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RAILWAY TIE AND FASTENER.
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924,414.

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Fig. 1.

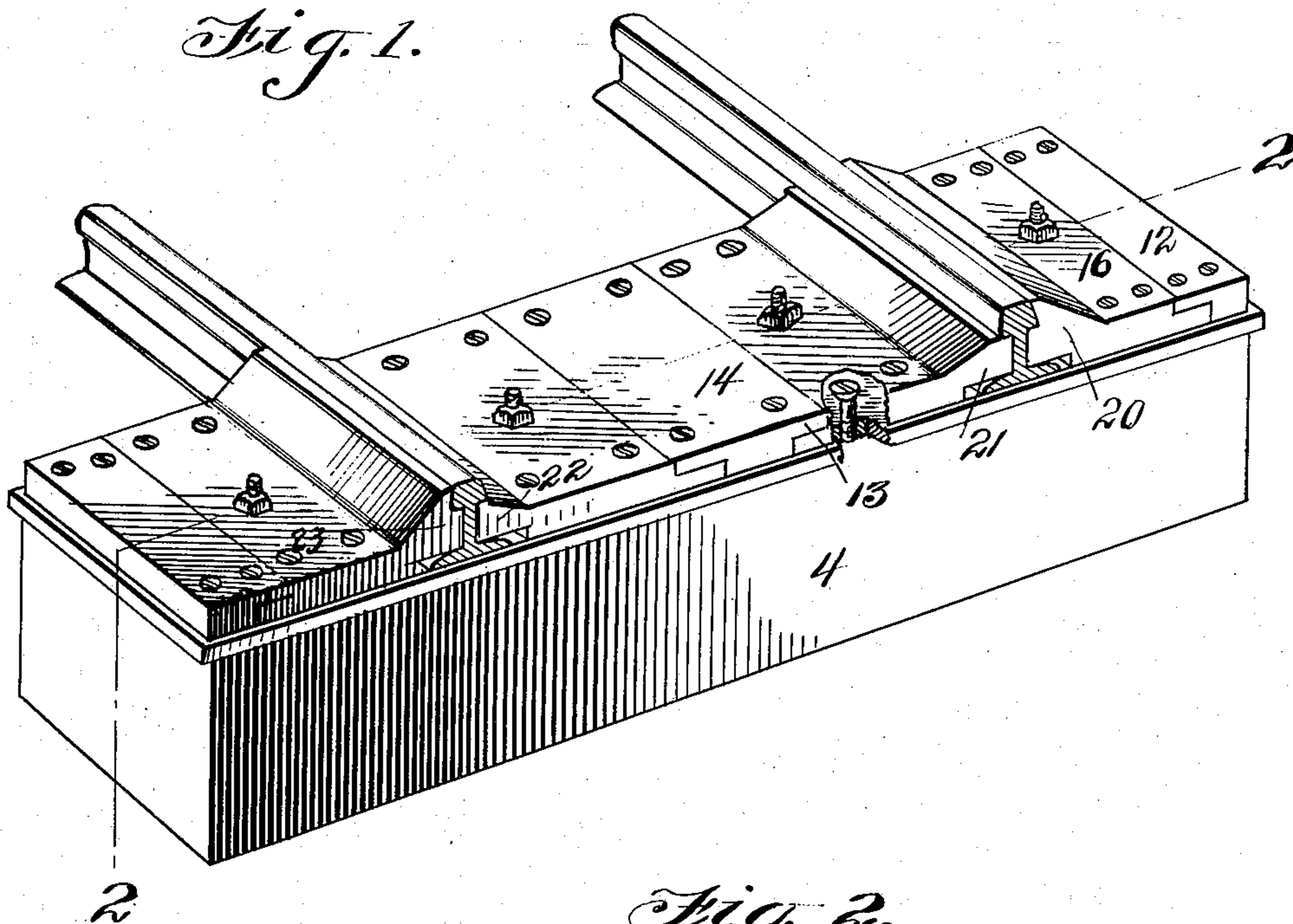
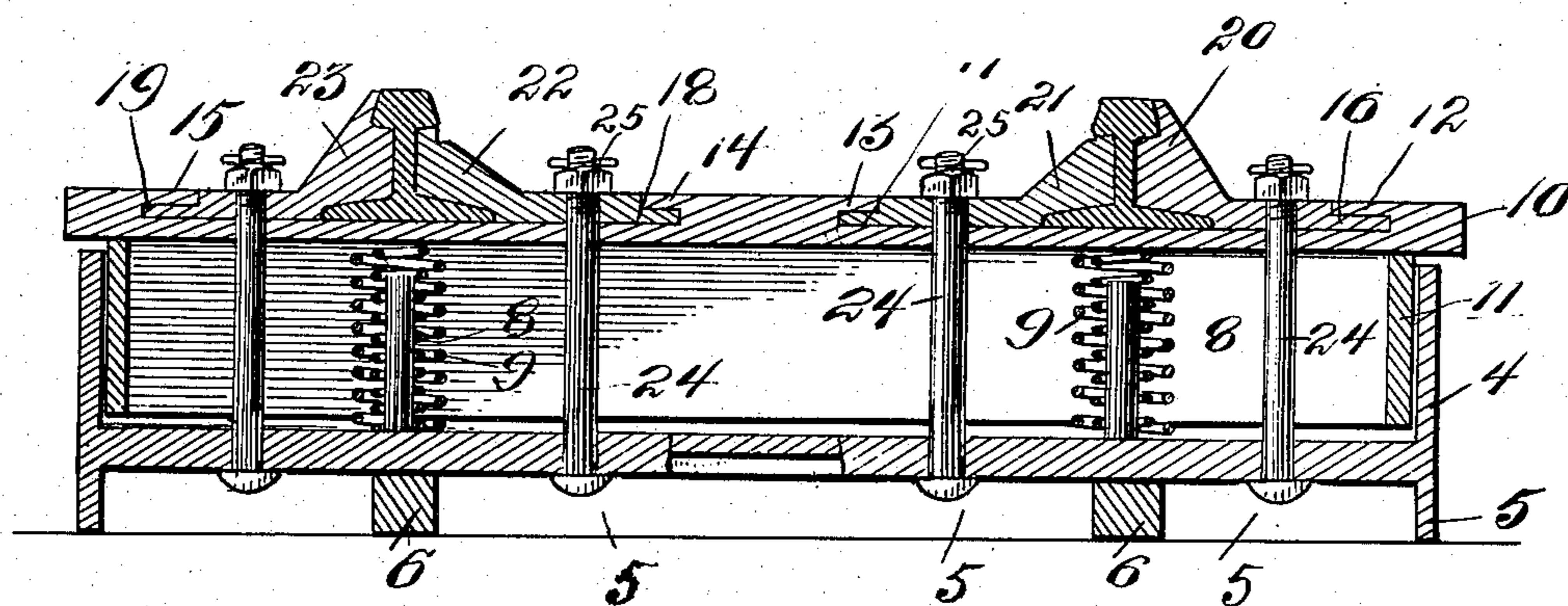


Fig. 2.



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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE AND FASTENER.

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Specification of Letters Patent.

Patented June 8, 1909.

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To all whom it may concern:

Be it known that I, HARRY A. BAMBERGER, a citizen of the United States of America, residing at Etters, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties and Fasteners, of which the following is a specification.

This invention relates to railways and particularly to cross-ties and rail fasteners.

An object of this invention is to produce a cross-tie for yieldingly supporting a track, the said cross-tie being formed in sections, one telescoping within the other and the said sections having an interposed cushion in the form of a spring whereby the sections of the cross-tie are yieldingly connected, in order that the upper section may move with relation to the base or lower section.

A further object of this invention is to provide a cross-tie having means for anchoring the same, the base of the said tie preferably having a depending flange adapted to engage the roadbed in order that movement or displacement of the cross-tie may be obviated.

Furthermore, an object of this invention is to provide a cross-tie formed in two telescoping sections, the under section or base of which is provided with studs forming guides having a spring which normally supports the upper section clear of the upper edge of the sides of the base, means being also provided for affording movement of the upper section with relation to the base.

A further object of this invention is to provide the upper section with a series of flanges designed to engage rail securing clamps whereby the said rail securing clamps may be adjusted in position to engage the base flange and web of the rail, means being also provided for holding the rail clamps in operative relation to the rails and to the engaging members.

Finally an object of this invention is to produce a novel device of the character noted, which will possess advantages in points of simplicity, efficiency and durability, proving at the same time comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying

drawings forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, illustrates a view in perspective of a cross-tie and rail fastening device embodying the invention; and Fig. 2, is a sectional view on the line 2—2 of Fig. 1.

In these drawings 4, indicates a base of a cross-tie comprising a box like structure having an extension 5, designed to engage the roadbed for the purpose of anchoring the said base with relation to the roadbed. The bottom of the base 4, is provided with two transversely disposed plates 6, which rest on the roadbed and are designed to reinforce the bottom 7, of the base at points under the studs 8, the said studs being anchored to the bottom 7, of the base and form guides for the springs 9 which act as cushions for the upper portion of the cross-tie.

The upper portion of the cross-tie comprises a top plate 10, having downwardly extending flanges 11, which fit within the sides of the base and are telescopically supported with relation thereto. The top plate 10, is provided with transversely disposed recesses, the base flanges of the rail being applied to the recessed portions of the plate and the surface of the plate 10, is further undercut to form the grooves 12, 13, 14, and 15, designed to receive the tongues 16, 17, 18, and 19, respectively of rail clamping members 20, 21, 22 and 23. The clamping members at their points of contact with the base flanges and webs of the rail may be of any preferred construction but I deem it desirable to have them substantially of the construction shown in Fig. 2, in order that the rails may be braced at all points except at the inner sides of the heads of said rails. In order to prevent the clamps from moving, each of said clamps is provided with a bolt 24, each of said bolts extending through an aperture in the plate 10, and an aperture in the bottom 7, of the base and being provided with a nut 25.

From an inspection of the drawing the operation of the device will, it is thought, be apparent for as the plate 10 is clear of the upper edge of the base and is supported by the spring cushions 9, the track will be held in the position shown in Fig. 2, whereas when a train is passing over the track, the plate 10, will yield and the spring cushions will be compressed, it being desirable, however, to have the springs of such resistance as to prevent the plate 10, from contacting the upper

surface of the base except when unusually heavy loads are carried over the track.

As heretofore stated, the transversely disposed plates 6, reinforce the bottom of the base, at the points where the greatest pressure is applied to it, through the medium of the springs 9. By reason of the construction, the yielding track is provided which will prevent jarring of the rolling stock or unusual vibration of the bodies thereof.

I claim:

1. In a cross-tie and rail fastener, a base, a plate having depending flanges telescopically mounted with respect to the base, studs projecting from the bottom of the base, springs encircling said studs and bearing against the under surface of the plate and the upper surface of the bottom of the base, the said plate having recesses and grooves formed therein, clamping members having tongues slidable in the grooves, said clamping members being in engagement with the rails, and means for holding the clamping members on the plate.
2. In a cross-tie and rail fastener, a base, a plate having depending flanges telescopically mounted with respect to the base, studs projecting from the bottom of the base, springs encircling said studs and bearing against the under surface of the plate and the upper sur-

face of the bottom of the base, the said plate having recesses and grooves formed therein, clamping members having tongues, slidable in the grooves, said clamping members being in engagement with the rails, means for holding the clamping members on the plate, the said plate and base having coinciding apertures and the clamps having apertures adapted to aline with the apertures of the plate and base, and bolts extending through the said apertures for retaining the plate in position.

3. In a cross-tie and rail fastener, a base having a depending flange adapted to engage the roadbed, studs projecting from the bottom of the base, springs encircling said studs and bearing against the under surface of the plate and the upper surface of the bottom of the base, the said plate having recesses and grooves formed therein, clamping members having tongues slidable in the grooves, said clamping members being in engagement with the rails, and means for holding the clamping members on the plate.

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

HARRY A. BAMBERGER.

Witnesses:

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