(No Model.)

J. REED.

FROG OR BLOCK FOR RAILWAY CROSSINGS.

No. 254,693 Patented Mar. 7, 1882.

Fig. 1.

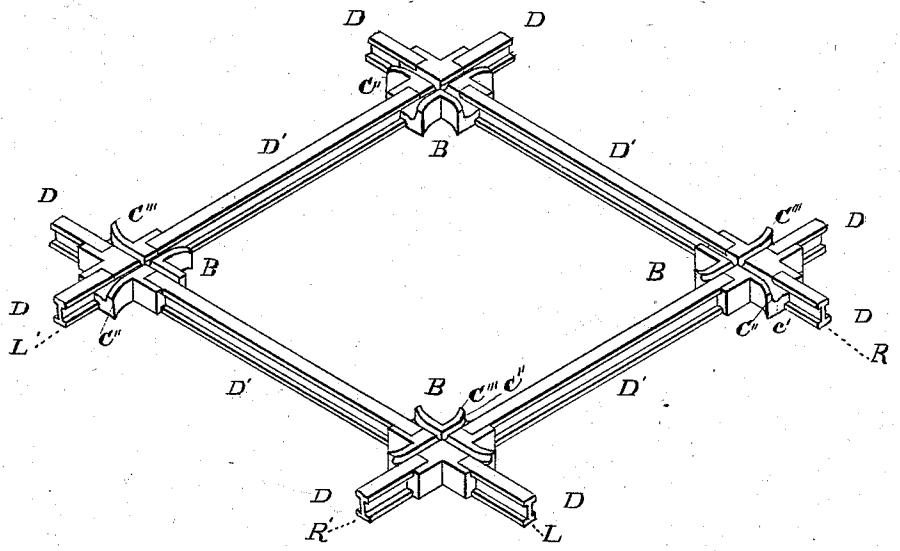


Fig. 3.

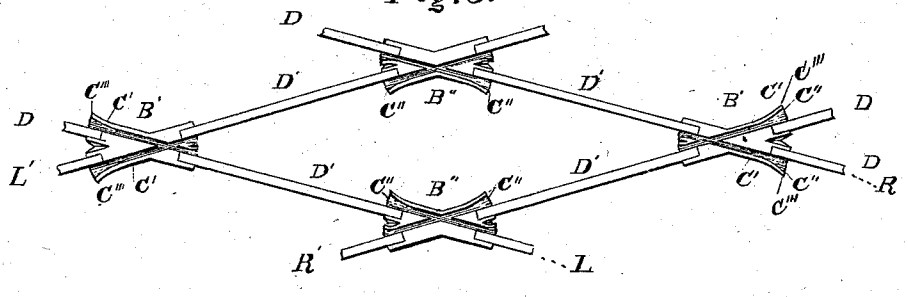


Fig. 2.

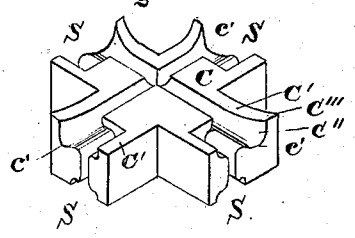


Fig. 5.

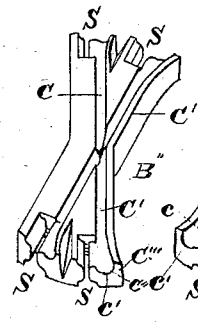
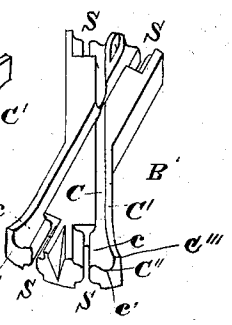


Fig. 4.



Attest:
Percy Knight
L. M. Hopkins.

Inventor:
James Reed.
Per Knight Bros.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES REED, OF COCHRAN, INDIANA.

FROG OR BLOCK FOR RAILWAY-CROSSINGS.

SPECIFICATION forming part of Letters Patent No. 254,693, dated March 7, 1882.

Application filed September 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES REED, of Cochran, Dearborn county, Indiana, have invented a new and useful Frog or Block for Railway Intersections, of which the following is a specification.

The frog or block is made to correspond in vertical thickness with the height of the rail, and has sockets which exactly fit and retain the ends of the rail-sections. Grooves or channels are provided in its crown for the passage of the wheel-flanges. Short rail-sections are used to make connection between the blocks. The soles of the blocks, being flush with those of the rails, may be supported with them on the customary ties or sleepers.

In the accompanying drawings, Figure 1 is a perspective view, representing the form of block employed by me for the comparatively unusual case of two tracks crossing one another at right angles. In such case all of the four blocks used are of identical shape and dimensions, and may be cast from the same pattern. One of such blocks is represented to a larger scale in Fig. 2. For intersections of all other angles—such as, for example, that represented by plan view in Fig. 3—two diverse forms of blocks are required, one form for the acute and the other form for the obtuse angles of the rhomb inclosed by the two intersecting tracks. These forms are shown on a larger scale in Figs. 4 and 5, respectively. These blocks are formed the exact height of the rails, and are coupled to each other by short section-rails on their neighboring sides, and to the track or continuous rails on their remote sides, as follows: R L and R′ L′ represent respectively two intersecting tracks, of which R and L are respectively the right and the left rails of one track, and R′ and L′ the right and the left rails of the track. Intersecting channels C extend the length of the blocks. The floors *c* of these channels are at such elevation as to support the wheel-flanges, and their outer walls, C′, diverge at their extremities to constitute guide-flanges C‴ and flaring entrances C″. The said floors descend somewhat toward the outer end to form vertically-flaring entrances *c*′. This arrangement serves to guide the approaching wheel and support it over the block without destructive jar or concussion. It will be seen that viewed in direction of either diagonal of the quadrangular inclosure formed by the intersecting tracks, the relative positions of the channels C are on that side of the rails nearest the center of the quadrangle. As above stated, this, in case of a rectangular crossing, calls for the use of an identically similar block, B, at each corner, in which the like parts or angles of the block are directed toward the interior of the quadrangle, as clearly shown in Fig. 1; but in the far more common form of oblique crossings two somewhat different forms, B′ and B″, are required for the acute and the obtuse angles or corners of the quadrangle. In this case, however, the assertion still holds good that the similar corners of each block of either given pair are presented toward the interior of the quadrangle. Whether for rectangular or oblique crossings, each block has four similar sockets, S, whose transverse section is the precise counterpart of that of a rail, in order that it may be possible to tightly jam the rails D and the short sections D′ endwise therein and hold the same firmly in place without other fastening than the customary chair and spike connections of the rails and sections to the ties or sleepers.

The angles at which the sockets of any group of blocks are placed of course are made by the pattern maker to agree accurately with the angle of each crossing, or at least with all crossings of the same angle. The blocks are preferably of cast-steel, cast in molds prepared from suitable cored patterns.

I claim as new and of my invention—

A railway frog or block the same height and flush with the rails to be connected, formed with sockets S, fitting the vertical sides, and adapted to receive the ends of the rails which rest on the sleepers, and having grooves or channels C, extending the whole length of the block and terminating in downwardly and laterally flaring openings or entrances C″ and *c*′, as set forth.

In testimony of which invention I hereunto set my hand.

JAMES REED.

Attest:
GEO. H. KNIGHT,
A. C. SHATTUCK.