

V. J. KUNA.
TIE AND RAIL FASTENER.
APPLICATION FILED FEB. 1, 1912.

1,034,918.

Patented Aug. 6, 1912.

FIG. 1

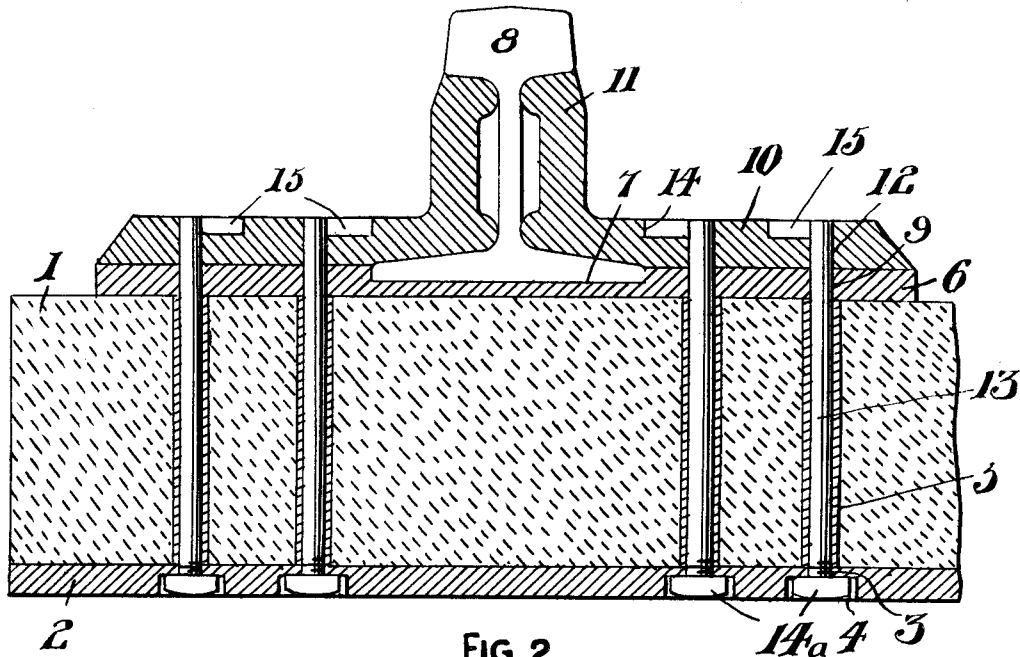
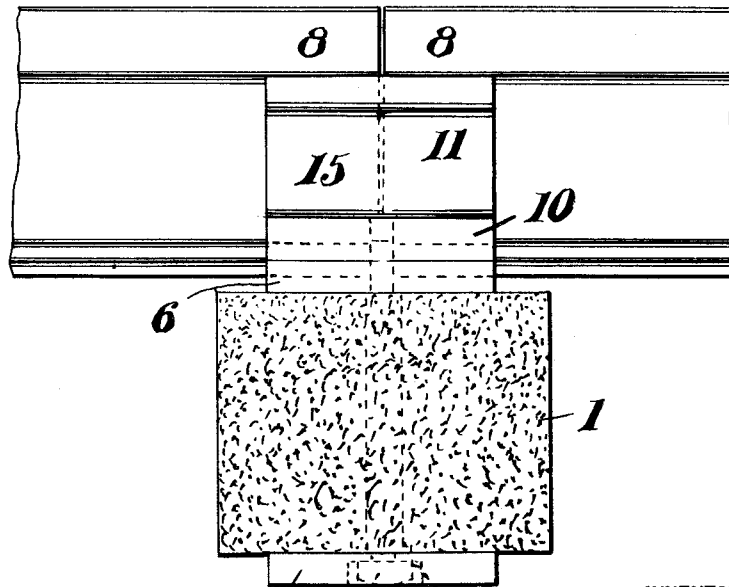


FIG. 2



WITNESSES

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VINCENT J. KUNA, OF HASTINGS, PENNSYLVANIA, ASSIGNOR OF ONE-FIFTH TO FRANCESZEK KULIKOWSKI AND ONE-FIFTH TO FERDINAND MRUGALA, BOTH OF HASTINGS, PENNSYLVANIA.

TIE AND RAIL-FASTENER.

1,034,918.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, VINCENT J. KUNA, a citizen of the United States of America, residing at Hastings, in the county of Cambria and State of Pennsylvania, 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 accompanying drawing.

This invention relates to a tie and rail fastener, and the objects of my invention are to provide a tie that is extremely light and durable and can be manufactured at a minimum cost, and to provide a tie possessing sufficient strength and firmness to support the great weight of roll stock.

Other objects of my invention are to provide a tie that will afford a sure and ready means for attaching a rail chair, and to furnish the tie with a fastener that will preserve the alinement of rails.

Other objects of my invention are to provide a tie with a rail fastener that can be easily and quickly installed without the use of skilled labor, and to accomplish the above results by a mechanical construction that compensates for expansion and contraction and is not liable to injury by ordinary use.

With the above and other objects in view, the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a longitudinal sectional view of a portion of a tie in accordance with this invention, illustrating the fasteners retaining a rail upon the tie, and Fig. 2 is an end view of the same.

A tie in accordance with this invention comprises an oblong concrete body 1 similar in shape to an ordinary wooden tie. Arranged upon the bottom side of the concrete body 1 is a longitudinal metallic plate 2 corresponding in length to the body 1, but of a less width than said body. This plate is provided with openings 3, adjacent to the ends thereof, the openings 3 being arranged in sets and having the lower ends thereof enlarged to provide rectangular pockets 4.

Embedded within the concrete body 1 are vertical metallic tubes 5 having the bores thereof registering with the openings 3 and the upper ends of the tubes flush with the concrete body 1. Mounted upon the top of the concrete body 1, over the upper ends of the tubes 5, is a chair 6, said chair having a transverse groove 7 serving as a seat for a rail 8. The chair 6 is provided with vertical openings 9 alining with the bores of the tubes 5, and mounted upon the chair 6 are the lateral flanges 10 of rail fasteners 11, said fasteners extending on to the base flanges of the rail 8, bracing the web of said rail and supporting the head of the rail. The lateral flanges 10 are provided with vertical openings 12 registering with the openings 9 of the chair 6, and extending upwardly through the tubes 5, the openings 9 and 12 are tie rods or bolts 13. These tie rods or bolts 13 have radially disposed heads 15 seated in recesses 14 provided therefor in the lateral flanges 10 of the rail fasteners, the lower ends of the bolts 13 are screw threaded and are provided with nuts 14 that are seated in the pockets 4. The tie rods or bolts 13 retain the chairs 6 upon the tie and the rail fasteners 11 in position to firmly hold the rail 8 and prevent vertical and lateral displacement.

Strong and durable metal is used throughout the construction of the tie and rail fastener, with the exception of the concrete body heretofore noted.

While I have herein described the fastener as holding a rail upon a tie, it is to be understood that the confronting ends of two rails can be readily held by the fasteners, as shown in Fig. 2 of the drawing.

What I claim is:—

A tie and rail fastener comprising a concrete body, a metallic plate arranged against the bottom of said body and formed with sockets, sets of vertically disposed tubes embedded in said body and registering with said sockets, a chair mounted upon the top of said body and provided with a transverse groove to form a seat for the reception of the bases of a pair of opposing rails and further provided with openings registering with the upper ends of said tubes, fish plates engaging the opposing sides of the opposing rails and provided with lateral flanges seat-

ed upon said chair and having their ends
flushed with the ends of the chair, said
flanges provided with openings registering
the openings of the chair and further pro-
5 vided in their upper faces with recesses dis-
posed at right angle with respect to the
openings, bolts extending through said
openings and tubes and into said sockets,
right angularly disposed heads integral with

said bolts seated in said recesses, and nuts 10
mounted in said sockets and engaging the
lower ends of the bolts.

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

VINCENT J. KUNA.

Witnesses:

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