

is against taking "the stitch in time," with the readily-appreciated results. For example, a cotter is seen to be out, but is not replaced, possibly because its pin is yet in place. Or, piston travel of $9\frac{3}{4}$ in. is not shortened, maybe because it is not over the government limit. However, with competent men it is believed that the underlying reason will generally be inadequate time.

Freight brake repairing and stencilling. The Northwest Air Brake Club of St. Paul, Minn., has proposed to the Air Brake Association a revision of M.C.B. requirement regarding brake repairing and stencilling, as follows:—It is submitted that the present M.C.B. stencilling for freight brake cleaning, etc., can be simplified, time and money saved, brake maintenance improved and more use got from cars by adopting a rule that when either the triple valve or the brake cylinder must be cleaned, lubricated and tested, all other parts, including the retaining valve and, where had, the dirt collector, be cared for at the same time; also, that any other repairs needed by the brake equipment be made then. Stencilling should then be modified as follows:—Use but two lines; the upper to show the shop or station letters indicating where the work was done, followed by the numerals indicating the month, day and year; the second line to be the initials of the road that did the work. Also, duplicate this on the opposite side of the reservoir or car so that one man inspecting can read all dates without frequently crossing over the train, as is now necessary. The present requirements are to stencil on one side only, and that the shop mark, date and road be repeated each for the "Cylinder," "Triple," and "Dirt Collector," the parts to be lettered as quoted. There is now just enough room to get all of it on the auxiliary reservoir of an 8 in. equipment. The retaining valve is supposed to be cared for at the same time, but there would be no room for a similar stencil for it even were this desirable, as it is not.

The thought back of this separate and complete stencil for each part is that one may require attention, with incident billing if a foreign car, when the others may not. In the rare event of this being so it will be cheaper to care for all then; first, because the broken dates that would otherwise follow would require that the car be switched to the repair tracks twice as often and held from service doubly as long per year to care for the brake cleaning; second, because in the necessarily rapid work of inspection the presence of two or more dates increases errors; and, third, because of the additional expense, if, when a defective brake is found in a train and sent to the repair tracks, a test must be made to positively locate the defect before cleaning and lubricating are begun, as must be if only the then imperative work be done. In that rare case where, for example, a triple valve must be changed (usually cared for in the train) and the other parts may be let go, time and money will be saved if the stencil is not changed and, if a foreign car, no charge is made.

In view of the obvious advantages of the foregoing, and as the cost of switching a car to and from the repair tracks, with the time it must be out of service, means a greater expense than the entire permissible charge for properly caring for all of the details covered by the present stencil, it is hoped that the proposed change in the stencilling rule and in others relating to the work involved will be favorably recommended to the M.C.B. Association and will meet with its consideration.

Incoming Freight Brake Terminal Test.

To all concerned—Enginemen and trainmen of freight trains on arrival at terminals will leave the brakes applied by a 20 lb. service reduction made from 70 lb. Where engineman has made an automatic application for stopping, he will, as soon as stopped, add to it by one farther, continuous reduction sufficient to make a total of 20 lb., and, watching the gauge, insure that this amount is had when the brake valve discharge ceases. On its completion he will give one short whistle blast, as advice to brakeman that he may cut off and to inspectors that inspection may begin. The brakeman will not close angle cocks until this signal is given. When the train must be left on two or more tracks, or when crossings must be cut, those concerned will follow the foregoing plan before cutting off each part. To avoid preventing inspectors from ascertaining the condition of air brakes, switchmen, carmen and others must not discharge any air from the auxiliary reservoirs or brake pipe of cars that have not been inspected. Before discharging any air from those already inspected, an angle cock must be closed between such and any uninspected brakes.

On brakes being applied, as indicated by whistle signal, inspectors will at once, and rapidly, examine for piston travel, brakes failing to apply, any that have leaked off and brake pipe leaks. At this time, make no repairs; merely indicate the defect with chalk. After completing inspection, repair the defects that should be cared for in the yard. For other defects, bad order cars for repair tracks unless impracticable, as may be with perishable or time freight. The air brake and the general inspection must not be made by the same man or men.

Adjust incorrect piston travel (less than 6 in. or over 8 in.) to 7 in., but before marking for apparent short travel, be sure, by trying a brake beam, that the brake has not partially leaked off. When a brake shoe can be moved back easily, as with one's foot, the brake piston has leaked back 1 in. or more. Consider cars over 12 months since brakes were cleaned as having defective brakes. Loads that cannot be held for brake repairs earlier will, where destination is a terminal, be marked on arrival "B. O. when empty," with date, and defect. These will be delivered to repair tracks as soon as practicable after unloading.

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

Quebec & Saguenay Ry. Purchase.

The Minister of Railways informed the House of Commons recently, that an agreement was entered into on July 25, 1916, as authorized under the statutes of 1915, chap. 16, and under the statutes of 1916, chap. 22, for the purchase of the railway lines from Quebec to Nairns Falls, and another line from Lyster to St. Jean des Châllons, Que. The first mentioned lines include a line from and inclusive of its terminals in Quebec, easterly. The lines are fully described in the statutes, and the fixing of the prices to be paid for the same is set out in the statutes of 1916, sec. 2. Up to the time the information was given, no money had been paid by the government on account of the purchase price of these lines.

G. Gordon Gale, M.Sc., M.Can.Soc.C.E., Vice President and General Manager, Hull Electric Co., Hull, Que., writes: "I take a very great interest in Canadian Railway and Marine World, and have obtained considerable valuable information by reading each issue carefully."

Timiskaming and Northern Ontario Railway Report.

The Timiskaming & Northern Ontario Ry.'s report for the year ended Oct. 31, 1917, has been issued by the commission which operates it, and the Nipissing Central Ry.—an electric line—for the Province of Ontario. Following are extracts:

Mileage.	
Main Line, North Bay to Cochrane.....	252.29
Branch lines (three).....	76.21
Nipissing Jet, spur leased to G.T.R.....	2.10
Yards and sidings.....	114.05
Second track	1.70

Total mileage T. & N.O. Ry..... 446.35

Assets.	
Cost of road.....	\$18,297,149.50
Cost of equipment.....	2,563,911.79
Nipissing Central Ry.....	483,123.31
Empire Lumber Co. plant, Latchford	805.00
Working assets	1,129,751.46
Deferred debit items.....	9,595.55

\$22,484,336.61

Liabilities.	
Provincial loan account.....	\$21,593,869.99
Working liabilities	324,358.00
Deferred credit items.....	292,802.98
Balance profit and loss.....	273,305.64

\$22,484,336.61

Earnings and Expenses.	
Revenue from transportation.....	\$2,220,892.22
Revenue other than transportation...	111,013.57

Total operating revenue..... \$2,331,905.79

Maintenance of way structures	\$419,266.84
Maintenance of equipment.....	305,268.86
Traffic expenses	17,676.10
Transportation expenses ..	985,452.19
Miscellaneous operations ..	47,824.69
General expenses	107,255.05
Transportation for investment—cr.	1,465.44

Total operating expenses..... \$1,881,296.29

Net operating revenue.....	\$ 450,609.50
Ore royalties	119,567.04
Rent from joint facilities.....	12,849.94
Rent from lease of road.....	13,624.15
Interest—dr.	5,649.48
Miscellaneous income	9,417.21

Total income

Deductions from income..... 83,726.80

Total earnings

Compared with the year ended Oct. 31, 1916, the total operating revenue increased \$193,783.84; total operating expenses increased \$287,118.83, and net operating revenue decreased \$93,334.99. Income from ore royalties increased \$69,698.42; rent from joint facilities decreased \$5,770.51; rent from lease of road increased \$287.11; interest decreased \$7,385.84, and miscellaneous income increased \$8,387.43. The deductions from income show a decrease of \$16,123.48, and the total earnings decreased \$12,004.90. From the profit and loss \$250,000 was paid to the Treasurer of Ontario, certain adjustments were made, and uncollectable accounts cancelled, and \$273,305.64 was carried forward.

Traffic Statistics.	
Revenue passengers	499,759
Passengers carried one mile.....	28,616,324
Passengers carried one mile per mile or road	87.112
Average distance carried (miles).....	57.26
Average amount received.....	\$1.31
Average receipts per passenger per mile	2.29 cts.
Passenger service train revenue per train mile	\$1.52
Revenue freight carried (tons).....	960,714
Tons carried one mile.....	161,476,728
Carried one mile per mile of road....	491,568
Average distance of haul of one ton (miles)	168.05
Average revenue per ton.....	\$1.52
Average amount received per ton per mile	00.9 cts.
Freight revenue per train mile.....	\$2.56
Freight originating on the line (tons)...	465,350
Received from Canadian lines (tons)...	417,472
Received from U.S. lines (tons).....	77,881
Total (tons)	960,714
Mileage of revenue passenger trains...	436,759
Mileage of revenue mixed trains.....	58,132
Mileage of revenue freight trains.....	512,121
Total revenue train mileage.....	1,006,012