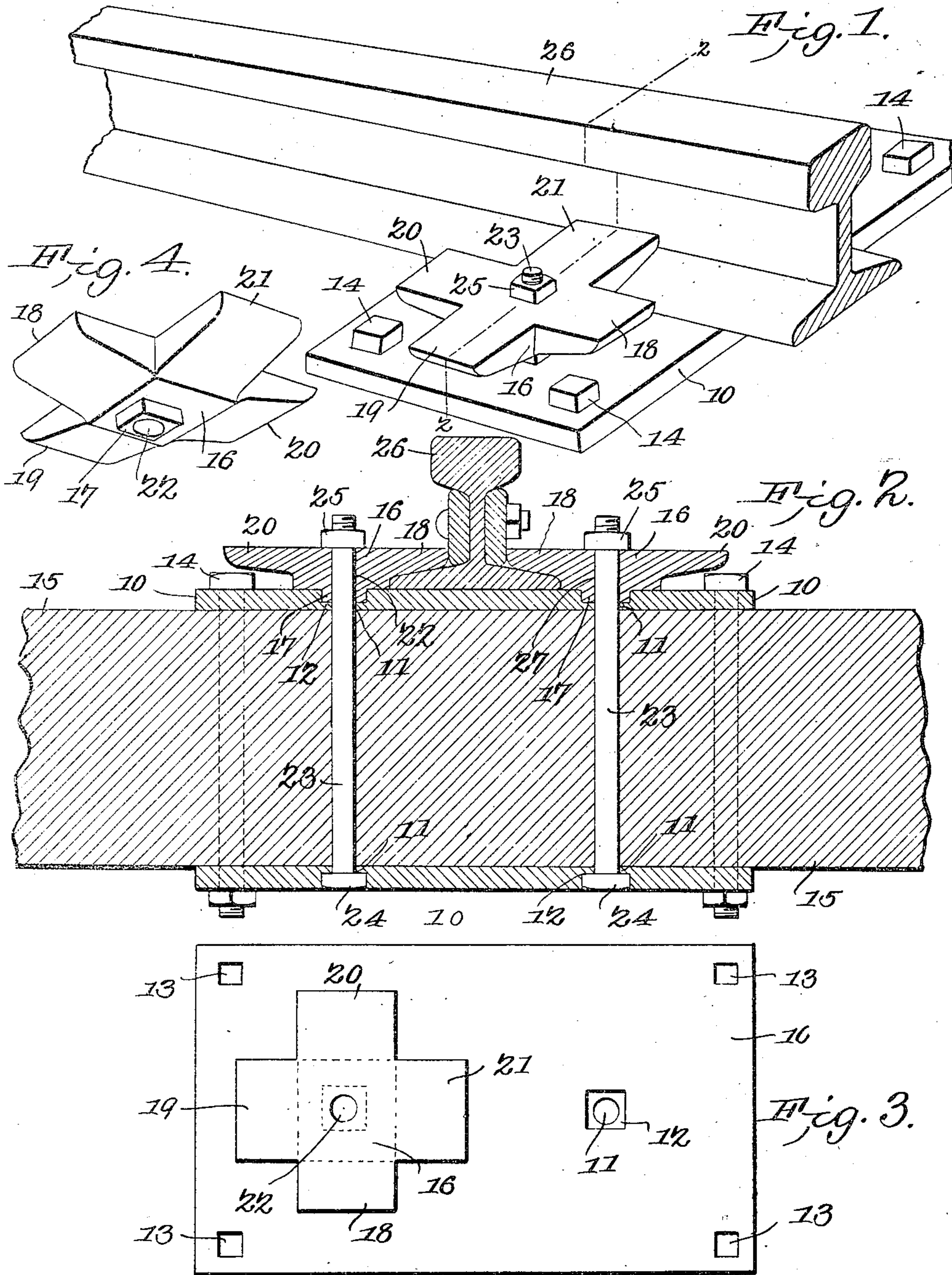


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E. T. FORRESTER.
RAIL FASTENER.

APPLICATION FILED NOV. 29, 1905.



WITNESSES:
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ELI T. FORRESTER, OF DENVER, COLORADO.

RAIL-FASTENER.

No. 816,788.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ELI T. FORRESTER, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented a new and useful Rail-Fastener, of which the following is a specification.

This invention relates to rail-fasteners and tie-plates, and has for an object to provide a device of the class embodying new and improved features of durability, adaptability, simplicity, and efficiency.

A further object of the invention is to provide a rail-fastener embodying improved means whereby the gage or alinement of the track may be varied without changing the location of the tie or the connections.

A further object of the invention is to provide a fastener embodying improved means for accommodating rails with webs of different thicknesses or to compensate for the interposition of fish-plates or the like.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of the improved rail-fastener applied to a tie and rail. Fig. 2 is a sectional view transverse of the rail and taken on line 2 2 of Fig. 1. Fig. 3 is a top plan view of the tie-plate and with one flange-clamp applied. Fig. 4 is a perspective view of the base-flange clamp.

Like characters of reference indicate corresponding parts in all of the figures of the drawings.

In its preferred embodiment the improved rail-fastener forming the subject-matter of this application comprises a pair of similar tie-plates 10, having spaced bolt-openings 11 with polygonal depressions or recesses 12, forming angular countersinks for the openings 11. The plates are also provided at their corners with the squared bolt-openings 13, through which are inserted bolts 14, by which the two plates are clamped upon the upper and lower sides of the tie, as 15, with

the openings 11 registering and the recesses 12 of the upper and lower plates opening, respectively, on the top and the bottom.

A rigid base-flange clamp 16 is provided, having a lug 17 proportioned to fit within and engage the polygonal recess of the plate and having radial arms 18, 19, 20, and 21, graded in lengths, the shortest one being designated by 18 and the longest by 21. The clamp is provided with a bolt-opening 22, through which is inserted a bolt 23 after passing through the tie and with the head 24 proportioned to fit within the polygonal recess 12 of the under plate. Upon the bolt 23 is a nut 25, by which the clamp is clamped upon the base-flange of the rail, as 26.

As shown in Fig. 1, the longest arm 21 is in use, while in Fig. 2 fish-plates are shown upon the sides of the rail and the shortest arm 18 is used. In operation either arm may be used upon either side of the rail, as conditions make expedient, and by loosening the nuts 25 and turning the clamps the gage or alinement of the rails may be changed or a rail replaced by one having a different thickness of web without disturbing the plates or their connection with the tie. It will be obvious that by reason of using a plate on the top and another on the bottom a tie of any material may be used and that with ties which decay the two plates will prolong the usefulness of the tie by a very long period.

In the drawings clamps are shown to conform to the rails of the usual and ordinary form and proportion. It will be understood that the form of the clamping member may be changed to conform to and clamp rails of any size and proportion or to accommodate fish-plates or joint-chairs of any form and size.

Having thus described the invention, what is claimed is—

1. In a rail-fastener a rigid, angular base-flange clamp having an eccentrically-disposed angular lug extending therefrom, said lug provided with a centrally-disposed bolt-receiving aperture.

2. In a rail-fastener, a rigid base-flange clamp having arms radiating therefrom and of different lengths, and an angular lug extending from the clamp and having a centrally-disposed bolt-receiving aperture therein.

3. A rail-fastener comprising a tie-plate provided with a polygonal recess and a rigid

base-flange clamp embodying a plurality of flange-engaging arms and means for engagement within the recess.

4. A rail-fastener comprising a tie-plate 5 provided with a polygonal recess and a rigid base-flange clamp embodying a plurality of flange-engaging arms and means engaging the recess and so proportioned that either arm may be clamped in rigid contact with the 10 flange.

5. A rail-fastener comprising similar tie-plates arranged to or spaced upon opposite sides of a tie and provided with registering openings and polygonal recesses forming part 15 of the openings, a base-flange clamp provided with an angular lug to engage the recess and an opening registering with the openings of the plates, and a bolt having a head to conform to and engage within the recess of the 20 under plate and to extend through the upper plate and the flange-clamp.

6. A rail-fastener comprising similar tie-plates arranged to be spaced upon opposite sides of a tie and provided with registering openings and polygonal recesses forming a 25 part of the openings, a rigid base-flange clamp embodying a plurality of radially-extending flange-engaging arms graded in length and a lug proportioned to be engaged within the polygonal opening of the upper 30 plate and to position either arm in contact with the flange, and a bolt having a head to conform to and engage within the recess of the under plate and to extend through the upper plate and the flange-clamp. 35

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELI T. FORRESTER.

Witnesses:

EDWIN VANCISE,
PATTIE DENNE.