

No. 608,507.

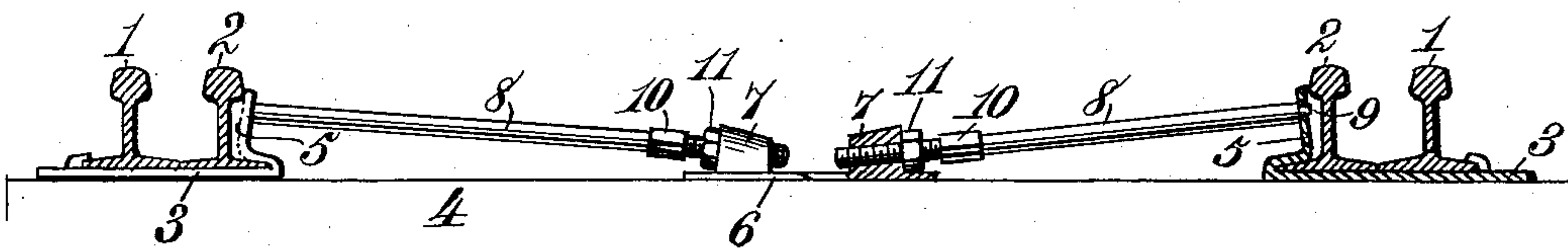
Patented Aug. 2, 1898.

W. B. & H. L. BRUNSON.  
RAIL BRACE FOR RAILWAY TRACKS.

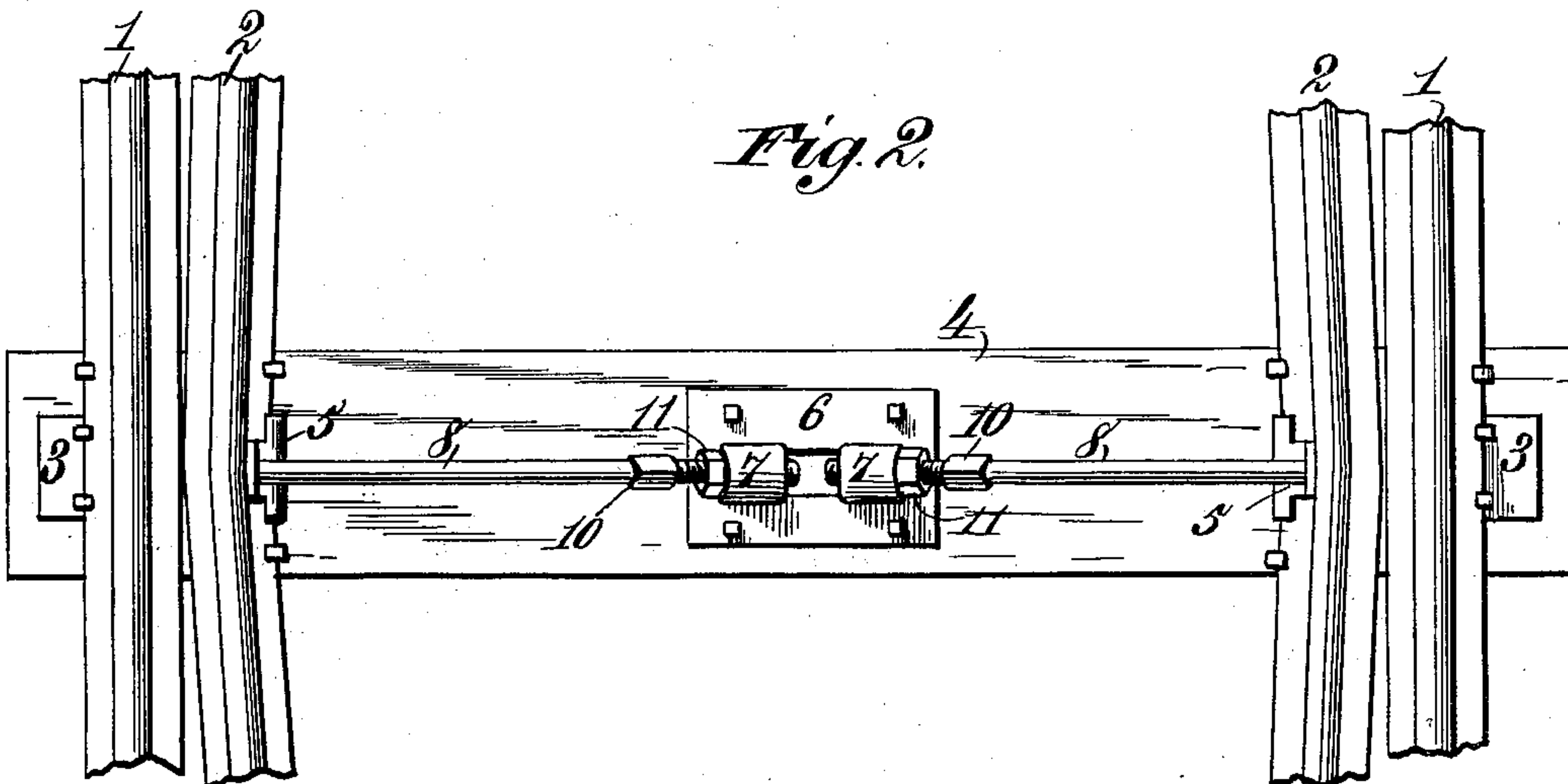
(Application filed Dec. 30, 1897.)

(No Model.)

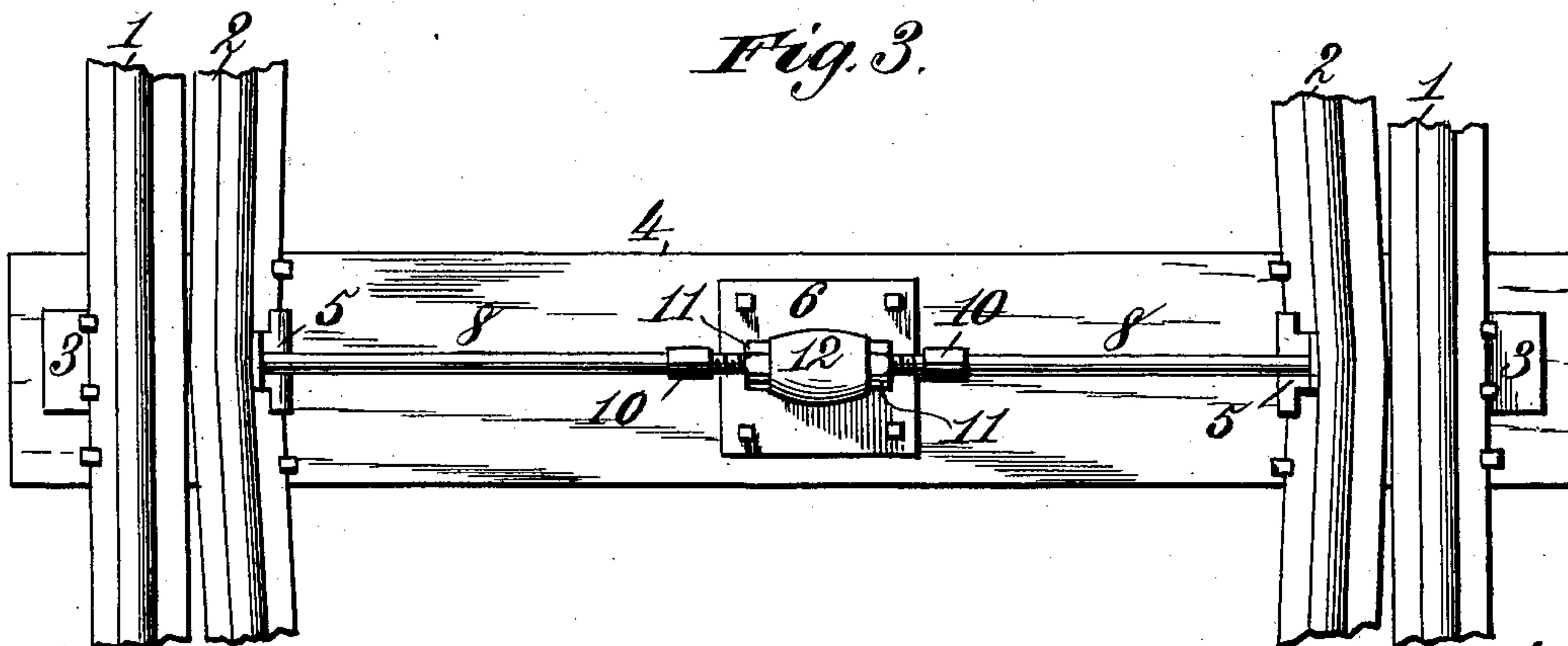
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.  
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# UNITED STATES PATENT OFFICE.

WESLEY B. BRUNSON AND HARTWELL L. BRUNSON, OF FLEMING, GEORGIA.

## RAIL-BRACE FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 608,507, dated August 2, 1898.

Application filed December 30, 1897. Serial No. 664,533. (No model.)

*To all whom it may concern:*

Be it known that we, WESLEY B. BRUNSON and HARTWELL L. BRUNSON, citizens of the United States, residing at Fleming, in the county of Liberty and State of Georgia, have invented new and useful Improvements in Rail-Braces for Railway-Tracks, of which the following is a specification.

Our invention relates to rail-braces for railway-tracks, and has for its particular object to provide improved devices for bracing the upper portion of a guard-rail and to thereby prevent it from canting and cutting into the cross-ties, which it is liable to do with the ordinary brace, that is insufficient to resist the strain thrown upon the rail by the wheel-flange.

It is another object of our invention to brace each guard-rail independently by means of adjustable rods supported at an abutment or abutments fixed at the center of the track, and whereby each guard-rail can be adjusted with relation to the adjoining main rail.

The invention consists in features of construction and novel combinations of devices for the bracing of rails, as hereinafter more particularly described and claimed.

In the annexed drawings, Figure 1 illustrates our invention in part sectional elevation. Fig. 2 is a plan of the same. Fig. 3 is a plan view showing a modification of the abutment or center piece.

Referring to the drawings, the numeral 1 designates the main track-rails, and 2 the guard-rails. It is preferable to provide for these rails the chairs or seats 3, that are spiked down at the outer sides of the main rails. These chairs are firmly supported on the cross-ties 4, and each chair has at its inner end an upward-extended and flanged portion 5, that closely fits the inner side of a guard-rail.

To the center portion of the tie 4 there is secured, by means of spikes or lag-screws, a plate 6, having, preferably, two abutments 7 formed thereon, as shown in Figs. 1 and 2. In each of these abutments 7 there is an inclined screw-threaded aperture that receives the inner screw-threaded end of a brace-rod 8, the outer end of which has thereon a stud or tenon 9, which is loosely inserted into an opening in the upward-extended portion 5 of the rail-chair near the upper inner side por-

tion of the guard-rail. On each brace-rod 8 there is a polygonal surface 10 for application of a wrench to adjust each rod independently, according to the requirements of the guard-rail with which it connects. Jam-nuts 11 are provided to prevent the brace-rods from turning after they have been adjusted.

Instead of providing a separate abutment 7 for each brace-rod 8, there may be formed on the center plate 6 only a single abutment 12, Fig. 3, with screw-threaded apertures in its opposite sides for supporting the two independently-adjustable brace-rods; but the construction shown in Figs. 1 and 2 is preferable for many reasons.

By spiking down the outer portion of the chair 3 onto the tie 4 at the outside of the main rail 1 the inner upward-extended portion 5 of said chair or seat will be drawn firmly up to the inner side of the guard-rail 2, thereby preventing it from slipping and at the same time affording a firm seat for the outer end of the brace-rod. Being extended beneath the rails 1 and 2, it is obvious that the bottom plate of the chair 3 will act also to prevent the flange of the guard-rail from cutting into the tie as the result of any tendency to canting of said rail.

At its outer end each brace-rod 8 has a perfectly loose connection with the upward-extended portion 5 of the chair, the stud 9 being loosely inserted into a hole to prevent the rod from being thrown out of position and to provide a seat or bearing only at the shoulder between the said stud and the main portion of the brace-rod. This connection is placed at as high a point as possible to give a downward and inward slant to the brace-rods 8, thus providing a more direct resistance to the pressure of the wheel-flange on the guard-rail. The provision of separate rod-abutments 7, spaced apart, as shown in Figs. 1 and 2, decreases the danger of brace-rods catching onto such abutment, and where one rail only is to be braced there is less strain on the spikes or lag-screws which hold the abutment or center piece to the cross-tie. Should it be found desirable, the chair 3 and abutment-plate 6 might be connected by means of a metal strip riveted to their under sides to reduce strain. The arrangement of the independently-adjustable brace-rods and their



supports will permit a firm bracing of each guard-rail with relation to the adjacent main rail and obviates liability to canting where only one guard-rail is used, as at switches.

5 What we claim as our invention is—

1. In a rail-brace, the combination with the rail, and a chair having an upward-extended portion at the inner side of the rail, of an abutment or center piece secured to a cross-tie at the center of the track, and an inclined  
10 brace-rod having one end adjustably connected with said abutment and its other end loosely engaged with the upward-extended portion of the chair at the inner side of the  
15 rail and near its top, substantially as described.

2. In a rail-brace, the combination with the rail, and a chair having an upward-extended portion at the inner side of the rail, of an  
20 abutment or center piece secured to the cross-tie at the center of the track and provided with an inclined screw-threaded aperture, an inclined brace-rod having one end screw-threaded and adjustably engaged in the abut-  
25 ment-aperture, the other end of said brace-rod being loosely engaged with the upward-extended portion of the chair at the inner side of the rail and near its top, and a jam-nut on  
30 the screw-threaded portion of said brace-rod, substantially as described.

3. In a rail-brace, the combination of the

rails, the chairs having upward-extended portions at the inner sides of the rails, a plate secured to a cross-tie at the center of the track and provided with two spaced-apart  
35 abutments each having a screw-threaded aperture, the inclined brace-rods each having its outer end loosely engaged with a chair at the inner side of a rail and near its top, the inner  
40 ends of said brace-rods being screw-threaded and adjustably engaged in the screw-threaded apertures of said abutments, and jam-nuts for said brace-rods, substantially as described.

4. In a brace for the guard-rails of railway-tracks, the combination of the main rails, the  
45 guard-rails, chairs for said rails, the inclined braces loosely engaged with said chairs at the inner sides of the guard-rails and near their tops, and a center piece secured to a cross-tie at the center of the track and provided with  
50 two spaced-apart abutments with which the inner ends of said brace-rods are adjustably engaged independent of each other, substantially as described.

In testimony whereof we have hereunto set  
55 our hands in presence of two subscribing witnesses.

WESLEY B. BRUNSON.

HARTWELL L. BRUNSON.

Witnesses:

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