

starting effort, and as this locomotive works at relatively lower speeds, it is not subject to wire-drawing to nearly the same extent as the passenger engine. The passenger locomotive has a greater steam lap, which lengthens the period of expansion and also increases the exhaust port opening, as explained before. The freight locomotive has a smaller steam lap, which allows a slightly later cut off in full gear, and though it tends to cut down the period of expansion a little, the ill effect is neutralized by the reduction or total elimination of the exhaust clearance. The passenger locomotive has a greater exhaust clearance, which hastens the release and delays the closure point, but, what is more important, it increases the exhaust port opening the amount necessary to keep the compression below the limit which will give a smooth running locomotive at the high speeds at which it has to work. The freight locomotive has little or no exhaust clearance, which has the effect of delaying the release, which is an advantage. It also has the effect of advancing the closure point and restricting the exhaust port opening, but there are no ill effects to be found from this at the long cut offs and relatively slow speeds at which this engine works. From this comparison we can see that the passenger locomotive setting has been developed to give a smart and free running locomotive at high speeds and short cut offs, while the chief consideration with the freight locomotive setting is to obtain the greatest possible tractive effort at moderate speeds and to run on comparatively long cut offs with the greatest possible economy by delaying the release point as far as possible.

I wish to express my gratitude to W. U. Appleton, Mechanical Superintendent, C.N.R., Moncton, for the help he has given me in getting out this paper, both in the way of suggestions and in affording me opportunities of taking readings from the actual locomotives.

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

Coal Car Shortage in United States—

The Interstate Commerce Commission issued the following circular March 2: The supply of cars available for the transportation of coal is insufficient to meet the demand. Unusual movements, incident upon the strike of coal miners, has brought about an abnormal location of cars. It is desirable that the proper relocation of cars shall be brought about as rapidly and with as little confusion as is possible. Critical situations still exist in which fuel for essential industries and purposes must be provided. The railways and the coal operators have all been working under the uniform mine rating and car distribution rules established by the Railroad Administration, which seem to be generally satisfactory and to meet with general approval. To the end that conflicting and contradictory rules on different roads, and in different fields, may be avoided in the unusual conditions which now exist in the industries and on the roads, the commission recommends that until experiences and careful study demonstrate that other rules will be more effective and beneficial, especially during the remainder of the early spring, the uniform rules as contained in the Railroad Administration's Car Service Section circular CS-31 (revised) be continued in effect.

Passenger fares have been advanced on French railways, 50%, in addition to previous advances.

Birthdays of Transportation Men in March.

Many happy returns of the day to:—

F. G. Adams, Commercial Agent, T.R. R., and Division Freight Agent, Grand Trunk Pacific Ry., Winnipeg, born at St. John's Nfld., April 6, 1878.

S. S. Anderson, General Manager, Sandwich, Windsor and Amherstburg Ry., Windsor, Ont., born there April 14, 1881.

W. H. Ardley, ex Comptroller, G.T.R., and Grand Trunk Pacific Ry., Montreal, born at London, Eng., April 24, 1858.

Jas. Black, Freight Claim Agent, C. P.R., Vancouver, B.C., born near Seaford, Ont., April 19, 1858.

C. G. Bowker, General Superintendent, Ontario Lines, G.T.R., Toronto, born at Medford, N.J., April 21, 1871.

G. C. Briggs, Supervisor of Buildings, Eastern Lines, Canadian National Rys., Toronto, born at Cockermouth, Eng., April 23, 1886.

F. D. Burpee, Superintendent, Ottawa Electric Ry., Ottawa, Ont., born there, Apr. 25, 1876.

G. Cobb, Superintendent, Western Division, Reid Newfoundland Co., Bishop's Falls, Nfld., born at Coupar Angus, Scotland, April 21, 1885.

A. V. Collins, Travelling Auditor, Canada Steamships Lines Ltd., Toronto, born at Island Pond, Vt., April 21, 1868.

R. J. Collins, Chief Dispatcher, Cranbrook Division, British Columbia District, C.P.R., Cranbrook, born at Winnipeg, April 29, 1883.

J. P. Doherty, Port Agent, Canadian Government Merchant Marine Ltd., St. John, N.B., born at Portland, Me., April 8, 1889.

W. A. Duff, Assistant Chief Engineer, Canadian National Rys., Moncton, N.B., born at Hamilton, Ont., April 20, 1877.

A. Gaboury, Superintendent, Montreal Tramways Co., Montreal, and President Canadian Electric Railway Association, born at Montreal, April 6, 1875.

Lieut.-Col. F. A. Gascoigne, D.S.O., Secretary-Treasurer, Canadian Pacific Ocean Services Ltd., Montreal, born at Gosport, Hants, Eng., April 2, 1866.

J. Murray Gibbon, General Publicity Agent, C.P.R., Montreal, born at Ude-wella Ceylon, April 12, 1875.

V. A. Harshaw, Manager, Fredericton & Grand Lake Coal & Ry. Co., and New Brunswick Coal & Ry., Fredericton, N.B., born at Mono, Ont., April 26, 1865.

E. J. Hilliard, Division Freight Agent, G.T.R., Ottawa, Ont., born at Montreal, April 14, 1870.

J. H. Johnston, Superintendent, Bridges and Buildings, Eastern Lines, G.T.R., Montreal, born at Uxbridge, Ont., April 22, 1866.

Capt. A. H. Kendall, M.C., Master Mechanic, Quebec District, C.P.R., Montreal, born at Aspatia, Cumberland, Eng., April 4, 1878.

G. F. Knight, Superintendent, St. Malo shops, Canadian National Rys., Quebec, Que., born at Charlottetown, P. E.I., Apr. 3, 1879.

A. A. Larocque, President, Sincennes-McNaughton Line Ltd., Montreal, and Second Vice President, Dominion Marine Association, born at Henryville, Que., April 30, 1865.

G. W. Lee, Commissioner and acting Chairman, Timiskaming & Northern Ontario Ry., North Bay, Ont., born at Renfrew, Ont., April 15, 1871.

A. MacDonald, Traffic Superintendent, Winnipeg Electric Ry., Winnipeg, born April 7, 1872.

W. E. McGill, Assistant Superintendent, Montreal Terminals Division, Quebec District, C.P.R., Montreal, born at Toronto, April 5, 1884.

J. A. Macgregor, Superintendent, Edmonton Division, Alberta District, C.P.R., Edmonton, born at Dufftown, Scotland, April 5, 1873.

G. P. MacLaren, Engineer, Ontario District, Canadian National Rys., Toronto, born at London, Ont., April 4, 1878.

B. R. Marsales, District Freight Agent, Canadian National Rys., Saskatoon, Sask., born at Guelph, Ont., April 13, 1887.

Paul J. Myler, President, Canadian Westinghouse Co., Ltd., Hamilton, Ont., born at Pittsburg, Pa., April 24, 1869.

J. H. Norton, Assistant General Freight Agent, Eastern Lines, Canadian National Rys., Halifax, N.S., born at Shaftesbury, Eng., April 21, 1884.

T. R. Percy, General Agent, Canadian Pacific Ocean Services Ltd., Yokohama, Japan, born in Ireland, April 21, 1888.

G. D. Perry, General Manager, Great North Western Telegraph Co., Toronto, born at Whitby, Ont., April 19, 1858.

S. J. L. Potter, Local Treasurer, Eastern Lines, Canadian Northern Ry., Toronto, born at Burrington, Devonshire, Eng., April 5, 1887.

R. A. Pyne, Superintendent of Motive Power and Car Department, Eastern Lines, C.P.R., Montreal, born at Toronto, April 10, 1874.

Lieut. R. S. Richardson, Superintendent, Canadian National Rys., Fort William, Ont., born at Napanee, Ont., Apr. 9, 1865.

E. W. Smith, Superintendent, Dining and Parlor Car Service, G.T.R., Toronto, born at North Bridge, Mass., April 21, 1869.

J. A. Sutton, District Fuel Agent, Canadian National Rys., Cochrane, Ont., born at Moncton, N.B., April 12, 1894.

J. J. Sullivan, Roadmaster, C.P.R., Lauder, Man., born at Fishers, N.Y., April 29, 1866.

G. M. Thomas District Freight Agent, Canadian National Rys., Hamilton, Ont., born at Dundas, Ont., April 21, 1876.

W. S. Tilston, Chief of Montreal Board of Trade Transportation Bureau, born at Manchester, Eng., April 14, 1877.

C. H. Towle, Assistant Superintendent, Smiths Falls Division, Quebec District, C.P.R., Smiths Falls, Ont., born at Enfield, Me., April 13 1878.

W. H. Winterrowd, Chief Mechanical Engineer, C.P.R., Montreal, born at Hope, Ind., April 2, 1884.

W. Woollatt, Vice President and General Manager, Essex Terminal Ry., Walkerville, Ont., born at Weedon, Hertfordshire, Eng., April 2, 1855.

H. E. Whittenberger, General Manager, G.T.R. Western Lines, Detroit, Mich., in remitting his yearly subscription, writes: "I consider Canadian Railway and Marine World a very finished periodical, and take a great interest in reading it."

Steel Rail Orders.—The Algoma Steel Corporation, Sault Ste. Marie, Ont., has booked during the past 6 months, orders for nearly 230,000 tons of steel rails, as follows: 140,000 tons, 85 lb., for C.P.R.; 50,000 tons, 85 lb., and 60 lb., for Canadian National Rys.; 35,000 tons, 100 lb., A.R.A. section, type A, for G.T.R., and also a few small lots of 85 lb. sections.