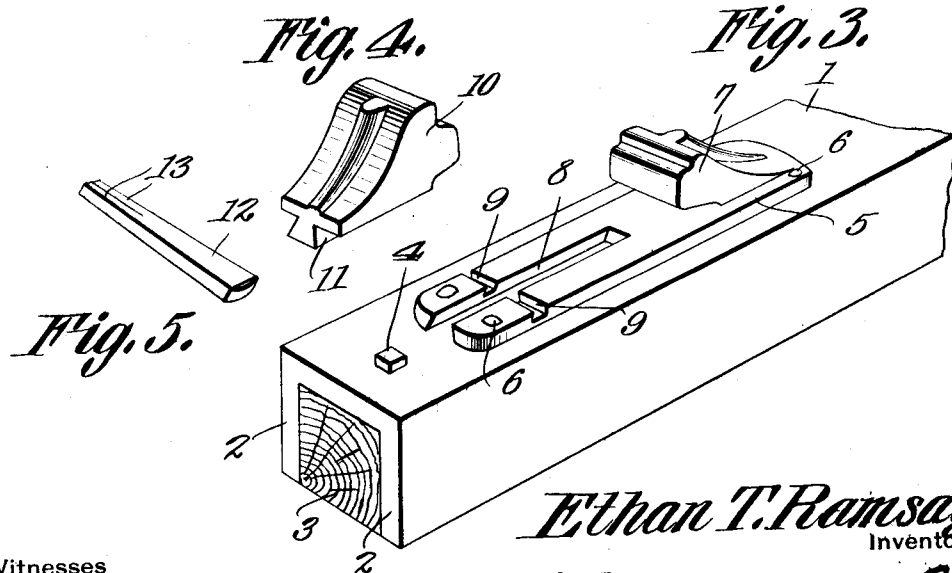
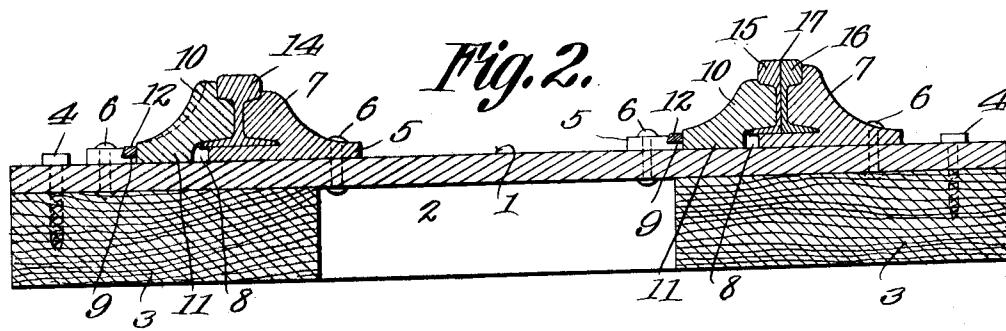
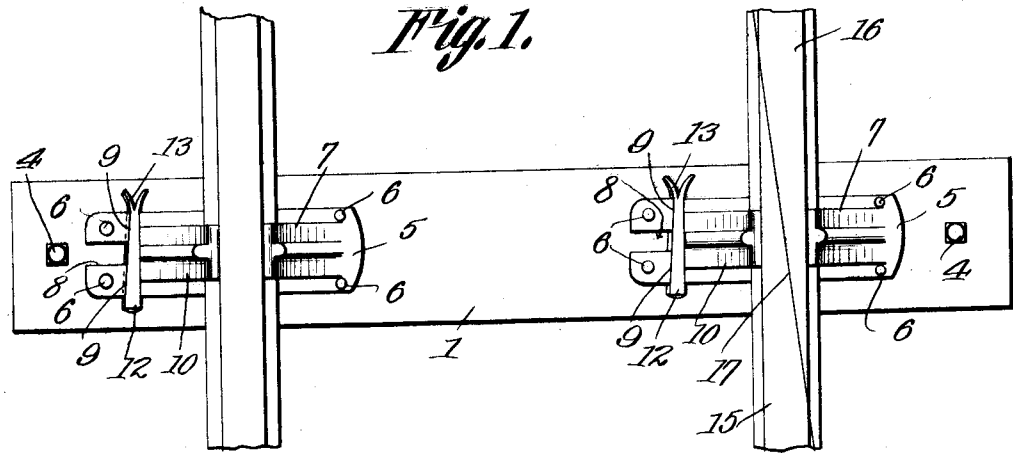


E. T. RAMSAY.
METALLIC TIE AND RAIL FASTENER.
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1,068,700.

Patented July 29, 1913.



Witnesses

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UNITED STATES PATENT OFFICE.

ETHAN T. RAMSAY, OF BIRDSBORO, PENNSYLVANIA.

METALLIC TIE AND RAIL-FASTENER.

1,068,700.

Specification of Letters Patent.

Patented July 29, 1913.

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To all whom it may concern:

Be it known that I, ETHAN T. RAMSAY, a citizen of the United States, residing at Birdsboro, in the county of Berks and State of Pennsylvania, have invented a new and useful Metallic Tie and Rail-Fastener, of which the following is a specification.

The present invention relates to improvements in metallic ties and rail fasteners, one object of the present invention being the provision of a metallic channel iron tie, having disposed within and below the rail supporting portion thereof, a block of wood to provide a cushioning means at such point of the tie, the fastening means for the rail being secured to the upper surface of the tie above the cushioning block, and being so disposed as to clamp the tie upon the rail and against transverse movement, yet permitting the same the necessary longitudinal movement due to expansion and contraction.

A further object of the present invention is the provision of a rail fastener especially adapted to connect the meeting ends of the rails, which in the present case are cut obliquely and are so disposed between the fastener as to dispense with the use of fish plates or other connecting mediums at the joints, the present fastener taking the place of the fish plates and providing means for the necessary expansion between the joints without the bulging or battering of the rails at the joints.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:—Figure 1 is a top plan view of a tie with the fastener in position upon a single rail and at the joint of two connecting rails. Fig. 2 is a longitudinal sectional view through the tie, rail fasteners, and the rails as illustrated in Fig. 1. Fig. 3 is an enlarged perspective view of one end of the tie with the fixed portion of the rail fastener therethrough. Figs. 4 and 5 are detailed perspective views of the respective removable portions of the rail fastener.

Referring to the drawings, the numeral 1 designates the rail supporting surface of the

metal tie, which is provided with the two downwardly extending parallel flanges 2, which constitute in cross section a channeled tie, between the ends of which are disposed the blocks 3 preferably of wood, said blocks extending to such a distance as to be at the extreme ends of the tie and beyond the rail bearing surface or portions thereof. The large screws 4 are employed to maintain the blocks 3 in their relative positions.

The rail fastener which is properly attached to the upper surface of the rail bearing portions of the tie, each consists of the base 5, which is properly secured to the tie by means of the rivets or bolts 6, the rail brace or chair 7 being cast integral therewith at one end and shaped to properly fit over the base of the rail against the web thereof and below the adjoining portion of the tread as clearly illustrated in Fig. 2.

The base 5 is slotted as at 8, said slot being preferably dovetailed shape in cross section and terminating at a point slightly below the base of the rail 14, as clearly shown in Fig. 2 while disposed transversely of the base adjacent one end of the slotted portion thereof, are the alined dove-tailed and wedging recesses 9, said recesses 9 not being extended through the full depth of the metal and terminating at a point for the proper reception of the wedging pin 12 as will presently appear. The removable rail base plate or engaging member 10 is provided with the dove-tailed shaped lug projection 11 upon the lower face thereof, for sliding engagement with the groove 8, said member 10 being disposed to be moved to and from the member 7, to properly engage and hold the rail 14 or the ends 15 and 16 of the rail as shown at the right in Fig. 1, properly positioned. When the parts are in the position as shown in Fig. 2, the wedging pin 12 is driven into the recesses 9 and as said pin 12 is of greater thickness than the depth of the recess, the upper portion and the portion thereof transverse of the slot will engage the outer edge of the movable bracing member 10, thus tending to wedge the same against the rail 14 or the rail sections 15 and 16, so as to properly bind the rail between the members 7 and 10 and against spreading movement, the members 7 and 10 being so constructed as to properly permit of the longitudinal movement of the rail due to expansion and contraction. The end 13 of the pin 12 is

split, or the same may be bent so as to assume the shape as shown in Fig. 1, so that the same cannot be accidentally removed from the recesses 9 when in proper wedging
5 and locking position.

When it is desired to use the fastener in connection with overlapping or meeting ends of rail sections, as 15 and 16, the sections are cut as at 17 to form the joint, the
10 members 7 and 10 being disposed as shown in Figs. 1 and 2 at the right thereof to lock the ends properly together and thus dispense with the employment of fish plates or other connecting means which tend to
15 weaken the web of the rail and also in most cases become rusted when connected therewith so as to interfere with the expansion at said points.

What is claimed is:—

20 A rail plate and fastener, including a base plate having one terminal slotted longitudinally, the upper surface of the plate intermediate the ends of the slot being provided

with a dove-tailed tapering recess transversely of the plate, a rail brace formed upon 25 the upper face of the plate at the end remote from the slotted terminal, a separable rail brace provided with a longitudinal rib upon the lower face thereof for slidable insertion within the longitudinal slot of the 30 plate, said latter rail brace being provided with a projecting portion adapted to normally register with the transverse recess of the plate, and a wedging and locking member insertible in said transverse recess for 35 engagement with the projecting portion of the slidable rail brace to move such rail brace toward the opposite rail brace and into rail engaging position.

In testimony that I claim the foregoing as 40 my own, I have hereto affixed my signature in the presence of two witnesses.

ETHAN T. RAMSAY.

Witnesses:

EDMUND L. DEAM,
WILLIAM K. YOUNG.

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