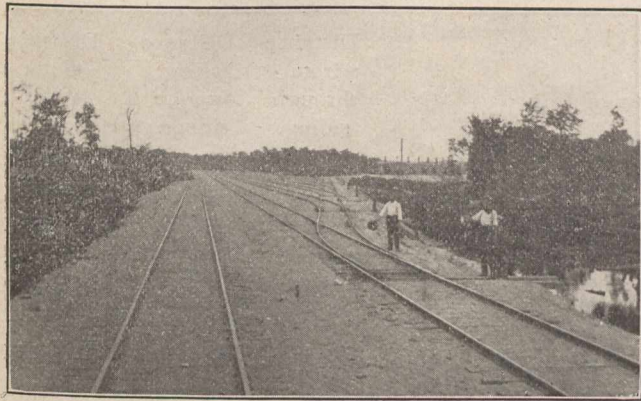


THE LAYING OUT OF THE TRACK IN THE MUSKOKA DIVISIONAL YARD.

C. D. Norton.

For many years the Canadian Pacific Railway did not have direct connection between Toronto and the district Toronto represented and Western Canada. It is true they had a traffic agreement with the Grand Trunk Railway by which they used the Northern Division of the Grand Trunk



Muskoka Yards, Looking North.

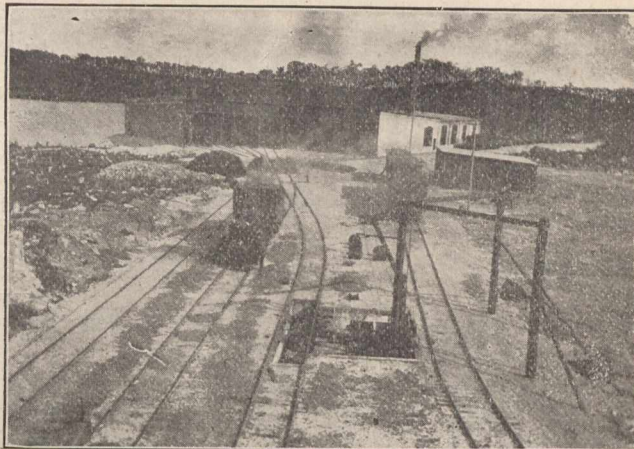
to North Bay, but in 1902 the C.P.R. decided to build a line connecting Toronto directly with the West, which, when built, became known as the Toronto-Sudbury branch of the C.P.R.

This article deals with the laying out of Muskoka, the only division point on the line.

Nothing new or of any scientific importance will be found in the following article, but it may be helpful to those who have not had much experience with trackwork, especially if they are required to produce results in a hurry.

is in practical work all settled beforehand, and governed by standard rules. It need only be taken into consideration in special cases, as when one switch follows too closely upon another or when a turnout is on a curve. When once a starting-point is established it will be found better to ignore centres and use the gauge line of the rail, and set all stakes to it, which will bring results ready for the foreman.

When possible it is advisable to reference points so that



Ash Pit, Oil House and Round House, Muskoka.

if necessary they can be picked up with a tape, either by the engineer or the foreman. The latter should be watched, though; the average is far from accurate.

In the yard under consideration a large part of the sub-grade was built by train-fill, and the above method was found very useful, every second or third frog being, of course, checked with a transit.

Before any frogs are set it is advisable to check the angles, as sometimes a No. 7 proves to have a $6\frac{3}{4}$ or $7\frac{1}{4}$ spread, and any found to be wrong should be put in where

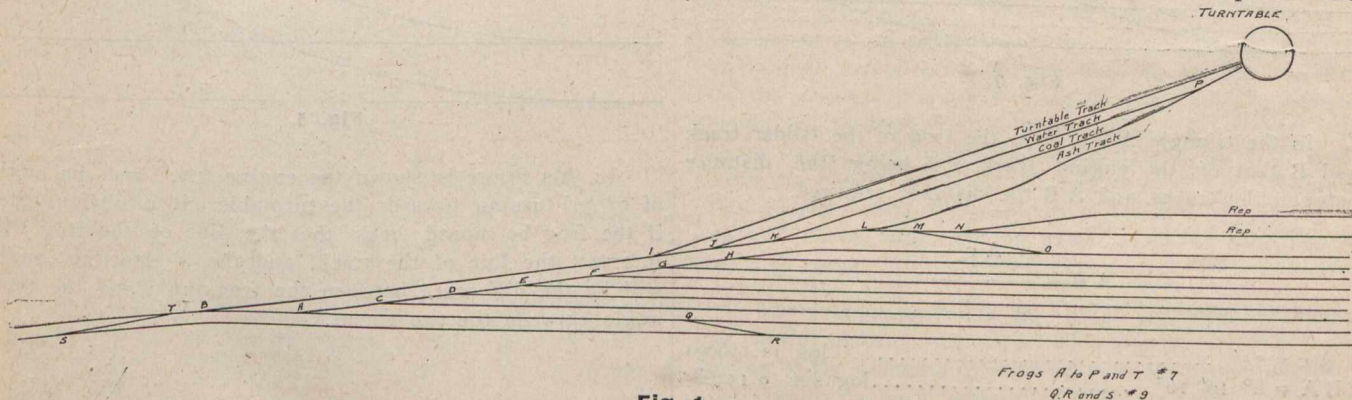


Fig. 1.

The writer was provided with a plan of the proposed yard, shown in sketch (Fig. 1); this was drawn to a scale of 50 feet to an inch, and it gave only the distances between tracks, and the chainage of the P.I. of the ladder track and the through siding. Quite contrary to the usual procedure of railway construction, the plan arrived some time before the work was required to be laid out, thus allowing ample time for experiment; but it would be only fair to mention that the time-honored custom was not forgotten, and, at a later date, the location of one of the tracks was altered, necessitating the relocation of the adjoining switches.

The layout of a series of switches seems very simple on paper, but the stakes on the ground are puzzling enough to the man who set them there, and to the foreman they are meaningless until he is shown exactly how the switches are to run. Care should be taken to leave in only such stakes as the foreman can conveniently work from; practically all that he needs is a stake set at the actual point of frog and an occasional centre. If too many are put in he will most certainly mistake them and evolve some very peculiar and expensive results. All details regarding the lining of the lead-out curve and other minor details are best left to the foreman, as that is his business. The length of the lead, although dealt with very thoroughly in text books,

it will not be in conjunction with another frog. They should never be used on ladder tracks, but can sometimes be put in a cross-over if due allowance is made.

After a careful perusal of the plan, a thorough search was made through the available text and note books, and it was found that these gave only the theory, with little or nothing of practical work, especially regarding split switches. Those books published for the guidance of trackmen were certainly more useful, but, of course, instrument work is not touched upon in them.

The following are the principal problems involved and their respective solutions:—

The P.I. of the ladder track and the through siding was established according to the chainage, and the point of frog was found as shown by the following sketch:—

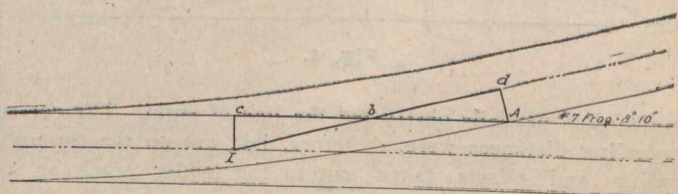


Fig. 2.