

RAILWAY STATISTICS FOR YEAR ENDED JUNE 30, 1900—Continued.

Name of railway.	Mileage.	Gross earnings.	Net earnings.	Proportion of earnings to working expenses.	Earnings per train mile.	Operating per train mile.
		\$ cts.	\$ cts.	p.c.	Cents.	Cents.
Nova Scotia Steel Co.'s Ry...	12.50	23,410 35	3,458 04	117	146.31	124.70
Orford Mountain	26.50	17,697 83	1,677 26	110	57.68	52.21
Oshawa (E.)	8.02	33,477 14	13,173 24	164	68.84	41.75
Ottawa & Gatineau	56.50	73,199 52	20,092 11	138	124.40	90.28
Ottawa & New York	56.79	63,890 04	3,058 55	95	73.18	76.68
Phillipsburg Jct. & Quarry Co.	7.50	7,279 63	5,447 75	397	433.37	109.04
Pontiac Pacific Junction	70.60	46,105 08	1,797 10	96	94.91	98.67
Port Arthur, Duluth & Western (20)	85.50	14,482 05	3,866 42	79	107.44	136.12
Portage & North-western	29.23	2,084 81	8,379 79	20	26.45	132.79
Qu'Appelle, Long Lake & Saskatchewan	253.96	100,702 68	14,776 56	87	154.07	176.67
Quebec Central (21)	213.50	519,348 59	168,343 20	148	123.16	83.24
Quebec & Lake St. John (22) ..	297.00	339,285 52	95,457 88	139	111.03	79.79
Quebec, Montmorency & Charlevoix	30.00	65,615 23	28,439 65	177	1078.44	61.10
Red Mountain	9.53	89,148 83	55,566 58	206	593.89	223.71
Salisbury & Harvey	45.00	24,533 26	411 00	98	87.09	88.54
Shore Line, New Brunswick...	82.50	31,344 03	4,349 52	88	56.63	64.48
Stanhope, Shefford & Chambly	43.00	70,253 87	14,049 40	125	108.11	86.49
St. Clair Tunnel	2.23	237,040 65	130,579 03	222	280.07	125.78
St. Lawrence & Adirondack (23)	33.00	189,403 74	106,470 05	228	96.42	42.22
Sydney & Louisburg	48.96	548,982 64	282,316 65	206	317.50	154.22
South Shore	54.50	54,528 55	16,351 43	143	82.92	58.06
Témiscouata	113.00	78,238 49	15,958 69	125	91.26	72.64
Tilsonburg, Lake Erie & Pacific	20.00	11,122 30	3,293 30	142	55.61	39.14
Thousand Islands	4.33	23,273 11	9,994 83	175	117.00	66.75
Toronto, Hamilton & Buffalo ..	83.94	391,461 64	140,737 55	156	141.56	90.67
United Counties (24)	83.80	59,783 79	1,572 47	98	53.47	54.88
Victoria & Sydney	16.26	17,920 97	141 87	99	73.93	74.51
Total	17,656.80	70,740,270 45	23,040,471 83			

figures are for 11 months to May 30, 1900, the month of June being included in the C.P.R.

(18) The Massawippi Valley, operated by the Boston & Maine R.R., has running powers on the G.T.R. from Sherbrooke to Lennoxville, 2.95 miles.

(19) The Montreal & Atlantic, formerly the Southeastern, mileage includes the Lake Champlain & St. Lawrence, 60.70 miles. Both are operated by the C.P.R.

(20) The Port Arthur, Duluth & Western Ry. was sold to the Canadian Northern Ry. in May, 1900. The return for portion of year prior to sale not having been received in time, a proportion of traffic returned in 1899 has been inserted for the period prior to sale.

(21) The Quebec Central has running powers on the I.C.R., from Harlaka Jct. to Levis, 5 miles.

(22) The Quebec & Lake St. John mileage includes Q. & L.S.J., 242; Great Northern, St. Tite to St. Boniface, 20; & the Lower Laurentian, Rivière a Pierre to St. Tite, 35. The Great Northern does not appear in the returns, though it did in 1898-99.

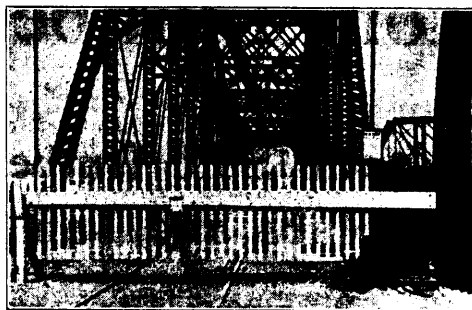
(23) The St. Lawrence & Adirondack Ry. has running powers on the G.T.R., 13.20 miles & on the C.P.R., 8.70 miles.

(24) The United Counties Ry. has running powers on the South Shore Ry., St. Robert to Sorel, 5 miles. Its mileage includes the U.C., 61 miles & the leased East Richelieu Valley, 22.80 miles.

J. F. Dolan, recently transferred to Montreal as City Passenger Agent of the R. & O. Navigation Co., was, on leaving Toronto, presented by the members of branch 15, C.M.B.A., with a mahogany music desk, in token of their appreciation of his services as President of the branch.

Gates for Swing Bridges.

The illustration herewith shows one of a set of gates which have been in operation at the Burlington canal bridge at Hamilton, for three seasons. The gates are operated from the centre of the bridge by the attendant who swings the bridge. The operator has absolute control of the traffic, as each gate, or pair of gates at the ends of the draw, is operated by separate levers. The gates are on the approach to bridge at either



end, and being operated from centre of draw the connection necessarily requires to be broken each time the bridge is swung. This object is obtained by a very simple yet reliable clutch & receiver, which releases the connection by a trip, & allows the rod to be drawn back clear. This operation lowers the gates, & the attendant has a clear bridge with all traffic blocked at either end. The next move is to swing the bridge. An automatic device—consisting of a straight lever, the tail of which is moved aside by closing

the bridge, and is attached to rods and cranks leading to lock which is operated by a very powerful spring, and engages the projecting rod at end of gate the moment bridge starts to open—immediately locks the gates down, & they cannot be raised until the bridge is swung back to its proper position for traffic. This releases the lock and allows operator to raise the gates, which operation locks the bridge, as when the levers are thrown over, the rodding attached is forced into the receiver and clutch at either end, & act as two powerful bolts. The gates, as will be seen, block the entrance to the open draw, so that not even a child can get through. Traffic over the Burlington canal bridge is very heavy, & being at the entrance to Hamilton harbor, on busy days the bridge is swung over one hundred times, which necessitates, of course, the raising & lowering of gates each time. That these gates have stood this test for three seasons speaks well for their utility, as there has not been an accident of any kind. There were erected by the patentees, the N. L. Piper Railway Supply Co. of Toronto, the mechanism being especially constructed for the position by Hiram Piper. Major Gray, in charge of Dominion Public Works in Ontario, endorses the gates very highly.

Hudson's Bay Navigation.

A very interesting addition to the Hudson's Bay Co.'s fleet on the Atlantic & Hudson's Bay service has just been made, the Co. having purchased H.M.S. Pelican from the British Admiralty. The employment of this vessel marks a new departure in ice navigation. It has been customary to speak with a considerable amount of derision of the old type of Hudson's Bay ships. "Bluff-bowed," "old wooden tubs" they have been called, but they did their work well, & the long records of the Co.'s voyages are most remarkably free of wreck or disaster.

Latterly the Co. has had a steamer plying to Hudson's Bay, but of the same heavy wooded-build as the famous Dundee whalers & the vessels chartered for the Dominion expedition of 14 & 16 years ago. The Pelican belongs to quite a different type to the vessels hitherto employed in this service, & it seems very appropriate that a corporation with the long & unequalled experience in the navigation of Hudson's Bay that the H. B. Co. has, should be in the van in introducing to those seas a vessel up-to-date in every respect.

The Pelican is all that an ordinary ocean-going iron-built steamer is, with in addition a sheathing of two thicknesses of solid oak planks of 3 & 3½ ins. respectively, & the space just behind the bows is practically solid wood to buffet the icebergs. She is of 1,130 tons displacement, has screw propeller, & is of a beautiful model.

Doubtless when the whistle blows & this stately ship steams into view at one or other of the lonely ports of call on the desolate shores of Labrador or Hudson's Bay she will be the object of much curiosity to the dusky inhabitants. May she have a long & prosperous career, & as successfully combat the obstacles of free navigation as she would certainly have done the enemies of the empire before the H.M.S. had been replaced by the monogram more familiar in the North, "H. B.C.," cannot but be the wish of all who are watching with interest the readjustment of the Co.'s methods in keeping abreast of the times, under the progressive management of Commissioner Chipman.

H. Foster Chaffee, on leaving Montreal recently for Toronto to become Western Passenger Agent of the R. & O. Navigation Co., was presented with an illuminated address signed by a number of prominent citizens.