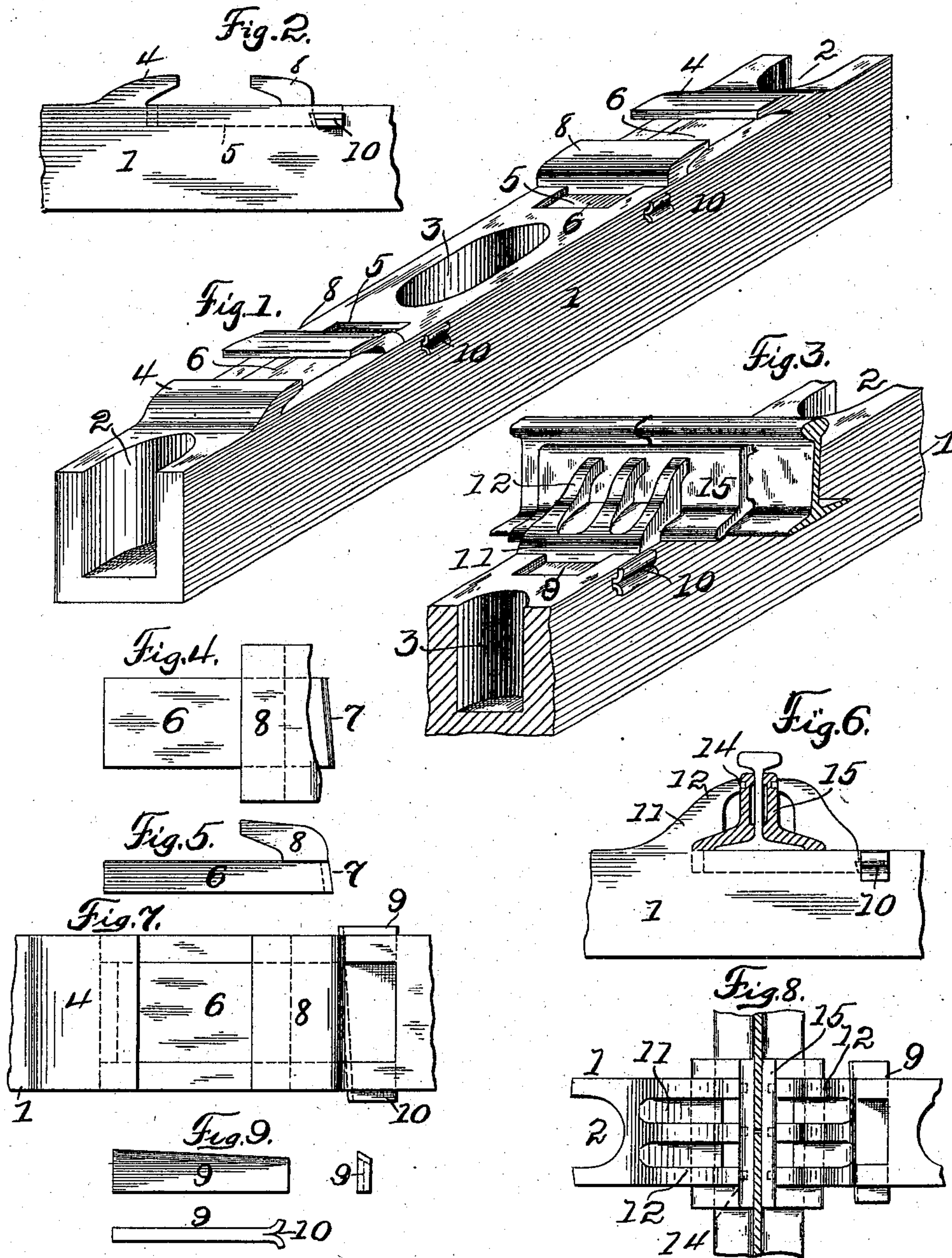


No. 726,818.

PATENTED APR. 28, 1903.

J. H. GALLAGHER.
METALLIC TIE AND RAIL FASTENER.
APPLICATION FILED JAN. 19, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. GALLAGHER, OF BRIDGEWATER, PENNSYLVANIA.

METALLIC TIE AND RAIL-FASTENER.

SPECIFICATION forming part of Letters Patent No. 726,818, dated April 28, 1903.

Application filed January 19, 1903. Serial No. 139,585. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GALLAGHER, a citizen of the United States of America, residing at Bridgewater, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in metallic ties and rail-fasteners; and the object of the invention is primarily to construct a novel, simple, and durable metallic tie and means for securely
15 fastening the rails thereto.

A further object of the invention is to construct a tie of this character and fastening means for the rail which will permit the ready removal of the rail when desired, as
20 may be necessary when it is required to renew the rails.

A still further object of the invention is to securely brace the rails when in position on the ties, as may be required on the high side
25 of curves and the like.

The invention will be hereinafter more specifically described, and then more particularly pointed out in the appended claim, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference will be employed for designating like parts throughout the several views of the drawings, in
35 which—

Figure 1 is a detail perspective view of my improved tie and rail-fastening in the preferred form of construction. Fig. 2 is a side elevation of a portion of the tie and fastening. Fig. 3 is a detail perspective view of a portion of the tie, showing a modified form of construction. Fig. 4 is a top plan view of the detachable clamp member, partly broken away. Fig. 5 is a side elevation of the same.
40 Fig. 6 is a side elevation of the modified form of construction shown in Fig. 3, the fish-plates being in section. Fig. 7 is a top plan view of a part of the tie, showing the preferred form of fastening. Fig. 8 is a top plan
45 view of a part of the tie, showing the modified form of construction of fastening with the rail in section. Fig. 9 is a plan detail side

and detail end view of the wedge-key employed for locking the detachable clamp in position.

To put my invention into practice, I provide a metallic tie 1, which I cast or mold, and in order to lighten the same to as great an extent as possible without weakening the same provide skeleton ends 2 and the hollow
55 center 3. Where it is not desired to extend a brace up against the sides of the rails, I construct the tie near each end with an integral clamp-bar 4, which receives and impinges upon the base of the rail. I provide the upper face
60 of the tie inside the integral clamps 4 with recesses 5, and in these recesses is fitted a bar 6, provided with an inclined or beveled inner end 7 and carrying a clamp member 8 to engage the base of the rail on the opposite side
65 of the rail-web to that engaged by the clamps 4. The cross-tie is provided with transverse slots passing through the tie near the upper face, intersecting with the recesses 5, and through these slots is passed the wedge-key
70 9, the inclined or beveled face of which engages with the inclined or beveled face 7 of the bar 6, whereby to force the bar toward the rail and engage the clamp member 8
75 firmly with the rail-base. The wedge-key 9 is preferably provided with a split end 10, whereby it may be spread at the end after being inserted in position to prevent the accidental displacement thereof. The recess 5
80 is made of sufficient length to permit longitudinal movement therein of the bar 6, whereby this bar may be moved back in order to permit the insertion of the rail into position, and the bar then moved up to bring the clamp member into engagement with the rail,
85 when the wedge-key 9 is then inserted to hold the movable clamp-bar in position. These clamp-bars may be made of a size to permit the use of the fish-plates of ordinary construction at the joints, and throughout the
90 length of the rails between the joints the clamp-bars engage directly with the base of the rails.

In Figs. 5, 6, and 8 I have shown a modified form of construction as regards the fastening
100 means. The tie is of the same form of construction except for the integral clamp-bar carried thereby. The integral clamp-bars 11 in this form of construction are constructed with

ribs 12, which have pins or studs 14 on their ends to engage in recesses provided therefor in the fish-plates 15. The inside clamp-bars 16 are similarly constructed to the outside clamp-bars, if desired, though it will be apparent that a clamp-bar similar to that shown in Fig. 1 may be employed for the inside clamp-bars in this modified form and the ribbed outside bar employed, since this ribbed form of bar is adapted to be employed only where it is desired to brace the rails. It is therefore not essential that the inside bar be ribbed. It is understood, of course, that the ribbed bars provided with pins are employed only at the joints, and where throughout the length of the rail between joints ribbed bars were employed, either on the outside or inside, that the ribs would project direct against the web of the rail instead of engaging into the fish-plates. The same fastening for the movable clamp-bar is employed with this ribbed form of construction.

While I have herein shown and described the invention in detail, yet it will be evident that in the practice of the same various slight changes may be made without departing from the general spirit of the invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A metallic tie having integral ribbed clamp-bars adjacent its ends, studs carried by said ribs to engage the fish-plates, inside clamp-bars slidably mounted in the upper face of the tie, and wedge-bars engaging the ends of said slidable clamp-bars to retain the same in position, substantially as described.

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

JOHN H. GALLAGHER.

Witnesses:

THEO. E. STAHL,
J. M. CARGO.