

W. DEAN.
METALLIC TIE AND RAIL FASTENER.
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997,244.

Patented July 4, 1911.

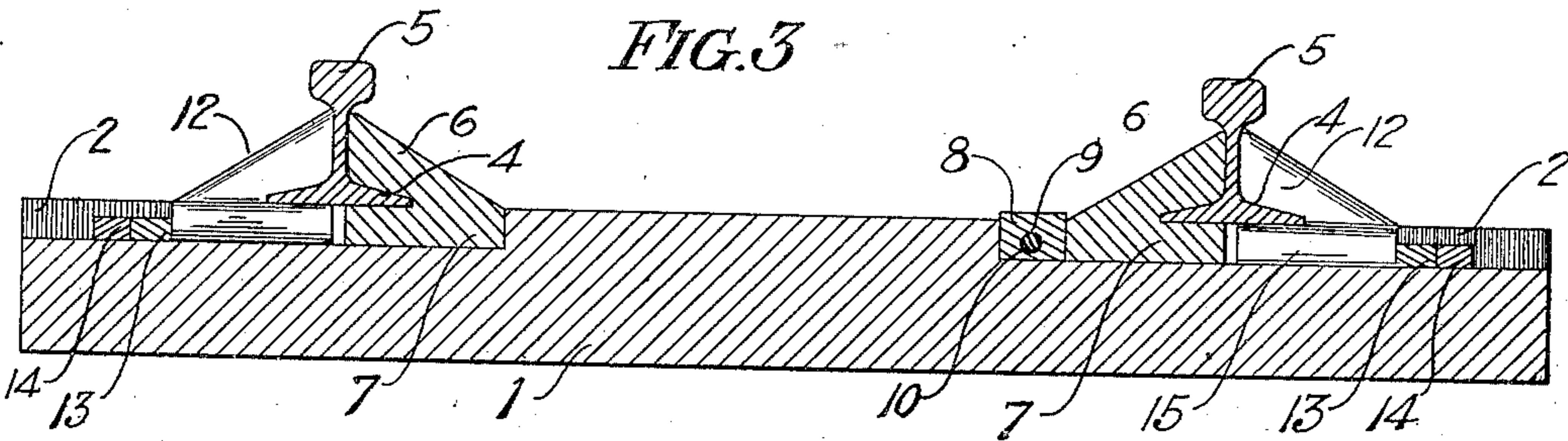
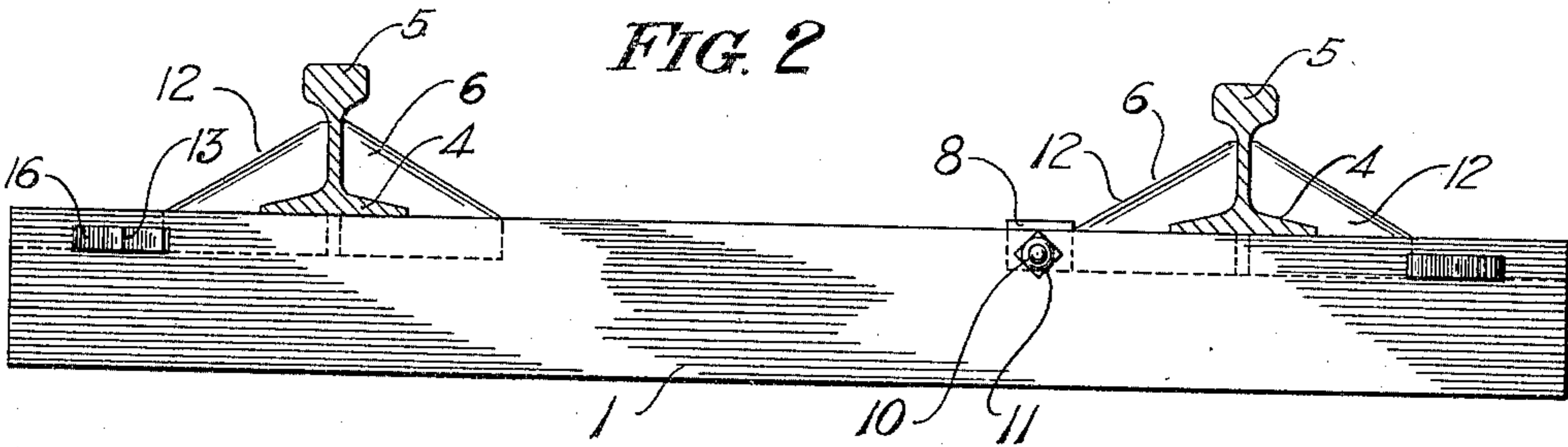
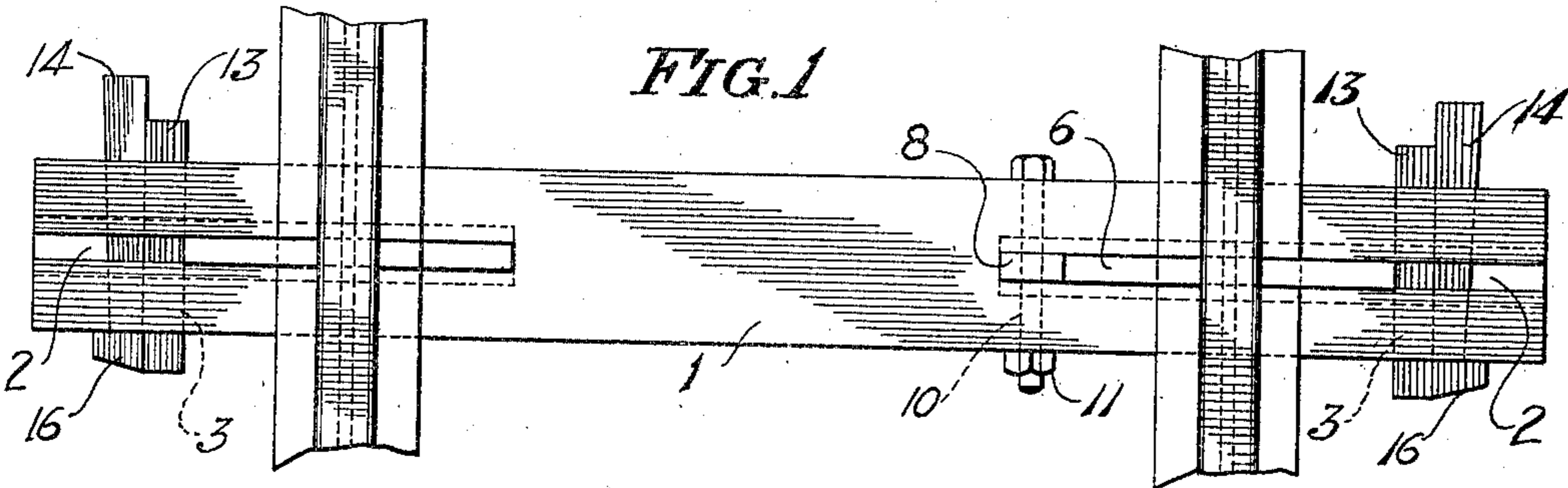
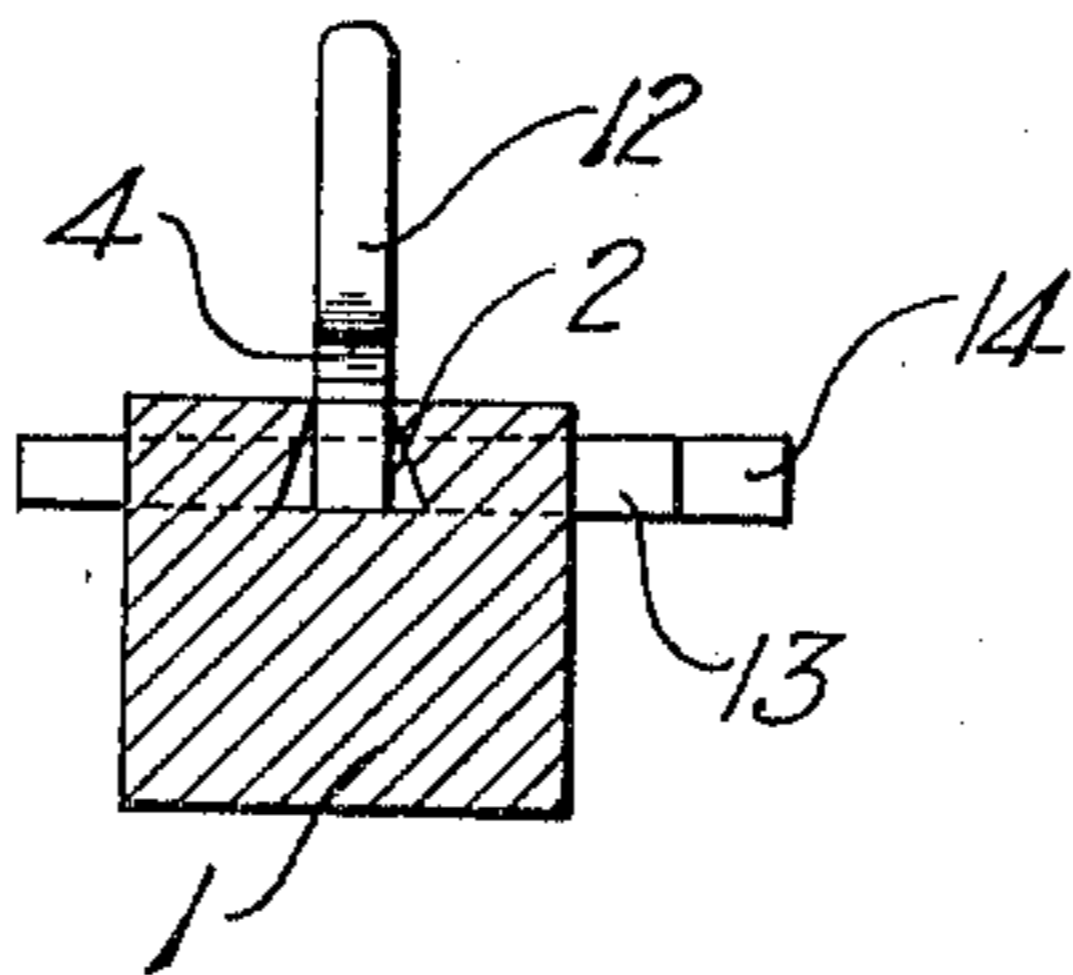


FIG. 4



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METALLIC TIE AND RAIL-FASTENER.

997,244.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed April 25, 1911. Serial No. 623,159.

To all whom it may concern:

Be it known that I, WILLIAM DEAN, a citizen of the United States of America, residing at Manor, in the county of Westmoreland 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 drawing.

This invention relates to metallic ties and rail fasteners, and the objects of my invention are to provide a metallic tie for firmly supporting the rails of a track, thereby obviating the necessity of using wood, and to furnish a metallic tie with a fastener that will positively retain rails upon the tie.

Other objects of the invention are to provide a tie that is simple in construction and easy to install, and to provide a fastener that obviates the necessity of using splice bars, bolts and nuts as a fastening medium for rails.

Further objects of the invention are to provide a rail fastener that allows for the expansion and contraction of the rails held thereby, and to accomplish the above results by a mechanical construction that is inexpensive to maintain in an operatable condition.

These and such other objects as may hereinafter appear are attained by 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 like numerals of reference designate corresponding parts throughout the several views, in which:—

Figure 1 is a plan of the tie and rail fastener, Fig. 2 is a side elevation of the same, Fig. 3 is a longitudinal sectional view of the tie and rail fastener, and Fig. 4 is a cross sectional view of the same.

A tie in accordance with this invention comprises an oblong body 1, preferably rectangular in cross section and made of metal or concrete. The top of the body 1 at the ends thereof is provided with longitudinal dove-tailed grooves 2 and these grooves are intersected by transverse openings 3. The ends of the tie are adapted to support the base flanges 4 of rails 5, and as the fasteners at the ends of the tie are identical in construction, I deem it only necessary to describe one of said fasteners.

6 denotes an inner fastener overhanging the inner base flanges 4 of the rail and engaging the web thereof, said fastener having a depending dove-tailed tongue 7 adapted to engage in the groove 2 and extend under the base flange 4 of the rail. Interposed between the inner fastener 6 and the inner end of the groove 2 is a filler block 8 and said block is not dove-tailed, whereby it can be moved vertically from the groove, but it is provided with a transverse opening 9 to receive the bolt 10, said bolt being arranged transversely of the tie and provided with a nut 11 whereby it will remain in engagement with said tie.

12 denotes an outer rail fastener similar to the inner rail fastener, and the outer rail fastener is retained within the groove 2 by keys 13 and 14 arranged in the opening 3, the key 13 engaging the tongue 15 of the fastener 12, this key being tapered whereby it can be driven between the key 14 and the tongue 15. The key 14 has a head 16 and after said key has been placed in the opening 3, it is shifted to one side of said opening to provide clearance for the driving of said key. The key 14 is also tapered and with the head 16 thereof engaging the outer side of the tie, said key cannot become accidentally displaced relatively to said tie when the key 13 is driven home.

It is through the medium of the filler block 8 that a rail can be renewed without moving the tie or the tie renewed without removing the rail, it being only necessary to remove the filler block 8, shift the inner fastener 6 to the inner end of the groove 2 and then sufficient clearance is provided for the withdrawal of the tie or rail.

The fasteners 6 and 12, the block 8 and the keys 13 and 14 can be made of light and durable metal, and with these elements in position, it is practically impossible for the rails of a track to spread or become laterally or vertically displaced.

It is obvious that the tie can be made of a sufficient length to support one or more tracks, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof are susceptible to such variations as fall within the scope of the appended claim.

What I claim is:—

The combination with rails, of an oblong body adapted to support said rails, said

body having the ends thereof provided with longitudinal dove-tailed grooves, inner fasteners adapted to engage the inner sides of the rails, depending tongues carried by said
5 inner fasteners and adapted to engage in the grooves of said body, a filler block arranged between the inner ends of said grooves and said inner fasteners, means adapted to detachably hold said filler blocks in the
10 grooves of said body, outer fasteners arranged in the grooves of said body and adapted to engage the outer sides of said rails, depending dove-tailed tongues carried
by said outer fasteners and adapted to engage in the grooves of said body, tapering 15 keys arranged transversely of said body, heads carried by said keys, and tapering keys driven between the outer ends of said outer fasteners and the first mentioned keys, substantially as described. 20

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

WILLIAM DEAN.

Witnesses:

BERT SECHRIST,
WILLIS W. DICK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
