

The conclusion is that forging (under 5 ton hammer) before rolling is of great utility. The rails rolled here now have an average life of five years—a good result considering weight of traffic. The coal consumed amounts to 1 1-5 tons to ton of rails turned out. For fish-plates tough scrap is used; wing rails and crossing points are steel-capped. The experiments with all-steel points (Vickers' cast-steel points and crossings) have not been satisfactory; they wear down altogether faster, the flang of the wheel crushing them. An improved fish plate is being introduced, which conforms to the shape of the rail, and passes underneath. Experiments have been made with a process for carbonizing the whole rail (Bainton's patent)—the rail being placed entire in the furnace, which is then closed for from 36 to 48 hours, according to the hardness required; the mass absorbs carbon from the gasses, on the well-understood cementing process by which blister-steel is made; it is then thoroughly hammered down in the bloom; and is then put into the furnace again and finally re-rolled, and the metal having a consistency under the rolls like that of lead. A few of these after 18 months' wear, remain in remarkably good condition, although manufactured under great disadvantages. The process (on which there is an English patent) is considered a cheap one.

The freight business is in charge of two agents—the principal having charge of the American through business; the assistant devoting himself to local duties and station work. Two through fast freight lines run over the road—the noted "Blue Line," running on the Michigan Central and its connections; and the "Milwaukee Line" doing the through business of the D. & M. road and its connections. The Great Western Company have just built 190 "Blue Line," cars, increasing their stock thereof to 320; and contemplate building 180 more, making a total of 500.

The company has 100 fast freight "Milwaukee Line" cars. The operation of this line is similar to that of the "Blue Line," its interests and management being identical with that of the railway company. At Suspension Bridge and Detroit, all personal through baggage is put into "Vans," and sent through without inspection under the seal of the United States and Canada Customs. Under this arrangement five minutes now suffices for doing what previously consumed half an hour.

The freight earnings for each year since 1860 have been as follows—the half years closing on the 31st July and the 31st of January, respectively:

1860.....	\$1,052,493
1861.....	1,345,425
1862.....	1,654,849
1863.....	1,726,076
1864.....	1,698,653
1865.....	1,594,735
1866.....	1,625,697
1867.....	2,022,915
1868.....	2,148,629
1869 (6 months).....	1,105,868

The total of tons of freight forwarded during three years has been: 1867, 462,158; 1868, 507,194; 1869, 647,817.

The following were the tons forwarded from the principal stations:

	1867.	1868.	1869.
Suspension Bridge.....	103,000	109,551	125,655
Hamilton.....	21,434	23,975	26,134
Toronto.....	13,494	13,742	17,917
Guelph.....	20,413	14,770	9,875
Paris.....	16,045	13,941	14,110
Ingersoll.....	20,379	19,313	19,394
London.....	22,895	21,938	22,182
Petrolia.....	15,278	25,540	23,112
Windsor.....	93,691	153,706	270,702

The total number of barrels of oil shipped from Petrolia Station from January 1, 1867, to November 5, 1869, was 337,244.

The following is a comparative statement of

receipts and expenditure each half year, from the opening of the line Jan. 1, 1854:

Half year ending	Av. No. miles open	Gross receipts	Total expenses	Work done on 'g's.	Eq. p.c.
July 31, 7 mo's, 1854.....	229	\$600,422	\$239,241	44.83	
January 31, 1855.....	241	782,144	409,824	52.39	
July 31, 1855.....	241	998,774	516,442	51.71	
January 31, 1856.....	254	1,327,047	756,500	57.00	
July 31, 1856.....	283	1,423,004	838,980	58.96	
January 31, 1857.....	283	1,575,522	890,466	56.80	
July 31, 1857.....	283	1,296,627	767,878	59.22	
January 31, 1858.....	290	1,246,529	683,422	54.83	
July 31, 1858.....	279	1,039,774	625,693	60.17	
January 31, 1859.....	288	1,029,786	584,628	56.93	
July 31, 1859.....	330	883,184	585,588	66.30	
January 31, 1860.....	330	1,009,848	609,718	60.37	
July 31, 1860.....	339	946,509	556,069	59.75	
January 31, 1861.....	339	1,230,410	599,845	48.02	
July 31, 1861.....	330	1,018,673	630,799	61.92	
January 31, 1862.....	333	1,294,298	610,401	47.10	
July 31, 1862.....	331	1,198,314	628,049	52.41	
January 31, 1863.....	331	1,595,283	662,838	44.03	
July 31, 1863.....	331	1,428,261	663,181	46.50	
January 31, 1864.....	331	1,467,964	661,277	45.05	
July 31, 1864.....	331	1,532,708	682,251	44.51	
January 31, 1865.....	331	1,521,950	668,861	43.95	
July 31, 1865.....	331	1,384,885	644,768	46.56	
January 31, 1866.....	331	1,883,891	715,099	37.97	
July 31, 1866.....	331	1,679,057	731,976	43.83	
January 31, 1867.....	331	1,613,965	810,944	50.26	
July 31, 1867.....	336	1,779,760	880,473	49.90	
January 31, 1868.....	336	1,950,622	942,511	48.34	
July 31, 1868.....	336	1,735,093	1,014,514	58.45	
January 31, 1869.....	336	2,060,117	1,029,795	49.55	

Half year ending	Gross amt net rev'e.	Div. per an.	Tr'n's r'n.	Or'y w'k'g' ex.	Tot. cap' l. expen.
July 31, 7 mo's, '54.....	\$331,181	60c	\$235,193	\$1.12	\$11,628,029
January 31, 1855.....	374,122	6	272,686	*1.08	13,242,861
July 31, 1855.....	482,792	8	413,002	1.14	14,456,894
January 31, 1856.....	579,250	8	519,611	1.20	15,486,276
July 31, 1856.....	715,748	8	603,901	1.28	18,234,054
January 31, 1857.....	807,277	9	617,704	1.24	19,087,761
July 31, 1857.....	547,049	6	397,459	1.21	19,436,634
January 31, 1858.....	836,226	5	597,309	1.09	20,168,948
July 31, 1858.....	458,943	4	533,899	1.10	19,913,246
January 31, 1859.....	400,087	3	518,853	1.06	22,189,342
July 31, 1859.....	313,899	nil.	529,551	1.04	22,212,445
January 31, 1860.....	439,880	nil.	578,812	99	22,269,484
July 31, 1860.....	509,391	nil.	664,769	90	22,395,285
January 31, 1861.....	784,923	2	638,865	87	22,628,82
July 31, 1861.....	464,722	nil.	633,252	94	22,648,677
January 31, 1862.....	773,312	3	700,664	82	22,799,856
July 31, 1862.....	638,603	1	696,818	85	22,838,101
January 31, 1863.....	855,606	2	732,703	86	22,898,575
July 31, 1863.....	779,376	nil.	711,052	88	23,236,714
January 31, 1864.....	845,391	1	678,701	91	23,398,191
July 31, 1864.....	870,554	nil.	742,128	87	23,476,821
January 31, 1865.....	906,433	2	629,116	1.01	23,565,306
July 31, 1865.....	817,731	2	593,624	1.02	23,697,535
January 31, 1866.....	1,184,021	5	712,138	95	23,855,881
July 31, 1866.....	991,615	5	704,951	98	24,126,837
January 31, 1867.....	815,311	3	688,117	1.12	24,767,436
July 31, 1867.....	896,553	4	824,484	1.03	24,773,92
January 31, 1868.....	1,016,294	4	828,476	1.09	24,877,454
July 31, 1868.....	734,442	5	847,279	1.15	24,978,62
January 31, 1869.....	1,044,818	5	937,825	1.04	25,005,434

\*Ordinary working expenses equal to per train mile.

GREAT WESTERN RAILWAY.—Traffic for week ending January 7, 1870.

Passengers.....	23,717	78
Freight and Live Stock.....	38,739	04
Mails and Sundries.....	2,987	17

Total Receipts for week.....	\$65,443	99
Corresponding week, 1868.....	75,831	60

Decrease..... \$10,387 61

MIDLAND RAILWAY OF CANADA.—The annual meeting of the shareholders of this Company took place in Port Hope, on the 17th January, when the following gentlemen were elected office-bearers for the ensuing year:—President, H. Covert, Esq.; Vice-President, Wm. Cluxton, Esq.; Secretary and Treasurer, Joseph Gray, Esq.; Gen. Supt., A. T. H. Williams, Esq.; Engineer, A. T. Stewart, Esq.; Directors:—Hon. Sidney Smith, D. E. Boulton, Esq., and Lewis Moffatt, Esq. The report of the business of the road for the past year, presented by the General Superintendent was received with the utmost satisfaction. The Report shews the Company to be in an exceedingly prosperous condition, and this we believe is, in a great measure due to the energetic management of Mr. Williams, aided by his efficient assistants.

RAILROADS VS. STEAMBOATS.—Mr. Potter, President of the Grand Trunk Railroad Company, estimates the yearly growth of the railroad traffic in Upper Canada at from 10 to 20 per cent., and says there is a tendency throughout our whole system for "the traffic more and more to seek the railroad and leave the water. Passenger boats on the St. Lawrence and the Lakes have ceased to pay, and no more are being built." Mr. Potter says it is no use to compare the Grand Trunk with the leading railroads of England, but that it is in as good condition as the railroads in the Western States, or other lines in Canada, but not equal to the New York Central or Pennsylvania Central. He advises the laying down of 5,000 tons of steel rails in 1870, and 9,000 or 10,000 tons more of iron rails, from the rolling mills of Portland, Detroit and Toronto. He also advises the expenditure of \$1,500,000 the present year on the permanent way. \$100,000 has just been received in Montreal to be expended on freight cars, 800 being in process of construction.

THE NORFOLK RAILWAY.—The Norfolk Railway Company was organized at Simcoe on the 18th, by the election of Mr. H. S. Howland, President; Mr. Noah Barnhart, Vice-President; and Messrs. John Fiskien, John Shedden, and George Laidlaw, Directors. Mr. Thomas Laidlaw was appointed Treasurer; Mr. George Laidlaw, Managing Director; Mr. Adam Crooks, Counsel; Mr. Thomas Moss, Solicitor, and Mr. John Conlin, Secretary of the Company.

Insurance.

FIRE RECORD.—Halifax, Jan. 18.—An obliging correspondent sends us full particulars of all the fires in Halifax and the vicinity, since the commencement of the present year. (Jan. 1.)—A fire caught in a workshop, in the Royal Engineer's yard, and did only trifling damage; cause accidental. (Jan. 7.)—The confectionery store of Mr. O'Brien, on Buckingham street, was damaged to a trifling extent; some window decorations having caught fire. (Jan. 13.)—The Tobacconist's shop of M. Swain, on Water street, was set fire by a lighted match carelessly thrown among the clothing; the damage was only trifling. On the same day, the Conservatory in the Governor, Sir C. H. Doyle's garden, was totally destroyed; no insurance; cause a defective flue. (Jan. 15.)—The building owned by J. Lawlor, on Portland street, Portsmouth, east side of Halifax harbor, and occupied as a drug store, saddler's shop, and lodge room; was totally destroyed. The Masonic body had an insurance on the lodge furniture of \$500 in Liverpool and London and Globe; Mr. A. Corbin, had \$500 on the drug stock, in the same company, and \$1,500 in the Royal; the Lawlor estate had \$400 in the Royal, on the barn adjoining. The cause of the fire is not yet ascertained.

Ingersoll, Ont., Jan. 16.—The barn and sheds belonging to Moses Tripp, bailiff, near Ingersoll, occupied by Peter Stuart, together with about \$600 worth of hay and grain, and a threshing-machine owned by the Messrs. Gamble, were destroyed by fire. The buildings were covered by insurance. Mr. Stuart's stock was insured for \$500. The fire is supposed to be the work of an incendiary.

Peterboro', Jan. 25.—Renfrew's stove factory, with all the machinery and material, was destroyed by fire last Sunday morning, a little before daylight. Loss \$2,000; insured in the Home and Commercial Union for \$1,500. Evidently the work of an incendiary, no fire having been in the building since New Year.

Elora, Jan. 24.—Elora Mills have been burnt. It was noticed first about two o'clock on Sunday morning. The cause of the fire is supposed to be from middlings heating and igniting. The insurance on the mill, machinery and stock is \$16,000; loss about \$5,000.

St. Catharines, Jan. 24.—Another incendiary fire occurred here on Sunday morning, by which