

Railway Freight Statistics.

During the year ended June 30, 1908, the railways of Canada carried 63,071,167 tons of freight, distributed among the various classes of traffic as follows:— Products of mines, 22,636,227 tons; products of forests, 12,912,226 tons; products of agriculture, 9,396,967 tons; manufactures, 6,655,719 tons; products of animals, 2,472,359 tons; merchandise, 2,008,267 tons; miscellaneous consignments, 6,938,135 tons. Of the total tonnage relating to commodities 38,821,418 tons were reported as originating on the line, and 24,198,482 tons as having been received from connecting lines. The railway statistics give full details of the various classes of freight under both headings, and the following table shows the grand totals of the various classes of freight carried, whether originating on the various lines, or received from connecting lines:—

Name of Railway.	Tonnage Originating on Road.	Tonnage received from connecting Roads & other Carriers	Total Freight Tonnage
Alberta Railway and Irrigation Co.....	77,697	18,486	96,183
Algoma Central and Hudson Bay.....	366,810	259	367,069
Atlantic and Lake Superior.....	32,241	.....	32,241
Bay of Quinte.....	268,549	.....	268,549
Bedlington and Nelson.....	1,251	804	2,055
Beersville Coal and Ry. Co. (now North Shore).....	11,082	.....	11,082
Bessemer and Barry's Bay.....	.....	.....	.....
Brandon, Saskatchewan and Hudson Bay.....	29,160	12,223	41,383
British Yukon.....	3,178	28,974	32,152
Brockville, Westport and Northwestern.....	11,086	13,309	24,395
Buctouche and Moncton.....	.....	26,621	26,621
Canada Coals and Railway Company.....	83,698	3,055	86,753
Canada Southern.....	534,638	5,397,709	5,932,347
Can. Gov. Railways.....	.....	.....	.....
Intercolonial.....	3,629,682	378,859	4,008,541
Prince Edward Island.....	90,599	7,991	98,590
Canadian Northern.....	2,615,580	.....	2,615,580
Can. Northern Ontario.....	92,098	.....	92,098
Can. Northern Quebec.....	229,063	228,047	457,110
Canadian Pacific.....	10,736,619	3,495,687	14,232,306
Cape Breton.....	1,695	1,230	2,925
Caraquet.....	6,102	7,276	13,378
Carillon and Grenville.....	78	.....	78
Central Ontario.....	153,806	80,225	234,031
Crow's Nest Southern.....	177,321	51,205	228,526
Cumberland Railway & Coal Co.....	314,954	19,455	334,409
Dominion Atlantic.....	292,998	62,972	355,970
Elgin and Havelock.....	12,600	3,305	15,905
Grand Trunk.....	7,857,014	4,616,209	12,473,223
Grand Trunk (Canada Atlantic).....	664,844	1,413,891	2,078,735
Halifax and Southwest'n.....	149,849	32,212	182,061
Hampton & St. Martins Hereford.....	10,158	1,269	11,427
Inverness Railway and Coal Co.....	180,563	6,130	186,693
Iroindale, Bancroft and Ottawa.....	313,904	8,571	322,475
Kalso and Slocan.....	21,803	3,865	25,668
Kent Northern.....	8,444	839	9,283
Kettle River Valley.....	.....	139	27,550
Kingston and Pembroke.....	27,411	.....	27,550
Klondyke Mines.....	90,284	31,882	122,166
Liverpool and Milton.....	6,502	.....	6,502
Lotbiniere & Megantic.....	.....	.....	.....
London & Port Stanley.....	48,953	1,963	50,916
Manitoulin and North Shore.....	85,419	379,997	465,416
Massachusetts Valley.....	249,963	578	250,541
Midland Railway Co. of Manitoba.....	81,200	432,998	514,198
Montreal and Atlantic.....	18,461	31,709	50,170
Montreal and Province Line.....	133,352	789,542	922,894
Montreal and Vermont Junction.....	14,823	63,845	78,668
Morrissey, Fernie and Michel.....	6,532	740,586	747,118
Maganetawan River.....	560,225	28,228	588,453
Napierville Junction Ry. Nelson and Fort Sheppard.....	2,255	12,429	14,684
New Brunswick Coal and Railway Co.....	30,678	7,846	38,524
New Brunswick & Prince Edward Island.....	52,419	2,441	54,860
New Brunswick South'n.....	32,206	7,656	39,862
New Brunswick South'n.....	26,944	445	27,389

Name of Railway.	Tonnage Originating on Road.	Tonnage received from connecting Roads & other Carriers	Total Freight Tonnage
New Westminster South-ern.....	25,615	61,058	86,673
Nosbonsing & Nipissing Nova Scotia Steel and Coal Co.....	4,990	1,218	6,208
Orford Mountain.....	21,281	6,089	27,370
Ottawa and New York.. Phillipsburg Railway & Quarry Co.....	24,007	71,407	95,414
Princeton Branch of Washington Co. Ry.....	3,604	2,240	5,844
Pere Marquette Rd.....	.....	135,925	135,925
Quebec Central.....	269,585	1,579,691	1,849,276
Quebec & Lake St. John Quebec Ry., Light and Power Co., Montmor-ency Division.....	749,675	84,596	749,675
Quebec, Montreal and Southern.....	260,862	6,210	345,458
Red Mountain.....	104,678	438,701	543,379
Rutland and Noyan.....	35,440	28,776	64,216
Salisbury and Harvey..	86,605	336,180	422,785
Schomberg and Aurora..	34,797	4,453	39,250
Stanstead, Shefford and Chambly.....	3,120	.....	3,120
St. Clair Tunnel.....	12,721	751,803	764,524
St. Lawrence and Ad-irondack.....	.....	.....	.....
Sydney and Louisburg Dominion Coal Co.....	7,838	653,410	661,248
Temiscouata.....	3,447,413	111,979	3,559,392
Temiskaming & North-ern Ontario.....	132,584	15,885	148,469
Thousand Islands.....	273,796	161,134	434,930
Toronto, Hamilton and Buffalo.....	30,171	.....	30,171
Vancouver, Victoria and Eastern.....	126,023	1,055,700	1,181,723
Vancouver, Westminster and Yukon.....	720,200	151,922	872,122
Victoria & Sidney, B. C. Victoria Terminal Rail-way and Ferry Co..	.....	29,724	29,724
Wabash Railroad Com-pany in Canada.....	29,724	.....	29,724
Wellington Colliery Co. Wellington Colliery Co., (Ladysmith Extension).....	1,200,915	3,160	1,204,075
York and Carleton.....	277,350	.....	277,350
York and Carleton.....	483,347	.....	483,347
York and Carleton.....	8,149	2,179	10,328
Total.....	38,821,418	24,198,482	63,019,900

now ready for assembling. Field coils are next put to place and magnet plates bolted home, finished steel bolts and hexagon nuts with spring lockwashers being used exclusively for motor and truck work. The motor frames are now bolted together and a gauge inserted between the pole pieces to prove proper distances. The proper distance between magnets having been secured, the armature is next put to place and armature boxes bolted on. Equal clearance between armatures and magnets is next secured by use of a special gauge. New spring felt feeder wicks are placed in bottom oil pocket of both armature and motor axle bearings, and oil receptacles filled with clean oil. Next a piece of felt is inserted in the grease hole at bottom of grease box touching the shaft, a square oil-soaked pad, half-inch in thickness, is then neatly fitted to the bottom of the box, the balance of space is then filled with hand-picked pure wool waste, the waste having previously soaked in oil 24 hours and dripped for 12 hours. Brush-holder yokes, and brushholders completely assembled, are now bolted to place. These parts do not require any alteration for the reason that they have been built up in a special jig, their correct position and alignment on the commutator being both electrically and mechanically correct. The overhauled motor is now subjected to a running test on the floor for three hours with 40 amperes of current for the purpose of proving the condition of the bearings. While the motor is under test it is painted with a quick drying mineral black paint. The gears, pinions and gear case having been thoroughly cleaned of grease, the motor is now swung to place on the trucks and gears and pinions given an application of special compound, the two or four motors all having come through at the same time the overhaul truck and motor equipment is now ready for service.

Just as soon as car body is placed on trestles, the controller, rheostats, trolley stand and brake cylinder are removed and sent to their respective repair departments; they are at once replaced with new or overhauled material. Cable ducts on car body are opened, cleaned and repainted, renewals being made where necessary. Car body, wood and iron work repaired and painted. Overhauled trucks and motors are now run under, and body put to place, brake and cable connections made, brakes adjusted and car given a severe tryout under service conditions before being passed as o.k. by the inspector.

Armatures are first inspected for bearings and renewals made where necessary, cast steel sleeves lined with babbit being used for bearings. Next, the entire armature is carefully cleaned, commutator turned and polished, string band carefully inspected or renewed, and sent to the testing department. Here the millivolt drop test from bar to bar is used and finally the armature is subjected to a six hundred volt ground test, armature body then shellaced and placed in the o.k. rack. Field coils are then placed in section of motor frame without magnet, and a millivolt reading taken, next a magnet attached to an air cylinder is lowered on field coil and another reading taken while the coil is under pressure. If the coil reads up to the standard and shows no variation under pressure the outside tape is repaired and the coil dipped in air drying compound.

This description practically covers the entire performance of overhauling a car. The following remarks, however, may not be out of place. A great reduction in motor lead trouble has been secured by boring the motor frames on the axle side and bringing the leads out as near the king bolt as possible; this, of course, refers to outside hung motors.

Quebec Transportation Club.—The annual meeting was held at Kent House, June 1, at the conclusion of which, the members were the guests, at dinner, of the Quebec Ry. Light and Power Co., and subsequently conveyed to the city by special cars. The club has accepted the R. and O. Nav. Co.'s invitation for a trip to Murray Bay, July 3, and on July 19 and 27, it will entertain Boston and Chicago railroad men respectively. The officers for the current year are: Hon. President, E. A. Evans, General Manager Q. Ry. L. and P. Co.; Hon. Vice Presidents, W. M. Macpherson, Dominion Line Steamships; E. O. Grundy, Quebec Central Ry.; President, F. S. Stocking, Quebec Central Ry.; Vice Presidents, J. A. Everall, Superintendent Montmorancy Division, Q. Ry., L. and P. Co.; F. M. Spaidal, General Superintendent, C.N.Q.R. and Q. and L. St. J. Ry.; Hon. Secretary-Treasurer, A. H. Davis, C.P.R.

A. M. Nanton, Managing Director, Alberta Ry. and Irrigation Co., on the occasion of a recent visit of inspection, stated at Lethbridge, that the company was endeavoring to settle up the winter wheat land it owned. The company's policy, as it had been for years past, was to fill up its land with settlers.

The Canadian Society of Civil Engineers held its last meeting of the season at Montreal recently, when an address on "Some phases of the construction and design of the Manhattan Suspension Bridge" was delivered by J. C. Ostrup, Professor of Structural Engineering, Stevens Institute of Technology, Hoboken, N.J.