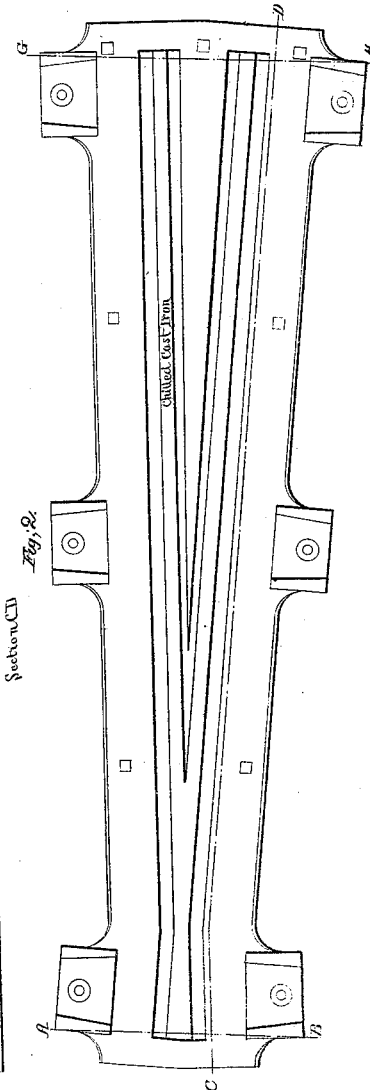
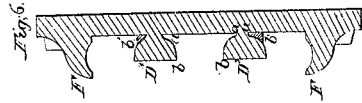
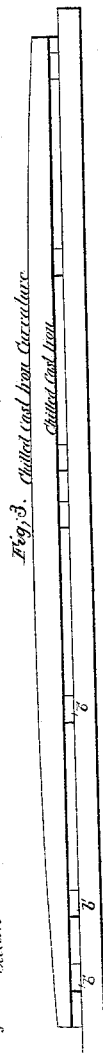
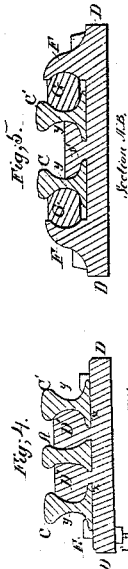
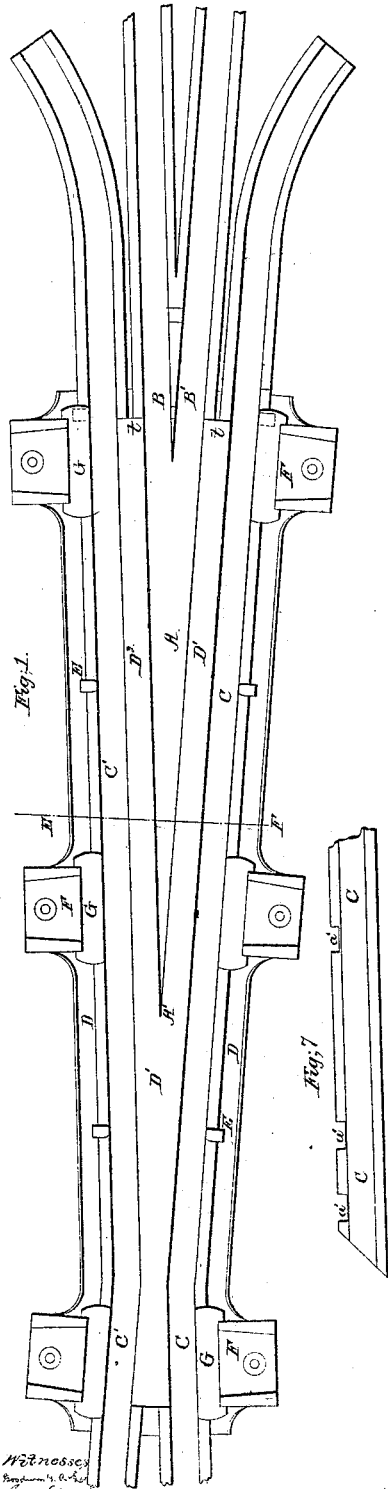


J. M. RABB.
RAILROAD FROG.

No. 30,155.

Patented Sept. 25, 1860.



Inventor;
James M. Felt.
by Messrs.
S. H. Munnings

UNITED STATES PATENT OFFICE.

JAMES M. RABB, OF CHARLESTON, SOUTH CAROLINA.

RAILROAD-FROG.

Specification of Letters Patent No. 30,155, dated September 25, 1860.

To all whom it may concern:

Be it known that I, JAMES M. RABB, of the city and county of Charleston and State of South Carolina, have invented a new and useful Improvement in Railroad-Frogs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, represents a plan of the railroad frog; Fig. 2, a similar plan with the rails removed; Fig. 3, a longitudinal side view of the frog plate with its rails removed; Fig. 4, a section on line E, F, of Fig. 1; Fig. 5, a section on line A, B, of Fig. 2; Fig. 6, a section on line G, H, of Fig. 2, and Fig. 7, a top view of a rail, C, detached.

Similar letters of reference, in each of the several figures, indicate corresponding parts.

To enable others, skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

The bottom-plate D, of the frog is provided with a central longitudinal ridge D', which branches out into two arms D², D², at the point A', of the frog. The body of this ridge is narrow at the bottom and wide on top as seen in Fig. 6, at *a, a*, and *b, b*, respectively. The bottom flanges *w*, of the rails are intended to fit underneath the wide top of the ridge, as seen in the various sections.

To prevent the rails C, C', from giving way in a longitudinal direction, the narrow bottom part or rib of the ridge is provided with little square projections *b'*, *b'*, which fit into corresponding square recesses *a'*, *a'*, in the bottom flanges of the rail.

Wedges G, driven in between the ribs Y, of the rails C, C', and brackets F, projecting from the frog plate D, prevent the rails from yielding sidewise. Both sides of each wedge G, are rounded so as to fit the concave curve of the rail rib on one side and the similar cavity of the bracket on the other side. The wedges thus constructed cannot yield upward. Besides this, the rails C, C', are secured to the frog plate by clamps E, the

upper ends of each of these clamps being hooked so as to overlap the rail flange, while its screw threaded shank passes through a hole in the frog plate and is fastened against the under-surface of the plate D, by a nut *r*.

The outside flanges *t, t*, of the point A, A', of the central rails B, B', of the frog fit underneath the broad tops of the branches D², D², of the ridge in a manner similar to the rails C, C'.

Thus it will be seen, the various parts of the frog are firmly secured together, and yet the rails can be easily removed and replaced by new ones whenever necessary.

The curvature of the ridge D', D², D², is such that the ridge is lowest at the ends, while it is highest at the point A', where the wheels pass from the rails C, onto B, or from C', onto B'. By this means the wheel treads are made to turn clear above the top of the rails and the flanges to run on the ridge surface, while passing the point A'. The curvature of the ridge is gradual, so that the wheel treads may gradually rise above the rail top before they arrive at the point A', and gradually descend and again run onto the rail top after they have passed the point A'.

The sudden jolt which is unavoidable with other frogs at the point where the wheel passes from one rail onto another and the consequent rapid wear of the point A', is avoided.

The surface of the ridge D', D², D², being of chilled cast iron will stand very long before being worn out.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the rails C, C', B, B', and the curved-chilled ridge D', D², D², when the chilled curved ridge has projections *b'*, *b'*, formed on it, and the bottom flanges of the rails has recesses *a'*, *a'*, cut in them, substantially as and for the purposes herein described.

J. M. RABB.

Witnesses:

F. I. PORCHER,
LOUIS DE SAMPIERE.