No. 894,580. PATENTED JULY 28, 1908.

R. O. BLAKEY.

RAIL FASTENER FOR METALLIC TIES.

APPLICATION FILED FEB. 20, 1908.

2 SHEETS—SHEET 1.

FIG. 1.

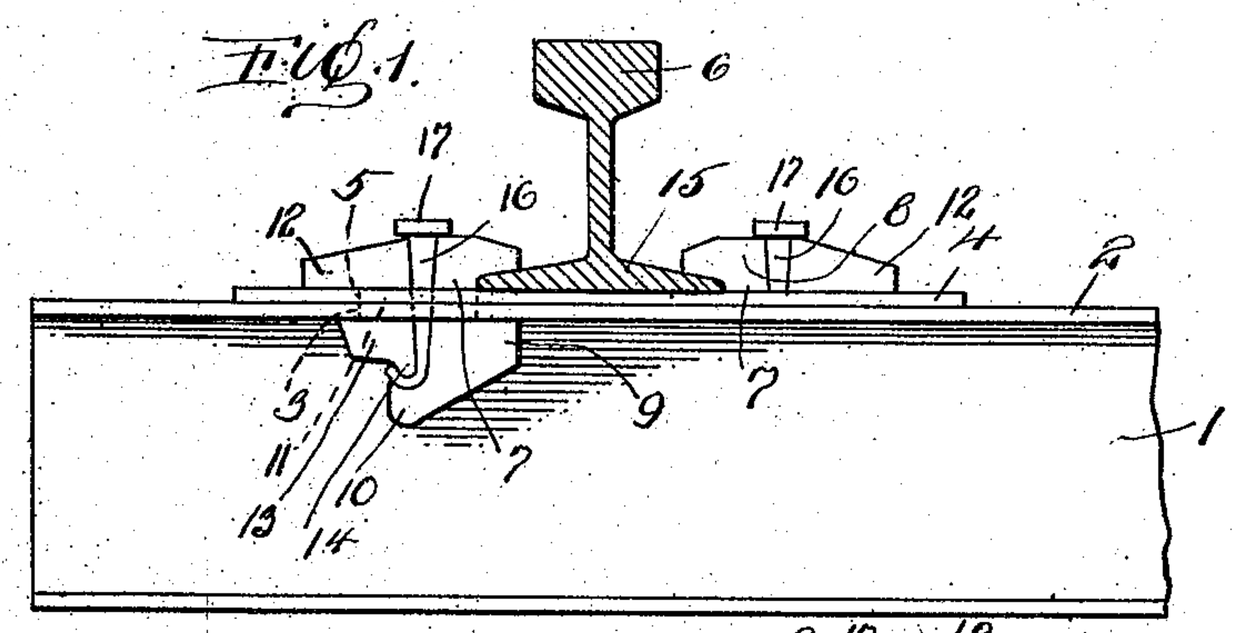


FIG. 2.

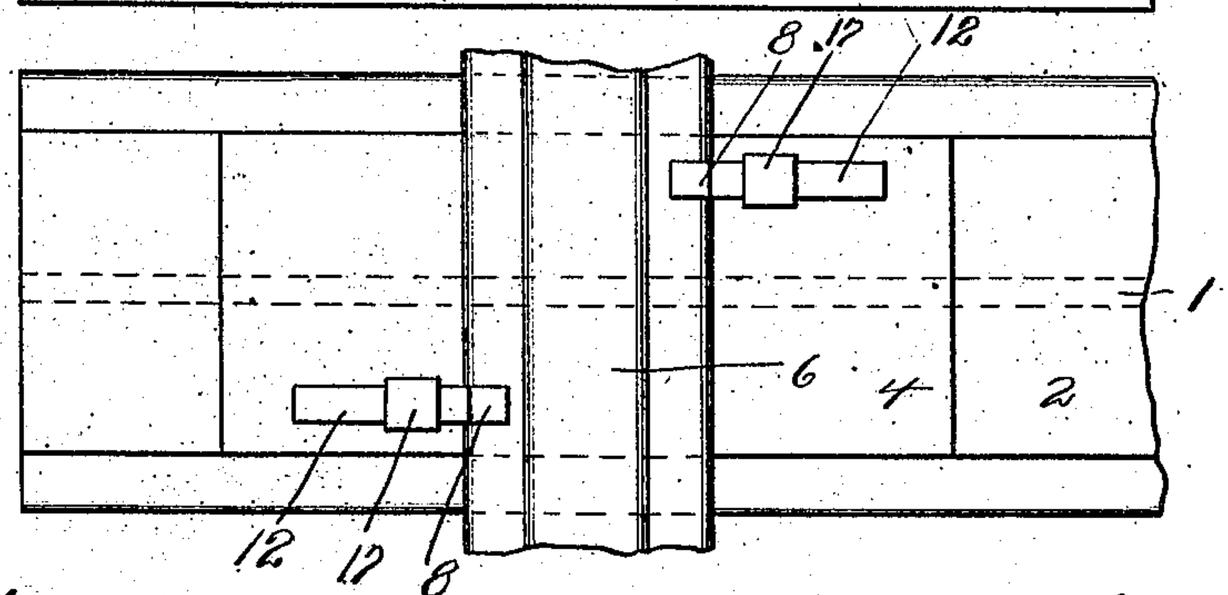


FIG. 3.

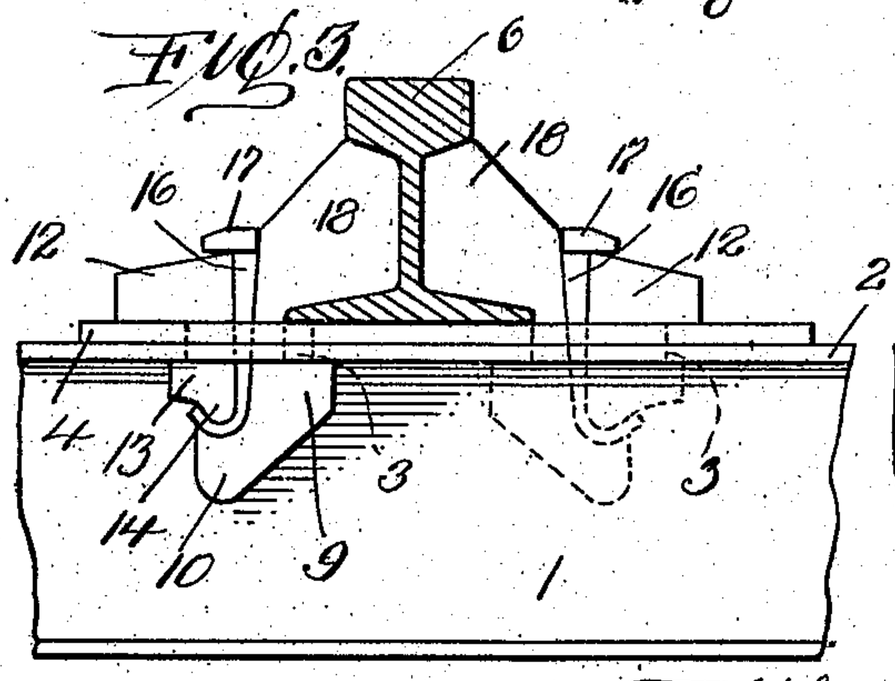


FIG. 4.

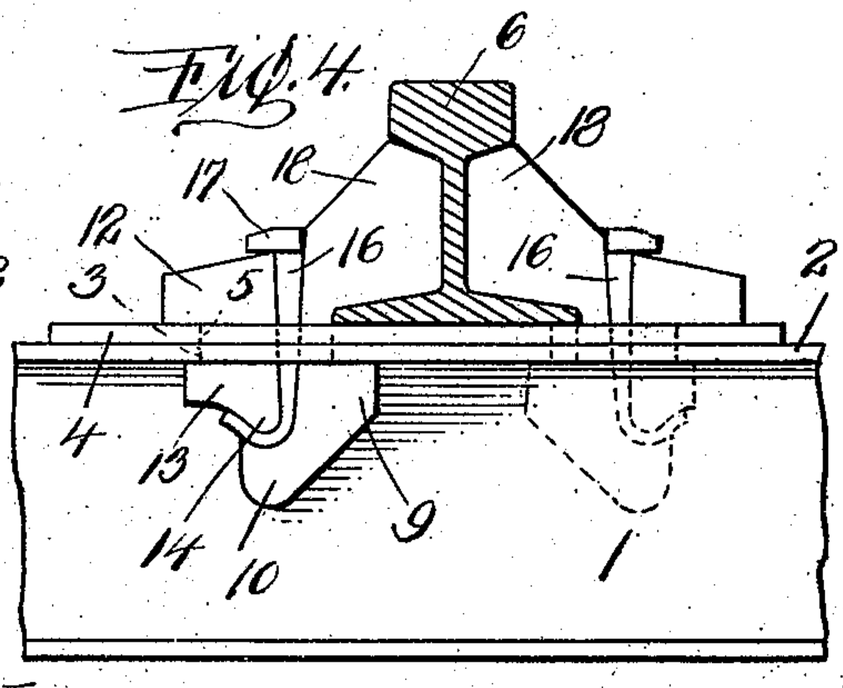
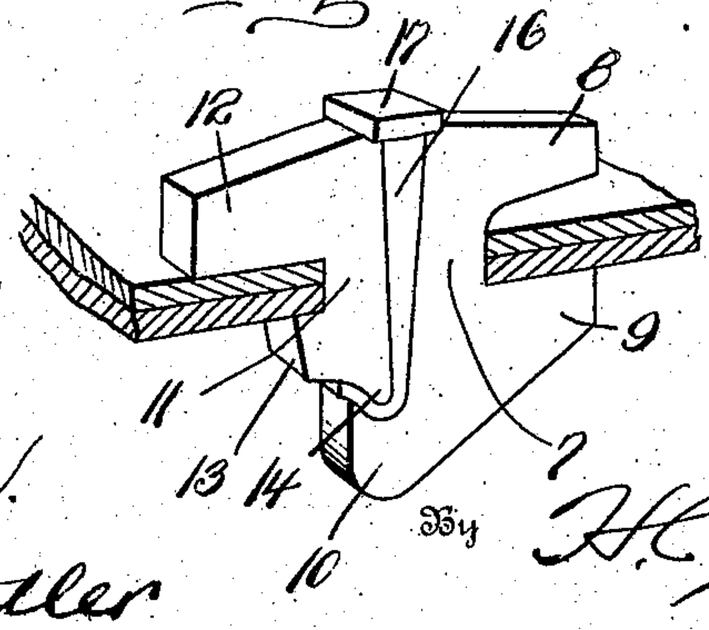


FIG. 5.



Witnesses.

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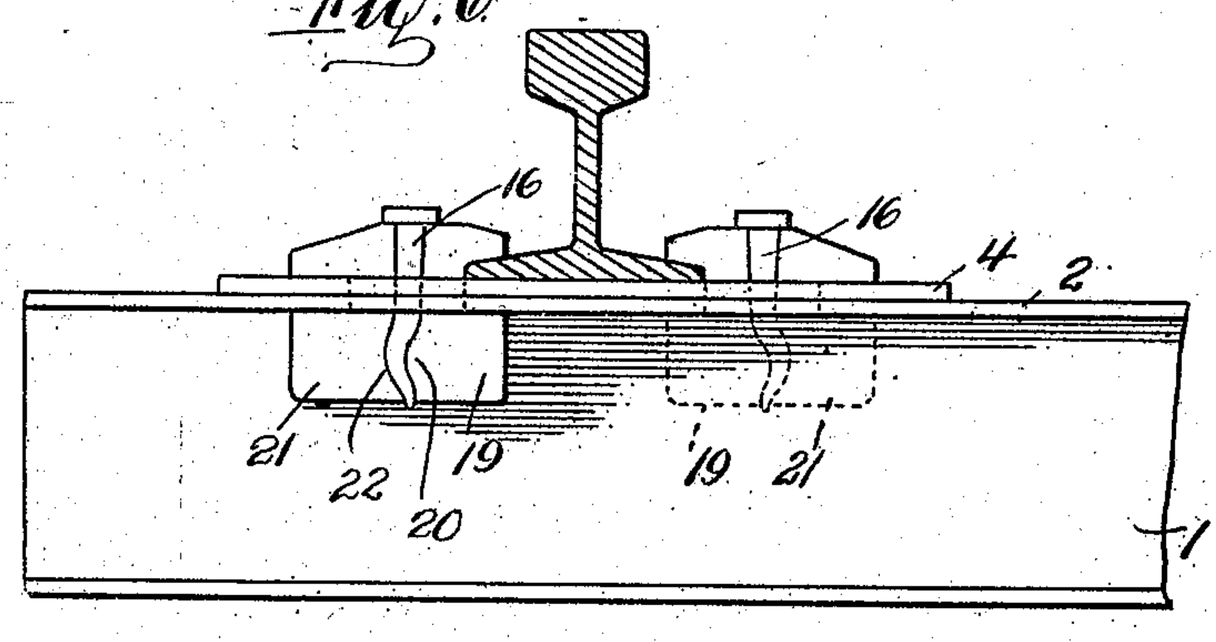
2 SHEETS—SHEET 2.

Fig. 6.



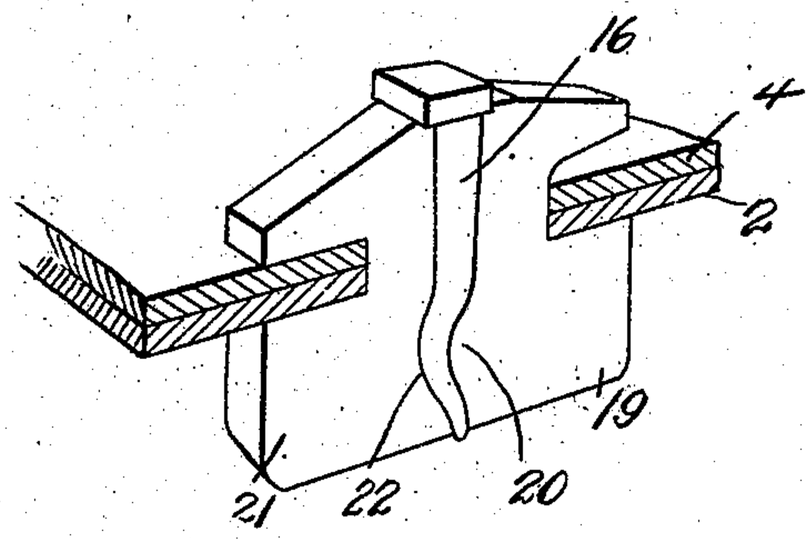


Fig. 7.

Fig. 8.

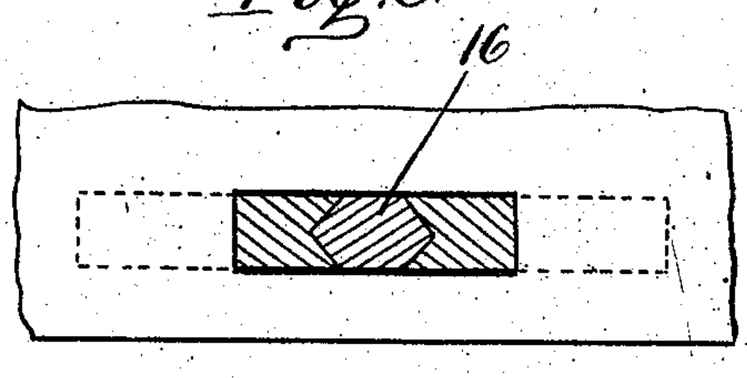


Fig. 9.

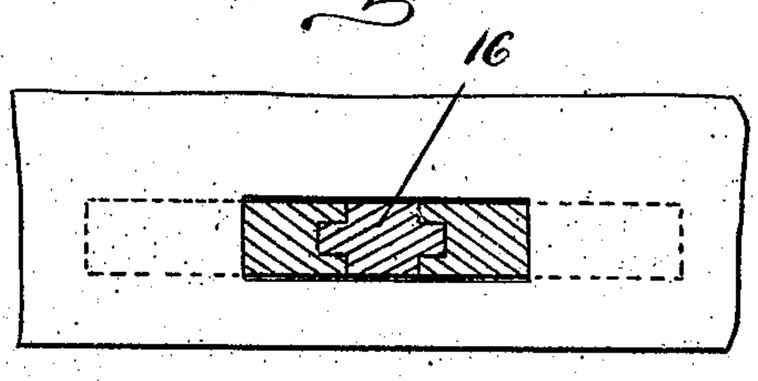
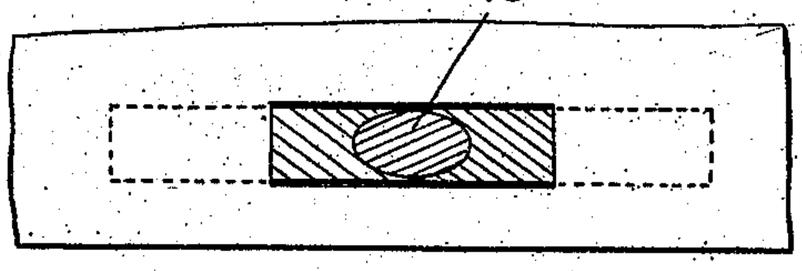


Fig. 10.



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UNITED STATES PATENT OFFICE.

ROBERT O. BLAKEY, OF PITTSBURG, PENNSYLVANIA.

RAIL-FASTENER FOR METALLIC TIES.

No. 894,580. Specification of Letters Patent. Patented July 28, 1908.

Application filed February 20, 1908. Serial No. 416,903.

To all whom it may concern:

Be it known that I, ROBERT O. BLAKEY, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Rail-Fasteners for Metallic Ties, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a rail fastener for metallic ties, and the primary object of my invention is to provide a novel fastener which is locked in position by a malleable spike or pin.

A further object of this invention is to dispense with the use of nuts and bolts for securing rails to metallic ties, and to employ a novel fastener and means for locking the same, that will prevent lateral and vertical displacement of a rail with relation to a tie. To this end, I have devised a fastener comprising two parts or members adapted to inter-lock with the tie, these parts or members being held in a fixed position by a malleable spike driven between said members and automatically clenched.

The detailed construction of my invention will be presently described and then specifically pointed out in the appended claims.

Referring to the drawing forming part of this specification Figure 1 is an elevation of a portion of a tie equipped with my fastener. Fig. 2 is a plan of the same, Fig. 3 is an elevation of a modified form of fastener, Fig. 4 is a similar view, illustrating the modified form of fastener as shifted. Fig. 5 is a perspective view of the preferred form of fastener; Fig. 6 is an elevation of a portion of a tie equipped with another modified form of fastener, Fig. 7 is a perspective view of the form of fastener shown in Fig. 6. Figs. 8, 9 and 10 are horizontal sectional views showing modified forms of securing spike, with the two members of the fastener modified to accord with the particular form of spike employed.

In the accompanying drawings, 1 designates a metallic tie of I-beam form having its rail-supporting flanges 2 provided with diagonally disposed slots 3, located at opposite sides of the web of said tie and adjacent to the longitudinal edges of the rail-supporting flanges 2.

Mounted upon the rail-supporting flanges 2 of the tie is a base plate 4, having slots 5 formed therein which register with the slots 3 in the flanges 2 of the tie. The rail plate 4 is adapted to support a rail 6 and to retain said rail and rail plate upon the tie, I use a novel fastener adapted to be interlocked in the slots 3 and 5. Each fastener embodies an inner rail-clamping member and an outer tie-engaging member. The inner or rail-clamping member comprises a shank 7 having an overhanging head 8, a lip 9, and a hook-shaped spike-deflector 10. The outer or tie-engaging member comprises a shank 11, a head 12, a lip 13, and a bracing lug 14.

The members constituting the fastener at each side of the rail are similar in form, and the heads 8 of the rail-clamping members of the fastener engage the base flanges 15 of the rail 6, the heads 12, engage the rail plate 4, the lips 9 and 13, engage the under sides of the supporting flanges 2, and the shanks 7 and 11 rest within the slots 3 and 5.

The confronting edges of the members are slightly inclined, whereby a spreader herein shown in the form of a wedge-shaped spike or key 16 can be driven between said members to lock the members in position. The spike or key 16 is made of malleable metal whereby when the end thereof impinges against the hook-shaped spike-deflector 10, the end of said spike or key will be deflected upwardly, or over the bracing-lug 14 of the outer member, causing the end of said spike or key to become clenched, to prevent accidental displacement of the members of the fastener.

The lip 13 of the outer member is of a lesser length than the lip 9 of the inner member, whereby these parts can be easily placed within the slots 3 and 5 and spread by the spike or key to grip the tie and the rail.

The spikes or keys are preferably formed with heads 17, whereby a suitable implement (not shown) can be employed to withdraw the spikes or keys.

In Figs. 3 and 4 of the drawings, I have illustrated a slight modification of my invention, wherein the inner members of the fasteners are formed with combined overhanging heads and rail braces 18. In connection with this modification of my invention, I have illustrated the shanks of the outer members of the fasteners as varying in size, the shank of one outer member being smaller than the shank of the other outer member.

In making the slots 3 and 5 slightly longer, the outer members of the rail fasteners can be inter-changed to permit of a rail being

slightly shifted upon a tie. In Fig. 4 of the drawings, the outer member upon the right hand side of the rail takes the place of the outer member upon the right hand side of the rail illustrated in Fig. 3 of the drawings, thereby permitting of a rail being shifted to the right, from the position illustrated in Fig. 3.

In Figs. 6 and 7, I have illustrated a still further modification of my invention, wherein the spike or locking medium is deflected by the confronting edges of the inner and outer members of the fastener. The inner fastener 19 has its edge provided with an enlargement 20, while the outer member 21 has its edge provided with a concavity or recess 22. These confronting edges provide a sinuous or irregular path for the spike or key that is driven between said members, consequently said spike or key will be bent when driven between the members, and will be prevented from becoming accidentally disengaged from the fastener.

In Figs. 8 to 10 inclusive, I have illustrated spikes or keys of different shapes in cross section, these spikes or keys preventing lateral displacement of the spike or key when driven between two members of the fastener.

It will of course be understood that the confronting edges of the members of the fastener shown in Figs. 8 to 10 are constructed to accommodate the form of spike used, and these spikes may be deflected so as to hold the same against working loose from the members, in the same manner as shown in Figs. 1 to 5, or as shown in Figs. 6 and 7.

It is thought that the construction of my rail fasteners will be fully understood from the foregoing description, taken in connection with the drawings, and I reserve the right to make such structural changes in my invention as are permissible by the appended claims.

Having now described my invention what I claim as new, is;—

1. The combination with a metallic tie having slots formed therein, and a rail plate provided with slots adapted to register with the slots of said tie, of fasteners mounted in said slots, each fastener comprising an inner member and an outer member, heads carried by said members, lips carried by said members, a wedge shaped malleable spike adapted to be driven between said members, and a hook shaped deflector carried by the inner member for deflecting the end of said spike against the outer member.

2. In combination with a slotted metallic tie adapted to support rails, fasteners mounted in said tie for holding rails thereon, each fastener comprising an inner member and an outer member, heads carried by said members, lips carried by said members, a wedge shaped spike adapted to be driven between said members, and a deflector carried by said inner member for clenching the end of said spike.

3. A rail fastener comprising an inner member, and an outer member, heads carried by said members, lips carried by said members, a malleable spike adapted to be driven between said members, and a deflector carried by said inner member for forcing the end of said spike against said outer member.

4. A rail fastener comprising an inner rail-clamping member, an outer tie-engaging member, a spreader adapted to be driven between said members, and means carried by one of said members for deflecting the end of said spike against the other of said members.

5. A rail fastener comprising two members each having a tie-engaging lug and having confronting edges shaped to provide an irregular path between the members, and a spike adapted to be driven into said irregular path to spread said members.

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

ROBERT O. BLAKEY.

Witnesses:

MAX H. SROLOVITZ.

A. J. TRIGG.