

bolts. In casting, the concrete was well tamped into the corners and along the sides to insure absence of voids. The block was allowed to stand two weeks.

To put the block into position the engine was moved forward far enough for the fly-wheel to clear the end of the foundation and then off to one side. After the damaged portion of the foundation had been torn off and the newly exposed surface cleaned, the concrete block was rolled forward, let down over the anchor bolts and grouted into position. After this had set the engine was replaced. Enough of the old foundation was taken off so that there was fully an inch of clear space between the bottom of the engine bed and the top of the concrete block when the nuts on the anchor bolts had been screwed down the length of their own depth.

The cores in the concrete block were large enough to allow lateral motion for bringing the engine into alignment with the dynamo, and that was done by moving the engine so that the edges of the driving wheels and the driver pulley were all in the same straight line. The engine is supported on iron wedges and by shifting these wedges the engine was perfectly levelled both in direction of cylinder and crank-shaft. A form was then built around the founda-

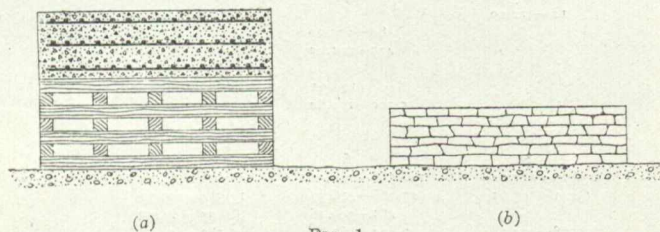


FIG. 1

tion, the top being level and projecting an inch above it. The engine bed was then firmly grouted in by first filling the core boxes and then bringing the entire surface to the level of the top of the forms. The iron wedges were not removed but remain permanently. The spaces surrounding the bolts in the bedplate openings were filled with molten sulphur.

The mine was closed on Wednesday at 3 p.m. and the work of moving the engine off the foundation began, and at 12 p.m. the concrete block was rolled into place, grouted in and allowed to stand twenty-four hours. This was considered long enough for the grout to have gotten sufficiently hard to permit putting the engine back into position. The engine was moved into position on the block in four hours, grouted in and allowed to stand until Saturday noon, when a trial run was made. No apparent movement could be detected in the foundation. On Monday morning work began as usual and the block method of renewing this foundation was a success.

The calculated weight of this block was $7\frac{1}{2}$ tons and the estimated cost of this renewal was as follows:—

| | |
|--|---------|
| Concrete 6.5 cubic yards at \$8..... | \$52.00 |
| Forms (lumber and carpenter)..... | 4.50 |
| Blacksmith on reinforcements..... | 3.00 |
| Raising engine off foundation, tearing out old foundation and setting block and engine | 12.00 |
| | <hr/> |
| | \$71.50 |

The Soo Corporation's output of rails for the year compares as follows:—

| | 1907-8—Tons. | 1908-9—Tons. |
|--------------------------|--------------|--------------|
| Pig iron | 135,852 | 130,268 |
| Rails (Bessemer) | 117,697 | 126,733 |
| Rails (open hearth) | 25,321 | 31,732 |

ORDERS OF THE RAILWAY COMMISSIONERS OF CANADA.

Copies of these orders may be secured from the Canadian Engineer for a small fee.

8146—September 22—Recommending to the Governor-in-Council for sanction agreement between the Canadian Collieries, Ltd., and the United Coal Fields of British Columbia, re sale and transfer of the franchise, rights, powers, railway and undertakings.

8147—September 22—Approving location plan of the C.P.R. Company's station at Mowbray, Man.

8148—September 22—Authorizing the C.P.R. to open for the carriage of traffic portion of line from Bolton to Bolton Junction, Ont.

8149—September 21—Directing the C.N.R. to provide and construct certain highways in the City of Fort William, Ont.

8150—September 22—Authorizing the Municipal Electric Light System of Listowel, Ont., to cross with its wires the track of the G.T.R. at that town.

8151—September 22—Authorizing the C.P.R. to construct, maintain, and operate spur in the Parish of Kildonan, Man.

8152—September 22—Authorizing the C.P.R. to construct industrial spur for the Empire Elevator Company at Fort William, Ont.

8153—September 22—Approving plan of proposed new iron bridge to be constructed by G.T.R. to replace present bridge at M.P. 121.22 near Ailsa Craig, Ont.

8154—September 22—Authorizing the C.P.R. to construct spur for J. Brodie & Son, mileage 3.79 from Stayner-ville Junction, P.Q.

8155—September 22—Granting leave to the Listowel Municipal Electric Light System to place its wires across the track of the G.T.R. Company, where the same crosses Mill Street, Listowel, Ont.

8156—September 22—Granting leave to the Listowel Municipal Electric System to place its wires across the track of the G.T.R. at Mill Street in said town.

8157—September 23—Granting leave to the Walford Rural Telephone Company to place its wires across the track of the C.P.R. at Irish Creek, Ont.

8158—September 23—Granting leave to the Bell Telephone Company to place its wires across the track of the N.C.R.R. near Bridgeburg, Ont.

8159—September 21—Dismissing application of the C.P.R. for leave to cross with its tracks the track of the G.T.R. in the town of Ingersoll, Ont.

8160—September 22—Dismissing application of the C.P.R. to cross with its track the track of the G.T.R., County of Oxford, at mileage 5.03, Ont.

8161—September 24—Approving location and detail plans of the C.P.R. Company's station at Belle Plain, Sask.

8162—September 24—Authorizing the G.T.R. to operate branch line in the City of Brantford, Ont., to the premises of Schultz Bros., Ltd.

8163—September 24—Authorizing the C.P.R. to operate branch, or industrial spur, for the Redcliffe Realty Company, Limited, Redcliffe, Alta.

8164—September 24—Approving and sanctioning location of the G.T.P. Company, Prince Rupert easterly, between mileage 150 and 180.74, Coast District, B.C.

8165—September 23—Granting leave to the Bell Telephone Company to cross the track of the G.T.R. at Howick
(Continued on Page 440.)