

Answers to Questions on Electric Railway Topics.

Hydro Electric Power Commission of Ontario Legislation.

The following replies have been received to questions asked, regarding electric railway operation, etc., through the American Electric Railway Association's question box.

Grinding Joints.—What is a fair estimate of the cost of grinding joints, on new track and on old track? Give investment in grinding machinery, number of grinders used, men employed per grinder, whether work is done at night or during daytime, and if at night, whether an increase of wages is paid.

W. F. Graves, Chief Engineer, Montreal Tramways Co.—Have not kept the costs of grinding joints on old and new track separate. However have arrived at an average figure of \$1.18 per joint on a total of 2,622 joints. This includes overhead, machinery repairs, depreciations, renewals, interest, insurance and taxes. Investment in grinding machinery, \$4,500; grinders used, two; men per grinder, three; practically all night work except on construction work where track is dead. Two cents an hour extra is paid to ordinary laborers and 5c. an hour to the men in charge of machines.

Repairing Cup Joints.—How are cup joints repaired and what is the approximate cost?

W. F. Graves, Chief Engineer, Montreal Tramways Co. for the past two years we have been making a practice of repairing cupped joints by pouring mild steel which has been melted with a machine similar to the welder put out by the Indianapolis Frog and Switch Co., with considerable success. In fitting 674 joints in this manner during the past three months we used 510 lbs. of this mild steel or approximately 0.76 lb. per joint.

Traffic Counts.—What are the methods used in making traffic counts, what direct and tangible results are secured from such counts, and what determines the frequency with which they are made?

F. L. Hubbard, Assistant to General Manager, Toronto Ry. Co.—We maintain a staff of traffic counters attached to the transportation department, and independent of divisional inspection forces. Our regular counting is done by routes, the men being stationed at the point of maximum traffic and a count taken of passengers in each car passing that point in both directions. The count is forwarded to transportation department and graphically charted. Special counts are made of transfer passengers at intersections and to secure statistics relating to the trend of traffic, running time of cars, cars laying in at the end of the line, etc. The counts enable the management and officials of transportation department to keep in touch with actual traffic conditions, independent of the reports of traffic inspectors. We use the information in a follow up system of the outside supervising forces by daily sending typewritten extracts of special features from such counts to divisional superintendents. Counts are invaluable to transportation department in checking up requisitions for new time tables sent in by divisional superintendents. The charts form a handy record of traffic and service in dealing with complaints from individuals or before traffic commissions. We keep the staff regularly employed on a circuit of the different lines. The special counts are made as required.

Elimination of Time Points.—Have any companies experience with elimination

of time points and what has been the results?

F. L. Hubbard, Assistant to General Manager, Toronto Ry., No, but we have our doubts of the system proving a success. Even if scheduled time points were abolished, it would seem to us that the individual motor man would divide the route into time sections to guide him in arriving at the terminal on time, and if this assumption be correct, it is better to have this division of time uniform and scheduled for all the men rather than that it should be left to the individual. The lack of time points would prove a handicap to inspectors in checking the running time of cars, and in straightening the line after a block.

In accident prevention work, in schools and among the public generally, have better results been obtained by a organization controlled by the railway itself, or by contributing to and working with safety organization outside of the company?

F. L. Hubbard, Assistant to General Manager, Toronto Ry. Co.—We have obtained better results by contributing to and working with an independent public safety league, composed of representatives from the Ontario Railway and Municipal Board, Government Factory Inspection Bureau, City Council, Police Department, Board of Education, Manufacturers' Association, Trades and Labor Council, Motor League and railway companies. The League being a representative public body has a much broader field to work in than it is possible for the company to cover. Its educational work is not confined to street railway accidents, but covers accidents of all kinds and this is carried on with an entire absence of prejudice or anti corporation feeling on the part of the public.

Equipment Maintenance Cost.—What should be the cost of equipment maintenance: 25% city service, average rate of speed 9 miles an hour, and 75% inter-urban service, average rate of speed 22 miles an hour?

G. Gordon Gale, General Manager, Hull Electric Co., Hull, Que.—The cost of equipment maintenance as specified should be 2½c a car mile.

Repairs after Collisions.—In case of collision and wagon accidents, is it, as a general proposition, more expensive to repair a steel car than a wooden one?

M. Power, Master Car Builder, Toronto Ry., Toronto.—The steel car is the more expensive to repair.

Inspection of Freight Trailers.—What is considered the most efficient way of inspecting freight trailer cars on a property operating 30 trail cars, and where they are not available for daily inspection, being distributed over a line of 150 miles?

M. Power, Master Car Builder, Toronto Ry., Toronto.—This is a question hard to answer without a knowledge of the conditions. It may be quite possible that a system of inspection could be arranged at different points of such a system.

Good Intentions.—A contemporary states, "The Montreal & Southern Counties Ry. has been intended as far as Granby, Que." We have heard that the road to a certain place is laid with intentions, but, as far as memory serves, that place is not Granby.

The Canadian Northern Ex. Co. has placed its service in effect between Inwood and Hodgson, Man., 50 miles.

The Ontario Legislature at its recent session passed three acts affecting the water powers of the Province and the Hydro Electric Power Commission of Ontario's powers in respect thereto. The first is an act to regulate the use of provincial waters for power development purposes. It declares that it shall be the duty of the owner of a water power to ensure as far as possible the economical and efficient use of the water by him; and provides for the appointment of an inspector to examine into the manner in which the water power is being developed and used. Upon reports of the inspector, the Government may make order as to the power, and in the event of the owner feeling himself aggrieved, he may be granted compensation. Under this act it would appear that the Government may restrict and limit the development of water powers, and the distribution of electrical energy by private owners or by municipal corporations.

The second act deals with the development of water power in the vicinity of Niagara Falls, and authorizes the Hydro Electric Power Commission of Ontario to divert the Niagara River, Welland River and tributary waters, and convey them by aqueduct or canal or in any other manner from any point on the Welland River, or on the Niagara River above the Cataract and discharge their waters into the Niagara River, for the purpose of the production of electric energy, and for such purpose to use all the powers conferred by the Power Commission Act. The cost of such works is to be defrayed out of funds appropriated for that purpose by the Legislature, and to be designated the Niagara Power Development Works account. Until this power is developed the commission may secure such additional power as is necessary to meet the requirements of the municipalities over and above the 100,000 h.p. required under existing contracts, upon the best terms available, and the additional cost of such power to the municipalities shall be included in the price per horse power payable by municipal corporations under existing contracts.

The third act is an amendment of the Power Commission Act, in which the authority of the commission was specifically set out in regard to certain matters. Bylaws confirming agreements as to power between the commission and a number of municipalities, and other contracts, which are set out in the schedules are ratified and confirmed.

During the discussion upon these bills, it was stated on behalf of the Government that it is not proposed to encourage any expenditure upon radial electric railways under the Hydro Electric Ry. Act of 1914, during the continuance of the war. Preparations for the construction of such railways will, however, be continued.

The Toronto Ry. and Subway Construction.—The Supreme Court of Canada dismissed the Toronto Ry. Co.'s appeal, May 2, against an order of the Board of Railway Commissioners assessing the company with 10% of the cost of building a subway under the C.P.R. at Avenue Road. The chief grounds of the appeal were the question of the Board's power to assess a provincial railway in regard to a subway under a Dominion railway, and also the rights of the company to the use of city streets. The amount to be paid by the company is \$8,000.