with \$10,000,000 capital and office at Toronto, to acquire and operate coal lands and other properties, and in connection therewith to own and operate steam and other vessels, wharves, docks, etc., tramways, aerial carriers and other shipping and handling facilities. The incorporators are, F. H. Phippen, K.C., A. J. Reid, K.C., R. H. M. Temple, W. Bowler and F. C. Allen, Toronto, all of whom are connected with the Canadian Northern Ry. legal department.

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

	Acres.
Calgary and Edmonton Ry.	1,436.15
Canadian Northern Ry.	160.00
Canadian Pacific Ry. roadbed and station grounds	8.70
Qu'Appelle, Long Lake and Saskatchewan Rd. and Steamboat Co.	3,511.66

Total

German Locomotives.—In a recent prize court case in England, an affidavit was read to the effect that from information in the British Government's hands, 8,000 locomotives were laid up at Essen alone during March, on account of wear and tear due to the scarcity of lubricating oils in Germany, or to the use of bad lubricants.

Grain Elevator for Port Stanley.—The London Railway Commission, operating the London and Port Stanley Ry., is reported to have issued instructions for the preparation of drawings of the pier and requisite lands for the erection of a grain elevator at Port Stanley, Ont.

Summer Excursions Banned.—At a meeting of the Eastern Canadian Passenger Association at Hamilton, Ont., May 8, it was decided that no summer excursions be run this year, as the locomotives and train crews are required for freight traffic.

The Canadian Northern Ry.'s Agricultural Department at Winnipeg has sent out flower seeds for planting at its stations. Arrangements are being made to supply vegetable seeds to the agents.

The Great North Western Telegraph Co. has opened offices at Beaumaris, Ont.; Vawn, Sask., and Rosebud, Alta., and has closed its offices at Dwight and Odessa, Ont.

The Canadian Pacific Ry. has issued a booklet describing the northwest country reached by its lines, for use in promoting immigration.

George Bury's Work in the War.

As stated in Canadian Railway and Marine World's last issue, George Bury, Vice President, C.P.R., returned to Canada, April 25, after being absent from Jan. 23, during which time he visited Russia as a member of the special British commission headed by Lord Milner. When Mr. Bury reached England, Lord Milner and the other members of the mission were already in Russia, so he proceeded by rail to the north of Scotland, whence he was conveyed on a fast destroyer to Bergen, in Norway, going thence by rail to Petrograd, and being there during the revolution. He travelled over the principal Russian railways from Lapland to the Caucasus, accompanied by Russian Government railway officials, made a thorough inspection, and on his return to England, presented very comprehensive reports to the War Cabinet, for which he was warmly thanked in a letter from Mr. Lloyd George,

On his return to Montreal he stated in an interview, among other things: "There is no doubt whatever that after the war Russia will have to build several hundred thousand miles of railway. Canada has ten times more railway mileage per unit of population than has Russia. Then, again, Russia made the mistake of patterning her railway transportation after that of Europe rather than America. Traffic in Russia moves vast distances in great bulk. The country lends itself to low grades and easy curvature. If that great country is to achieve the destiny in store for her she will have to come to the large train and large car, because these two factors make for economical transportation, and economical transportation is essential if a producing country of wide distances is to hold her own in the markets of the world. Had Russia been equipped with railway transportation, say as in Canada, she would have been able to have played a much greater part in the war."

The selection of Mr. Bury to go to Russia, which was the personal act of Premier Lloyd George, was undoubtedly one of the greatest compliments ever paid to a Canadian railway official, and a recognition of the outstanding position he occupies as a transportation authority. Only a few days after his return to Montreal, he was invited by President Wilson to go to Washington, and while there he had conferences with the advisory committee of the Council for National Defence, and with the leading railway executive heads, at which he undoubtedly fully explained Russia's necessities from a railway standpoint. A few days later it was announced that President Wilson had decided to send a railway commission to Russia consisting of J. F. Stevens, of New York, former Chief Engineer of the Panama Canal, Chairman; W. L. Darling, of St. Paul, Chief Engineer of the Northern Pacific Ry.; Henry Miller, of St. Louis, former operating Vice President of the Wabash Ry.; George Gibbs, of Philadelphia, former Chief Mechanical Engineer of the Pennsylvania Rd.; and J. P. Griner, of Baltimore, Chief Consulting Engineer of the Baltimore & Ohio Rd. Before leaving the United States the commission arranged to furnish the Russian Government with a large amount of locomotives, railway cars and materials, based, no doubt, on Mr. Bury's report of the requirements.

When in New York, on his return trip from Washington, Mr. Bury said, in an interview, among other things: "I have

heard unthinking people say that the U.S. railways might be found wanting. It must be remembered that there is no such vast movements of freight traffic anywhere in the world as on the American continent, and that when the people think as at war, rather than as at peace, and allow the American railways to take the action that is now followed in Europe, the American railways will be equal to any task. If the American railways were called upon to move large bodies of troops and supplied the same accommodation as in Europe, they would be in a position to move a vastly greater number in a shorter time. In Europe during war troops are moved in freight cars, when passenger equipment is not available.

"In Europe the passenger service has been curtailed, and the trains left on



George Bury,
Vice President, Canadian Pacific Railway.

slowed up, and the running of fast freight trains discontinued. Canada and the United States will have to bend every effort to increase the food surpluses by extra production and saving. Large fleets of ships will have to be built to supply Europe with the necessary food. Troops will have to be raised, and a grave labor shortage will immediately materialize unless some means are taken to substitute women for men where the work will admit, and of placing the male population in employments of necessity to win the war; cutting off all frills until after the cause of humanity has been saved. The passenger service ought to be reduced and slowed up; and fast freight service replaced with full trains. This would result in an immense saving of fuel, oil and labor. By other reductions, essentials in times of peace, but non-essentials in times of war, such as the closing of outside agencies, taking off freight and passenger canvassers, etc., etc., a number of men would be released for other services. Some of the other belligerent countries, probably through under estimation of the length of the war, or through their eagerness to raise a

large army, drew men that could not be spared from essential employments, causing disruption, which made it necessary to return men from the front for transportation, mining and manufacturing. Some of these nations allowed their cars and locomotives to get out of repair, which has had unfortunate results.

"When the history of the war comes to be written, it will be found what effect efficient transportation has had on victories and how inefficient transportation has brought about dire defeats. You are to be congratulated in so quickly forming a central committee in Washington to deal with the major matters of transportation in the United States as a whole, with such an able chairman and executive. If supported by public opinion, they can quickly make the drastic moves necessary in this crisis."

Mr. Bury was accompanied throughout his European trip by W. H. Winterrowd, Assistant to the Chief Mechanical Engineer, C.P.R., who acted as his secretary.

New Publications Received.

Any of the books mentioned under this heading can be obtained through Canadian Railway and Marine World.

Railway Estimates, Design, Quantities and Costs, by F. Lavis, M.Am.Soc.C.E., member American Railway Engineer Association, special lecturer, railway engineering, Yale University. Cloth, 6 x 9 in., 607 pages; with numerous diagrams and plans. New York, McGraw Hill Book Co., 239 West 39th St. \$5 net.

Railway Nationalization and the Average Citizen, by W. H. Moore. Cloth, 5 x 7½ ins.; 181 pages., Toronto, McClelland, Goodchild & Stewart. \$1.35.

The Irresponsible Five, a new family compact. By W. H. Moore. 5 x 7 ins.; 67 pgs. Toronto: McClelland, Goodchild and Stewart. Cloth, 50c; paper, 35c.

Winnipeg Traffic Club.—The opening meeting of this newly organized club was held April 26, when an address was delivered by W. R. Ingram, Chairman of the Manufacturers' Association, and of the Industrial Bureau, upon the transportation end of business. The President of the club is S. W. Thomas, of the Allan Line; P. D. Dennison is the President, and G. W. Travis is Secretary. The club has about 350 members, and was organized to promote the several interests of transportation men and provide a central meeting place.

Rails for Canadian Government Railways.—Ottawa dispatch, May 16: Arrangements are being made whereby rails required for renewal purposes on the government lines, the Intercolonial and National Transcontinental, may be rolled in Canada. Negotiations are in progress with the Imperial Munitions Board to secure the release of the necessary steel. It is probable that some of the rails will be turned out at Sault Ste. Marie and others at Sydney, obviating the need of importation.

G. T. R. Track Maintenance.—A book of instructions regarding the work of maintaining the track at the highest standard of efficiency has been issued to G. T. R. maintenance of way employes by H. R. Safford, Chief Engineer. The duties of every class of men in the department having the safety of trains in charge are outlined and illustrated.

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.

Canada Steamship Lines, Ltd.—W. J. ROBINSON, heretofore District Freight Agent, Windsor, Ont., has been appointed District Passenger and Freight Agent, Hamilton, Ont.

P. J. PEER, heretofore chief clerk, Passenger Department, Hamilton, Ont., has been appointed City Passenger and Freight Agent, Hamilton, Ont.

J. J. LYNCH has been appointed General Agent, Windsor, Ont.

Canadian Government Railways.—On May 21 we were semi-officially advised from Ottawa that consequent on F. P. GUTELIUS' resignation, to become Vice President of the Delaware & Hudson Co., C. A. HAYES, General Traffic Manager, C.G.R., would be appointed to succeed him as General Manager; that D. A. STORY, General Freight Agent, would succeed Mr. Hayes; that J. K. McNEILLIE, General Superintendent at Moncton, would continue in charge of the Prince Edward Island Ry., the Intercolonial Ry. and the portion of the National Transcontinental Ry. east of the St. Lawrence River, that is, between Moncton and Levis; that F. P. BRADY, General Superintendent, at Cochrane, would continue in charge of the National Transcontinental Ry. west of the St. Lawrence River, and that L. S. BROWN, Superintendent at New Glasgow, N.S., would be appointed as Assistant to Mr. McNeillie. On May 28 we were officially advised from Ottawa that the Minister of Railways had appointed C. A. HAYES, General Manager, Canadian Government Railways, east of the St. Lawrence River, and of Quebec City and Bridge; that he had appointed F. P. BRADY, General Manager of the Canadian Government Railways west of the Quebec Bridge, including the Fort William Branch. Up to May 29, no circulars announcing any of these appointments were available.

J. A. EVERELL, heretofore District Passenger Agent, C.G.R., Montreal, and Superintendent, Montmorency Division, Quebec Ry., Light & Power Co., Quebec, Que., is now devoting his entire time to the Quebec & Saguenay Ry., with the title of Superintendent. Office, Quebec, Que.

T. SAMSON, whose appointment as Travelling Passenger Agent was announced in our April issue, has his headquarters at Quebec, and not at Montreal, as stated.

A. J. ROBERTS, heretofore District Master Mechanic, District 2, Transcontinental Division, Grant, Ont., has been appointed Locomotive Foreman, vice W. Hamilton, transferred.

W. H. ROACH, heretofore locomotive man, Grant, Ont., has been appointed District Master Mechanic, District 2, Transcontinental Division, vice A. J. Roberts, transferred. Office, Grant, Ont.

W. HAMILTON, heretofore Locomotive Foreman, Cochrane, Ont., has been appointed Locomotive Foreman, Armstrong, Ont.

Canadian Northern Ry.—G. EASSON and J. W. DIXON have been appointed Travelling Freight Agents, Toronto.

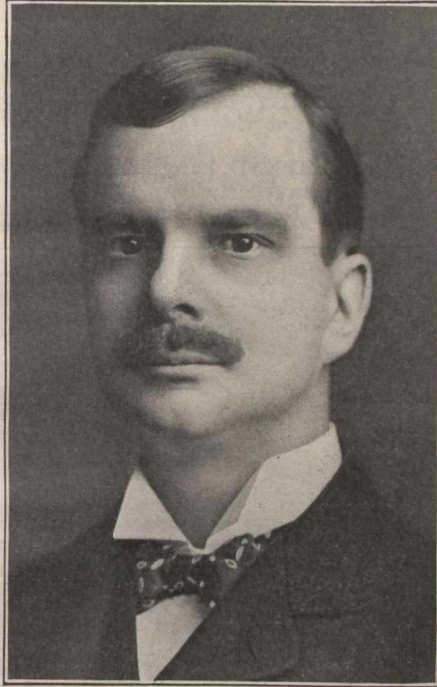
T. J. BURK, F. R. LOCHE and W. J. DUFFY have been appointed Contracting Freight Agents, Toronto.

R. C. GADSBY and R. M. LALOR have

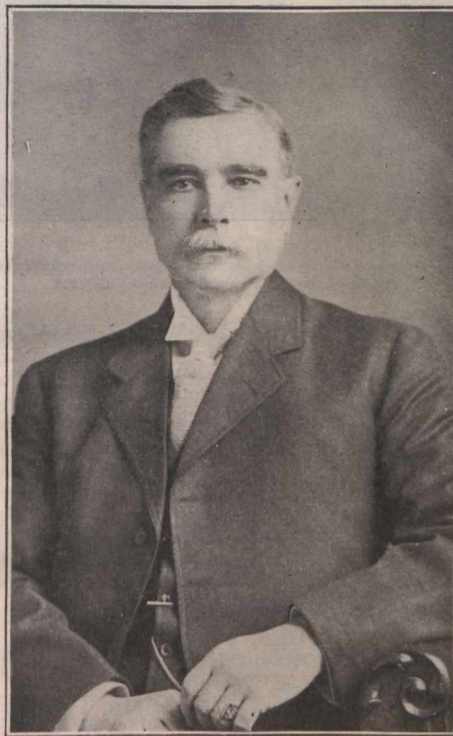
been appointed Travelling Passenger Agents, Toronto.

A. S. DAVIS has been appointed Soliciting Passenger Agent, Toronto.

G. A. GOULD has been appointed ticket agent, Toronto Union Station, vice R. R. Cooper.



C. A. Hayes,
General Manager, Lines Quebec Bridge and easterly, Canadian Government Railways.



F. P. Brady,
General Manager, Lines from Quebec Bridge westerly, Canadian Government Railways.

P. A. ROONEY has been appointed Travelling Passenger Agent, Winnipeg, vice B. Brown.

F. A. SHAW, heretofore Division Freight Agent, lines west of Ottawa and east of Port Arthur, Ont., Toronto, has

been appointed General Agent, Freight and Passenger Departments, Detroit, Mich. Office, Majestic Building.

R. LOGAN has been appointed Travelling Agent, Detroit, Mich.

J. F. MONGAN has been appointed chief clerk, Detroit, Mich.

T. F. CARTHY has been appointed chief clerk, Chicago, Ill.

S. C. CORFIELD has been appointed Contracting Agent, Pittsburg, Pa.

Canadian Pacific Ry.—R. U. PARKER, General Passenger Agent, Dominion Atlantic Ry., Kentville, N.S., has also been appointed Assistant District Passenger Agent, C.P.R., Halifax, N.S., reporting to N. R. DesBrisay, District Passenger Agent, St. John, N.B. Office, 117 Hollis St., Halifax.

A. O. WOLFF, Resident Engineer, Chapeau, Ont., is reported to have been appointed Resident Engineer, Brownville Jct., Me., vice N. E. Gutelius transferred.

E. BOWIE, heretofore Locomotive Foreman, Sherbrooke, Que., has been appointed Locomotive Foreman, Smiths Falls, Ont., vice C. A. Wheeler, promoted.

C. L. LEIGHTY, heretofore Inspector of Transportation, Eastern Lines, Montreal, has been appointed Superintendent of Telegraph, Ontario District, vice H. J. Lillie, appointed chief operator. Office, Toronto.

N. E. GUTELIUS, heretofore Resident Engineer, Brownville Jct., Me., has been appointed Resident Engineer, Sudbury, Ont., vice V. T. Boughton, enlisted for active service.

C. A. WHEELER, heretofore Locomotive Foreman, Smiths Falls, Ont., has been appointed General Locomotive Foreman, North Bay, Ont., vice W. Wells, promoted.

T. HAMBLY, heretofore Division Master Mechanic, Sudbury Division, Algoma District, Sudbury, Ont., has been appointed acting Master Mechanic, Algoma District, vice J. H. Mills, resigned. Office, North Bay, Ont.

W. WELLS, heretofore General Locomotive Foreman, North Bay, Ont., has been appointed Division Master Mechanic, Sudbury Division, Algoma District, vice T. Hambly, transferred. Office, Sudbury, Ont.

J. R. C. MACREDIE, M.Can.Soc.C.E., heretofore Resident Engineer, Connaught Tunnel, has been appointed Engineer, Saskatchewan District, with office at Moose Jaw, and not Resident Engineer there, as inadvertently stated in a recent issue.

W. G. McPHERSON, heretofore General Foreman, Moose Jaw, Sask., has been appointed Division Master Mechanic, Saskatchewan District, vice S. W. Falkins, transferred. Office, Regina.

F. C. JOHNSON, heretofore Night Locomotive Foreman, Moose Jaw, Sask., has been appointed General Foreman there, vice W. G. McPherson, promoted.

J. H. SCOTT, heretofore Chief Dispatcher, Saskatoon, Sask., has been appointed Car Service Agent, Alberta District. Office, Calgary.

J. YORSTON, heretofore of the construction department, has been appointed Resident Engineer, Lethbridge, Alta., vice E. B. Skeels, resigned.

H. M. SMITH, heretofore Trainmaster, Medicine Hat, Alta., has been appointed Trainmaster, MacLeod, Alta., vice W. E. Cline, transferred.

W. E. CLINE, heretofore Trainmaster, MacLeod, Alta., has been appointed

Trainmaster, Medicine Hat, Alta., vice H. M. Smith, transferred.

Delaware & Hudson Co.—C. S. SIMS, heretofore Vice President, Albany, N.Y., has been appointed Resident Vice President, Montreal.

F. P. GUTELIUS, heretofore General Manager, Canadian Government Railways, Moncton, N.B., has been appointed Vice President in charge of Operating and Traffic Departments, D. & H. Co., vice C. S. Sims, transferred. Office, Albany, N.Y.

Grand Trunk Pacific Ry.—The following station agents have been appointed: Zelma, Sask., D. J. Harnett; Lewvan, Sask., H. House; Gilroy, Sask., E. Briggs; Dodsland, Sask., W. G. M. Corregan; New Norway, Alta., J. W. McGhee.

Grand Trunk Ry.—H. A. CARSON has been appointed City Freight Agent, Montreal, vice A. E. Clare, resigned.

G. PYE, heretofore Road Foreman of Locomotives, Ottawa Division, Ottawa, has been appointed General Foreman, Motive Power House, Ottawa, vice D. J. McCuaig, whose appointment as Master Mechanic, Ontario Lines, Toronto, was announced in a recent issue.

L. I. STONE, heretofore Assistant Engineer, London, Ont., has been appointed Assistant Engineer, Toronto.

W. R. FRASER has been appointed Assistant Engineer, Allandale, Ont., vice W. G. Swartz, transferred.

C. S. COINE has been appointed Assistant Engineer, London, Ont., vice L. I. Stone, transferred.

The following station agents have been appointed: Windsor Mills, Que., J. A. LeRoche; Hoards, Ont., W. D. Locke; Utterson, Ont., A. M. Clarke; Parkdale, Ont., F. A. Bamber; Paris Jct., Ont., H. G. Simmons; London East, Ont., J. Gilpin; Pinkerton, Ont., F. F. Phillips; Barrys Bay, Ont., F. Folkard; Whitney, Ont., A. W. Simpson.

Great Northern Ry.—E. C. LEWIS has been appointed Freight Claim Agent, vice G. W. Perry, resigned. Office, St. Paul, Minn.

Lehigh Valley Rd.—T. J. HENNESSEY, heretofore Soliciting Freight Agent, Toronto, has been appointed Soliciting Freight Agent, Chicago, Ill.

V. A. FRADENBURG, heretofore chief clerk to Canadian Freight Agent, Toronto, has been appointed Soliciting Freight Agent, Toronto, vice T. J. Hennessey, transferred.

Michigan Central Rd.—A. G. OLDRIEVE, heretofore in the St. Thomas shops, has been appointed Roundhouse Foreman, Montrose, Ont., vice J. R. Sands, transferred.

J. R. SANDS, heretofore Roundhouse Foreman, Montrose, Ont., has been appointed Roundhouse Foreman, Windsor, Ont., vice J. Farrell, who has been granted leave of absence through illness.

New York Central Rd.—D. W. DINAN, heretofore Superintendent, Mohawk Division, Albany, N.Y., has been appointed General Superintendent, 2nd District, Buffalo, N.Y., vice C. Christie.

D. L. SOMMERVILLE, heretofore Superintendent, St. Lawrence Division, Watertown, N.Y., has been appointed Superintendent, Mohawk Division, Albany, N.Y., vice D. W. Dinan, promoted.

H. SCOTT has been appointed Superintendent, Ontario Division, Oswego, N.Y., vice J. W. Evans.

L. S. EMERY has been appointed Superintendent, St. Lawrence Division, Watertown, N.Y., vice D. L. Sommerville, transferred.

Pere Marquette Ry.—Under the recent reorganization, the name of the company has been changed from Pere Marquette Rd. to Pere Marquette Ry., and the following organization:

E. N. BROWN, Chairman of the Board. Office, New York.

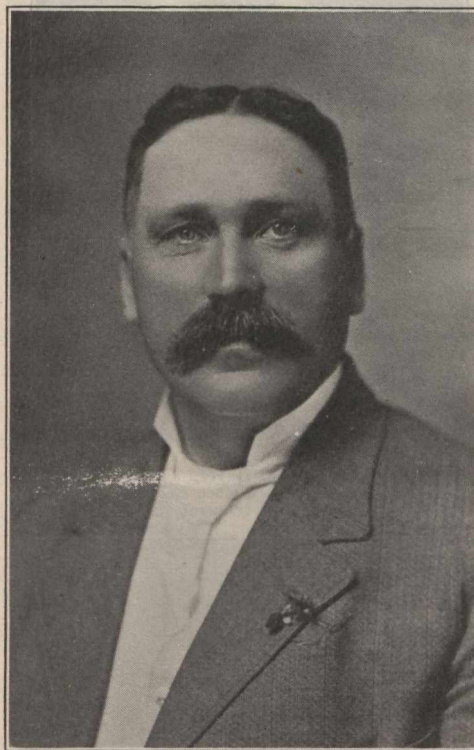
F. H. ALFRED, heretofore General Manager for the Receivers, President and General Manager. Office, Detroit, Mich.

J. L. CRAMER, heretofore Comptroller for the Receivers, Secretary and Treasurer. Office, Detroit, Mich.

A. E. BADGER, Assistant to the President and General Manager, Detroit, Mich.

A. L. GRANDY, heretofore Chief Engineer, Assistant General Manager, Detroit, Mich.

H. O. HALSTEAD, heretofore Superintendent of Transportation, General Superintendent, Detroit, Mich.



L. S. Brown,
Assistant to General Superintendent, Intercolonial
Division, Canadian Government Railways.

E. M. HEBERD, Assistant Secretary, New York.

J. TUTHILL, Chief Engineer, vice A. L. Grandy, promoted, Detroit, Mich.

C. S. SHELDON, Engineer of Bridges and Buildings, Detroit, Mich.

J. L. HAYES, heretofore Superintendent, Port Huron-Grand Rapids Division, Saginaw, Mich., Superintendent, Toledo-Ludington Division, vice A. R. Merrick, Saginaw, Mich.

J. A. ANDERSON, Superintendent, Port Huron-Grand Rapids Division, Saginaw, Mich., vice J. L. Hayes, transferred.

A. C. RHODES, heretofore Chief of Bureau, Departmental Accounts, Auditor Station Accounts, Detroit, Mich.

O. L. KINNEY, heretofore District Passenger Agent, Toledo, Ohio, Western Passenger Agent, Chicago, Ill.

J. K. COOPER, heretofore City Passenger and Ticket Agent, Grand Rapids, Mich., District Passenger Agent, Toledo, Ohio, vice O. L. Kinney, promoted.

W. S. BAKE, Land Agent, Detroit, Mich.

W. W. BRACY, stationer, Detroit, Mich.

C. J. RIST has been appointed Division Engineer, Toledo-Ludington Divi-

sion, Saginaw, Mich., vice J. E. Johnson, resigned to enter Michigan Central Rd. service.

Quebec & Saguenay Ry.—See Canadian Government Railways.

Quebec, Montreal & Southern Ry., Napierville Jct., Ry.—See Delaware & Hudson Co.

St. John Valley Ry.—W. P. JONES has been appointed President and General Solicitor, Fredericton, N.B.

E. S. CARTER has been appointed Secretary, Fredericton, N.B.

C. O. FOSS, formerly District Engineer, National Transcontinental Ry., St. John, N.B., has been appointed Chief Engineer, St. J.V.R., Fredericton, N.B.

Spokane International Ry.—E. PENNINGTON, President, Minneapolis, St. Paul & Sault Ste. Marie Ry., Minneapolis, Minn., has also been elected President, Spokane International Ry., vice D. C. Corbin, who retired on the acquirement of the railway by the C.P.R., mention of which was made in our last issue.

E. S. McPHERSON, heretofore Assistant Secretary, Minneapolis, St. Paul & Sault Ste. Marie Ry., Minneapolis, Minn., has been appointed Assistant to the President, Spokane International Ry. Office, Spokane, Wash.

G. W. WEBSTER, Secretary, Minneapolis, St. Paul & Sault Ste. Marie Ry., has also been appointed Secretary and Treasurer, S.I.R. Office, Minneapolis, Minn.

Following are other officers of the organization:

A. R. HERRICK, Assistant Secretary and cashier, Spokane, Wash.

J. E. HANIFEN, Superintendent, vice E. J. Roberts. Office, Spokane, Wash.

G. H. MARTIN, General Freight and Passenger Agent, Spokane, Wash.

E. F. CARDLE, Assistant General Freight and Passenger Agent, Spokane, Wash.

C. H. PRESCOTT, Master Mechanic, Spokane, Wash.

J. C. WILLIAMS, Auditor, Spokane, Wash.

Toronto, Hamilton & Buffalo Ry.—F. F. BACKUS, heretofore Assistant to the President, has been appointed General Manager, and his former position has been abolished. Office, Hamilton, Ont.

Wabash Ry.—The stores and purchasing departments have been separated and ERNEST BAXTER, heretofore Service Inspector, St. Louis, Mo., has been appointed General Storekeeper, reporting to the Vice President, vice A. J. Sewing, assigned to other duties. Office, St. Louis, Mo.

F. M. NOWELL has been appointed Superintendent, Detroit Terminal Division, which includes the line from Detroit to and including Oakwood yard. He is in charge of all the operating departments, and reports to the Superintendent, Locomotive and Car Department; Chief Engineer, Maintenance of Way, and Superintendent of Transportation, in matters relating to their respective departments. Office, Fort St. Union Station, Detroit, Mich.

Intercolonial Ry. Coal Contracts.—The Minister of Railways stated in the House of Commons recently that the Department had entered into contracts for the supply of coal as follows: Dominion Coal Co., 260,000 tons; Intercolonial Coal Co., 90,000 tons; Bras d'Or Coal Co., 10,000 tons; Milford Coal Co., 5,000 tons; Maritime Coal Co., 10,000 tons; Minudie Coal Co., 5,000 tons; Jones & McKinnon, 8,000 tons; M. F. Keith, 7,000 tons.

Traffic Orders by the Board of Railway Commissioners.

Alleged Underbilling of Freight.

26015. April 13. Granting the application of C.P.R. under section 400 of the Railway Act, for leave to prosecute G. C. Curtis, of Lacombe, Alta., for alleged fraudulent underbilling of certain shipments of freight.

Use of G.T.R. Yard in Montreal.

26055. April 20. Re complaint of G. H. Bavis of Montreal, that the G.T.R. refuses the use of its McGill St. yard, Montreal, for loading and unloading cartage freight. Upon hearing the complaint at Montreal, April 18, the Montreal Board of Trade and the railway company being represented, the complainant appearing in person; the railway companies having been required to justify the laying down or setting apart of certain tracks for the sole use of particular lines of traffic to the exclusion of others. It is ordered that the complaint be dismissed.

Demurrage on Grain at Niagara Frontier

26070. May 2. Re complaint of Toronto Board of Trade against assessment of demurrage at the Niagara frontier on cars containing Canadian grain for export through United States ports, while awaiting Canadian Government inspection; the inspection being a requirement of United States carriers. Upon hearing the complaint at Toronto, April 13, the Toronto Board of Trade, the Canadian Pacific, Grand Trunk, and Toronto Hamilton & Buffalo Railways, and the Michigan Central Rd being represented. It is ordered, that the complaint be dismissed.

Demurrage on Coal Cars.

26059. May 1. Re application of Retail Merchants Association of Canada, Toronto (Ontario Provincial Coal Section) for an order directing that, in cases where demurrage is charged on cars placed on public or private sidings and such charges are deemed by the shipper or consignee to be unreasonable, such shipper shall pay the charges under protest and may, within 10 days thereafter, appeal to the board, which shall determine such appeal, and, if the charges are found unreasonable, issue an order directing the carrier to refund the amount to the appellant, such order to be final. Upon hearing the application at Toronto, April 13, the applicants, the Grand Trunk, Canadian Pacific, and Canadian Northern Railways and the Michigan Central Rd. being represented, the application being withdrawn. It is ordered that the same be dismissed.

Potato Rates from Maritime Provinces.

26091. May 8. Re complaint of Jones & Jones, Woodstock, N.B., on behalf of shippers of potatoes in the Maritime Provinces, against the increased rates proposed to be charged by the Canadian Pacific and Temiscouata Railways under Tariffs C.R.C. no. E-3176 and C.R.C. 256 respectively, suspended until further order by order no. 25322, Aug. 30, 1916: Upon hearing the complaint at St. John N.B., Nov. 9th, 1916, it is ordered that order 25322, suspending C.P.R. Tariff, C.R.C. no. E-3176, and Temiscouata Ry. tariff, C.R.C. no. 256, be rescinded; provided that the rates in the said tariffs, where higher, be reduced to the St. John eighth-class basis, from stations shown therein on the Canadian Pacific and the Temiscouata Railways.

Rates on Binder Twine from Welland.

26102. April 20. Re complaint of Plymouth Cordage Co. against rates on

binder twine, in carloads, from Welland, Ont., to points east of Toronto, to and on hearing the complaint at Ottawa, Feb. including Kingston and Smiths Falls. Up-20, the complainant, the Canadian Manufacturers' Association, the Canadian Pacific and the Grand Trunk Railways and the Michigan Central Rd. being represented, it is ordered that the complaint be dismissed.

Freight Rates on Canned Goods.

26116. May 16. Re complaint of Regina Board of Trade and H. G. Smith, Ltd., of Regina, against the increased freight rates charged on canned goods and dried fruits, effective Mar. 1, 1917, from Pacific coast points to Regina. Upon hearing the complaints at Regina, Mar. 15, the Boards of Trade of Regina, Saskatoon, Moose Jaw, and Yorkton, the Canadian Manufacturers' Association, Codville & Co., Campbell Brothers & Wilson, the Provincial Retail Merchants' Association, and the Canadian Pacific, Canadian Northern, and Grand Trunk Pacific Railways being represented at the hearing, it is ordered that the complaints be dismissed.

Movement of Grain from Goose Lake District.

26117. May 16. Re movement of grain in the Goose Lake District, served by the Canadian Northern Railway and the transportation thereof. Upon its being represented to the board that it is necessary that grain should be moved just as soon as possible, in order to prevent loss, it is ordered that the Grand Trunk Pacific and the Canadian Pacific Railways be directed forthwith, as long as they continue to do so and as long as the emergency exists, to supply cars at the rate of 75 and 50 a day respectively, to the Canadian Northern at the transfer track at Saskatoon; the said cars to be taken into the Goose Lake District by the Canadian Northern, loaded, and returned to the Grand Trunk Pacific and the Canadian Pacific Railways at Saskatoon for furtherance to the elevators at the head of the lakes. That the through rates for the joint carriage of the said grain, as herein proscribed, shall be the rates published and filed by the Canadian Northern for the carriage of grain over its own rails, or jointly with its eastern connections, as so published, east of Saskatoon, from the said points of shipment to the same destinations; the allocation of the said joint rates between the carriers hereby made parties thereto to be arranged between themselves within one week from the date of this order, and, failing such arrangement, to be settled by the board, subject to such submissions in relation thereto as either railway company may desire to make, provided that the uninterrupted movement of the said grain be not impaired pending such settlement.

Algoma Eastern Ry. Interswitching.

26121. Re order, April 16, 1917, granting leave to Algoma Eastern Ry. to charge interswitching rate of 1c per 100 lb. shown in its tariff, C.R.C. no. 169, from Feb. 15, 1917. Upon reading the submissions filed, and the report of the Board's Chief Traffic Officer, it is ordered that the said order be amended by striking out the words, "from the effective date of the said tariff, viz., Feb. 15, 1917," in the two last lines of the order. And it is further ordered that Supplement 2 to Algoma Eastern Ry. Co.'s Tariff, C.R.C. 169, be amended by striking out the words, "effective Feb. 15, 1917."

Moncton & Buctouche Ry. Tariff.

26156. The application of Moncton & Buctouche Ry. Co., under sec. 327 of the Railway Act, for approval of its Standard Freight Mileage Tariff, C.R.C. no. 25. Upon the report and recommendation of the Board's Chief Traffic Officer, it is ordered that the tariff be approved. And it is further ordered that order 25737, Dec. 20, 1916, approving the company's Standard Freight Mileage Tariff, C.R.C. no. 23, be rescinded.

Transportation Associations, Clubs, Etc.

The names of persons given below are those of the secretaries unless otherwise stated:

Canadian Car Service Bureau—W. J. Collins, Manager, 401 St. Nicholas Building, Montreal.

Canadian Electric Railway Association—Acton Burrows, 70 Bond Street, Toronto.

Canadian Freight Association (Eastern lines)—G. C. Ransom, Canadian Express Building, Montreal.

Canadian Freight Association (Western lines)—W. E. Campbell, 805 Boyd Block, Winnipeg.

Canadian Railway Club—J. Powell, St. Lambert, Que. Meetings at Montreal 2nd Tuesday, each month, 8.30 p.m., except June, July and August.

Canadian Society of Civil Engineers—C. H. McLeod, 176 Mansfield St., Montreal.

Canadian Ticket Agents' Association—E. de la Hooke, London, Ont.

Dominion Marine Association—F. King, Counsel, Kingston, Ont.

Eastern Canadian Passenger Association—G. H. Webster, 54 Beaver Hall Hill, Montreal.

Engineers' Club of Montreal—R. W. H. Smith, 9 Beaver Hall Square, Montreal.

Engineers' Club of Toronto—R. B. Wolsey, 94 King Street West, Toronto.

Express Traffic Association of Canada—C. N. Ham, Montreal.

Great Lakes and St. Lawrence River Rate Committee—James Morrison, Montreal.

Hydro-Electric Railway Association of Ontario—T. J. Hannigan, Guelph, Ont.

Niagara Frontier Summer Rate Committee—James Morrison, Montreal.

Nova Scotia Society of Engineers—A. R. McCleave, Halifax, N.S.

Quebec Transportation Club—A. F. Dion, Quebec.

Shipping Federation of Canada—Thos. Robb, Manager, 42 St. Sacramento Street, Montreal.

Ship Masters' Association of Canada—Capt. E. Wells, 45 St. John Street, Halifax, N.S.

Toronto Transportation Club—W. A. Gray, 143 Yonge Street, Toronto.

Transportation Club of Vancouver—H. W. Schofield, 553 Granville Street, Vancouver, B.C.

Twin Cities Local Freight Agents' Association—E. J. Travers, Fort William, Ont.

Winnipeg Traffic Club—James Gehrey, Bannatyne Avenue, Winnipeg, Man.

New Heavy Freight Car.—The Pennsylvania Rd. is building a hopper car of 85 tons capacity to a design for large load capacity and large bulk capacity in combination. The light weight of the car will be 60,000 lb. Its load capacity will be 170,000 lb., and it volume capacity level with top will be 2,900 cu. ft. The loaded weight will be 115 tons; and as the trucks will be four-wheeled, each axle will carry a load of 57,500 lb. under full load. The car will be 48 ft. 4 in. long over end sills and 38 ft. 4 in. between truck centres. As the trucks will have 5 ft. wheelbase, a pair of such cars coupled together will have four consecutive axles at 5 ft. spacing, each carrying over 57,000 lb. load. This approximates the heaviest engine driving wheel loading used in bridge design. The average weight of the car per lineal foot, however, will be a little less than 4,800 lb.

Car Shortage in the U.S.—The Interstate Commerce Commission has been given power to take complete control of the movement of railway cars engaged in interstate commerce, so that there shall be adequate accommodation for the nation's war requirements, and to relieve the prevalent car shortage.

Electric Railway Department

Electric Railway Statistics for Year Ended June 30, 1916.

The following abbreviations are used in the names of railways:—E, electric; E.R., electric railway; E.S.R., electric street railway; S.R., street railway. The minus mark (—) in the column for net income or deficit, shows that there was a deficit in the operation of the line to the extent of the figures given.

Name of Railway	1st Main track mileage	Gross earnings from operation	Miscellaneous earnings	Operating expenses	Taxes funded debt, etc.	Net income or deficit	Total car mileage	Fare passengers carried
Berlin and Waterloo S. R.	3.28	\$ 51,656		\$ 36,011	\$ 7,764	\$ 7,881	207,5281	1,010,114
Berlin and Northern Ry.	3.15	8,271		6,960	1,601	—290	35,400	192,227
Berlin, Waterloo, Wellesley and L.Huron Ry.	17.81	218,032		122,645	21,827	73,559	301,177	1,373,823
Brandon Municipal Ry.	10.31	29,258		28,660	20,100	—19,501	235,281	627,739
Brantford and Hamilton Ry.	23.00	141,647		109,232	88,804	—56,390	362,164	759,063
Brantford Municipal Ry.	29.96	99,717		64,938		34,779	853,643	1,514,418
British Columbia E. R.	242.55	2,468,143	\$1,594,528	2,448,896	944,145	669,629	12,557,439	43,021,598
Calgary Municipal Ry.	55.00	548,494	15,877	375,777	109,284	79,309	2,527,410	12,986,234
Canadian Resources Development	1.75	331		1,478		—1,146	6,636	6,633
Cape Breton E. R.	30.52	220,412	122,713	135,931	116,594	90,599	685,446	4,171,838
Chatham, Wallaceburg & Lake Erie Ry.	36.94	148,164		81,212	41,438	25,513	494,655	416,049
Cornwall E. R.	4.00	33,555	77	22,359	5,618	5,655	223,306	422,221
Edmonton Interurban Ry. (1)	8.19							
Edmonton Radial Ry.	52.37	534,163		367,894	277,012	—110,743	2,138,498	10,948,518
Fort William E. R.	19.88	113,421		87,643	81,887	—56,109	618,364	2,581,029
Guelph Radial Ry.	8.50	45,143		33,627	1,639	9,876	278,975	1,090,017
Halifax Electric Tramway Co.	12.29	350,077	214,195	212,270	58,352	293,649	1,362,693	8,061,025
Hamilton and Dundas E. R.	7.00	75,599		56,059	6,131	13,408	166,663	974,519
Hamilton, Grimsby and Beamsville E. R.	22.00	136,420		124,279	14,639	—2,498	405,235	1,019,152
Hamilton S. R.	30.06	659,709		414,301	101,530	143,877	2,618,393	15,630,039
Hamilton Radial Ry.	25.00	171,407		155,041	57,161	—40,796	524,640	1,234,890
Hull Electric Co.	15.67	157,800	30,168	124,537	62,602	829	798,716	2,513,237
International Transit Co.	4.30	97,386	41	64,204	14,747	18,476	287,342	1,536,747
Kingston, Portsmouth & Cataraqui E. R.	8.00	43,229	1,708	30,763	3,970	8,496	199,680	1,032,656
Lethbridge Municipal Ry.	11.00	46,853		41,039	24,175	—18,361	284,234	963,719
Levis County Ry.	11.75	94,976		84,102	23,370	—12,495	416,341	2,034,518
London S. R.	35.19	422,640		282,250	44,643	95,747	1,960,217	11,342,886
London & L. Erie Ry. & Transportation Co.	28.00	82,410	46	85,594	47,325	—50,463		403,717
London and Port Stanley Ry.	23.60	281,058		180,619	76,524	23,913	549,610	548,326
Moncton Tramways Elec. & Gas Co.	4.47	16,808	63,999	18,531		62,267	117,301	426,961
Montreal Tramways Co. (2)	124.26	6,609,765		3,707,053	2,118,405	784,306		156,408,303
Montreal and Southern Counties Ry.	52.20	217,378	251	215,434	92,072	—89,877	604,018	1,982,983
Moose Jaw E. R.	9.00	89,599		73,988		15,610	409,240	1,962,852
Nelson S. R.	2.13	11,635		13,127		—1,492	30,236	273,036
Niagara Falls Park and River Ry.	11.91	121,242	6,430	240,981	34,298	—142,607	272,034	1,212,043
Niagara, St. Catharines & Toronto Ry.	63.07	691,593		443,635	18,186	229,771	1,445,224	5,524,212
Niagara, Welland and Lake Erie Ry.	1.87	25,738		10,568	4,412	10,757	86,892	552,765
Nipissing Central Ry.	15.37	108,215	516	72,635	11,704	24,391	268,525	1,386,748
Oshawa Ry.	9.00	105,391	483	61,826	3,647	40,400	81,910	283,500
Ottawa E. R.	28.11	1,081,303		646,577	88,645	346,079	4,756,501	25,392,750
Peterborough Radial Ry.	6.39	56,701		37,170	11,009	8,521	437,896	1,240,680
Port Arthur Civic Ry.	12.43	96,375	1,301	81,039	69,093	—52,456	561,921	2,155,425
Quebec Ry., Light and Power Co.								
Citadel Division	19.91	523,524		322,695		200,829	2,098,926	12,278,607
Montmorency Division	28.60	210,398		144,971		65,426	442,378	1,775,523
Regina Municipal Ry.	31.35	192,865		186,947	98,937	—93,019	909,098	4,236,310
Sandwich, Windsor and Amherstburg Ry.	40.78	331,108	35,657	191,138	38,419	137,208	1,103,557	6,044,912
Sarnia S. R.	8.25	62,936		44,711	4,902	14,429	209,196	1,066,477
Schomberg and Aurora Ry.	14.40	13,685		15,637	35,011	—36,962	21,090	24,092
Sherbrooke Ry. and Power Co.	9.00	49,621	54,814	38,085	62,630	3,179	419,294	1,128,432
St. Stephen S. R.	7.00	40,530		29,621	5,777	5,131	183,960	766,583
St. Thomas S. R.	7.00	22,263		27,237		—4,974	295,785	489,051
Suburban Rapid Transit	21.02	167,872	30,980	67,642	31,749	—20,362	432,468	767,973
Saskatoon Municipal Ry.	12.63	48,084		116,624	37,725	13,522	736,077	3,257,611
Three Rivers Traction Co.	4.00	21,493		19,270	5,566	—3,343	130,308	411,856
Toronto Civic Ry.	9.14	212,858		193,388	89,459	—69,989	1,262,685	12,604,038
Toronto Ry.	116.44	5,839,393	90,000	3,227,963	1,336,159	1,365,270	20,056,819	145,812,384
Toronto Suburban Ry.	18.79	164,640	3,807	80,667	55,398	32,381	468,651	2,890,880
Toronto and York Radial Ry.	72.43	547,850		382,606	155,609	9,633	2,221,344	5,454,649
Winnipeg E. R.	110.14	2,121,653	650,226	1,401,578	587,227	783,074	10,424,726	54,220
Windsor, Essex & Lake Shore Rapid Ry.	36.17	165,194		103,828	58,912	2,453	508,669	540,220
Winnipeg, Selkirk & Lake Winnipeg Ry.	39.40	129,236	10,431	82,717	37,992	18,960	431,052	663,617
Yarmouth E. R.	3.00	39,340	312	21,665	12,430	5,556	89,145	249,111
Total	1,730.73	\$27,416,284	\$2,928,573	\$18,099,905	\$7,358,283	\$5,774,916	82,516,612	580,094,167

- (2) Montreal Tramways Co., additional mileage 7.65
- (3) Pictou County E. Co. 9.10
- (4) St. John Ry. 18.15

Less deficits —888,489
 Total net income... \$4,686,067

1,765.63

Notes to Electric Railway Statistics.

The figures in the foregoing table are taken from the annual returns to the Dominion Railways Department, which, however, are incomplete, there being again no returns from the Montreal Tramways Co., the Pictou County Electric Co. and the St. John Ry., as has been the case for some years past. The figures prefixed to the following notes refer to similar figures in the first column of the table:

(1) The Edmonton Interurban Ry. was not in operation during the year.

(2) The figures given for the Montreal Tramways Co.'s first main track mileage, 124.26, are those used in the 1915 statistical tables, in which they were stated to be the figures used in 1911 report. The actual first main track mileage at Dec. 31, 1916, was 131.91 miles. The earnings, expenses and passengers carried are apparently taken from the company's report for the year ended June 30, 1916, as given in Canadian Railway and Marine World for Sept., 1916, pg. 375.

(3 and 4) The Railways Department does not receive returns from the Pictou County Electric Co. and the St. John Ry. The latest figures we have of these companies' first main track mileage, 9.10 and 18.15 miles respectively, have been added by us at the bottom of the table to show the total mileage in Canada, viz.: 1,765.63, against 1,730.73 shown by the Railways Department.

The Brantford Municipal Ry. appears in the table in place of the old Grand Valley Ry., which included the Brantford Electric Street Ry. The London & Port Stanley Ry. and the Schomberg & Aurora Ry., formerly steam railways, having been electrified, are transferred to electric railway mileage. The other new lines reporting are the Three Rivers Traction Co. and the Toronto Civic Ry. The total first main track mileage shows an increase of 140.44 miles over June 30, 1915.

Five companies reported that they were operating cars over 210.84 miles of lines leased from other companies.

Twenty-seven of the companies carry freight over their lines, the number of tons carried for the year ended June 30, 1916, being 1,936,674; and 23 of the companies reported a freight, mail and express car mileage of 1,990,375 miles in addition to passenger car mileage.

Winnipeg Electric Railway Advertising.

The Winnipeg Electric Railway is a thorough believer in advertising for business, and for some time past has been carrying on a general campaign in Winnipeg daily papers and by the distribution of leaflets. The company supplies gas, electric light and power, and street car service, and while there is a specialization along each of these lines, the broad general line of argument in all the company's advertising is service. "It is your right as a citizen to expect good service," says one of the leaflets. "It is our duty to serve you, . . . may we have your co-operation." Another says, "We hold our success not in the light of dollars and cents, but rather in the expansion and development of our efforts to better serve the public," says another, while a third says: "We ask you, not as our fellow townsmen, not as a big corporation, but from the point of view of your own citi-

zenship, to consider the transportation question of Winnipeg as having a vital interest to you personally, for man's greatest interest is man, and that man well known to you."

The various leaflets and newspaper advertisements bring out and illustrate various matters in connection with the company's service; show how it aids in maintaining the streets, contributes to the general revenue of the city, and how it is controlled and restricted by law in the public interests. In others the question of the jitney traffic is discussed. The jitney is described as a freelance vehicle, practically unrestricted by authority, operating only in fine weather and then only on short and profitable runs and only paying a small license fee. The company claims "that the jitney is a stumbling block in the way of Winnipeg's future," and in another advertisement recognizes "that the jitney serves to advantage a small number of the public. But can the minority be considered in a big issue which so vitally affects Winnipeg and its future?" Can you as a broad minded citizen, allow one form of transportation all the advantages when, by so doing, you are hourly strangling that system which has helped build Winnipeg to its present greatness and the support of which will mean most for your own and Winnipeg's future?"

The advertisements in the daily papers are mostly in the form of short talks, direct and forceful over the signature of F. Morton Morse, the Secretary-Treasurer and a director. A number of them are illustrated, with views of Winnipeg, with statistical information graphically displayed. One particularly good illustration shows the development of transportation from the oxcart to the present type of interurban car.

Mainly About Electric Railway People.

W. G. Ross, President, Montreal Harbor Commission, and a director, Montreal Tramways Co., has been elected a director of the Canadian General Electric Co.

A. E. Wideman, who resigned recently as Chairman of the Port Arthur Public Utilities Commission, operating the Port Arthur Civic Ry., Port Arthur, Ont., remains a member of the board.

E. P. Coleman, General Manager, Dominion Power & Transmission Co., Hamilton, Ont., and President, Canadian Electric Railway Association, spent a short holiday in Algonquin Park in May, with his two young sons.

Thos. Ahearn, President, and James D. Fraser, Secretary-Treasurer and Director, Ottawa Electric Railway, who left Ottawa on Feb. 20 for California, returned home early in May. They went via New Orleans, spending most of their time at Coronado, and visiting Riverside, Los Angeles and San Francisco, returning via Portland, Oregon, and Chicago.

B. Greenway, General Foreman, and for the last two and a half years, acting Assistant Superintendent, Regina Municipal Ry., Regina, Sask., was presented with a gold watch, fob and gold mounted pipe by the employees recently, on his leaving Regina for Grand Forks, N.D., where he has been appointed Superintendent, Grand Forks St. Ry.

C. U. Peeling, who has been Manager of the electric light and gas properties at Oshawa, Ont., which are operated by the Hydro Electric Power Commission of Ontario, has been appointed Manager of the

Cornwall St. Ry., Light & Power Co. and the Stormon Electric Light & Power Co. at Cornwall, Ont., succeeding Wm. Hodge, who has resigned after occupying these positions for 12 years. Mr. Hodge will remain in Cornwall, and will be prepared to give his assistance and advice regarding the properties.

Jitney Traffic Notes.

About 400 jitney licenses have been taken out in Winnipeg this year up to date. In 1916 there were 558 issued.

The Winnipeg City Council was asked, May 10, by the Winnipeg Automobile Club to pass a bylaw to require jitneymen to put up a bond, as is done in other cities.

The Vancouver, B.C., Jitney License Inspector is reported to have stated recently that there were 10 more jitneys in operation in the city than there were at any time during 1916.

The Union Jack Motor Co. put in operation 10 additional cars on its motor service between Vancouver and New Westminster, B.C., May 1. It is operating on a 15 minute schedule, with a 40c fare for the round trip.

Owing to reduction in traffic the Winnipeg Electric Ry. put in force a new car schedule, May 1, which requires 14 less cars to run than were used during the winter. It is reported that on some of the heaviest routes a car is now only making about \$25 a day in place of from \$45 to \$50 a day three years ago. The reduced traffic is stated to be almost entirely due to jitney competition.

In connection with the communication addressed to Winnipeg City Council by the Winnipeg Electric Ry., as to jitney competition, which was given in Canadian Railway and Marine World for May, the City Solicitor has advised the council to refuse to admit that the company has any ground for holding the city responsible for the losses which the company alleges it has sustained through the competition of jitneys, which are licensed by the city to do business.

Fares on Port Arthur and Fort William Municipal Railways.

Canadian Railway and Marine World for April gave particulars of a proposed new schedule of fares for the Port Arthur Civic Ry. and the Fort William Municipal Ry. The two cities have since forwarded a joint application to the Ontario Railway & Municipal Board, for a revision of their fares in accordance with the following schedule.

One fare in each city. This means that after crossing the boundary line between the two cities on a car another fare will be collected.

Regular fare 5c, or 6 tickets for 25c, good from 5.30 a.m. until 12 midnight.

Workmen's fare 5c, or 8 tickets for 25c; good from 5.30 a.m. to 8 a.m., and from 5.30 p.m. to 7 p.m. from Monday to Saturday (inclusive). Sunday tickets, 8 for 25c, good from 5.30 a.m. to 12 midnight.

Children's tickets, up to 14 years of age, 10 for 25c, good all hours, every day of the week, Sunday included. All bona fide students above 14 years privileged to use children's tickets from 8 a.m. to 5 p.m. on school days. Children under 14 years of age may use school children's tickets on Sunday, good for through ride.

The Board decided to hear the application at Port Arthur on June 19.

A Few Disconnected Ideas on Street Railway Operation.

By F. D. Burpee, Superintendent, Ottawa Electric Railway.

I will endeavor in this paper to describe a few ideas we are using in Ottawa. The paper will be short and if the matter it contains is not new to the reader, he will not have lost much time.

Car Service Regulation.—Some years ago, when the service on the different lines of our system was supervised by inspectors, who were for the greater part of the time around the centre of the system, it was found that the motormen made an effort to be on time passing through the centre, but loafed at the termini. They tried to make the lay at the terminus as long as possible, by arriving ahead of time and leaving behind time, making gaps in the service and causing many complaints. To correct this condition, we have established a starting office for each line, situated at or near a terminus. The starters were chosen from the list of conductors and motormen, old hands thoroughly familiar with car service work, and men who showed they were intelligent and tactful. These offices, beside controlling the service on each line, sell tickets, issue transfers, and keep on hand a stock of sand, salt and supplies for minor repairs, which often makes it possible to keep cars in service that would otherwise have to go to the repair shop. The cars leave the barns in the morning with instructions to get to certain points for their first trip. After that the service is entirely in charge of the car starter, who gives the motormen so many minutes for the round trip. He extends or reduces this time as the traffic fluctuates, and works the rush hour extras into the service when they come out. Each starter makes a daily report showing the exact time each car passes his office and gives an explanation of any gaps that may appear. When rush hour extras go into the barns he arranges his regulars so that the gaps are quickly absorbed.

At the centre of the system we maintain a checking office in charge of the Traffic Inspector, whose clerk records on a large sheet the time each car passes east and west. As nearly all lines pass this office the sheet shows at a glance the whole service. It is the duty of the Traffic Inspector to consult the car service sheet, investigate gaps, and keep his eye on the service generally. He keeps in close touch with each starter by telephone and is their immediate chief. He makes a daily report to the Superintendent, explaining each gap shown by the car service sheet and any other items or recommendations concerning his department. We have established four starting offices, two of them being placed at a point where two lines intersect and have control over both lines. They cost us about \$2,500 each per year, but we consider the money is saved many times over in the splendid service obtained. They have proved a splendid means of maintaining the time interval between cars and when blockades occur the service can be reorganized in a very short time.

Each car carries a card giving the time it should pass various time points. The card is held by a clip in the front vestibule where the motorman can easily consult it. Hooks for motormen's watches are just beneath the time card.

I consider the success of our starting offices largely due to the men who were chosen for starters. They should be men who will not antagonize the conductors and motormen, but firm enough to have

their orders promptly carried out. Briefly, they must be intelligent and tactful, with a thorough knowledge of the car service work. It provides an excellent position for the conductor or motorman who is above the average, and worthy of promotion.

Operation of Sweepers.—Each autumn we book our sweeper crews for the winter, taking them from the old hands. We choose men who can be relied upon and who agree to show up whenever called. They are men who are booked on regular day and relief runs, working the same cars. When sweepers are needed these crews are relieved by spare men and go to the barns for their sweeper, or in an emergency run their cars in. Each crew has its own sweeper and route and are held responsible for both. They stay with their sweeper until it is sent in or relieved by their regular relief crew. The relief crews stay out until after midnight if necessary, and come when called between that hour and 6 a.m.

Maintenance of Equipment.—While I think every operating man is convinced that the policy of giving each motorman his own car is a god one, he does not know until he tries it what an effect it has on maintenance cost and regularity of service. Owing to the fact that we have not open terminal barns, it has been considered impossible to inaugurate it here. It was attempted on one occasion, but the shunting necessary to place the cars caused so many complaints from residents in the neighborhood of the barns that it was discontinued. We found recently, however, that by arranging the runs so that the first cars out in the morning are the last in at night, each man could be given his own car and the shunting practically eliminated. We have put this arrangement in force on all our lines. The men are taking a keen interest in their cars, even to the extent of asking for brass polish and cloths to keep everything polished up and looking well. If a day man finds that his car has been abused the night before, he comes down with both feet on the night man, and vice versa. If the man at fault is a spare, he gets a lecture on car operation that he remembers. In the old days a man seldom reported defects, because his chance of getting the same car the next day was remote. Now he reports everything that is not in first class shape on his car and keeps at it until he gets it fixed. The conductors seem to be as keenly interested as the motormen.

Elimination of Skid Flat Wheels.—We have always had the skid flat wheel trouble with us, due to the extreme variations in temperature and the frequency at such times of what the motormen call a "bad rail." Some equipment men will tell you that if a wheel is flattened, scrap it. I have heard this statement from the superintendent of a large system, but during a visit to his city counted over a dozen cars with flat wheels in half an hour. Of course we all know that if the flat spot is small it will, in the course of time, pound out. During the pounding process, however, the passengers have a few things to say about the road. We have installed a wheel grinder and have done well enough with it to justify its purchase, but have had more success by getting at the root of the trouble and preventing the flattening by the motormen. We have established a rule that

each motorman who flattens a wheel must make an accident report of it and give an explanation of the damage he has done. There are times when a man is to be commended for flattening wheels. It may be that he has averted a serious accident. In the majority of cases, though, the damage might be avoided, and is often due to carelessness. The starting office on each line is provided with a pad on which to record verbal reports of motormen who receive cars with flat wheels. If a motorman takes a car in that condition from a barn or from the crew he is relieving, he reports the car number at his starting office at the first opportunity. The starter records the man, and car, and time report is made. The last man to handle this car, who has not so reported it, is held responsible for the damage, and, if he has not already done so, is called upon to make out a report. Due allowance is made for weather conditions. We have days when it is impossible to keep cars from skidding. Under such conditions flat spots are liable to appear with the best of motormen. Whatever the reason, we have succeeded in reducing our flat wheel trouble remarkably. It is partly due, I think, to the fact that each man has his own car, and also to the moral effect of making each man at fault make an accident report and place himself on record as being responsible for the damage.

Car Changers.—When a car becomes disabled it used to be our practice to send it in and give the crew another car. This made a gap in the service. For several years back we have kept a crew at the repair shop who are known as car changers. They are ex motormen of long service and have an intimate knowledge of the various runs. Fortunately for us these men have taken a keen interest in their work and keep themselves informed of any changes in the service, so that they have a pretty good idea, when a car is reported, just where they can meet it. When some trouble develops on a car, which is beyond the ability of the motorman to repair, he reports it at his starting office. The starter telephones the repair shop. When the car comes back to the centre of the city the crew find a car waiting at some convenient point, transfers the passengers and go ahead. The car changers take the disabled car back to the repair shop. There is no delay and no gap.

Bulletins.—It was our practice until a short time ago to post bulletins in a book and have each man sign opposite his number, but we found that there were always a large number of men who neglected to sign and also a large number who signed without reading the bulletin. We have substituted bulletin boards and loose leaf books at each barn, and in the conductors' and motormen's lounging room. We post on the bulletin board a copy of every bulletin issued and in the books copies of those we wish to preserve, so that a man who has been off duty can read all bulletins that have been issued during his absence. We have also started the publication of a small monthly sheet called "The Ottawa Electric Railway Bulletin," which is given to the men with their pay envelopes on the 20th of each month. While this is primarily intended to contain copies of bulletins issued the month previous, it also contains other matter on efficiency, courtesy, safety, etc., set forth in a more or less interesting way. We

hope in the course of time to extend the scope of this publication to taking in all the departments and make it appeal to the employes of every department. In its present form of four pages the bulletin costs us about \$15 a month for 1,000 copies.

Seniority.—Operating men should realize, and probably do, the importance that a conductor or motorman's place on the seniority list has for him. He goes through the hard times of being a spare man and the long spell of night work, and for some years looks forward all the time to something better. These better things depend entirely on his advancement in order of seniority. It does not seem fair that, except in the case of sickness, men should get leave of absence for several months and when they return take exactly the same place on the seniority list as when they left. We have cases where men have been away one year out of five, but have been credited with five full years, whereas they have only worked four. They have held their places on the seniority list ahead of men who have worked nearly five years. This had led to some discontent among the men. Seniority should mean length of actual service rendered. We have established a rule that a man who obtains leave of absence for any period more than one month, will be reduced on the seniority list the length of time he is away from duty.

EDITOR'S NOTE—The foregoing paper was written before Mr. Burpee obtained leave of absence for military service. He is now a major in the 207th Battalion, which was recruited in Ottawa and which is now overseas.

Regina Municipal Railway Earnings.

Following are the earnings, expenses, etc., for April, compared with those for Apr. 1916, and the aggregate totals for 4 months ended Apr. 30, 1917:

	Apr. '17	Apr. '16	4 mths. to Apr. 30, '17
Total earnings . . .	\$18,986.56	\$18,121.67	\$81,296.26
Operating expenses . . .	15,955.08	15,241.47	69,603.27
Capital charges . . .	7,953.34	8,963.80	32,022.22
Operating surplus . . .	3,031.48	2,880.20	11,692.99
Deficit	4,921.86	6,083.60	20,329.23
Exp's per car mile without power . . .	15.83c	10.01c	16.78c
Exp's per car mile with power	20.89c	20.11c	22.45c
Cost per k.w.h. . . .	1.41	1.99	1.41
Cost per car mile . . .	5.06	5.34	5.66
Platform wages per car hour	78.18	72.94	77.58
Total passengers . . .	425,117	410,697	1,820,098
Expenses per cent. of earnings, less capital		84.09	
Expenses per cent. of earnings, with capital		125.97	

One-Man Cars in Edmonton, Alta.—The Edmonton Radial Ry. is operating one-man cars upon two routes, and on May 14 decided to adopt them on a third route. Superintendent Moir reported in favor of using them on all routes on the system except the one from North Edmonton to 124th St. The present wages bill for motormen and conductors is \$461.44 a day, but under the one-man car system if carried out as recommended it would be reduced to \$358.70 a day. There will be no lessening of the service, under the system, but it is hoped to give a quicker service than at present.

The American Electric Railway Association has decided that the convention in its usual form be abandoned for the present year, and that the member companies be communicated with at a later date, advising such a meeting as it may seem proper to substitute.

Answers to Questions on Electric Railway Topics.

Following are answers by Canadian electric railway officials to questions sent in to the American Electric Railway Association's question box:

Changing Wheels.—Do you change car wheels as to defects according to individual inspector, or do you do it by fixed rules?

W. R. McRae, Master Mechanic, Toronto Ry., Toronto.—Equipment inspectors spot wheels and leave for special wheel inspectors, who decide cause and action.

Vestibule Doors.—In operating cars with bulkhead doors and vestibules, do you require the motorman to keep the bulkhead doors closed?

F. L. Hubbard, Assistant to General Manager, Toronto Ry., Toronto.—Yes, in winter; during the summer months doors are kept open.

Automatic Crossing Bells.—How long should automatic crossing bells ring before the train arrives at the crossing?

C. L. Wilson, Assistant Manager, Toronto & York Radial Ry., Toronto.—The Ontario Railway Act calls for warning to be given by whistle or bell 80 yards before arriving at a crossing. This, we think, should fix the length of time an automatic bell should ring.

Fencing Right of Way.—Is it your practice to keep all private right of way and miscellaneous property carefully fenced in?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—Yes.

Installation of Cattle Guards.—When operating in territory where the law forbids cattle and other domestic animals to run at large, is it necessary to install cattle guards?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—Yes, at all public road crossings we make a practice of installing cattle guards.

Fire Protection on Bridges.—What is your method of protecting wooden bridges and trestles against fire?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—Water barrels and water buckets are placed on bridges at about 200 ft. intervals.

Conversion of Cars to One Man Operation.—Is it not possible to make over old cars to one man operation, so that they will be a satisfactory substitute for new equipment for this purpose?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—We have not had any experience in rebuilding old cars for one man operation, although last summer we rebuilt one of our old cars to the open air type, centre entrance. From our experience with it so far it has proved satisfactory.

Waiting Rooms in Cities.—Are waiting rooms justified for city traffic, where the headway is less than 15 mins.?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—No, we do not think that waiting rooms are justified on lines where the headway is less than 15 mins.; where we give a 30 min. service on suburban lines, we furnish waiting rooms.

Lighting of Waiting Rooms.—On interurbans running through sparsely settled territory, is the lighting of waiting rooms or shelters necessary?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—Yes, we think it advisable that shelters on interurban lines should be lighted, and particularly so where the shelter is built up from the roadway.

Automobiles for Officials.—Do you provide open or closed automobiles for the use of your executive officials?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—We provide open automobiles for executive officers.

Bridges With Draw Spans.—What is the most practical and economical way to safeguard operation over bridges with draw spans?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—We consider the best method is to install section insulators 1,000 ft. on each side of the draw span, which causes the trolley to become dead between this point and the draw as soon as the draw commences to open; in addition to this, a compulsory stop should be made requiring all cars to come to a full stop at all times before proceeding 1,000 ft. on each side of the draw. This has been our practice for some years and has worked out very satisfactorily.

Company Publicity.—What single agency, such as a company publication, do you consider to be the most effective in giving "a soul to a corporation," or in other words, to humanize the company in the eyes of the public?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—I am of the opinion that a company publication of a weekly or semi-monthly issue is the most effective.

Change Orders on Suburban Lines.—In operating suburban trolley lines by the dispatcher system, do you furnish both motorman and conductor with change orders?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—We do not operate suburban lines by a dispatcher system. On interurban lines, where trains are operated to Standard Rules, train orders are handed to the conductor by dispatcher or given over the phone to the conductor, who writes them down on order blank, and in both cases hands them to the motorman.

Closing Bulkhead Doors.—In operating cars with bulkhead doors and vestibules, do you require the motorman to keep the bulkhead doors closed?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—Yes.

A. Gaboury, Superintendent, Montreal Tramways Co., Montreal.—Yes, at all times, except when backing car.

Automatic Crossing Bells.—How long should automatic crossing bells ring before the train arrives at the crossing?

W. G. Murrin, Assistant General Manager, British Columbia Electric Ry., Vancouver.—1,000 ft. or 1,500 ft. before the front end of trains reach crossing.

East Kildonan, Man., recently applied to the Public Utilities Commission of Manitoba, May 4, for an order directing the Winnipeg Electric Ry. to provide a better car service and to reduce fares within the municipality. Alternative proposals were submitted, and after hearing what the company's management had to say, judgment was reserved.

Sandwich, Windsor & Amherstburg Railway Franchise.

The S.W. & A.R., which has 40.78 miles of first track lines, is owned by the Detroit United Ry. Co. The railway includes the lines within the City of Windsor, the Town of Walkerville, and the line extending to Amherstburg, together with the Windsor & Tecumseh Electric Ry. For some considerable time past there has been a good deal of friction between the City of Windsor and the company respecting the car service, etc. The franchises within the city and in Walkerville expire in 1922. The question of taking over the lines in the near future has been considered with a view of linking them up with the Hydro Electric Power Commission of Ontario's projected lines. In this connection something like joint action is being taken by all the municipalities within which the company operates. P. Watt, Street Railway Commissioner of Cleveland, Ohio, met a committee of citizens of Windsor and Walkerville, May 3, and advised that complete municipal ownership was the real solution of all the difficulties which surrounded the situation. The present financial situation might render it impossible to carry out such a project, but it might be possible to arrange with the company to operate the line under municipal control. The committee finally decided to send a delegation to Toronto interview the H.E. P.C. of Ontario on the matter.

The delegation appears to have met the commission, in Toronto, for the Mayor of Windsor is reported to have said in an interview, on May 10, that the commission advised against the purchase of the lines at present, and further advised against the city undertaking at present any extensions of the lines which might be desirable in order to give a more adequate service. The commission, he said, pointed out that if the city took over the lines now, instead of on the expiry of the franchise, it would have to pay the value of the property as a going concern, that having been a court decision in a similar matter.

Winnipeg Electric Railway Co's Annual Report.

The report for the calendar year 1916 shows the following results:

Gross earnings from operation	.....	\$3,311,169.69
Operating charges	.....	1,939,041.36
Net operating revenue for year	..	\$1,372,128.33
Miscellaneous income	.....	26,010.42
Gross income available to meet fixed charges	.....	\$1,398,138.75
Fixed charges:		
Sinking fund requirement	.....	\$ 60,000.00
City percentage and taxes	.....	201,797.01
Other charges	.....	691,090.29
		952,887.30
Net income	.....	\$445,251.45

The net income, which decreased \$35,742.33 for 1915, was equivalent to about 5% on the capital stock. The directors regret that owing to very substantial increases in all the materials necessary in the operation of the railway, gas and lighting departments, as well as to the serious competition of the jitneys in the city, the results for the year were disappointing. For these and other reasons, very careful consideration was given to the question of continuing the payment of any dividends. It was felt that, due to financial conditions and the impossibility

of disposing of long term securities at prices to retire temporary loans, a discontinuance of dividends for the time being would strengthen the company's financial position and more quickly guarantee an earlier date for the resumption of such dividends. Having reached this conclusion, no dividend was declared during the year.

It is a matter for congratulation that as a result of a thorough investigation of all the properties by the J. G. White Engineering Corporation, of New York, its appraisal goes to show that the properties have been well maintained and taken care of, which points to the conservative treatment adopted by the board heretofore. The board has therefore adopted the appraisal in accordance with the statement made in its previous report, and is pleased to state that all depreciation has been taken care of to date. With the knowledge that the company's properties have so far been maintained to a high standard of physical efficiency, it is reasonable to assume that with a return to normal conditions the revenue from the various departments of the company's activities may be expected to show satisfactory increases. In accordance with the orders of the Public Utilities Commission in regard to the classification of accounts, the company's system of accounting has been altered to meet the commission's requirements.

The net income for the year, \$445,251.45, added to the surplus brought forward from 1915, as adjusted, \$682,824.47, makes a total surplus carried forward of \$1,128,075.92.

At the annual meeting the directors were all re-elected and the officers were re-appointed.

The London and Port Stanley Ry's Funded Debt.

A Canadian engineer writes from Toronto: "The railway statistics issued by the Dominion Government recently containing the sworn statements of the different railways as to their financial condition and operating results, give for the London & Port Stanley a funded debt in bonds of \$900,000, but include no return of either miscellaneous obligations or outstanding stock. The impression intended to be conveyed to the public is that these bonds are the sole debt of the railway, and, with no stock subscription or government aid, represent its cost, to the interest and sinking fund on which the net traffic returns are in part applicable. As a matter of fact, however, this large item of \$900,000 only covers the cost of electrification, the new cars, and the 19 miles of additional sidings and turnouts, and the return ignores the very large original cost of the permanent way, the entries into cities, the terminals, docks, etc., previously represented for years in these annual statistical returns, as covered by the items, \$1,332,834 of bonds and \$527,158 of actual stock subscribed. A nominal rental of \$20,000 is said to have been arranged, but this would afford only 1/10th% interest on this debt, as against the high rates originally paid and now prevailing.

"In order to induce the people of Ontario to believe that all future lines constructed by the Hydro Electric Power Commission will be profitable, this railway—the first to be constructed under the commission's auspices has been publicly announced by the commission as meeting all the interest on its bonds and other charges, and having a surplus in

addition, when as a matter of fact, the large annual interest and sinking fund of the original cost are ignored. Evidently to appease the conscience of the commission, which appears to take a special care over this railway's affairs, and at the same time to further blind the people of Ontario, this long standing item of \$1,332,854 of bonds on the road, appears in another part of the same government blue book, under the head of 'Aid to steam railways,' where the public is not expected to look for information about electric railways, and is now called 'Loans from municipalities,' while the share subscription of municipalities is given as \$414,000. Is this straightforward dealing with the public?"

Electric Railway Legislation in Nova Scotia.

The Nova Scotia Legislature has passed bill 223 as follows:

1. Chap. 11 of the acts of 1911, amended by chap. 58 of the acts of 1914 is hereby amended by adding the following sections:

16 (d). The Board of Commissioners of Public Utilities, on application being made to it, and on being satisfied that the additional men required can be obtained, and that in other respects it is not unreasonable so to do, shall make regulations, limiting the number of days in every eight days, during which employes or any class of employes of any street railway company may be required or permitted to work, as such employes.

16 (e). The power conferred by the next preceding section may be exercised, notwithstanding the provisions of any agreement, respecting hours of labor, between such street railway company and its employes.

2. Clause (f) of sec. 22 of chap. 180 of the acts of 1914 is hereby repealed and the following substituted therefor:

(f) The Nova Scotia Tramways and Power Co., Ltd., shall, for the benefit of the working people issue tickets for use in the City of Halifax at a price to give 8 single trips for 25c during such hours at noon and evenings and subject to such terms and conditions as the Board of Commissioners of Public Utilities may approve.

Brantford Municipal Ry. Wages.

The Brantford Municipal Ry. Commission advanced conductors' and motormen's wages on the Brantford Municipal Ry. recently 2c an hour. Following is a comparison of the old and new rates:

	Old rate.	New rate.
Ist month	..... 16c	18c
Next 11 months	..... 19½c	21½c
Second year	..... 21½c	23½c
Third year	..... 22½c	24½c

Ontario West Shore Ry. Liquidation.

T. Strothers, trustee, Dungannon, Ont., received tenders to May 12, for the material, plant and equipment on the partially built O.W.S.R. between Goderich and Kincardine, Ont. The principal items in the inventory were: 900 tons of 70 lb. steel rails, a large quantity of fish plates, 710 boxes of spikes, 135 boxes of bolts; 6 pairs of steel bridge girders, 25 to 70 ft. spans; 1 locomotive and 3 flat cars. The other property included scrapers, square and other timber, and fence posts. All the above was either stored along the right of way or in stock yards. In addition to this there was 14 miles of track completed, the materials on which can be taken up and removed.

Electric Railway Notes.

The London Township Council passed a bylaw, May 16, authorizing the London St. Ry. to run its cars from London to Broughdale, Ont., on Sundays.

Port Arthur, Ont., Civic Ry. employes asked, on May 13, for a raise of wages approximating 15%, with certain other concessions. The last increase was given in 1914.

The London and Port Stanley Ry. was reported recently to be arranging to ask for tenders for the supply of 30 tons of 80 lb. steel rails for switch lines. We are advised that the building of any additional track this year is not contemplated.

The London St. Ry., in a bulletin issued May 14, stated that the operation of its cars on Sundays is not remunerative and that if the cost of operation continues to increase the company will be compelled to ask for relief in some direction or other.

The British Columbia Electric Ry.'s honor roll of employes who are on active military service contains the names of 452 men. Of the total enlistments, 353 were from Vancouver and 99 from Victoria. Of these 17 have been killed, 25 wounded, 3 are prisoners of war, and 14 have returned.

The Toronto Ry. has placed several new cars in service during the past few weeks. The company notified the city recently that 40 out of the 50 cars ordered by the Ontario Railway and Municipal Board to be in service by May 1 were in operation, and that it was expected the remaining 10 will be running early in June.

The London and Lake Erie Ry. and Transportation Co. was stated recently in a press report to have offered to sell the rails on its line between London and Port Stanley, 28 miles, to be taken up and sent to France. We are officially advised that no such offer has been made. The rails are 60 lb. section, while 80 lb. are required for France.

The London & Lake Erie Ry. & Transportation Co. is reported to have invited the Dominion Government to make an offer for the rails laid in the company's tracks for shipment to France. The company operates an electric railway between London and Port Stanley, Ont., and is in the market for sale. Some details of the company's position were given in our last issue.

The Nipissing Central Ry., operated in the Cobalt district of Ontario, by the Timiskaming & Northern Ontario Ry. Commission, has purchased three second hand cars from the East St. Louis, Columbia & Waterloo Ry., East St. Louis, Ill. These cars are of the interurban type, about 50 ft. long, and will be used to maintain the service until new equipment can be ordered and built.

The Lethbridge, Alta., Municipal Ry., we are officially advised, includes a line to Henderson Park, which is not profitable except during summer. Two of the city cars are being changed so that they can be run in either direction without turning. They will be operated on this line by one man each, as far as profitable, and back, thus giving a service on the line where it is required.

The British Columbia Electric Ry. put its summer schedule in operation on its mainland lines, April 29. The principal feature of the service is on the Fraser Valley Division, where two trains a day in each direction are run through between Chilliwack and Vancouver, without

change at New Westminster. On the Jardine line a special car leaves Jardine at 7.15 on Sunday evenings for Vancouver.

The case of the City of Toronto against the Toronto Ry. Co., in which the former asks for the committal of the company's General Manager to jail, or the company's sequestration, for contempt of an order of the court to supply the city with certain details, came before the court at Toronto, May 14, and the matter was ordered to stand until Sept. 15, to allow certain information to be obtained to supply the desired report.

The British Columbia Legislature has inserted a section in the Vancouver City bill giving the city council power to operate an electric power and light plant, but providing that it must apply to the Legislature again before it can enter into competition with the British Columbia Electric Ry. The company asked the Legislature for an opportunity to appear in protest against the insertion of the section, but was refused.

The North Vancouver, B.C., city council, on May 7, decided to enter into negotiations with the British Columbia Electric Ry. with the view of securing an agreement similar to that in force between the company and the City of Vancouver regarding the electrolysis of water pipes. This agreement provides for the city being compensated wherever it is proved that the electrolysis is due to the imperfect bonding of the company's railway.

The City of Saskatoon, Sask., is in the market for 3 single truck, double end cars for the Saskatoon Municipal Ry. The type desired is similar to those now in use in the city, 33 ft. long over all, with seating capacity for 32 passengers. The equipment includes two 40 h.p. Westinghouse motors, 2 K. 36 I. controllers, hand brakes, centre aisle, reversible cane seats, forced draught heaters, etc. The weight of each car is not to exceed 35,000 lbs.

A. K. Bunnell, City Treasurer of Brantford, Ont., addressing the Rotary Club members there, on May 10, on municipal administration, in referring to the public utilities, said: "The street railway, which had long been a source of public disgust and annoyance, was taken over nearly three years ago. The lines have been extended and improved, and at present the city has an investment of \$430,000. It is not necessary to say that the public appreciate the change, as this is shown by the constant increase in traffic, and it is fairly to be assumed that this latest venture in public ownership is now on a business basis and self sustaining."

The London Street Ry. says in a recent bulletin: "While it may not be desirable at present to consider the matter of increasing the car fares in London, there are several ways in which some saving could be effected for the company without such additional expenditure on the part of the public as higher car fares would call for, such, for instance, as reducing the car service at those hours of the day when few people are riding. Such an economy would cause only slight inconvenience for those few passengers who may just miss a car and have to wait one or two minutes more than usual for the next one."

We are advised that the fire at the Windsor, Essex & Lake Shore Rapid Ry. shops and car barns, Kingsville, Ont., mentioned in our last issue, originated

near the dry kiln user for drying armature, transformer and other coils. The oven is asbestos lined, so it is presumed that the heat set fire to something outside the oven. The electric locomotive no. 50 was damaged on the exterior and pantagraph stands, the cables and connections being entirely destroyed. Three passenger cars were badly damaged, roofs and pantagraphs being destroyed, and the interiors, including seats, rendered useless, from heat and water. The car barn and shops were damaged. The locomotive will be repaired in the company's shops, and the cars will be overhauled by the Preston Car & Coach Co.

Electric Railway Projects, Construction, Betterments, Etc.

Bathurst Electric & Water Power Co., Ltd.—The New Brunswick Legislature is being asked to amend the company's charter in several directions, and to give it authority to operate an electric railway in Bathurst and vicinity. The company controls a hydro electric power plant on Tetagouche River. J. P. Lager, Bathurst, N.B., is President and General Manager.

Brantford Municipal Ry.—The Brantford, Ont., City Council has appointed a committee to interview the commission in charge of the municipal railway in connection with the project to extend the line into the Terrace Hill district. (May, pg. 203.)

London & Port Stanley Ry.—A press report states that tenders will be asked shortly for 30 tons of 80 lb. rails for switching lines. (May, pg. 203.)

Montreal Tramways Co.—The Mayor is reported to have approved of the building of a car line to the top of Mount Royal. Plans are to be prepared by the City Engineer, and when these are approved the city council proposes to ask the Tramways' Commission to approve of them. (May, pg. 203.)

Moncton Tramways, Electricity & Gas Co.—We are officially advised in regard to projected extensions in Moncton, N.B., as follows: The company proposed that the city allow it to take up the present tracks on High St., from Main St. to John St., and from Weldon St. to High St. on Main St., and to replace them on Weldon St. from Main St. to John St., and from Weldon St. to High St. on John St., and to build a new line along John St. and Union St., to connect with the present line at Union and Botsford Sts. with a branch from Union and Church Sts., to Sunny Brae. This would give a much needed improvement in the service over that provided by the present lines. However, the city has decided to pave West Main St. and High St. from Main St. to the fire station on High St., about 7 city blocks on High St., and 5 city blocks on West Main St., and it is also going to pave King St. from Main St. to St. George St., on which the company has tracks. The city has so far refused

Sanitary Conveniences on Hamilton, Grimsby and Beamsville Electric Ry. On Nov. 2, 1916, the Ontario Railway and Municipal Board directed the company to file plans and specifications for sanitary conveniences on its passenger cars and at its station at Grimsby, Ont., which were approved by the board on Jan. 3, 1917, after having been altered as recommended by the board's engineer. On Apr. 27, the board ordered that the installation of the conveniences be completed by July 1.

to grant permission to the company to remove its tracks from High St., and unless it is allowed to make the change in the tracks as proposed, the company will not make any extensions this year. The company's share of the paving work proposed to be done will be so heavy that it is not willing to pay for the paving and make any extensions in addition. (May, pg. 203.)

New Brunswick Power Co.—The St. John, N.B., city council, April 30, decided to inform the company that a reasonably permanent grade would be established on Union St., which it was proposed to pave, and that the city would fill in between the track sections above the railway foundations if the company would raise its tracks to conform to the new grade. (May, pg. 203.)

Nova Scotia Tramways & Power Co.—A press report states that the company is making surveys for extensions of its lines, and that it is in the market for rails, ties, general construction material, and for additional rolling stock. (Dec., 1916, pg. 502.)

Port Arthur Civic Ry.—We are officially advised that the railway is placing a reinforced concrete liner adjacent to the rails on the track between Victoria and McVicar Sts. It is also contemplated to replace the present straight angle bars on rail joints with continuous joints and later on to place reinforced concrete liner adjacent to rails on the double track line on Main St., from Arthur St. to Bay St. An order has been given for 250 pairs of continuous rail joints for 80 lb. A.S.C.E. section. (May, pg. 203.)

Saskatoon Municipal Ry.—We are officially advised that owing to the present shortage of labor the proposed extension of track is being held over for the present. (May, pg. 203.)

Winnipeg Electric Ry.—In giving judgment on an application to order the company to build additional lines in the Morse district, Public Utilities Commissioner Macdonald stated, on May 4, that under existing financial conditions he could not issue such an order. (Oct., 1916, pg. 425.)

Windsor, Essex & Lake Shore Rapid Ry.—The Board of Railway Commissioners has reserved judgment on the application of the Town of Leamington, Ont., requiring the company to remove its tracks from North St. or as an alternative to cease obstructing the street. (Mar., pg. 113.)

Electric Railway Finance, Meetings, Etc.

British Columbia Electric Ry., and allied companies.—All payments as between the companies not affecting the net earnings, hitherto included, are now eliminated.

	Mar. '17	Mar. '16	July 1, '15 to Mar. 31, 1917	July 1, '15 to Mar. 31, 1916
Gross	\$456,626	\$446,401	\$4,067,005	\$3,826,820
Expenses	356,178	355,103	3,194,692	3,170,134
Net	100,448	91,298	872,313	656,686

Cape Breton Electric Co.—

	Mar. '17	Mar. '16	Jan. 1 to Mar. 31, '17	Jan. 1 to Mar. 31, '16
Gross	\$33,753.78	\$27,866.33	\$104,344.95	\$90,625.14
Exp's	20,904.84	19,939.85	63,558.85	57,708.46
Net	12,848.94	7,926.48	40,786.10	32,916.68

Calgary Municipal Ry.—The annual summary of the finances of the City of Calgary, Alta., for the year 1916, issued by the Comptroller, shows that of the public utilities owned the municipal railway showed a profit of \$28,722.09 and the

electric light and power plant a profit of \$15,254.42, while the waterworks and other utilities showed losses.

Edmonton Radial Ry.—The City Comptroller's report on the finances of Edmonton, Alta., for the year 1916, has the following reference to the E.R.R.: "The operation cost of the street railway has been reduced 27%, being \$446,897 in 1914, and \$339,208.50 in 1916. The result of the operations of this utility for the year is a loss of \$115,597.66, which is \$16,161.05 better than in 1915."

Lethbridge Municipal Ry.—From a report issued by the City Commissioner, it appears that for the four months ended April 30, the municipal railway made a profit over operating expenses of \$3,356, against a profit of \$3,462 for the same period of 1916.

London Street Ry.—

	Apr. '17	Apr. '16	Jan. 1 to Apr. 30, '17	Jan. 1 to Apr. 30, '16
Gross	\$31,019.50	\$34,013.43	\$132,681.33	\$133,442.14
Exp's	25,934.30	25,489.48	98,660.07	92,344.78
Net	5,085.20	8,523.95	34,021.26	41,097.36

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

	Mar. '17	Mar. '16	Jan. 1 to Mar. 31, '17	Jan. 1 to Mar. 31, '16
Gross	\$991,192	\$910,969	\$2,926,228	\$2,663,575
Exp's	515,586	477,031	1,538,605	1,408,863
Net	475,606	433,938	1,387,623	1,254,712

Toronto Civic Railway.—Total receipts for April, \$21,791.45 against \$17,876.80 for Apr. 1916. The total passengers carried during April was 1,284,195 compared with 1,065,508 during Apr. 1916.

Toronto Railway.—

	1917	City percentage	1916	City percentage
Jan. . . .	\$510,053	\$ 76,508	\$473,784	\$68,847
Feb. . . .	473,184	70,976	470,704	70,614
Mar. . . .	531,080	105,857	518,555	97,237
Apr. . . .	510,334	102,066	496,172	99,234
	\$2,024,651	\$355,425	\$1,959,215	\$355,932

Winnipeg Electric Ry.—The net earnings for March, after allowing for fixed charges, were \$21,442.

	Mar. '17	Mar. '16	Jan. 1 to Mar. 31, '17	Jan. 1 to Mar. 31, '16
Gross	\$293,094	\$296,500	\$893,756	\$887,310
Expenses	209,453	184,600	643,083	558,685
Net	83,641	111,900	250,673	328,625

Among the Express Companies.

The Canadian Ex. Co. has reopened its offices at Ruthilda, Sask., and Delburne, Alta.

J. N. Johnston has been appointed claim agent, Eastern Division, Dominion Ex. Co., Toronto.

The Dominion Ex. Co. has opened offices at Musquodoboit, N.S.; River Henry, Que., and DeWinton, Alta.

W. A. McDonald has been appointed acting route agent, Western Division, Dominion Ex. Co., Winnipeg.

The Canadian Ex. Co. has reopened its office at Camp Borden, Ont., and has appointed H. H. Cheeseman as agent there.

Wells, Fargo & Co. have placed their express service in effect over the London & Port Stanley Ry., and have appointed E. G. Crook agent at London, and W. H. McPherson agent at Port Stanley.

The Board of Railway Commissioners issued order 26090, May 8, ordering that order 25975, Mar. 29, which prescribed the boundaries within which tolls of express companies shall include collection and delivery in Toronto, published in our last issue, be amended by striking out the words, "thence following the present eastern city boundary," in the third and fourth lines of clause 1, par. 2, and substituting therefor the words, "Summerhill Park Ravine," and by striking out the words, "except southerly," in the sixth line.

Telegraph, Telephone and Cable Matters.

W. T. Leslie, heretofore chief operator, Great North Western Telegraph Co., Quebec, Que., has been appointed local manager there, vice R. V. Aubin, deceased.

C. L. Leighty has been appointed Superintendent, Ontario District, C.P.R. Telegraphs, Toronto, vice H. J. Lillie, who has been appointed chief operator there.

C. E. Lillie, heretofore Office Manager, Great North Western Telegraph Co., Toronto, has been appointed Manager there, in charge of inside business.

G. Hogarth, heretofore Toronto Manager, Great North Western Telegraph Co., has been appointed Commercial Manager there, in charge of the company's outside business in the city.

A standing committee of the House of Commons reported to the House, May 15, that it had had under consideration a bill to incorporate the British America Telephone & Telegraph Co., and had agreed to report same with amendments, and with a recommendation that the name be changed to the Eastern Telephone & Telegraph Co.

The Western Union Telegraph Co. is enlarging its office accommodation at St. John, N.B., by taking over for its own use the whole of the building at the corner of King and Prince William Sts., of which it had occupied a portion. In the operating room on the top floor, five sets of high speed automatic multiplex repeaters are being installed for traffic between St. John, New York, North Sydney and Montreal. The basement is being equipped with shower baths, dressing rooms, etc., for employes.

The New Brunswick Telephone Co.'s annual meeting was held at Fredericton, May 18, when the report for 1916 showed assets of \$2,170,019.05, and liabilities of \$2,145,130. The net revenue for the year was \$109,324.84. The officers and directors for the current year are: S. H. White, President; Hon. F. P. Thompson and F. B. Black, Vice Presidents; A. W. Bennett, R. O'Leary, L. B. McFarlane, A. R. Slipp, W. B. Snowball, R. B. Emerson, F. B. Carvell, J. M. Robinson, F. W. Sumner, G. W. Ganong, J. L. McAvity and H. P. Robinson.

United States Shipping Committee.—The Council of National Defence at Washington has created a committee on shipping, consisting of Chairman Denman of the Federal Shipping Board; P. A. S. Franklin, President, International Mercantile Marine; H. H. Raymond, President, Coastwise Shipping Association; E. T. Chamberlain, Commissioner, Bureau of Navigation, Department of Commerce; D. T. Warden, Manager, foreign shipping department, Standard Oil Co.; L. H. Sherman, Vice President, W. R. Grace & Co.; E. M. Bull, Vice President, E. M. Bull & Co.; and F. C. Munson, President, Munson Steamship Line. The function of the committee is to advise with the U. S. Shipping Board and to report, through Mr. Denman, to the council as to the best methods of increasing tonnage available for shipment to the allies.

Calvin Austin has been elected President, Eastern Steamship Lines, Inc., recently reorganized, and G. W. Sterling has been appointed General Traffic Manager at New York. The company operates a line between St. John, N.B., and Boston, Mass.

Marine Department

Government and other Shipbuilding Throughout Canada.

Canadian Railway and Marine World for April and May contained very full particulars of all information then available in regard to shipbuilding in Canada for Canadian and British Governments. As stated in the May issue, the Imperial Munitions Board had then placed orders at various points between Montreal and Victoria, B.C., for 26 steel steamships, ranging from 2,900 to 8,800 tons capacity, and with a total tonnage of 130,000. The board has placed and is still placing orders for wooden steamships, ranging from 3,000 to 3,500 tons capacity, and the number to be ordered will only be limited by the capacity of Canadian shipbuilding yards to complete them within the required time. In consequence, there is unprecedented activity in Canadian shipyards from the Atlantic to the Pacific, and many new shipbuilding industries are starting up.

W. I. Gear, Vice President of the Robert Reford Co., steamship agents, etc., Montreal, has been appointed Director of Steel Shipbuilding, under the Imperial Munitions Board, to deal with all questions relating to the construction of steel merchant vessels in Canada for the British Government. He has an office in the Transportation Building, Ottawa.

Any wooden shipbuilding which may be done in Eastern Canada will be handled from the Imperial Munitions Board office in Ottawa. As stated in our last issue, R. P. Butchart, of Victoria, B.C., has been appointed by the Imperial Munitions Board to take charge of the organization of the wooden shipbuilding industry in British Columbia, with the title of Director, and has established a local office there for that purpose. He was connected with the cement industry in Ontario for a number of years, being associated with Mr. Kilbourne, of Owen Sound. Their interests were sold to the Canada Cement Co. some years ago, after which Mr. Butchart and associates organized the Vancouver Portland Cement Co., which has a plant near Victoria, B.C., and of which he is President and General Manager. J. W. Troup, Manager, B. C. Coast Steamship Service, C.P.R., Victoria, has been loaned by that company to assist Mr. Butchart, and has been appointed Assistant Director. Messrs. Butchart and Troup returned to Victoria, May 15, from Ottawa, accompanied by W. H. Stewart, Assistant Purchasing Agent, Imperial Munitions Board, and gave the following statement to the press:

"The Board has decided upon the building in Canada of a standard type of vessel, 250 ft. long, 43½ ft. beam and 25 ft. deep, with a deadweight capacity of about 2,800 tons, on a draught of 21 ft. The vessels are to be built very strongly, with box girder stelsons. They will have a deep tank forward for water ballast. They are to be propelled by steam with triple expansion engines of about 950 i.h.p. The matter of geared turbines from England is being considered for some of the ships. The vessels are to be built of Douglas fir, to Lloyd's requirements for A1 classification. The authorities are in favor of concentrating on steel shipbuilding in Canada, rather than on wooden ships, it being considered preferable to build boats of steel construction. Messrs. Butchart and Troup have, however, placed the facilities of British Col-

umbia before the Board, and as soon as they have had an opportunity of lining up the situation in B.C., they will report to the Board as to the building that could be undertaken here. The programme that has so far been outlined is not very extensive. It remains to be seen what facilities and what inducements B.C. can offer to the authorities."

The Minister of Trade and Commerce said in the House of Commons on May 11: "I cannot go into particulars, but I can say that today every shipyard in Canada which is able to build ships, and is equipped therefor, has not only the opportunity, but has the actual contracts for building every ship and every vessel it can turn out, and that today the building of vessels for the specific purpose of warding off and fighting the submarine peril is being carried on in all the shipyards in this country. And in regard to the building of wooden ships, an arrangement has been completed and is being carried out whereby anybody or any company that can undertake to build wooden ships and complete them within a certain time will get an opportunity to do so and will be assured that over and above the cost of building the ships they will have a reasonable profit guaranteed to them." In this connection the Finance Minister has agreed to loan the British Government \$10,000,000 to pay for wooden vessels to be built in Canada.

In connection with shipbuilding in Canada for the British Government, it is interesting to note what is being done in the United States. The U.S. Shipping Board advised Canadian Railway and Marine World on May 1 that it contemplated having 1,000 wooden steamships built, but that it was very likely that number would not be reached, and that the number of wooden vessels which might be built would be augmented by steel ones up to the number of approximately 1,000. We have since been favored with a copy of the specifications for the construction of a standard wood steamship, yellow pine, issued by the U.S. Shipping Board, Emergency Fleet Corporation, which provides the following dimensions: Length over all, 281½ ft.; length, fore side of stem to after side of rudder post, 268 ft.; beam over planking, 46 ft.; depth moulded at side of upper deck, 26 ft.; load draught from bottom of keel shoe, 23½ ft.; total estimated deadweight, 3,500 long tons; sea speed, loaded, 10 knots. The U.S. Shipping Board has also issued standard propelling machinery specifications for single screw reciprocating engine, coal burning, wood steamships; for twin screw reciprocating engine, coal burning, wood steamships, and for single screw geared turbine, coal burning, wood steamships.

Major General Goethals, who is connected with the U.S. shipbuilding work, is reported to have stated at the American Iron and Steel Institute's meeting in New York, May 26, that the proposal to build a thousand 3,000-ton wooden steamships in 18 months is simply hopeless, that he asked permission to change to steel, and that this has been granted.

Shipbuilding Notes.

A shipbuilding plant is being projected at Port Alberni, B.C.

The Kingston Shipbuilding Co. is reported to have purchased the Kingston Foundry Co.'s property for incorporation in its own plant.

The Shipbuilders' Corporation of Toronto, Ltd., has been incorporated under the Dominion Companies Act, with authorized capital of \$250,000.

The Minister of Marine stated in the House of Commons recently that 48 vessels are being built in Nova Scotia by private individuals.

The Goderich Dry Dock & Shipbuilding Co., Ltd., has been incorporated under the Dominion Companies Act, with office at Toronto, and an authorized capital of \$1,000,000.

The Canadian Car & Foundry Co. erected a car building plant at Fort William a few years ago, which has not been operated. It is said that the company may utilize it for shipbuilding.

The Sydney Foundry & Construction Co., Sydney, N.S., is reported, on the authority of W. E. Clark, an official of the company, to have purchased a floating dry dock suitable for the smaller class of steam and other vessels frequenting the harbor.

Pacific Shipbuilding Co., Ltd., has been incorporated under the Dominion Companies Act with an authorized capital of \$50,000, and office at Vancouver. The incorporators include J. C. Shields, lumberman, Vancouver, and J. T. Robinson, broker, Kamloops.

Alfred Wallace, of Wallace Shipyards, Ltd., North Vancouver, B. C., is reported to have announced on returning there recently from Ottawa that the company had contracts for two steel steamships for British interests and for eight wooden ones for the Imperial Munition Board.

The Tusket Shipbuilding Co. is reported to have completed its organization, and to have acquired several old shipyards at Tusket, N.S., and to be negotiating for other yards. It is stated to have four vessels under construction at Shelburne, and four at Liverpool, N.S.

It is reported that a shipbuilding plant is being built at Catalina, Nfld., at a cost of about \$2,000,000, and that wooden shipbuilding is extremely busy throughout the colony. A number of vessels are being built there under a bounty of \$20 a ton, as provided in the government's act of last year.

The Toronto Board of Control, at a meeting, May 9, adopted a resolution calling upon the Dominion Government to establish, equip, maintain and operate a national shipbuilding plant in Toronto. The Minister of Trade and Commerce replied that it was not the government's intention to do so.

Welland Shipbuilding Co., Ltd., has been incorporated under the Dominion Companies Act, with an authorized capital of \$200,000, and office at St. Catharines, Ont. It will carry on its operations at Welland, where it has leased the shipyard and present boiler shop of M. Beatty & Sons, Ltd., who are carrying on their other business as usual. It is said to have a contract for three cargo steamships of full canal size.

Chester Basin Shipbuilders, Ltd., has been incorporated in Nova Scotia to build

sailing vessels at Chester Basin. The officers are: A. H. Zwicker, Lunenburg, President; Wm. Duff, Vice President; H. Oxner, Secretary Treasurer; J. J. Kinley and E. F. Zwicker, directors. The company is stated to have orders on hand for two vessels, which are being built under the supervision of G. A. Gardner, of Liverpool, N.S.

The Pacific Shipbuilding Co. is reported to have been incorporated under the Dominion Companies Act and to be about to establish a yard opposite New Westminster, B.C., on the south side of the Fraser River. Capt. J. T. Robinson and J. C. Shields, of Kamloops, B.C., are among the promoters, and the former is reported to have stated in Vancouver, May 18, that they had been given contracts by the Imperial Munitions Board.

The Falmouth Shipbuilding & Transportation Co., Ltd., incorporated recently under the Nova Scotia Companies Act, is reported to have acquired a site at Falmouth, N.S., for a shipbuilding plant. The location is said to be at the junction of the river and the passenger bridge, adjacent to the Dominion Atlantic Ry. and the Hants Manufacturing Co.'s saw mill, where sufficient lumber has been accumulated for the construction of the first vessel, which will be commenced shortly and launched early in the autumn. The officers are: E. E. Armstrong, President; F. W. Dimock, J. L. Sexton, T. B. Aikins and T. A. Mosher, directors; A. P. Clark, Secretary-Treasurer.

Stranding of the s.s. Maskinonge.

An investigation was held at St. John, N.B., May 9, by Capt. L. A. Demers, Dominion Wreck Commissioner, assisted by Lieutenant-Commander A. J. Mulcahy, R.N.R., and Capt. Jas. Hayes, as nautical assessors, into the causes of the stranding of William Roberts & Co.'s s.s. Maskinonge, under charter to the Dominion Coal Co., in St. John harbor, Apr. 28. The evidence showed that on entering the harbor it was discovered that the berth the vessel was to occupy was taken, and therefore it was decided to anchor, which was apparently effectively done, but five minutes later the vessel dragged her anchors from a broad to an acute angle, and eventually grounded gently on a bank on the starboard side. The method of anchoring was adopted with the view of preventing sheering, but the master acknowledged that if the anchors had been placed at a more acute angle, they would have been more effective. The court found that under the conditions existing the master and pilot did the best they could. A mistake, or error of judgment, was made as to the angle at which the anchors were placed, but the error was not of a culpable nature, and therefore the court did not hold the master or pilot at fault nor censure them.

The Dominion Coal Co.'s Marine Superintendent eulogized the harbor and Government officials, who rendered all possible help in releasing the vessel, which was eventually refloated without any apparent injury.

Renaming German Vessels.—The two interned German commerce raiders taken over by the United States Government will bear the names of famous German generals who served under Washington in the Revolutionary War. The Kronprinz Wilhelm will be renamed the Baron von Steuben, and the Prince Eitel Frederick will be renamed the Baron de Kalb. Both vessels will be put into the U. S. service.

Grounding of the s.s. Lord Antrim.

Judgment was rendered at Sydney, N.S., May 10, in the matter of the grounding of the Irish Shipowners Co.'s s.s. Lord Antrim, May 3, while en route from Baltimore, Md., to Louisburg, N. S., by Capt. L. A. Demers, Dominion Wreck Commissioner, and concurred in by Capt. A. J. Morrison and J. D. MacKenzie, as nautical assessors.

It was found, after weighing the evidence, in which there was no contradiction, that it was the court's duty to accept the evidence given relating to weather, courses, distances of land from the vessel and the last bearing taken prior to grounding, and also as to the striking of an obstacle not visible to the crew, and considered by them to be a submerged obstacle, on account of orders issued owing to war conditions not allowing of verification of these details by the log book. The court, therefore, on this account, came to the conclusion that the vessel struck a submerged object, and exonerated the master and officers from blame. The court, however, commented on certain phases of the evidence, which could not be brought to light satisfactorily, as follows—the reduction of speed due to bad coal; that after leaving Cranberry Island, no allowance was made for possible leeway; that land was $7\frac{1}{2}$ miles distant, and that the master acknowledged having seen surf breaking. Without reflecting on the evidence, these points mentioned were not clear to the mind of the court.

The court pointed out that there is a tendency of the tide to throw vessels in toward land from Cranberry Island to Fourchu, especially during such conditions of wind and sea as existed at the time of this casualty.

The Malahat Motor Ship Co., Ltd., incorporated recently with \$100,000 capital and office at Vancouver, B.C., is a subsidiary of H. W. Brown and Co., Ltd., which is associated with Canada West Coast Navigation Co., of which H. W. Brown is General Manager. The company has a vessel under construction by Cameron-Genoa Shipbuilders Ltd., Victoria, of the same type as those being built for Canada West Coast Navigation Co., an illustration of which was given in our last issue. This vessel will be named Malahat and is expected to be ready for operation by September. It is understood that H. W. Brown & Co. Ltd. represent the western interests of those interested in Canada West Coast Navigation Co., and who are mainly associated with Canada Steamship Lines, Ltd. A second vessel is stated to be under construction for the same company, to be named Esquimalt, and these are to be registered at Victoria.

U. S. Water Supply Regulations on Great Lakes Vessels.—As mentioned in previous issues, the U.S. authorities have made certain regulations respecting water for drinking and culinary purposes on Great Lakes vessels, these being applicable to Canadian vessels calling at U. S. ports, as well as to U. S. vessels. The Dominion Marine Association took this question up with the Dominion Government, which has made an arrangement with the U. S. authorities for the suspension of the regulations so far as Canadian vessels are concerned, until 1918, on the understanding that the Dominion Government shall adopt similar regulations to the U. S., in which event certificates that Canadian vessels have complied with the Dominion law, will be accepted.

The Reid Wrecking Co. Changes Hands.

The Reid Wrecking Co., with plants at Sarnia, Ont., and Port Huron, Mich., including all vessels and properties, are in course of reorganization with a view to their transfer to Canadian interests. R. M. Wolvin, of Winnipeg, appears to be chiefly interested in the transfer, and press reports stated that the properties were being acquired in the interests of Canada Steamship Lines, Ltd., with which Mr. Wolvin is associated. This, however, is officially denied.

The Reid Wrecking Co. was incorporated under the Ontario Companies Act in 1903 by Jas. Reid, father of J. T. and W. H. Reid, the present Treasurer and Secretary respectively of the company. On his death in 1913 he owned 50% of the stock. The company does a large business and owns a considerable wrecking plant, including tugs and dredges and a dry dock at Port Huron, Mich., which cost about \$200,000. The stock has been chiefly held by the Reid family. D. Milne and F. F. Pardee are directors with nominal holdings.

The dry dock at Port Huron measures 375 ft. on blocks, 400 ft. over all, 75 ft. wide at bottom, 100 ft. at top, with 65 ft. at entrance and 16 ft. depth over sill. The vessels owned by the company include tugs James Reid, Sarnia City, S. M. Fischer; propellers J. M. Diver, John B. Ketchum 2nd, Inland, Manistique, Matoa and Spokane; barge Magnetic, and schooners Belle Hanscom and John Kilderhouse.

The New York State Barge Canal.

This canal was opened for traffic between Oswego, N.Y., on Lake Ontario, and from Whitehall, on Lake Champlain, to Troy, on the Hudson River, May 15, and it is announced that the entire canal system will be ready for traffic by May, 1918. It is anticipated that the opening of the canal will do much toward the relieving of congestion in freight at western freight yards, and, to some extent, lower the cost of foodstuffs, owing to the cheaper transport. It is stated that the rate on wheat will at least be cut in half, as between Buffalo and New York, a similar effect being achieved on ore between Port Henry and New Jersey. Arrangements have already been made for the operation of a number of barge lines between Buffalo and Albany, making daily stops at the more important centres on the Erie Canal. Other lines will run on the Champlain Canal.

The Canal Board is pushing the completion of the work, and has suspended a contract in the western portion, owing to the contractor not making the progress expected. This contract has been taken over by the state. For this year, the canals will be used between Troy and Oswego, Troy and Lake Champlain, and the Erie Canal from Troy to New London, where the old channel will be used for short stretches to Rochester, and then on to Tonawanda, etc.

Purchase of Steamships by Dominion Government.—The Minister of Railways stated in the House of Commons recently that the prices paid for the steamships J. A. McKee and Thomas J. Drummond, which, as stated in Canadian Railway and Marine World for May, were bought under authority of order in council of April 17, to carry coal from Sydney, N.S., to St. Lawrence River ports, were \$500,000 and \$515,000 respectively.

Canada Atlantic Transit Co's Operation by G.T.R. Authorized.

The Interstate Commerce Commission gave the following decision at Washington recently:—In Lake Line Applications under Panama Canal Act, 33 I.C.C., 699, the petitioner the Grand Trunk Ry. Co. of Canada was denied permission longer to operate the Canada Atlantic Transit Co., a boat line which it owns and operates on the Great Lakes. Pursuant to a petition to rehear, the order entered with respect to the C. A. T. Co. was set aside and the case re-opened for further hearing by order dated Mar. 29, 1916. A further hearing was held Sept. 27, 1916, at which time an important jurisdictional question was urged and further evidence was introduced in support of the contentions previously advanced by the petitioner.

The G.T.R. Co. is a railway corporation organized under the laws of the Dominion of Canada, owning and operating various lines of railway within Canada, and by act of the Parliament of Canada dated May 16, 1905, was specifically authorized to acquire the capital stock of the Canada Atlantic Ry. Co. and Canada Atlantic Transit Co. The Canada Atlantic Transit Co. operates a line of boats from Depot Harbor Ont., on Georgian Bay, the western terminus of the C. A. Ry., to Chicago, Ill., and a line of boats from Depot Harbor to Milwaukee, Wis., plying on the International Boundary waters between the United States and Canada. The petitioner contends upon rehearing that the refusal to permit it longer to operate its boat line invades the right of free navigation of the International Boundary water between the U. S. and Canada, which is preserved to the inhabitants of each of said countries by treaties which have been in force for many years, that the Panama Canal Act does not specifically provide that this treaty right shall be curtailed; that accordingly the Panama Canal Act cannot be construed as having any application to the ownership of the petitioner in the C.A.T. Co.; and that this commission consequently has no jurisdiction to deny petitioner power longer to operate. In the view we now take upon the merits of this application, upon rehearing, under which the water service of the C. A. T. Co. as now operated may be extended, we deem it unnecessary to consider or decide this question.

The petitioner upon rehearing again contends that it does not compete with its boat line within the meaning of the provisions of the Panama Canal Act, and that this commission is without jurisdiction in the premises. The petitioner, in addition to the lines of railway which it owns and operates in Canada, owns and operates certain lines of railway, within the United States which reach Chicago, connecting with its Canadian lines. The petitioner joins in through routes and publishes joint through rates in connection with the lines from Chicago to Milwaukee, the other port served by its boats. In Lake Line Associations under the Panama Canal Act, supra, we held that this condition brought about a transportation situation under which the petitioner does or may compete with its boat line within the meaning of the provisions of the Panama Canal Act. Nothing shown upon the rehearing would warrant our changing this finding.

The Canada Atlantic Transit Co. is a so called differential line. Because the route from eastern territory to the ports served by this line is more circuitous than

that of the more direct route, a somewhat lower scale of rates is made applicable via this line. For many years the transit company's rate has been lower by 10c per 100 lbs for 1st class traffic from New York to Chicago, than the rate of the so called standard lake and rail routes, and proportionately less for traffic of other classes. It appears from statements filed upon rehearing that the rates via the standard lake and rail routes from New York to Chicago are higher than the transit company's rates on the different classes of traffic as follows, viz.: On 1st class, 19.2%; 2nd class, 17.4%; 3rd 13.6%; and 6th class, 10.5%. The standard all rail rates from New York to Chicago are higher than the transit company's rates on the six classes of traffic, as follows, namely: On 1st class, 51.5%; 2nd class, 48.5%; 3rd class, 50%; 4th class 41.5%; 5th class, 43.2%; and 6th class, 38.4%.

The transit company operates three steel vessels, having an aggregate net registered tonnage of 7,118 tons and a cargo capacity of 14,000 net tons. During 1914 it carried 348,727 tons of freight, and during 1915, 321,824 tons. During 1915, up to Aug. 31, it carried 184,738 tons. The transit company provides approximately three sailings a week, both eastbound and westbound, during the season of navigation, with substantially regular service. During 1915 its boats were in commission 205 times and made 68 round trips. During the last season, up to Aug. 31, its boats had made 34 round trips. The traffic transported has its origin or destination at numerous points throughout a large territory, in Canada and in the United States, including the terminal points Chicago and Milwaukee, and points generally in Wisconsin, Illinois, Iowa, Nebraska, and Kansas, and the southwest territory, New England, New York, and Canada, and the Canadian provinces, and also points abroad from which traffic is imported or to which it is exported. During the early part of the season of navigation last past the transit company handled over 34,000 separate and distinct consignments of freight. The traffic representative of many regular shippers and consignees located in the territory who have availed themselves of the service of the transit company appeared at the rehearing and testified to the satisfactory nature of the service, and uniformly expressed the desire that it be continued.

The service of the transit company was originally established to provide a western connection for the Canada Atlantic Ry., which otherwise would have ended in a transportation cul de sac. Thirty per cent. of the gross earnings of the C. A. R. during the season of navigation and 18% of its earnings throughout the year are received on traffic destined to or received from the transit company. The service of the transit company was established solely as a supplement to and extension of the C. A. R. The traffic and business conditions in the territory served by the C.A.R. have materially changed since its organization. Formerly that territory was a large producer of timber and lumber products, with the traffic incident to such production; but now that the timber resources have been largely depleted this traffic has greatly decreased and there has not been, as yet, agricultural development or other local development which furnishes traffic to replace that formerly incident to the lumber pro-

jects. It is urged that the transit company is of increasing importance to the C. A. R., which is an integral part of the G. T. system. The transit company has always operated at a deficit after the payment of fixed charges. In 1913 the deficit was \$704,574; in 1914 it was \$860,453.

The Canada Atlantic Ry. has always absorbed out of its rail revenue the deficit resulting from the operation of the transit company, because there has been no other way to secure the maintenance of the service performed by the transit company or to secure an equivalent water service west of Depot Harbor for the interchange of traffic to and from Lake Michigan ports. The Canada Atlantic is the only railway which reaches Depot Harbor. Neither the petitioner nor the C.A.R. has ever refused to interchange traffic at Depot Harbor with any other vessel or carrier by water, or to form through routes or make joint rates or enter into arrangement for divisions of rates on an equitable basis with respect to the handling of lake and rail traffic. No request has ever been made to either of them for the making of such arrangement. It is stated on behalf of the petitioner that it heretofore has been, and now is, ready to make reasonable and proper arrangement for the establishment of such through route and joint rates in connection with any responsible water carrier or vessels carrying package freight to and from a connection with it at Depot Harbor, even if the service of the transit company continues under its present control.

It is stated on behalf of the petitioner that the elimination of the interest of the petitioner in the transit company would necessarily result in a discontinuance of the water service of that line, which is the only remaining differential rail and lake route to Lake Michigan ports. It is also stated that the Lake Line Association has been dissolved. It is said that the petitioner has not diverted nor attempted to divert traffic from the boats of the transit company, and that neither the petitioner nor the transit company has acquired any monopoly of or lessened any competition upon the water route served by the transit company, and that the transit company has actively competed and will continue actively to compete with other existing rail and lake routes upon the great lakes.

From a full consideration of the record, upon rehearing we find that the existing service by water of the C. A. T. Co. is being operated in the interest of the public, and is of advantage to the convenience and commerce of the people, and that an extension thereof will neither exclude, prevent, nor reduce competition on the route by water here under consideration. The C. A. T. Co. will be required to file its tariffs in accordance with the provisions of the act to regulate commerce as amended by the Panama Canal Act. An order will be entered in accordance with the views expressed herein.

British Government War Risk Insurance.—The Imperial Colonial Office has announced that, as from Apr. 23, the rates of insurance under the Government war risks insurance scheme are as follows: Hulls, a voyage, 2½%; a round voyage, 5%; 91 days time policy; 5%; cargo, 105 shillings %.

Canada West Coast Navigation Co's Auxiliary Ships.

In view of the pressure on shipbuilding which is at present being exercised, and the regeneration of wooden shipbuilding, the performances of what may be termed the pioneers of the new type of auxiliary sailing vessels, are being watched with considerable interest. While an extensive programme of wooden shipbuilding is being undertaken in Canada, and also in the United States, the whole project is being very freely criticized, and it is being urged that such building should not be undertaken to any great extent, owing to the lack of seasoned lumber, that the vessels would be of low speed and not suitable for avoiding the submarine danger, that they could not be adequately armed, and that steel vessels are the only suitable means of meeting the emergency. Whatever arguments may be brought to bear on the subject, the fact remains that Canada West Coast Navigation Co., controlled chiefly by men associated with Canada Steamship Lines, Ltd., have had sufficient confidence in vessels of this type, and nearly a year ago placed orders on the British Columbia coast for the construction of eight auxiliary ships. Several of these have been delivered, and the balance are approaching completion. They are designed chiefly for the transportation of lumber, but without doubt could be so modified as to meet the exigencies of the demands for general cargo carriers. The recent trials of the ship Margaret Haney, show that a speed of 10 knots an hour can be obtained with sail and power combined, with a breeze of about 3 Beaufort scale.

The auxiliary power equipment, which is the same on each of the company's vessels, consists of two 160 h.p. Bolinder type, semi Diesel engines, the horse power being developed at 225 revs. per min. giving a speed under power alone of about 3 knots. The engines are of the two cycle type, and are fitted with a direct reversible with a one way clutch only, thus allowing the propeller to run free when the vessel is under sail. The clutch is operated by compressed air. The reversing gear is very simple, being controlled by one lever, which automatically stops the injection of fuel from the pumps, and as the engine comes to rest, injects a single jet of fuel into the cylinder, as the piston is on the up stroke. The pressure thus caused brings the piston to rest and starts it on the down stroke before it reaches the top centre. This is a new system and has not been used previously on engines of this type. The main fuel pumps can draw fuel from any one of the six main fuel tanks, and discharge into the service tanks, and can also be used for trimming purposes by discharging back into any of the tanks. The fuel pumps are in duplicate, and the filters on the main fuel line are so arranged that either of them can be taken out for cleaning without interfering with the flow of fuel to the main engines. All the auxiliary engines on the vessels, including windlass, four winches, and pumps, can be operated either by steam or compressed air. Steam is furnished by a donkey boiler under the fore-castle, and the air by two compressors on the main engines and one auxiliary compressor driven from the electric lighting plant. Crude oil is used as fuel, and the consumption when the engines are developing 160 h.p. is a little over 11 gallons an hour. The tanks have capacity for 30,000 gallons of fuel.

Electric light is furnished by a Canadian Westinghouse generator, driven by an 8 h.p. engine of similar type to the main engines. The officers' quarters are located under the poop deck and the crew's quarters are placed forward. The crew consists of 18 hands, including master, two mates, three engineers, one donkey man, two apprentices, seven seamen, cabin boy and cook.

A photograph of the ship Mabel Brown was reproduced in Canadian Railway and Marine World for May, and this illustration can be taken as typical of the other vessels under way for the company.

Shallow Draught Vessels for Indian Service.

Orders have been received recently by Yarrows, Ltd., Victoria, B.C., for the construction of the hulls of two shallow draught, stern wheel steamboats, for use in the shallow rivers and swampy regions of India, where navigation is difficult. This will make four of this type of vessel built at Victoria. One built early in the year is now in India, a second is ready for shipment, and the remaining two are in hand at the yards. The steel hulls only, with superstructure and rudder forgings, are made at Victoria, the engines, boilers, etc., being made by the parent company in Glasgow, Scotland, and shipped direct to India. The hulls are fabricated in Victoria and erected there, the port and starboard sides being painted with distinguishing colors, and all parts carefully numbered and named. They are then dismantled and crated for shipment to destination. The hulls are built of light weight steel, with steel main deck and holds for cargo. The upper deck, which is of wood, is for the cabins and passenger accommodation, with dining room and other conveniences, and above this is a galvanized iron roof. The wood work is done in India by the purchasers. The aim in the construction of these vessels is to have strength combined with lightness, so as to obtain the least possible draught when afloat. The hull is strengthened by 6 king posts of H section steel, 3 on each side, braced together with diagonal trussing of 3 in. double angle steel bars, also a longitudinal bulkhead in the centre running forward to aft, with deck stringers under the main deck. There are 8 transverse bulkheads, making the hull into watertight compartments, so that in the event of one of the compartments being punctured, the remaining ones will keep the vessel afloat. The vessels draw 18 in., light, and when loaded with 100 tons, approximately 36 in., and are engined for a speed of 9 to 10 knots.

Welland Canal Accident.—The s.s. Natironco, owned by A. B. Mackay, Hamilton, while upbound light, on May 3, struck and carried out the two head gates of lock 3 of the Welland Canal. The rear of the bank on the easterly side of lock 2 was partly washed away by the rush of water. Two spare gates were placed in position and locking was resumed after an interruption of 11 hours. The cost of repairing the damage done is about \$4,000. The cause of the accident was due to the snubbing wire getting caught in the compressor, and the vessel helper being unable to put it around the mooring post. When this was discovered, the master signalled to the engine room for a reverse, but the engineer put the engines ahead. They were eventually reversed, but too late to avert the collision with the gates.

The U.S. Shipping Board Criticised.

During the past two or three years, considerable criticism has been directed at the shipping legislation undertaken by the U. S. government. The Pacific Marine Review, in commenting rather pointedly on some of the work undertaken by the Shipping Board, refers to an instance which may be enquired into, and in which Canada is interested, as follows: "It will be remembered that one clause of the shipping act provides that U.S. goods or shippers are to be in no way discriminated against by foreign ships. There is opportunity under this section of the act for innumerable court actions. As an instance of the class of cases the Shipping Board is going to try there is the case of the White Star-Dominion Line's apple shipments from Portland, Me. From late in April to Dec. 1, the White Star-Dominion vessels run out of the St. Lawrence and the other months of the year from Portland, where they receive nearly their entire cargo from the G.T.R. The White Star-Dominion Co. has a contract for Canadian apple shipments which uses up most of their freight space for months at a time. They refuse to take U.S. apple shipments because they have no space for them if they live up to their contract with the G.T.R. The only reason the steamships of this line go to Portland, in the winter rather than to St. John, N.B., is because of their agreements with the G.T.R.. We understand the Shipping Board is to institute proceedings against the White Star-Dominion Line for discrimination against U.S. shippers. If these proceedings are successful the only losers will be the G.T.R. and the City of Portland. The Canadian shippers may be inconvenienced also; in fact, everyone concerned will be injured with the single exception of the concern against which the action has been taken. It does not look like a very sensible proceeding. Here we have goods of Canadian origin, shipped on a Canadian railway and carried on a British-Canadian ship. In transit, the goods pass through a small section of U.S. territory and are trans-shipped at a U.S. port, thus giving a U.S. city the chance to profit through at least one step of the transfer, the moving of the goods from rail to ship. The parties to the transaction are Canadian shippers, a Canadian railway and a British steamship line. What right has the U.S. to interfere in a case of this kind? Will the U.S. shipper have a better chance to ship goods on a White Star-Dominion vessel when she has been forced to sail from St. John than he has now when she is leaving Portland? If such cases as this one are to be the work of the Shipping Board, we need hardly look for any marked growth of the U.S. merchant marine resulting from the labors of that body."

Plant Line Service Cancelled.—A. W. Perry, General Manager, Plant Line, Boston, Mass., operating Canada Atlantic & Plant Steamship Co., has given notice that owing to conditions in the United States and Canada, on account of the war, the exceedingly high price and scarcity of fuel and of operating expenses, and the consequent falling off in passenger traffic, the company is unable to resume its service between Boston, Nova Scotia and Prince Edward Island. When the resumption of service is decided on notice will be given. All matters pertaining to the company's business will be attended to by F. H. Chipman, Plant Line, 453 Washington St., Boston.

Mainly About Marine People.

Rear Admiral W. C. Storey, Admiral superintendent, Esquimalt, B.C., has been promoted to Vice Admiral.

Artemas Lord, Superintendent of Lights at Charlottetown, P.E.I., under the Marine Department, died there, May 3, aged 81.

F. N. Sinclair has been appointed a pilot commissioner for the pilotage district of New Westminster, B.C., vice A. E. White resigned.

C. A. Lebel, chief clerk and acting agent, Marine Department, Montreal, is reported to have been appointed acting shipping master there, vice H. McLaughlin, resigned.

Vice Admiral C. E. Kingsmill, retired, who has been associated with the Canadian Naval Service Department for some years, has been promoted to Admiral on the retired list.

S. C. Calvin, formerly of the Calvin Co., Garden Island, Ont., has bought Bishop's Court, Kingston, Ont., which was the official residence of the former Anglican bishops of Ontario.

The Governor General in council has approved the action of the Vancouver Pilotage Commissioners in agreeing to pay their Secretary-Treasurer, **C. Gardner Johnson**, a salary of \$900 a year.

John Miller, who, it is announced, has arrived in Port Arthur, Ont., to become Superintendent, Port Arthur Shipbuilding Co., has been in service with Vickers, Ltd., in England, Canadian Vickers, Ltd., Montreal, and latterly was with the Texas Steamship Co.

J. H. Welsford, President, Union Steamship Co. of British Columbia, and Chairman and Managing Director, J. H. Welsford & Co., Gulf Transport Co. and Leyland Shipping Co., Liverpool, Eng., died suddenly in London, Eng., May 1, aged 53.

William McGuiness, heretofore Secretary, Allan Line Steamship Co., and Manager, Allan Bros. & Co., Glasgow, Scotland, has been appointed to supervise Furness, Withy & Co.'s Liverpool, St. John's, Halifax services, with office in the Royal Liver Building, Liverpool, Eng.

W. E. Burke, Assistant Manager, Canada Steamship Lines, Ltd., has been accompanying the Toronto City Property Commissioner to some of the United States coal mining centres, to make arrangements for a supply of coal for civic institutions and for sale to citizens.

Capt. S. Sigurdson, who died at Winnipeg, May 17, from cerebral hemorrhage, aged 53, was born in Iceland, and came to Canada in 1876, settling in Manitoba. He was well known on Lake Winnipeg, where he commanded various steamships, latterly being captain and owner of the s.s. Mikado.

John V. Foy, whose appointment as General Passenger and Freight Agent, Canada Steamship Lines, Ltd., Toronto, was announced in our last issue, was born at Toronto, Aug. 27, 1882, and entered transportation service in 1901 with Capt. R. S. Melville, General Ticket Agent, Toronto. He was, from 1902 to 1904, clerk, Niagara Navigation Co., Toronto; 1905 to 1910, chief clerk to General Manager, Niagara Navigation Co., Toronto; 1911 to 1912, General Passenger Agent, Niagara Navigation Co., Toronto; 1913 to 1914 District Passenger Agent, Richelieu and Ontario Navigation Co., Toronto; 1914 to 1915 General Agent, Passenger Depart-

ment, Canada Steamship Lines, Ltd., Chicago, Ill.; 1915 to 1916, General Agent, Passenger Department, same company, Buffalo, N.Y.; 1916, Assistant General Passenger Agent, same company, Toronto. He is a son of the late John Foy, who at the time of his death was President of the Niagara Navigation Co.

Dominion Government Vessels for Ocean Service.

Canadian Railway and Marine World for May gave some details of the sailing ship equipped with auxiliary motive power, which the Dominion Government had ordered from the Wallace Shipyards, Ltd., North Vancouver, and stated that another similar vessel was to be ordered shortly.

A press report from South Vancouver, May 17, stated that at a meeting of the Board of Trade there on the previous day, it was definitely stated that the contract for the second vessel had been signed with Lamonde & Harrison, at an approximate price of \$225,000, and that the vessel would be built on a site which the firm had acquired at the foot of Quebec St.

While it is quite probable that the second vessel which the Government decided to order some time ago, will be built by this firm, we were advised May 25, that the contract had not then been signed.

The vessel is to be of the following dimensions: length over all 255 ft., length of keel 225 ft., depth moulded 21 ft. 4 in., breadth extreme 44 ft., and the construction and equipment will follow generally the lines adopted by Canada West Coast Navigation Co., in those now being built for that company, on the Pacific coast, and illustration of which appeared in our last issue.

Ships Needed for U.S. Coast Defence.

—The U.S. Navy Department has urged upon the consideration of the House Committee on Naval Affairs its urgent need for ships for the coast defence fleet and has suggested legislation to enable the department to commandeer those it requires at a reasonable price. A number of the finest yachts in the country have been tendered to the government by the owners for use during the war, either free or on a nominal lease, and numerous vessels of other types, including smaller boats, have been bought or leased; but a great many more are needed. The owners of a number of the vessels that are sought by the navy are asking exorbitant prices for them. About 200 yacht owners have refused to sell their vessels to the government at prices to be fixed by the Board of Appraisal, and several have refused to sell at any price.

Canadian Northern Steamships, Ltd., now owns six steamships, which were acquired from the Merchants Mutual Lake Line Ltd. last autumn, viz.: A. E. Ames, Beaverton, Mapleton, H. M. Pellatt, J. H. Plummer and Saskatoon. They are being operated under an agreement with the Canada Steamship Lines, of which H. W. Cowan is Operating Manager. The officers of the Canadian Northern Steamships, Ltd., are: Sir William Mackenzie, President; Sir Donald Mann, Vice President; D. B. Hanna, Second Vice President; L. W. Mitchell, Treasurer; R. P. Ormsby, Secretary; R. C. Vaughan, Assistant to Second Vice President and Assistant Secretary.

The Welland Ship Canal.

During the early part of the year, it was announced that work on the construction of the Welland Ship Canal was to be suspended until the conclusion of the war. Some minor work was gone on with preparatory to shutting down, and work definitely ceased May 2. Contracts are running for sections 1, 2, 3 and 5, the work, taken as whole, being rather more than 50% completed, that on sec. 3, the heaviest portion of the whole route, not being in so forward a state as on the other sections. It was anticipated that construction on the other three sections would have been completed this year, within the contract time, and that on sec. 3 about the middle of 1918, or a year behind the time specified in the contract. The contracts are held as follows: Sec. 1, Dominion Dredging Co., \$3,487,727; Sec. 2, Baldry, Yerburgh & Hutchinson, Ltd., \$5,377,185.75; Sec. 3, O'Brien & Doheny, \$9,540,050; Sec. 5, Canadian Dredging Co., \$1,945,788.

The services of the entire staffs have been dispensed with, including those of the Engineer in Charge, J. L. Weller, M.Can.Soc.C.E. Mr. Weller was born at Cobourg, Ont., Feb. 13, 1862, and entered Dominion Government service in 1883, as Assistant Engineer on the Trent Canal, and from 1885 to 1888 was Assistant Engineer on the Murray Canal; 1888 to 1900, Resident Engineer, St. Lawrence Canals, Cornwall, Ont.; 1900 to 1912, Superintending Engineer, Welland Canal, St. Catharines, Ont.

Proposed Government Control of Lake Freight Rates.

The House of Commons committee dealing with the revision of the Railway Act has before it an amendment to sec. 358, providing that the provisions of the act in respect of tolls, tariffs and joint tariffs, shall, so far as deemed applicable by the Board of Railway Commissioners, extend and apply to all freight traffic carried by any carrier by water from any port or place in Canada to any other port or place in Canada. This amendment is being strongly opposed on behalf of the Dominion Marine Association. Francis King, M.A., Counsel for the Association, appeared before the committee, May 22, and stated that while the association had no objection to the railway lake carriers being under the board's control, the consensus of opinion was against the proposal. He claimed that there was no analogy between railways and lake lines, the latter having no public franchises and no exclusive privileges. On the water there was constant competition, which was not possible to the same extent on land. He also contended that the board could not possibly establish fair lake rates, owing to the rapidly changing conditions of the lake trade.

Payment of Freight Charges on Lake and Rail Grain Cargoes.—The railway companies have notified vessels that on delivery of grain cargoes for trans-shipment at Georgian Bay ports, they have discontinued advancing the payments for freight to the vessel. The Dominion Marine Association, acting for the vessel owners, immediately notified the shippers that in these cases the freight must be paid in advance. The Winnipeg Grain Exchange and the Lake Shippers Association of Fort William have since protested to the railway companies, and the matter is under consideration.

Atlantic and Pacific Ocean Marine.

The France-Canada Steamship Co., operating between Canada and France, is reported to have purchased seven sailing vessels from J. S. Winslow, Portland, Me.

The Donaldson Line s.s. Cassandra was the first trans-Atlantic steamship to arrive at Montreal this year, making port on May 2. Capt. R. C. Brown, the master, was presented with a gold headed cane by the harbor commissioners.

Canada Steamship Lines s.s. Cascapedia, which has been extensively repaired and overhauled, is running for a while on the Quebec Steamship Co.'s route between New York and Bermuda. Later in the season she will return to her customary service between Montreal, Gaspé and Prince Edward Island ports.

The British s.s. Lord Antrim, bound for Great Britain from the U.S., grounded near Fourchu, N.S., May 4, during heavy weather. She was floated during the same day and taken to Louisburg, where some temporary repairs were undertaken in order to allow of her proceeding to Halifax, where repairs were completed.

The Gulf Transport Co., operating between Great Britain and the Gulf of Mexico, of which J. H. Welsford & Co., Liverpool, are the managers, is reported to have sold its fleet of five vessels to Liverpool buyers, two of the vessels being sold to Elder, Dempster & Co. A sixth vessel belonging to the company has been held at Hamburg since the outbreak of war. J. H. Welsford & Co. control the Union Steamship Co. of British Columbia.

Furness, Withy & Co. announce that as Allan Bros. & Co. having relinquished the agency at Liverpool, Eng., for Furness Line vessels between Liverpool, Eng., St. John's, Nfld., and Halifax, N. S., all traffic arrangements are now conducted from Furness, Withy & Co.'s own offices in the Royal Liver Building, Liverpool. The services mentioned are under the supervision of W. McGuiness, heretofore Secretary, Allan Line Steamship Co., and Manager, Allan Bros. & Co., Glasgow, Scotland.

The Dominion Government s.s. Durley Chine was rammed and sunk off Sandy Hook, toward the end of April, by the outward bound s.s. Harlem. The captain and crew were saved and returned to New York. The s.s. Durley Chine was a single screw steamship, length 279 ft., beam 40 ft. 1 in., depth 18 ft. 4 in., and was built at Sunderland, Eng., in 1912. She was purchased by the Dominion Government in 1914 from the Alum Chine Steamship Co., London, Eng., chiefly for Hudson Bay service. The Dominion Government has taken action against the owners of the s.s. Harlem in the Halifax Admiralty Court, claiming \$400,000 for the loss of the vessel.

The U. S. Government is reported to have purchased seven steamships from the Austro-American Steamship Co. These vessels have been interned in U. S. ports since the outbreak of war. The price paid for the vessels is given as \$6,778,006.70, and the business was carried out by the U. S. Shipping Board. The vessels had previously been purchased from the Austro-American Co., and a contract had been entered into for their resale at \$148 per deadweight ton, but on the request of the U. S. Government, the resale was not carried out, and the vessels were transferred to the government at the original price paid. The original contract confined the use of the vessels to

neutral waters, but a release was arranged on payment of a further \$20 a deadweight ton, and this release goes with the vessels to the government.

Maritime Provinces and Newfoundland.

The C.P.R. s.s. Empress was taken off her route between St. John, N.B., and Digby, N.S., May 21 to 23 inclusive, for a general overhaul at St. John.

The s.s. William Edwards, owned in Sydney, N.S., and chartered for carrying coal to Grand Falls, Nfld., foundered off Cape Pine, May 16, during a heavy gale. The crew were saved, and the vessel and cargo were fully insured.

The s.s. Aranmore, which has been running between Pictou, N.S., and Charlottetown, P.E.I., in conjunction with the car ferry Prince Edward Island, struck some submerged object while docking at Charlottetown, May 11, making a large hole in her side. Repairs were undertaken at Charlottetown after she was beached.

The s.s. Maskinonge, under charter to the Dominion Coal Co., which stranded off St. John harbor, at the end of April, was released May 5, practically without damage, and docked at no. 1 berth. The stranding was due to the dragging and fouling of the anchors during a freshet.

The Dominion Coal Co. is reported to have purchased the steamships Hochelega and Lingan from Furness, Withy & Co. The Hochelega was built in 1912, and is 4,681 tons gross, 2,601 net, and the Lingan was built in 1911, 4,677 tons gross, 2,603 tons net. Both were built at Middlesbrough, Eng., and were specially designed for the coal trade.

The Governor General in council has approved bylaw 33 of the Pilot Commissioners of the Pilotage District of Sydney, N.S., providing that all licensed pilots and pilot apprentices shall undergo every year an examination as regards form vision and color ignorance, and that the sight tests shall be the same standard

as those passed by candidates for masters and mates examinations.

Province of Quebec Marine.

The Inland Revenue Department received tenders, May 23, for the privilege of ferrying across the Ottawa River between Cumberland, Ont., and Buckingham, Que., for five years from May 1.

It was announced in the House of Commons recently that Capt. E. Angers, of the Dominion Government s.s. Vercheres, had been dismissed for incompetence. No investigation had been held, but one would be granted by the government if the person dismissed desired it.

The Montreal City Council has arranged with the Canada Steamship Lines to operate a ferry service to St. Helen's Island for \$28,000 for the summer, the company to have the privilege of selling refreshments. The ferry is free to the public, the steamboats Longueuil and White Star being used, from May 23.

The Dominion Government s.s. Berthier arrived at Quebec, May 18, from Sorel, on her maiden trip. She was built at the Government shipyard at Sorel last year, being completed during the winter. She is intended for the use of the staff engineers of the St. Lawrence Ship Channel below Quebec. A description and illustration of her were given in Canadian Railway and Marine World for Dec., 1916.

The Quebec & Levis Ferry Co.'s annual meeting was held at Quebec, May 15, when a satisfactory report of the past year's business was presented. A vote of condolence was passed on the death of C. H. Shaw, President of the company. The board for the current year is: J. S. Thom, President; A. Gourdeau, Vice President; G. E. Allen Jones, L. C. Webster and W. J. Thompson.

The Minister of Trade and Commerce announced in the House of Commons recently that a contract had been entered into for a steamship service every two weeks between Quebec and Gaspé Basin, calling at way ports. Last year the service was every week, and was performed

Sault Ste. Marie Canals Traffic.

The following commerce passed through the Sault Ste. Marie Canals during April.

ARTICLES	CANADIAN CANAL	U. S. CANAL	TOTAL
Eastbound			
Flour	Barrels		
Wheat	Bushels		
Grain	Bushels		
Copper	Short tons		
Iron ore	Short tons		
Pig iron	Short tons		
Lumber	M. ft. b.m.		
Stone	Short tons		4
General merchandise	Short tons	4	
Passengers	Number		
Westbound			
Flour	Barrels		
Grain	Bushels		90,292
Coal, hard	Short tons	7,500	82,792
Coal, soft	Short tons	15,500	144,818
Iron ore	Short tons		
Manufactured iron	Short tons		
Salt	Barrels	6,000	6,000
Oil	Short tons		
Stone	Short tons		
General merchandise	Short tons	4,402	2,374
Passengers	Number		
SUMMARY			
Vessel passages	Number	36	130
Registered tonnage	Net	93,609	455,528
Freight—Eastbound			
.....	Short tons		4
.....	Short tons	27,402	230,884
Total freight	Short tons	27,402	230,888
Passengers			
.....	Number		166
.....	Number		549,137

The Canadian canal opened April 25, and the U. S. canal April 24.

by the Gaspé and Baie des Chaleurs Steamship Co., Quebec, for a subsidy of \$8,500.

In response to questions in the House of Commons recently, it was stated that the harbor master at Quebec, Capt. J. Murray, was, prior to his appointment, master of the C.P.R. s.s. *Empress of Britain*, and he was selected for the position by reason of the special qualifications he was known to possess, and was appointed at the time extensive works were authorized in connection with the new organization of the Harbor Commission. His salary is \$3,500 a year, and that of his predecessor was \$1,750.

Ontario and the Great Lakes.

The name of the steamship *Harvey H.*, owned by Canadian Stewart Co., Toronto, has been changed to *Henriette Stewart*.

Canada Steamship Lines s.s. *W. Grant Morden*, which grounded near Sault Ste. Marie, May 18, was released, May 20, undamaged, and proceeded to Lake Erie.

The Northern Navigation Co. has placed in service at its freight sheds at Sarnia a number of electric storage battery trucks for handling freight to and from the sheds and vessels.

The s.s. *Rochester*, which is being operated by the Northern Navigation Co., this year, will be on the route between Cleveland, Ohio, and Sault Ste. Marie, calling at Sarnia and Georgian Bay ports.

The s.s. *Forest City*, which has been running between Port Arthur and Fort William and Silver Islet for several years, is reported to be for sale, and it is expected that she will leave that district.

The U. S. Lake Survey has issued a notice advising vessels to keep to the northerly side of the wrecked s.s. *John Plankinton* in the Canadian side of the channel in the Detroit River, opposite the foot of Fifth St., Detroit.

The tug *Frances B. Hackett*, owned by the Hackett Towing & Wrecking Co., Amherstburg, Ont., and Detroit, Mich., has been sold to E. P. Morse, Jr., Brooklyn, N.Y., who is believed to have made the purchase on behalf of the U.S. Government.

The A. B. Mackay Steamship Co.'s s.s. *Natironco*, which ran aground on Charity shoal, about 20 miles west of Kingston, May 16, was released on the following day, leaking somewhat, and proceeded west to be docked for examination and repairs.

The Pittsburg Steamship Co.'s s.s. *Pentecost Mitchell* and the s.s. *Saxona* owned by G. A. Tomlinson, Duluth, Minn., collided, bows on, near Watson's reef, Detour, Mich., May 13, and both sank. The crews took to the boats and reached shore safely. The vessels lie in the channel in a northeasterly direction, but there is sufficient room on either side for vessels to pass.

The U.S. Lake Survey reports the levels of the Great Lakes in feet above mean sea level for April, as follows: Superior, 602.28; Michigan and Huron 580.78; St. Clair 575.21; Erie 572.57; Ontario 246.24. Compared with the average April levels for the past ten years, Superior 0.72 ft. above; Michigan and Huron 0.63 ft. above; Erie 0.16 ft. above, and Ontario 0.14 ft. below.

The Great Lakes Transportation Co., Midland, Ont., has two steamships under construction by the Port Arthur Shipbuilding Co., Port Arthur, Ont. They are full canal size, 261 ft. long, 43½ ft. beam

and 28 ft. 2 in. deep, 4,200 tons deadweight capacity. In addition to these, the company has on hand the construction of 5 canal size steamships, 3,500 tons deadweight capacity, and 6 smaller vessels.

The s.s. *Keystorm*, which was wrecked and sunk in Chippewa Bay, near Brockville, in 1913, is reported to have been sold by Lloyd's underwriters to James Richardson & Son, Kingston, for \$7,500, as she lies. Some attempts have been made to raise her, but without success. It is now stated that arrangements are being made for her salvage, and that it is expected she will be raised during this summer. The wreck lies with her stern in about 110 ft. of water and her bows under about 35 ft. Owing to the present high price of vessels, due to shortage, it is considered a good proposition to spend a considerable sum on the work.

The steamships *Congercoal* and *Lloyd S. Porter* were destroyed by fire, May 10, while lying alongside each other at North Fairhaven, N.Y. Both vessels were engaged in the coal trade. The *Congercoal* was owned by the Conger Lehigh Coal Co., Toronto, and was built at Mount Clemens, Mich., in 1882, and named A. Weston. Her dimensions were, length 162 ft., breadth 31.3 ft., depth 13 ft.; tonnage, 276 gross, 333 register, and she was equipped with engine of 48 n.h.p. driving a screw. The *Lloyd S. Porter* was built at Port Huron, Mich., in 1893. Her dimensions were, length 158.7 ft., breadth 29.5 ft., depth 10 ft.; tonnage, 489 gross, 397 register, and she was equipped with engine of 43 n.h.p. driving a screw.

The U.S. Lighthouse Bureau has marked with two red spars, carrying red lights at night, the channel bank of Pipe Island, opposite and above the wrecks of the steamships *Pentecost Mitchell* and *Saxona*, in the St. Marys River. The stacks and spars of the wrecks are visible above water, and are marked at night by lights maintained by the owners. The available channel between the wrecks and Pipe Island Bank has a clear width of 500 ft. of which about 400 ft. is on the easterly side and 100 ft. on the westerly side of the chart vessel course. Vessels are warned not to meet or pass each other in the immediate vicinity of the wrecks. The tug *Minta K.* has been placed to oversee the passage of vessels in accordance with the rules and masters are requested to co-operate in keeping the channel clear.

Masters and Mates Certificates and Returned Soldiers.—The Governor General in council has amended the scale of fees as previously adopted to provide that in the case of a returned soldier from active service at the front, or in the case of a soldier who has been honorably discharged and returned as medically unfit for service at the front, proof of which shall lie with the candidate, the fee for a master's or a mate's certificate of any grade shall be \$1.

Levis Dry Dock.—Work on the construction of the graving dock at Lauzon, Levis, Que., is reported to be progressing satisfactorily. It is stated that the excavation will be completed this year, with most of the concreting. When completed, this dock will be of the following dimensions: Length, clear, 1,150 ft.; width, 120 ft.; maximum depth, 45 ft., making it the largest dry dock in the world. It will be 10 ft. deeper than the next largest at Boston, Mass., and 130 ft. longer than the Gladstone Dock at Liverpool, Eng., which, however, is 1 ft. deeper.

Manitoba, Saskatchewan and Alberta.

The Ross Navigation Co. is building a stern wheel vessel at Pas, Man., and it is expected that it will be ready for operation early in the summer.

The s.s. *Keenora*, at one time owned by the Rainy River Navigation Co., Fort William, Ont., and latterly by the Rat Portage Lumber Co., Kenora, Ont., and, as announced in our March issue, sold to Alex. Mackenzie, Winnipeg, has been thoroughly overhauled and lengthened 50 ft. She is being operated in excursion traffic on the Red River. She was built at Kenora, Ont., in 1897, and is screw driven by engine of 38 n.h.p. When she was last sold she was dismantled at Kenora and reassembled at Winnipeg.

British Columbia and Pacific Coast.

Navigation on the Yukon River opened May 15, being the latest since 1899, when it did not open until May 17.

A general meeting of the Alberni Canal Transportation Co., Ltd., was held at Victoria, May 12, to receive and dispose of the liquidator's report covering the winding up of the company's affairs.

The Hudson Bay Co. is operating a gasoline motor boat, this year, on the Stikine River, between Telegraph Creek, B.C., and Wrangell, Alaska. The service commenced May 10, the fare being \$10 each way, meals 50c each.

The Grand Trunk Pacific Coast Steamship Co. is allowing passengers on its steamships to occupy parlor rooms on board, while the vessels remain in port at Skagway, Alaska, for a charge of \$4 a room with bath, for one or two persons, and \$3 without bath.

The s.s. *Quadra*, formerly owned by the Dominion Government, and operated as a lighthouse and buoy tender on the British Columbia coast, and which was sold recently, after being sunk in collision, to a mining company at Howe Sound, is having oil burning apparatus installed at Vancouver.

The Grand Trunk Pacific Coast Steamship Co. will commence its summer Alaska service June 11, with the sailing of the s.s. *Prince George* from Seattle, Wash., calling at Vancouver, Prince Rupert, Ketchikan, Wrangell, Juneau and Skagway. The service will be given weekly to Aug. 27, by the steamships *Prince George* and *Prince Rupert*.

The New England Fish Co. has put into service the s.s. *Canada*, which it purchased from the British Columbia Fisheries, Ltd., when that company was wound up about two years ago. The vessel has been thoroughly overhauled and remodelled. The s.s. *Imbricaria*, purchased at the same time, is now being overhauled, and is expected to be ready for service towards the end of June.

The C.P.R. has purchased the car barge *D. L. Co. XXIV*, with triple tracks, capable of handling nine cars, from the Drummond Lighterage Co., Seattle, Wash. The barge is 140 ft. long, with 42 ft. beam, and has been used by the Chicago, Milwaukee & Puget Sound Ry. for transportation on Puget Sound. The barge has been transferred to the Canadian register and renamed *Transfer No. 6*.

The Grand Trunk Pacific Coast Steamship Co.'s s.s. *Prince Rupert*, which stranded on the west coast of Genn

Island, Mar. 22, was refloated at the end of April, and proceeded under her own steam, convoyed by the salvage steamer Salvor, to Victoria, where she was docked for examination. It is stated that about 42 new plates will be required, and that a number of plates will have to be removed and faired. The repairs will, it is estimated, take about two months.

The Western Fuel Co., Victoria, has obtained an injunction against Wilhelm Wilhelm, restraining him from interfering with the loading of the s.s. Tancred, under charter to the plaintiff company in the coal trade between Nanaimo, B.C., and San Francisco, Cal. The charter is dated June 5, 1915, and the master of the vessel stated that he had received instructions to refuse to load the vessel, and to withdraw her from service, unless the company agreed to pay £8,000 a month and to insure the vessel for £200,000.

The British Columbia Salvage Co. has entered suit in the U. S. District Court at Seattle, Wash., against the owners of the s.s. Congress for \$314,200, based on 30% of the salvaged value of the vessel, for services rendered by the tug Salvor, when the Congress was burnt at Coos Bay, Ore., in Sept., 1916. The vessel was owned by the Pacific Coast Steamship Co., which amalgamated with the Pacific Alaska Navigation Co. The Congress was not taken over by the amalgamated company, but was abandoned to the underwriters, who have since paid for her as a total constructive loss, and she has since been sold to other parties, for, it is said, \$1,000,000.

It is reported that the Grand Trunk Pacific Alaska Co. has been incorporated at Olympia, Wash., to own and operate the power schooner Tillamook, which we announced recently had been purchased by the Grand Trunk Pacific Coast Steamship Co., for operation to Ketchikan, Alaska, from Prince Rupert, B.C. It is said that the company will acquire other similar vessels for the cannery trade. The incorporators named are: J. S. Gibbon, Vice President, Grand Trunk Pacific Dock Co., Seattle, Wash.; J. H. Burgis, General Agent, Passenger Department, G.T. P.C.S. Co., Seattle; F. L. Norman, Commercial Agent, same company, Seattle; C. E. Crossen and K. F. Hass.

As the result of an enquiry into the purchase of the launch Faloma by the B.C. Government in 1911, on account of the vessel not now being in use, a standing committee of the legislature has reported that the Faloma was purchased from the Pacific Marine Brokerage Co. for \$10,000. She was built in 1910 for that company, at an apparent cost of \$8,000. She has been operated satisfactorily by the government for about two years, since when her engines have not been powerful enough to run her economically, and she has been laid up. The committee reported that the transaction was an ordinary business deal, that in view of the demand for boats at the time, the owner did not make any excessive profit, and that there is no evidence of commission or campaign fund payments.

Handling of Vessels in Harbors.—The Marine Department has issued special notice, no. 34, to masters, shipowners and others concerned, giving extracts from the Defence of Canada Order, 1917, relative to the handling, mooring and navigating of vessels in Canadian harbors and the vicinity, showing penalties incurred for contraventions. Copies may be had from the department.

Coast, Lake and River Steamship Officers for 1917.

The following are additional returns received since those published in our April and May issues. The first column shows the names of vessels, the second those of captains, and the third those of chief engineers:

BRITISH YUKON NAVIGATION CO.,		
WHITE HORSE, YUKON		
Canadian	J. P. Douglas	J. P. Bourne
Casca	J. O. Williams	R. C. Haws
Dawson	C. J. Bloomquist	J. R. Young
Scotia	J. McDonald	D. Sullivan
Selkirk	G. H. McMaster	W. C. Vey
Tutshi	J. G. Roberts	Jas. Lauderdale
White Horse	W. Turnbull	P. Larssen
CANADA STEAMSHIP LINES, LTD., MONTREAL		
Aberdeen	E. Legault	.....
America	R. H. Carnegie	.....
Belleville	W. Bloomfield	John Kennedy
Bickerdike	T. H. Johnston	D. S. LaRue
Boucherville	A. Laviolette	C. Hamel
Cadillac	W. Beatty	Jas. Kettles
Calgarian	R. Pyette	A. L. Black
Cayuga	C. J. Smith	.....
Chippewa	W. Malcolm	.....
City of Hamilton	O. Patenaude	W. Dungan
City of Ottawa	J. L. Baxter	C. E. Holmes
Corona	B. A. Bongard	Jos. Kennedy
Doric	H. J. Aitken	Jos. Aston
E. B. Osler	C. E. Robinson	W. Robertson
Emperor	J. F. Davis	G. M. Smith
Fairfax	M. Heffernan	C. LaVallee
Haddington	E. J. Shannon	C. Leriche
Hamiltonian	N. McKay	E. A. Kennedy
Home Rule	R. D. Simpson	.....
Ionic	O. Wing	A. E. Crosthwaite
Iroquois	J. H. Hudson	J. E. Readman
J. H. G. Hagarty	G. W. Pearson	C. Robertson
J. R. Binning	G. Irwin	.....
Kingston	E. Booth	W. Chipman
Longueuil	.....	H. Noel
Louis Philippe	H. Mandeville	A. Chayur
Macassa	J. Henderson	E. A. Prince
Magnolia	.....	T. Hazlett
Martian	A. B. McIntyre	R. Foote
Midland King	P. McKay	Jas. McGregor
Midland Prince	A. E. Stinson	J. A. Pickard
Modjeska	.....	A. McLaren
Montreal	F. X. LaFrance	N. Beauvain
Pierrepont	J. E. Ouellette	.....
Quebec	J. Rinfret	J. Matte
Ramona	E. M. Charlebois	.....
Rapids King	.....	W. Hazlett
Rapids Prince	.....	G. Hazlett
Rapids Queen	.....	A. Charbonneau
St. Irenee	.....	O. Bonin
St. Lawrence	John Bertrand	B. Farrell
Saguenay	J. Simard	A. Godin
Sarnian	R. McIntyre	I. J. Boyton
Seguin	H. McLennan	J. B. McLaren
Stadacona	H. Hinslea	J. Grant
Sir Trevor Dawson	G. H. Page	W. W. Norcross
Syracuse	L. Legendre	.....
Tadousac	W. Gagne	G. Gagnon
Thousand Islander	C. H. Kendall	.....
Three Rivers	A. Mondor	.....
Toronto	J. J. Jarrell	D. J. Leslie
Turbinia	.....	J. Gibert
W. D. Matthews	D. W. Burke	W. Reid
W. Grant Morden	N. Campbell	R. Chalmers
W. M. Egan	N. Hudgins	J. A. Connor
Wyoming	T. B. Greenway	.....

CANADIAN NORTHERN STEAMSHIPS LTD. (Operated by Canada Steamship Lines Ltd.)		
A. E. Ames	W. H. Montgomery	G. Jarrell
Beaverton	W. Brian	H. Myler
H. M. Pellatt	O. W. Patterson	W. Byers
J. H. Plummer	H. A. Leaney	F. A. McCauley
Mapleton	A. F. McLennan	A. E. House
Saskatoon	R. J. Wilson	J. A. McDonald

PROGRESSIVE STEAMBOAT CO., VANCOUVER, B.C.		
Maagen	H. Furstad	J. Harte
Progressive	A. Lewis	G. Dixon
Pronative	J. P. Tait	O. Sherberg
Projective	A. O. Clappitt	O. A. Mathieson
Senator	H. Graner	B. Bond

REID NEWFOUNDLAND CO., ST. JOHN'S, NFD.		
Argyle	W. Norman	G. Pike
Clyde	J. Knee	J. Pollock
Dundee	D. Blandford	J. Cunningham
Ethie	J. Goobie	P. Burton
Glencee	A. Blandford	F. Barnes
Home	H. Harbin	J. Pike
Kyle	L. Stevenson	J. McFailane
Meigle	W. Parsons	J. McFailane
Sagona	G. Spracklin	J. Buckingham

The Arctic Steamship Co., Ltd., has had its authorized capital stock increased from \$20,000 to \$80,000.

The Permissible Draught for the Welland Canal has been fixed for the present at not exceeding 14 ft.

Stranding of the s. s. Prince Rupert.

As a result of an official investigation at Victoria, B.C., into the causes which led to the stranding of the Grand Trunk Pacific Coast Co.'s s.s. Prince Rupert, on Genn Island, Mar. 23, it was found that a violent and blinding snowstorm temporarily obscured all the leading marks, and the unusually high tides caused an in-drift toward the mouth of the Skeena River. The master, Capt. Mackenzie, was perfectly justified in retiring to his cabin on the night of the casualty, after leaving instructions to be called if necessary, as the weather was then clear and all marks visible. The storm arose very suddenly, and the engines were put at slow speed, and later full speed astern, but before way could be got off the vessel, she struck on a reef at the north end of Genn Island, on the top of high water, at a tide which was one of the highest of the year. The court considered that under the circumstances everything possible was done to avoid the disaster, although no soundings were taken, the vessel being fully equipped in this respect, but the court considered that the taking of soundings would have been of no use. The master and officers were therefore exonerated from all blame for the casualty and their certificates were returned to them.

The Atlas Transportation Co., Ltd., has been incorporated under the Quebec Companies Act, with \$20,000 capital, and office at Montreal, to own and operate vessels of all kinds, with or without motive power, and to carry on a general transportation business. The incorporators are: J. G. Rene, L. Gelinas, J. H. Bourque, Maisonneuve, Que., and H. Bourassa and O. Perrault, Montreal. The company has not been fully organized as yet, but the President is A. A. Larocque, and the Managing Director is Yvon Dupre, both of whom are directors of Sincennes-McNaughton Line, Ltd., of which the new incorporation is a subsidiary. Among vessels which the new company is reported to be taking over, are the barge Russell Sage, and the steamboat William L. Proctor, owned by Sincennes-McNaughton Line, Ltd., and which have recently had their names changed to Atlas-co and Conqueror, respectively.

The Atlas Transportation Co., Ltd., The Barge Twin Sisters Co., Ltd., The Barge Ireland Co., Ltd., and The Barge Menominee Co., Ltd. incorporated recently under the Quebec Companies Act each with \$20,000 capital and office at 75 Common St. Montreal are closely associated with Sincennes-McNaughton Line, Ltd., Montreal and the Touzin Sand Co. The President is A. A. Larocque and the Managing Director is Yvon Dupre, in each case, both of whom are directors of the two latter companies. They own a number of forwarding barges and plan to make further purchases for operation on the Great Lakes.

Notice to Atlantic Navigators.—All vessels sailing from a port on the St. Lawrence River of Gulf, below, but not including, Quebec, must call at Sydney, N.S., for instructions from the senior naval officer there as to the route they must follow, unless they have been given precise instructions for the whole of their route before sailing. This notice has been issued under the Defence of Canada Order, penalty for non-compliance with which is a fine not exceeding \$5,000, or imprisonment not exceeding 5 years, or both fine and imprisonment.

Chartered Vessels and War Region Risks.

The appeal of the Maskinonge Steamship Co. against a judgment in favor of the Dominion Coal Co., as charterer of the s.s. Maskinonge, in respect of insuring the vessel against war risks, was before the English Court of Appeal recently. The s.s. Maskinonge was originally chartered by the Dominion Coal Co. in 1909, for seven seasons, and in 1915 another agreement was entered into for a further six years. In this latter agreement, it was provided that should the vessel be ordered by the charterer into the war region, the war risk insurance premium payable by the owner should be refunded by the charterer. In Oct., 1916, the vessel was ordered by the charterer to go to Boston, Mass., and on or about Oct. 8, a German submarine appeared off Nantucket and sank about six vessels. From this, the appellant claims that that part of the U.S. coast became a part of the war region, and the vessel was insured against war risks. The matter really resolved itself into the definition of the term war region in the agreement, and the appellant contended that as soon as it became clear that the region in which the vessel was trading was one in which there was real apprehension of enemy activity, that district became a war region. The war risk insurance for three months was £1,750.

The judgment was that the appeal be allowed, and the decision of the lower court reversed, the appellant's claim being allowed in full with full costs in the appeal and in the lower court. The judge held that when, as in this case, there had actually been warlike operations by the appearance of a German submarine and the sinking of vessels in the area in which this vessel was trading or ordered to trade in the future, and that there was reasonable apprehension that these operations would recur, and no reasonable grounds for coming to the conclusion that this was a mere sporadic attack, then that constituted this area a war region within the meaning of the contract.

Requisitioning Ships for Government Purposes.

A Dominion order in council was passed on April 24, repealing orders passed Nov. 24, 1916, and Mar. 31, 1917, and providing as follows: Whereas by order in council of Nov. 24, 1916, certain regulations were enacted under the provisions of the War Measures Act, 1914, for the requisitioning of any British ship registered in Canada by and on behalf of His Majesty for the carriage of foodstuffs and of any other articles of commerce; and whereas by order in council of Mar. 31, 1917, further regulations were made and enacted under the provisions of the said act for the requisitioning, for the said purpose, of any ship under construction or about to be constructed in any shipyard in Canada for neutral owners; and whereas it has been represented that it is essential that provision be made for the requisitioning of any British ship registered in Canada, for any other purpose whatsoever, including the requisitioning of any cargo space therein, and also for the requisitioning of any ship under construction or for the construction of which a contract has been entered into, in any shipyard in Canada, whether for British or for foreign ownership; therefore the Governor-General in council, under and

in virtue of the provisions of the War Measures Act, 1914, orders as follows:

Any British ship registered in Canada may until further order be requisitioned by and on behalf of His Majesty for the carriage of foodstuffs and of any other articles of commerce, or for any other purpose whatsoever. Any cargo space in any British ship registered in Canada may until further order be requisitioned in whole or in part by and on behalf of His Majesty for any purpose whatsoever. Any ship under construction or for the construction of which a contract has been or may be entered into in any shipyard in Canada, even in cases where the export thereof for foreign registry has been authorized by the Governor in council, may until further order be requisitioned by and on behalf of His Majesty for the carriage of foodstuffs or for other articles of commerce or for any other purpose whatsoever. The Minister of Marine and Fisheries is authorized and directed to give effect to these regulations by causing notice of requisition to be served on the owner of any such ship, or the builder in the case of a ship under construction, or for the construction of which a contract has or may be entered into.

We were officially advised on May 16 that no requisitions had been passed under the provisions of the order in council quoted above. As stated in previous issues of Canadian Railway and Marine World, the Dominion Government, between Sept. 19 and Nov. 15, 1916, authorized the exportation to Norway on completion of 18 cargo steamships to be built at New Glasgow, N.S., Montreal, Toronto, Port Arthur, Ont., and Vancouver, B.C., and for the exportation to the United States of two others to be built at Toronto. On May 16 we were officially advised that the only companies that had actual contracts for the construction of vessels for neutral owners were: Canadian Vickers, Ltd., Montreal, 2; Polson Iron Works, Toronto, 2; Thor Iron works, Toronto, 2. There appears to be little doubt that these will be taken over for the British Government.

Proposed Shipbuilding in New Brunswick.

The question as to what steps the New Brunswick Government should take in promoting and encouraging shipbuilding within the province was discussed at an impromptu meeting at Fredericton, N.B., led by T. H. Estabrooks. The scheme of aiding the construction and operation of vessels, as being carried out by the British Columbia Government, and also the proposals suggested under the Nova Scotia scheme, were outlined and discussed, and the history of shipbuilding in New Brunswick was reviewed. In the main, it was suggested that the N.B. Government should appoint a commission of business men, some of whom should have some knowledge of the shipbuilding business, with authority to proceed as speedily as possible with the construction of vessels of a suitable type to meet immediate needs. The commission should be provided with a fund of \$1,000,000 for the proper carrying on of the work and for assisting such construction as deemed advisable. The type of vessel to be adopted, method of propulsion, etc., should be left for decision by experts. It was suggested that instead of setting aside the sum suggested to promote the business, the Government should pay a bonus on a tonnage basis. A resolution calling upon the government to take such

steps as would eventually lead to the re-establishment of the shipbuilding industry in the province was passed and sent to the government, and T. H. Estabrooks and J. A. Likely were appointed to select a representative committee to meet members of the government to discuss the proposals.

Repairing the Damaged German Ships Interned in the U. S.

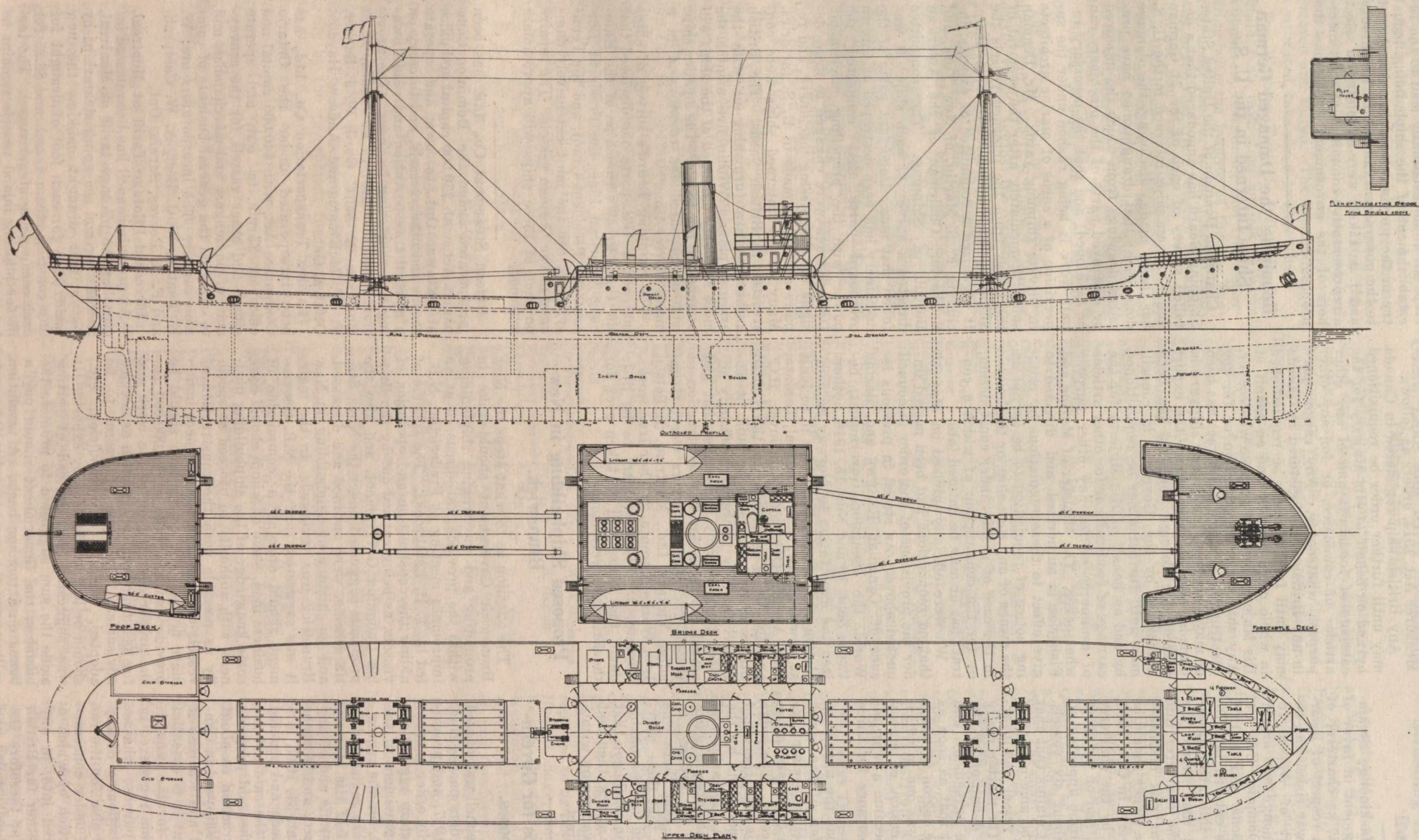
Chairman Denman of the United States Shipping Board has announced that a detailed survey of each of the 71 German and Austrian ships interned in the U. S. has been made, disclosing the damage done each; that draughtsmen have prepared drawings from which the impaired or destroyed parts of the machinery can be fashioned; and that the necessary repair work is being rushed under the supervision of a corps of marine architects in private shipping yards. Mr. Denman said: "Immediately after the removal of the crews from the interned vessels the Shipping Board undertook to repair them. It organized a committee of experts, including F. S. Martin, of New York, and S. Taylor, Chairman of the American Bureau of Shipping. The committee directed a survey of each ship. It was found that many important parts of the machinery had been destroyed or thrown overboard—parts that connected the power with the propelling mechanism. Draughtsmen were engaged to draw designs for the missing machinery, and repairs are being made in U. S. factories. Many of the interned ships were constructed in British yards. The British authorities are furnishing us with the original plans. Within five months the most seriously damaged of the ships will be ready to put to sea. The smaller ships will be prepared for commission in a much shorter time."

The Shipping Board's survey of ships interned in U.S. ports has disclosed that the three great steamships of the Hamburg-American Line, the President Lincoln, the President Grant, and the Pennsylvania, are the most extensively damaged of the German vessels. The repairs on each of these ships will approximate \$250,000.

Rideau Steamboat Co., Ltd. has been incorporated under the Dominion Companies Act, with \$50,000 capital and office at Ottawa, Ont., to own and operate steam and other vessels, and to carry on a general transportation and vessel owning and chartering business. The provisional directors are: F. F. Pardee, A. S. Burnham, N. St. C. Gurd, W. J. Barber, F. W. McKinnon and Andrew Haydon, Ottawa, Ont.

Landbo Transportation Co., Ltd., has been incorporated under the Ontario Companies Act, with \$40,000 capital and office at Sarnia, to own and operate steam and other vessels for the conveyance of passengers and merchandise, and to carry on the general business of common carrier. The incorporators are: W. E. Beaton, W. J. Best, A. W. Campsall, and F. R. Reeves, Sarnia, Ont.

Increased Pilotage Tariff at Montreal.—An order in council has been passed increasing the pilotage tariff at Montreal, on coasting and sea going steamships by 25c a foot draught, making the new tariff \$2.75 for each foot of draught for any coasting steam vessel, and \$3.25 for each ocean going steam vessel. The tariff for piloting inland vessels remains as heretofore, \$2.50 per foot draught.



Profile and Plan Views, Steamship War Dog.

Steel Cargo Steamship Construction at North Vancouver.

A single screw cargo steamship was launched from the Wallace Shipyards, North Vancouver, B.C., May 17, and it is stated that this is the first steel steamship ever to be launched in British Columbia waters. The christening cere-

mony was attended by a number of prominent men in the locality, and the vessel was named War Dog.

The order for this vessel was originally placed with the builders by the Kishimoto Kissen Kabuskiks Kaisha, of

Japan, but while on the stocks, was transferred to J. W. Chambers, Liverpool, Eng., who we have good reasons for stating is acting for the British Government. Following are the principal dimensions: Length overall, 312 ft. 10½

in.; length, b.p., 300 ft.; beam moulded, 45 ft.; depth moulded, 27 ft.; load draught, 22 ft. 6¾ in.; load deadweight, 4,750 tons; displacement, 6,750 tons; total capacity of holds, 214,700 cu. ft. The general arrangement of the ves-

sel, which is being built to Lloyd's 100 A1 class, is illustrated by the elevation and deck plans given herewith. The scantlings are shown upon the midship section. The vessel is of the single deck type, with poop, bridge and top gallant forecstle. The vessel will be divided transversely by five watertight bulkheads, the position of which is shown in the accompanying illustrations.

A short second deck will extend between the engine room and boiler room bulkheads, the 'tween deck space being utilized for coal, in addition to the permanent side bunkers, giving a total coal capacity of 327 tons. The forecstle deck will be about 34 ft. long, the bridge deck about 58 ft., and the poop deck about 35 ft.. The officers' quarters, owners' stateroom and spare room will be on the bridge deck. Ample provision will

each case being 15 ft. Each hatch will be served by two 5 ton derricks, stepped on tables on the fore and mainmasts. The derricks will be operated by 8 separate steam winches, each being capable of handling 5 tons. The double bottom will be used for water ballast, feedwater being carried in no. 3 tank, beneath the engine and boiler rooms. The sanitary and fresh water system is receiving special attention, and the supplies will be ample for all occasions.

The propelling machinery, which will be located amidships, will consist of one set of triple expansion engines having cylinders 24 x 38 x 62 in. x 42 in., and which will be constructed in the builders' own shops. They will have cast iron back and front columns and be of substantial construction and design. There will be 2 Scotch marine boilers. All

on the bridge deck, and a 20 ft. cutter (work boat) on the poop deck. The vessel will be well equipped with fire extinguishing apparatus.

The vessel when complete should easily attain the guaranteed speed of 9½ knots.

Enemy Aliens Barred from U.S. Marine Service.—The Supervising Inspector General of the United States Steamboat Inspection Service has sent the following circular letter to supervising and local inspectors of the 1st, 2nd, 3rd, 5th, 8th, 9th and 10th districts, except the local districts of Albany, N.Y., and Burlington, Vt., Steamboat Inspection Service: "You are informed that, under instructions of the President, given to the Secretary of Commerce, you will not issue, until further advised, certificates of service as able seamen to persons who are enemy aliens."

The Panama Canal.—The terminal ports at Cristobel and Balboa are now closed between sunset and sunrise. All navigational lights are extinguished and it is therefore necessary for vessels to arrive off these ports by daylight. On account of lights being out and buoys removed, it will be unsafe for vessels to approach, either by day or night, nearer than two miles from the harbor entrances, without canal pilots.

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.

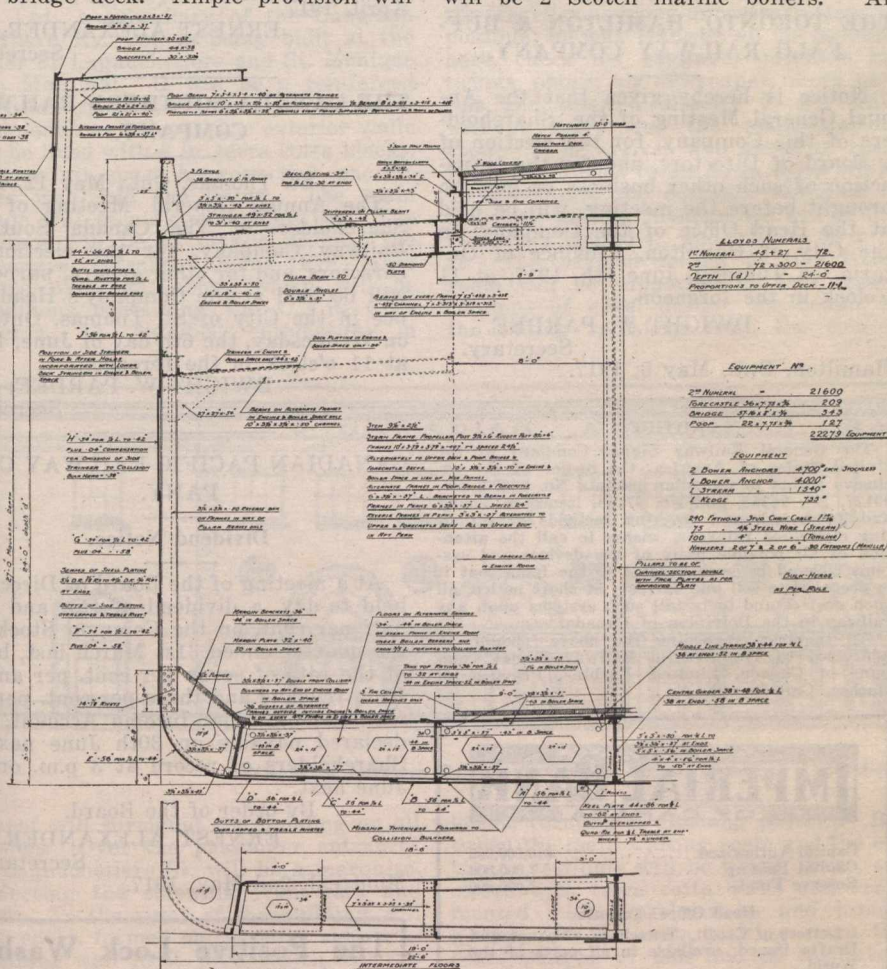
Canuck Supply Co., Ltd., railway materials and supplies, Montreal. F. W. Moore has been appointed Vice President.

Taylor & Arnold Limited, Montreal, have been appointed sole Canadian agents for Chadburn's (Ship) Telegraph Co., Ltd., Liverpool, Eng.

M. Beatty & Sons, Ltd., dredge, hoisting engine, derrick and clamshell bucket manufacturers, of Welland, Ont., have leased their shipyard and present boiler shop to the Welland Shipbuilding Co., Ltd., the incorporation of which is referred to elsewhere in this issue. M. Beatty & Sons have not leased all of their plant, as daily press reports would indicate, but are carrying on business as usual.

Preston Car & Coach Co., Ltd.—Some months ago, Martin N. Todd, who had been President for a number of years, resigned, and was succeeded by Frederick Clare. Donald M. Campbell, General Manager, has resigned recently, and no successor has been appointed, his duties for the present being divided among the other officials, who, in addition to the President above mentioned, and F. D. Palmer, Vice President, include A. N. W. Clare, Managing Director; W. J. Hodgins, Secretary-Treasurer, and C. S. Wright, General Sales Manager.

Independent Pneumatic Tool Co., Chicago. John D. Hurley, who has been Vice President of the company since its organization, and has been identified with the industry since pneumatic tools were first placed on the market, has been elected President to succeed the late J. B.



Construction Details, Steamship War Dog.

be made for bathrooms, lavatories, etc. The galley, pantry, officers' dining saloon, engineers' messroom and stores will also be on this deck. The officers' accommodation will be wood lined and finished in white enamel, and the owners' and captain's rooms in polished hardwood. At the forward end of the bridge deck will be a steel house, consisting of captain's cabin and bathroom, chart room and wireless room; above will be the pilot house, which will also be of steel construction, with a navigating bridge and flying bridge over. The accommodation throughout will be heated and ventilated and installed with electric lighting. The crew's quarters will be in the forecstle, which will have separate galley, wash room, shower bath, lavatories, etc.

There will be 3 main cargo holds and 4 hatches, no. 1 hatch being 22½ ft. long, no. 2 hatch 24½ ft., no. 3 hatch 20 ft. 5 in., and no. 4, 24½ ft., the width in

pumps will be independent, the condenser being of the centre flow type. The installation will include evaporator, feed-heater, filter, etc.

On the upper deck and in the space between the engine and boiler casings will be a donkey boiler, of 10 h.p. capacity, for supplying steam to the cargo winches when in port, access to the donkey boiler being direct from the boiler room, and also by a door leading to the passage alongside the casing on port side. Directly abaft the engine room, on the upper deck, will be a steel house, containing the steam steering gear, 7½ x 9 in. double cylinder horizontal type, the leads being carried along the upper deck direct to the quadrant in the poop. Hand steering will also be provided for on the poop deck.

The life saving requirements will be according to government requirements. Two lifeboats, 28 x 8 ft., will be carried

Brady. Ralph S. Cooper, who has been Manager of the New York office for 12 years, has been elected Vice President, and Robert T. Scott, Manager of the Company's Pittsburg branch, has been elected a director and member of the executive committee.

Electric Service Supplies Co., Philadelphia, has issued a 64 page catalogue of golden glow railway headlights and projectors, including also a complete line of switches and other headlight accessories necessary for use in connection with railway headlights. The book is printed in two colors, and considerable effort has been expended in reproducing different headlights as they really are. It was found particularly difficult to illustrate with ink, the golden glow reflector, which is of a greenish yellow color. Copies of the catalogue may be had on request to the Electric Service Supplies Co., Philadelphia, or the agents for Canada, Lyman Tube & Supply Co., Ltd., 323 St. James St., Montreal, and 33 Melinda Street, Toronto.

Robert W. Hunt & Co., engineers, bureau of inspection, tests and consultation, Chicago, with which Robert W. Hunt & Co., Ltd., Montreal, is affiliated, has offered the United States Secretary of War the services of its organization on terms that will mean their being rendered at actual cost. The company's organization embraces about 700 people, consisting of experienced civil, mechanical, metallurgical, chemical and mining engineers, supported by a corps of subordinates, most of whom are also men of technical and practical education, and the others selected on account of their practical experience in the several lines of duty to which they are assigned. The company's monthly pay roll is about \$100,000. In the letter making the offer, Robert W. Hunt & Co. say: "In regard to our work for the Canadian Pacific Ry., we can refer you to Lord Shaughnessy, President of that company, who has been and is, as you know, so closely identified with the Canadian purchases of the allied powers. We have been and are now performing inspection work on orders for the British, Russia, Italian, Netherlands and French Governments. These services cover not only munitions, but also railway and other equipment and steel rails and their accessories."

General Railway Signal Co. of Canada, Ltd.—C. O. Poor, formerly Assistant Resident Manager of the Chicago District, and later in charge of the munition plant of the General Railway Signal Co. of Rochester, N.Y., has been appointed President and General Manager of the General Railway Signal Co. of Canada, Ltd., Lachine, Que. After finishing a high school course in Port Chester, N.Y., he was employed for two years in the freight office of the N.Y.N.H. & H.Rd. at Greenwich, Conn. In 1892, he was a clerk in the Hall Signal Co.'s construction department at Chicago, and afterwards served as Superintendent of that company's works at Garwood, N.J., from 1896 to 1905, but spent the summer of 1904 in Europe studying the French, Belgian and English signalling systems. From 1905 to 1912 he was Superintendent of the General Railway Signal Co.'s works at Rochester, N.Y., and in 1912 was appointed Assistant Resident Manager at Chicago, which position he vacated July 1, 1916, to take charge of the company's munition plant at Rochester. V. I. Smart, who has been with the General

Railway Signal Co. of Canada for several years, has been appointed Consulting Engineer for the company at Lachine. The other officials are C. Leluau, Secretary-Treasurer, and H. W. Chamberlain, Assistant Secretary-Treasurer.

THE VICTORIA ROLLING STOCK AND REALTY CO. OF ONTARIO, LTD.

NOTICE is hereby given that a dividend of 4% on the paid-up capital stock of the Company for the six months ended May 31st, 1917, has been declared payable June 1st, 1917, to the shareholders of record as of the 31st of May, 1917.

By order of the Board,
H. F. MARRIOTT, Secretary.
Toronto, May 17th, 1917.

THE TORONTO, HAMILTON & BUFFALO RAILWAY COMPANY.

Notice is hereby given that the Annual General Meeting of the Shareholders of this Company, for the election of a Board of Directors, and for the transaction of such other business as may be brought before the meeting, will be held at the Head Office of the Company, in the City of Hamilton, Province of Ontario, on Tuesday, June 5th, 1917, at 11 o'clock in the forenoon.

DWIGHT W. PARDEE,
Secretary.
Hamilton, Ont., May 5, 1917.

NOTICE.

The General Railway Signal Company of the United States of America, the owner of the exclusive rights to Canadian patents No. 92323, No. 93127, No. 96256, and No. 97758, issued to Young and Townsend, and covering methods of signalling electrified railways, wishes to call the attention of all possible users of the devices and systems covered by such patents to the facts that it is prepared to sell and furnish, at short notice, all such devices and to install such systems upon any railway in the Dominion of Canada.

All inquiries regarding the above should be addressed to The General Railway Signal Company of Canada, Limited, Lachine, Province of Quebec, Canada.

IMPERIAL BANK OF CANADA

Capital Authorized.....\$10,000,000
Capital Paid up..... 7,000,000
Reserve Fund..... 7,000,000

Head Office: Toronto.

Letters of Credit, Travellers' Cheques and Drafts issued, available in all parts of the World.

Sterling and New York Exchange bought and sold.

Savings Department: Interest allowed on deposits at best current rates.

Branches throughout the Dominion of Canada.

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CHICAGO

GRIFFIN & BRINKERHOFF

P.O. Box 97, Windsor, Ont.

Canadian manufacturers of the Celebrated Wheel Truing Brake Shoe. Best Wheel Grinders in the World.

THE CANADIAN PACIFIC RAILWAY COMPANY.

NOTICE.—The Canadian Pacific Railway Company will apply to the Parliament of Canada, at its present session, for an Act empowering the Company to convert into denominations of the currency of the United States of America, any Consolidated Debenture Stock or Preferred Stock heretofore or hereafter issued in denominations of Canadian currency or of sterling money of Great Britain, to issue in denominations of said currencies any Consolidated Debenture Stock or Preferred Stock to be hereafter issued and to convert and re-convert the same from one to another of said denominations.

Dated at Montreal, this 25th day of April, 1917.

ERNEST ALEXANDER,
Secretary.

THE CANADA SOUTHERN RAILWAY COMPANY.

St. Thomas, Ont., May 12, 1917.

The Annual General Meeting of the Shareholders of The Canada Southern Railway Company, for the election of Directors, and for other general purposes, will be held at the Company's Head Office in the City of St. Thomas, Ontario, on Wednesday, the 6th day of June, 1917, at 11 o'clock in the forenoon.

DWIGHT W. PARDEE,
Secretary.

CANADIAN PACIFIC RAILWAY COMPANY.

Dividend Notice.

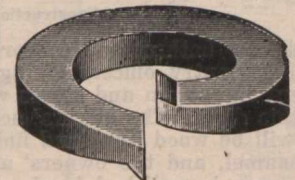
At a meeting of the Board of Directors, held to-day, a dividend of two and one-half per cent. on the Common Stock for the quarter ended 31st March last, being at the rate of seven per cent. per annum from revenue and three per cent. per annum from Special Income Account, was declared payable on 30th June next to Shareholders of record at 3 p.m. on 1st June next.

By order of the Board,
ERNEST ALEXANDER,
Secretary.

Montreal, 2nd May, 1917.

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We also make plain coils and tail nut locks

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F. H. HOPKINS & CO., Agents, Montreal

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