

For Ten Hours' Spiking and Scarifying.

Fuel—		
20 gallons of gasoline at 15c. per gallon	\$3.00	
Water—		
For cooling	0.15	
Oil	0.07	
Engineer—		
10¼ hours at 30c.	3.07	
		\$6.29

Cost of spiking per hour, 62 9/10 cents per hour.

The saving which is shown on the work in favor of gasoline has been in its constant operations. We gain from one to two hours a day of actual operations with our gasoline roller.

When we first purchased these machines we were afraid they would be difficult to start in cold weather, but this has not been the case.

The gasoline road roller has not been in operation long enough in Canada for us to be sure of just what it will do, but the success that has accompanied the gasoline engine in other fields of operations would indicate that it could be successfully operated in connection with road roller work.

GRAND TRUNK PACIFIC CONSTRUCTION.

The work accomplished by the Grand Trunk Pacific Railway for the twelve months ended December 20th is contained in the chief engineer's annual report issued in Winnipeg. It shows that construction has been undertaken on 563 miles of main line, and on 688 miles of branch lines, making a total of 1,251 miles of line on which clearing, grading and track-laying have been done. Track has been laid on 128 miles of main line, and on 331 miles of branch lines, making a total of 459 miles of railway completed exclusive of second tracks and sidings.

On the section known as "main line Winnipeg west," grade is now completed to mile 1,124, Rau Shuswap crossing, and track should be laid to that point before the close of the year. The line is in operation from Winnipeg to Tete Jaune Cache, mile 1,095. From the Rau Shuswap crossing at mile 1,124, westerly to mile 1,403 (Endako river crossing), the right of way is being cleared and at those points where clearing has been completed, active grading operations are under way. For instance, the grade from Rau Shuswap crossing to the second crossing of the Fraser river at mile 1,190, should permit of track laying in the space of a month or two.

From Prince Rupert easterly the track is laid to mile 189, being held up at that point, owing to the erection of steel bridges. Eighty-nine miles of this track were laid during 1912, and the line is in operation to Hazelton. From mile 189 to the Endako river crossing (mile 341 Prince Rupert, or mile 1,403 Winnipeg), active grading operations are in progress.

Harte to Brandon—Grading is under way on this branch and although 10.8 miles are ready for track no steel has yet been laid. The total length of this branch is 25 miles. Regina to international boundary, only the last 19 miles of this line require to be graded. The track is laid for 106 miles, and was all put down this season.

Prince Albert Branch—This line extends from Young on the main line, and is in operation from that point to Wakaw, a distance of 67 miles. No track was laid in 1912. A large steel bridge has yet to be erected over the South Saskatchewan river, but with the exception of the entrance into Prince Albert the grade is practically completed.

Tofield to Calgary—This line is 202 miles long. A few steel bridges have yet to be erected but grading is almost completed. During 1912 steel was laid from mile 07 to mile 165.3, and the

track will be continued to Calgary in the early spring of 1913. The line is in operation to mile 62.

Other branch lines reported upon are the Talmage-Weyburn line, 15 miles in length, of which 39 per cent. of the grade is completed; and the Regina-Moose Jaw connection, of 49 miles, which is now completed, and its terminals at Moose Jaw in course of construction. Grading is completed on Moose Jaw-Northwest branch, but no steel has been laid. All the track on the Oban-Battleford branch was laid during 1912, and the line, 48.5 miles in length, is now completed. The Cut Knife branch from Battleford westerly toward Wainwright is finished, so far as grading is concerned, and four miles of track are laid. Steel will be laid throughout its length in the early spring of 1913. A branch line is surveyed from Biggar to Calgary, and it is stated by the chief engineer that for the present time this line is only being constructed as far as the Saskatchewan-Alberta boundary, a distance of 104 miles from Biggar. Grading on this portion was completed in 1912, and steel is laid to mile 37. The Alberta coal branch, which extends 56 miles southerly from Bickerdike on the main line, is graded for the whole of its present length.

PERSONAL.

FRANK BARBER, consulting engineer, Toronto, has quite recovered from his recent illness, and is able to look after all his work.

O. H. HOOVER, B.A.Sc., is at present located at Moose Jaw, Sask. He has taken charge of the hydrographic work in the Moose Jaw district for the present winter.

W. K. TASKER, formerly superintendent of the Pere Marquette R.R., at Saginaw, Mich., has been made superintendent of the Canadian division with headquarters at St. Thomas, Ont.

F. A. CREIGHTON, who has been city engineer of Prince Albert, Sask., since July, 1907, tendered his resignation at the final meeting of the city council. It is probable that he will locate in private practice in Winnipeg.

PHILIP P. SHARPLES, chief chemist, Barrett Manufacturing Company, Boston, on December 30th delivered an illustrated lecture on the "Manufacture of Refined Coal Tar," before the graduate students in Highway Engineering at Columbia University.

N. H. MANNING, a graduate of the Faculty of Applied Science and Engineering, of the University of Toronto of the class of '09, is the Toronto district representative of the Canadian Inspection and Testing Laboratories, Limited, 25-27 Manning Arcade Annex.

J. W. EBER has been appointed to the position of general manager of the Toronto, Hamilton and Buffalo Railway Company. Mr. Eber was formerly general superintendent for the same company; that position is now abolished. His headquarters will be Hamilton, Ont.

JAMES B. GOODWIN, recently superintendent of construction and assistant general manager of the Mount Hood Railway and Power Company, Portland, Ore., has been appointed construction engineer for the city of Edmonton, Alberta. Edmonton proposes to do a large amount of new work in the coming year.

LIEUT.-COL. WILLIAM PATRICK ANDERSON, of the Dominion Department of Marine and Fisheries, who has just been honored by King George with a C.M.G., was born at Levis, Quebec, in 1851. He was one of the charter mem-