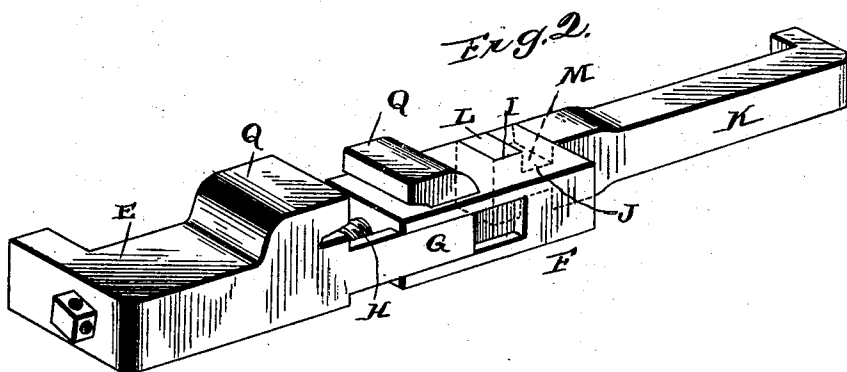
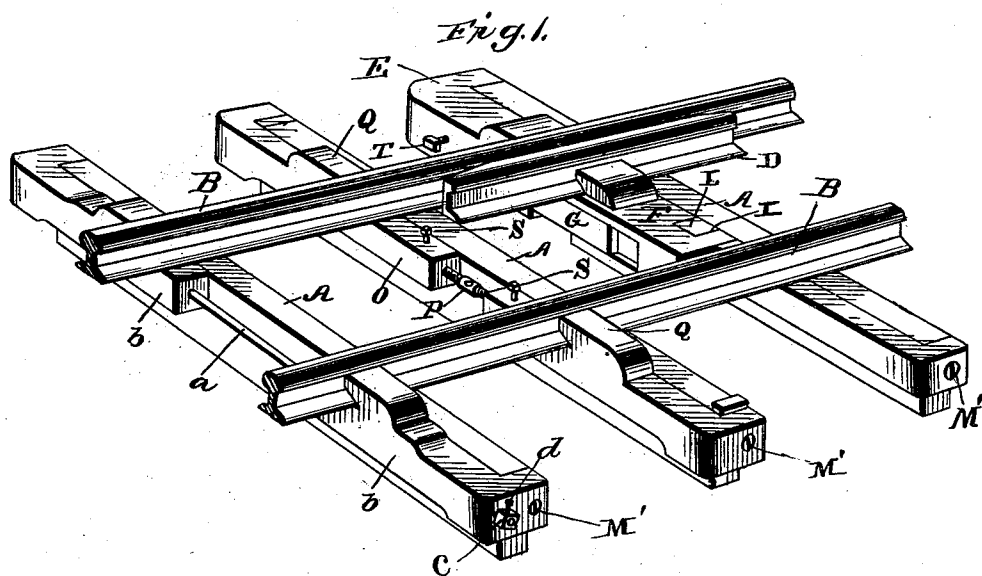


(No Model.)

D. MARKLEY.
RAILROAD RAIL BRACE.

No. 508,575.

Patented Nov. 14, 1893.



WITNESSES.
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UNITED STATES PATENT OFFICE.

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RAILROAD-RAIL BRACE.

SPECIFICATION forming part of Letters Patent No. 508,575, dated November 14, 1893.

Application filed July 21, 1893. Serial No. 481,148. (No model.)

To all whom it may concern:

Be it known that I, DAVID MARKLEY, of Lexington, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Railroad-Rail Braces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in railroad rail braces; and it consists in the construction and arrangement of parts as will be fully described hereinafter and especially pointed out in the claims.

The primary object of my invention is to provide a brace which has its ends engage the ends of the cross ties, and provided with upwardly extending projections which rest against the sides of the rails of the track to prevent them from being laterally displaced by the side pressure of the flanges of the wheels.

Another object of my invention is to so construct the braces, that while they prevent lateral displacement of the main rails of the track, they at the same time serve as a brace for the guard rail used in connection with frogs at switches.

In the accompanying drawings: Figure 1, is a perspective view of my invention showing the several modifications for accomplishing substantially the same result. Fig. 2, is a detached view of the brace which is constructed to have one part slide upon the other and to brace the guard rail as well as the main rail.

A represents the cross ties of the road, and B the main rails thereof. These cross ties may be the ordinary ties when the braces are applied to the track upon the ground, or they may be the cross ties of a bridge, to which this invention is especially applicable.

The brace for holding the guard rail D, as well as the main track rails B, consists of the two parts E and F, one sliding upon the other as clearly shown by having interlocking portions G, and each provided with upwardly extending projections Q cut away at their inner

edges to fit the flanges of the main rail and of the guard rail. Passing through these two parts E and F longitudinally is a screw rod H, which has its outer end provided with a nut for turning the same. This screw rod turns loosely in the outer section E, and passes into a screw threaded socket in the inner portion F, whereby when the said rod H is turned the two parts are drawn together and the projections on the upper faces thereof caused to clamp the guard rail and the main rail as will be readily understood. The inner end of the inner portion F of the brace is provided with a vertical slot I and with a longitudinal slot J. A portion K has its inner end provided with a head L fitting in the said vertical slot and with the longitudinally reduced portion M which fits in the said longitudinal slot. The outer end of this portion is turned laterally to engage the cross tie as shown, and also the outer end of the outer portion E of the brace is turned laterally for the same purpose. Set screws M pass through these laterally turned ends and engage the ends of the cross ties for the purpose of holding the brace up into position, as will be clearly understood.

The central brace is composed of the tube portions O which have their outer ends turned laterally for engaging the ends of the tie and their inner ends extending under the main rail of the track and provided with longitudinally screw threaded sockets into which the ends of the right and left screw threaded rod P, extend. Extending upward from the base of these portions O, are the projections Q which are cut away at their inner edges to fit the flanges of the rail and their inner upper edges to rest against the outer face of the web of the rail, as shown. By turning the screw rod these portions are drawn together as will be readily understood and caused to clamp against the edges of the tie, while at the same time these projections engage the outer faces of the rail and prevent any lateral displacement thereof, thus forming a very effectual brace. Passing into the screw threaded sockets of these two portions O are the set screws S which engage the screw threaded rod for the purpose of preventing it from becoming loose and the tube portion of the brace separated, as they might otherwise do. So also a set

screw T, extends into the outer portion E of the first described brace for the purpose of engaging the screw threaded rod and holding it against turning, after the brace has been
5 adjusted to position, as will be readily understood.

The outer brace, which is also a modification, is similar to the central brace shown in Fig. 1, and differs therefrom only in the clamping
10 ing rod. In this instance the clamping rod a, passes longitudinally through the two portions b, of the brace from end to end and has its end screw threaded for the reception of the nut c. Passing through the nut c, are the
15 set screws d, which engage the ends of the rod for the purpose of locking the nut in position after the brace has once been adjusted. The two portions of this brace, like the portions of the other braces described, are turned
20 laterally for the purpose of engaging the ends of the tie and the operation is substantially the same for the purpose of bracing the rails. So also set screws M' pass through the laterally extending ends of these
25 portions and engage the ends of the cross ties for the purpose of supporting them in position. This is likewise the case in regard to the central brace, which has its laterally turned end provided with set screws M' engaging the ends of the cross ties for the same
30 purpose.

While the first brace described having the sliding portion, does not show the headed portion provided with an upwardly extending
35 flange for engaging the outer brace of the opposite main rail from the guard rail, it will be readily understood that if desired it may be provided with an upwardly extending projection for the same purpose and thus made
40 to brace the rail the same as the projections upon the other braces.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. A railroad brace consisting of two longitudinal parts, each part having its outer
45 end held to the cross ties, a means connecting the inner ends of the parts for drawing them together, and upwardly extending projections from said parts outside of and engaging the
50 outer edges of the rails.

2. A rail road brace consisting of two parts, each part having a laterally extending end to engage the ends of the cross ties, a means for
55 drawing them together, and projections extending upward to engage the adjacent edges of the rail.

3. A railroad brace consisting of two parts, one sliding upon the other, each part having an upwardly extending projection, one adapted
60 to engage the main rail and the other the guard rail, a means for drawing these two parts together, the ends of the two parts being attached to the said cross tie outside of the main rail.
65

4. A railroad brace comprising two parts, one sliding upon the other, a means for drawing them together, projections extending upward therefrom for engaging the adjacent
70 faces of the rails of the track, the outer part having a laterally extending end adapted to engage the end of the cross tie, and a separate portion engaging the inner end of the inner part, the outer end of the separate
75 portion having also a laterally extending end adapted to engage the end of the railroad tie.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID ^{his} X MARKLEY
mark

Witnesses:

A. W. HECKETT,
W. H. EARHART.