J. C. DETLOFF.

COMBINED TIE AND RAIL FASTENER.

APPLICATION FILED JULY 1, 1920.

1,372,610. Patented Mar. 22, 1921.

Fig. 1.

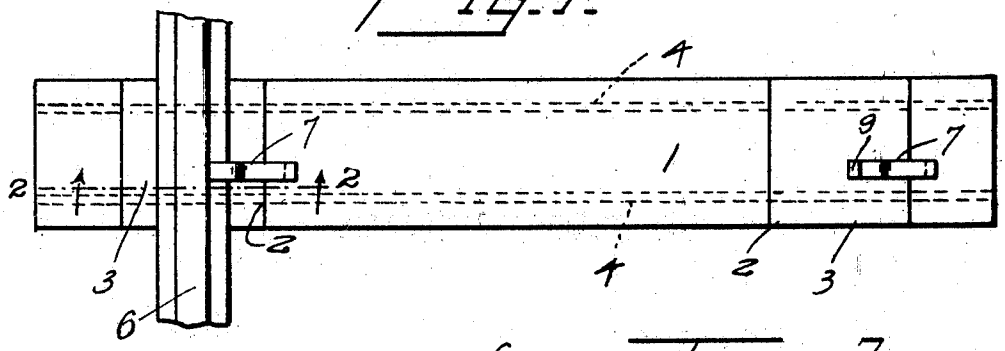
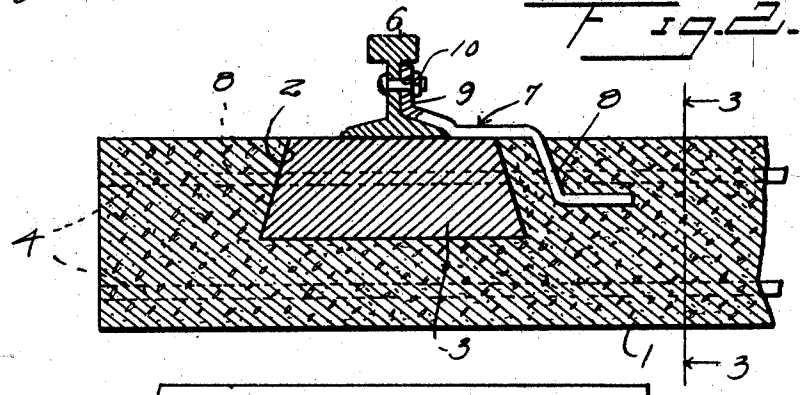


Fig. 2.



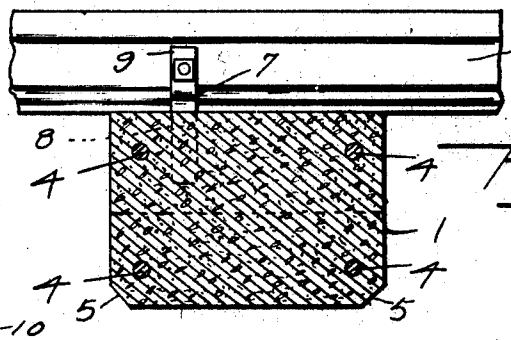
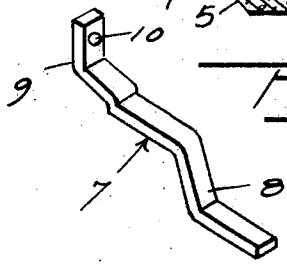


Fig. 3.

Fig. 4.



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COMBINED TIE AND RAIL-FASTENER.

1,372,610. Specification of Letters Patent. Patented Mar. 22, 1921.

Application filed July 1, 1920. Serial No. 393,339.

To all whom it may concern:

Be it known that I, JOHN C. DETLOFF, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Combined Tie and Rail-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to certain new and useful improvements in a combined tie and rail fastener and has for its primary object the provision of a combined tie and rail fastener which will be of simple and efficient construction as well as highly efficient in use and which may be readily molded from a plastic material properly reinforced and with the rail fastener securely anchored in the tie.

The invention has for another object the provision of a tie and rail fastener of the above stated character in which the tie rest or support will be securely retained in proper position within the upper face of the tie as the latter is molded to proper form.

The invention has for a still further object the provision of a tie and rail fastener of the character stated in which certain of the reinforcing members will be extended through the tie rest or support to securely hold the latter in proper position.

With the foregoing and other objects in view, as will appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of coöperating elements as hereinafter more specifically set forth, claimed and shown in the accompanying drawings forming a part of the present application.

Figure 1 is a plan view of a tie and rail fastener constructed in accordance with my invention and having a pair of rails mounted thereon.

Fig. 2 is a longitudinal section on the plane of line 2—2 of Fig. 1.

Fig. 3 is a transverse vertical section on the plane of line 3—3 of Fig. 2, looking in the direction indicated by the arrows.

Fig. 4 is a detail view of the rail fastener removed.

Referring more in detail to the drawings in which similar reference characters designate corresponding parts throughout the several views, 1 indicates the tie which is preferably formed of plastic material such as concrete and has a pair of transverse dovetailed pockets 2 formed in its upper face adjacent the opposite ends of the tie 1, to accommodate correspondingly formed rail supports or rests 3 composed of wood or some other suitable material and formed so that their upper faces will be flush with the upper face of the tie 1. A plurality of longitudinally extending reinforcing rods 4, preferably four in number, are arranged in upper and lower pairs, the rods 4 being equally spaced from the corners of the tie 1. The uppermost or upper pair of reinforcing rods 4 also extend through the tie rests or supports 3, as clearly shown in Fig. 3 of the drawings, thereby serving to securely anchor the tie supports or rests 3 within the pockets 2 of the rail 1. The rods 4 are preferably formed of metal and suspended in proper position during formation of the tie 1 so that the latter may be molded around the same. The tie 1 is also preferably provided with beveled longitudinal edges 5, as shown in Fig. 3 of the drawings.

In order to securely fasten the rails 6 on the rail supports or rests 3, I have provided rail fasteners 7 which have their lower ends extended into the tie 1 and turned, as shown at 8, so that they may be readily anchored within the tie body. These tie fasteners 7 extend upwardly at an incline toward the side or tread portions of the rails 6 and have upwardly directed ends 9 for engagement with the web portions of the rails 6 and provided with bolt openings 10 through which suitable bolts may be extended and also directed through the web portions of the rails 6 to securely fasten the rails 6 in proper position. The rail fasteners 7 may be positioned on either side or both sides of the rails 6, as desired. When the rail fastener 7 is employed for a rail 6, the latter may be passed beneath the same as it is moved to position upon the rail support or rest 3 without danger of weakening the rail fastener 7 as the end thereof is securely anchored in the body of the tie 1 during the molding or formation of the latter.

It will be understood that in forming the combined tie and rail fastener the rods 4 may be extended through the mold and suspended therein with the upper rods 4 also extended through the rail supports or rests 3, as shown in the drawings and the body of the tie 1 then molded around the rods 4

and rail supports or rests 3, as will be readily understood by those familiar with this art.

While the preferred embodiment of the invention has been shown and described it will be understood that minor changes in the details of construction and arrangement of parts may be resorted to within the scope of what is claimed without departing from the spirit of the invention.

What is claimed is:—

1. A tie and rail fastener comprising a plastic tie body having transverse pockets formed therein, a plurality of longitudinal rods extended through the tie body, certain of said rods being extended through the pockets, a pair of rail supports positioned in said pockets, the last mentioned rods being extended through said rail supports, a rail fastening bar embedded in said tie body adjacent the pocket and having an upwardly offset portion adapted to rest upon the face of a rail positioned on said rail supports, said rail fastening bar having its upper portion conforming to the face and web of the rail, and provided with an aperture to receive fastening means for securing the rail fastening bar to the web portion of the rail.

2. A tie and rail fastener comprising a plastic tie body having transverse pockets formed therein adjacent the opposite ends and provided with dovetailed walls, a pair of rail supports of corresponding formation engaged in said pockets, reinforcing rods extended longitudinally through said tie body, certain of said reinforcing members being extended through the said rail supports, and rail fastening bars embedded in said tie and extended on an incline upwardly therefrom, said rail fastening bars having upturned apertured ends for engagement with the web portions of the rail positioned upon said rail supports, said tie having beveled longitudinal edges.

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

JOHN C. DETLOFF.

Witnesses:

GRANT EDUARD CRENA,

HENRY JOHN BAASE.