

F. W. WORLEY.
TIE AND RAIL FASTENER.
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994,551.

Patented June 6, 1911.

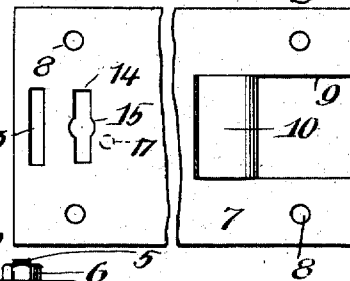
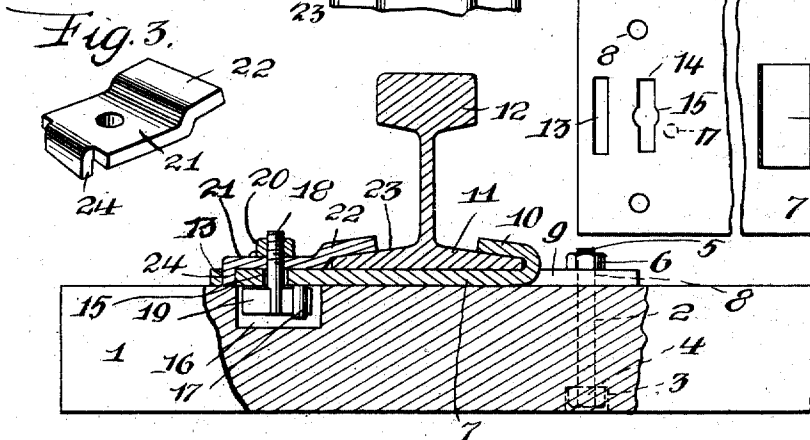
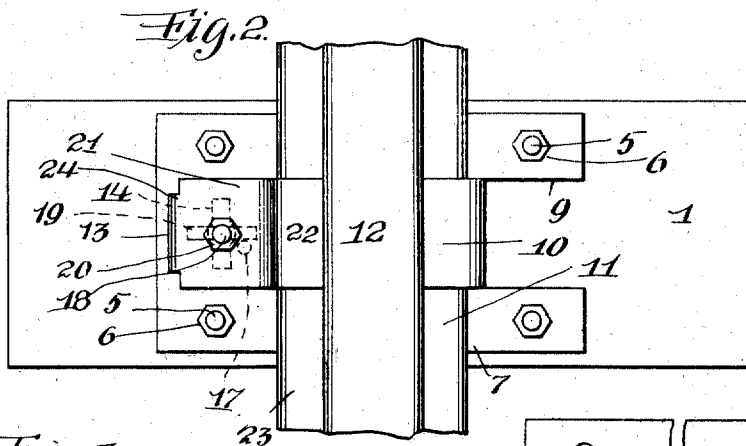
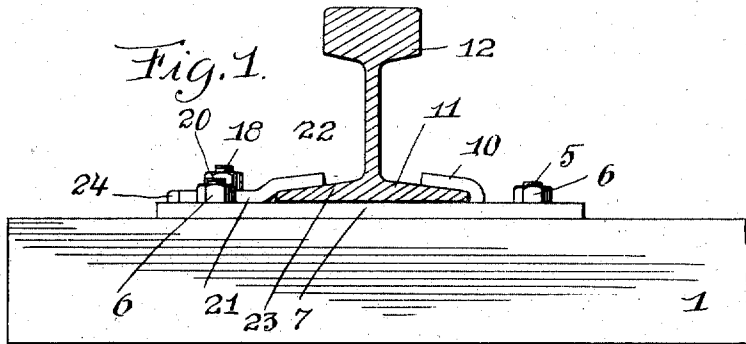


Fig. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK W. WORLEY, OF MOUNT VERNON, NEW YORK.

TIE AND RAIL-FASTENER.

994,551.

Specification of Letters Patent.

Patented June 6, 1911.

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To all whom it may concern:

Be it known that I, FREDERICK W. WORLEY, a citizen of the United States of America, residing at Mount Vernon, in the
5 county of Westchester and State of New York, have invented certain new and useful Improvements in Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accom-
10 panying drawing.

This invention relates to ties and rail fasteners, and the objects of the invention are to provide a tie that can be made of metal or concrete and placed upon a roadbed,
15 firmly supporting the rails of a track, and to furnish the tie with a fastener that will positively retain rails thereon and prevent lateral and vertical displacement of said rails.

20 Further objects of the invention are to provide a rail fastener that can be easily and quickly installed without the use of skilled labor, and to provide a fastener that is simple in construction, durable and inex-
25 pensive to manufacture.

I attain the above objects by a mechanical construction to be hereinafter specifically described and then claimed, and reference
30 will now be had to the drawing wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claim.

35 In the drawing:—Figure 1 is a side elevation of a portion of a tie in accordance with this invention. Fig. 2 is a plan of the same. Fig. 3 is a perspective view of the detached outer fastener. Fig. 4 is a plan
40 of a portion of a tie plate constituting the inner fastener, and Fig. 5 is a side elevation of a portion of the tie partly broken away and partly in sections.

The reference numeral 1 denotes an ob-
45 long tie structure made of metal or concrete and as the detailed construction at each end of the tie is identical, I deem it only necessary to describe one end of the tie. The tie adjacent to the end thereof is provided with
50 four vertical openings 2 having the lower ends thereof terminating in recesses 3 adapted to receive the heads 4 of vertical bolts 5. These bolts are employed in connection with
55 nuts 6 for retaining a tie plate 7 upon the tie structure 1, said plate having openings 8 to

receive the upper ends of bolts 5. The inner edge of the plate 7 is cut or sheared, as at 9 to provide a central tongue 10, which is bent upwardly and inwardly to constitute an inner fastener for engaging the inner
60 base flanges 11 of a rail 12. The outer end of the plate 7 is provided with two longitudinal slots 13 and 14, the latter having the longitudinal walls intermediate the ends provided with oppositely disposed recesses
65 15, for a purpose that will presently appear. The slot 14 is in communication with a pocket 16 in the top of the tie structure 1, and said plate is provided with a depending
70 pin 17 extending into said pocket.

The reference numeral 18 denotes a bolt having a winged head 19 adapted to pass
75 through the slot 14 into the pocket 16 and engage the pin 17, which prevents the bolt 18 from rotating in one direction, when the
80 nut 20 is screwed upon the upper end of the bolt. The oppositely disposed recesses 15 provide clearance for the bolt 18. The bolt 18 and the nut 20 are adapted to retain
85 an outer fastener 21 upon the tie plate, said outer fastener having the inner edge thereof of offset to extend over the outer base flange
90 23 of the rail 12. The outer edge of the fastener 21 has a depending lug 24 adapted to engage in the slot 13.

From the foregoing it will be observed that the parts of the fastener can be easily and quickly assembled to positively hold
95 the base flanges of a rail in engagement with the tie plate 7, and that said tie plate is firmly anchored upon the tie structure.

What I claim is:—

The combination with an oblong tie structure, of a tie plate mounted upon said
95 structure adjacent to the end thereof and adapted to support a rail, said tie plate having an inner edge thereof cut to form a tongue bent upwardly and inwardly to engage the inner base flange of the rail, the
100 outer end of said tie plate having slots formed therein, said tie structure having a pocket formed therein in communication with one of said slots, a bolt arranged in
105 said pocket and extending upwardly through said tie plate, an outer fastener arranged upon said tie plate and having the inner end thereof extending over the outer
110 base flange of the rail, a lug carried by the outer end of said fastener and extending into the outer end of said tie plate, a nut

screwed upon said bolt for holding said outer fastener in engagement with said plate, and means carried by said plate and extending into the pocket of said tie structure and
5 adapted to prevent said bolt from rotating during the screwing of said nut upon said bolt, substantially as described.

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

FREDERICK W. WORLEY.

Witnesses:

SANFORD HALLOCK,
ARTHUR C. BLATZ.