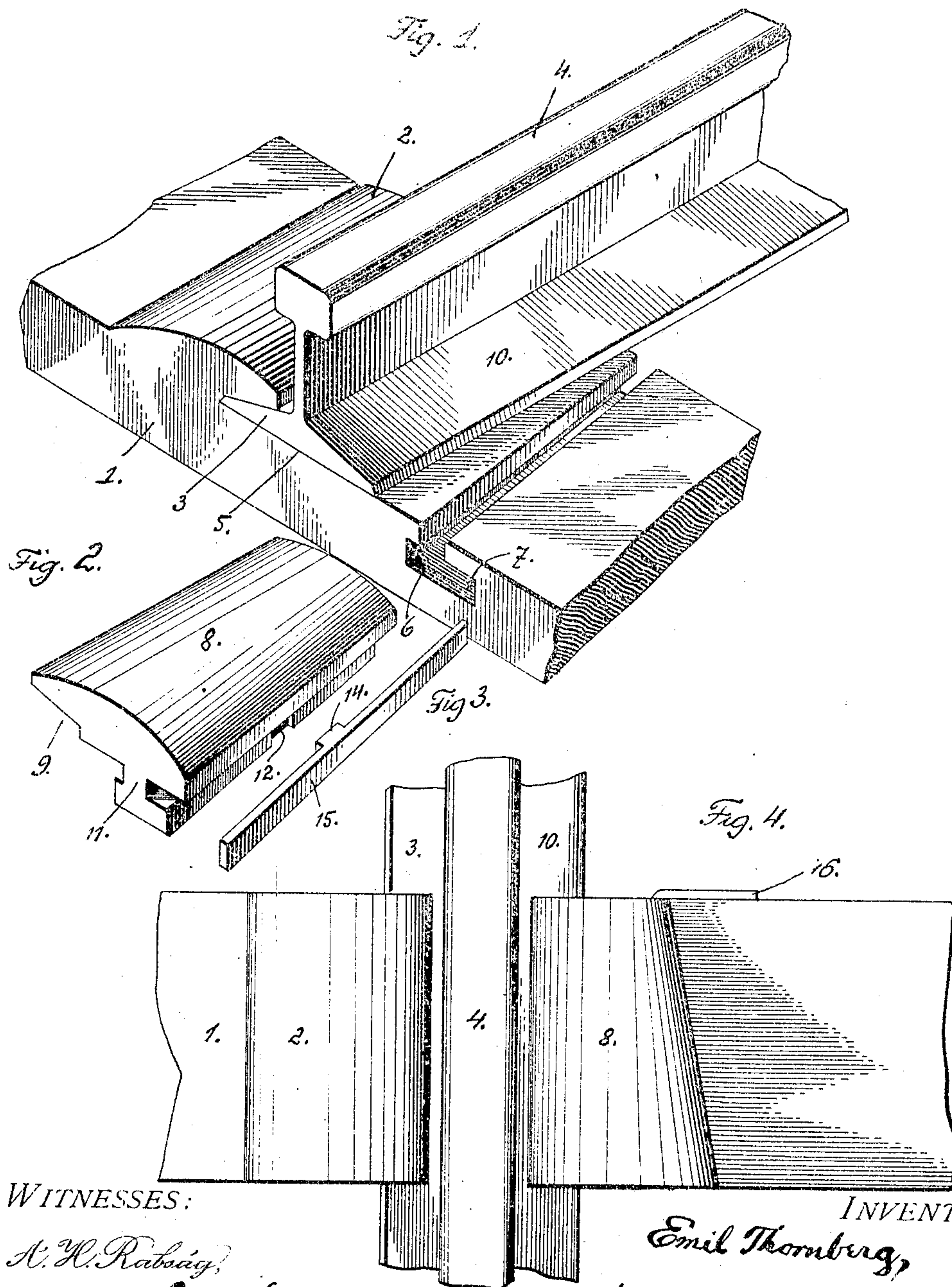


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E. THORNBURG.
RAIL FASTENER.
APPLICATION FILED DEC. 6, 1906.



WITNESSES:

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EMIL THORNBURG, OF McKEESPORT, PENNSYLVANIA.

RAIL-FASTENER.

No. 844,834.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed December 6, 1906. Serial No. 346,570.

To all whom it may concern:

Be it known that I, EMIL THORNBURG, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to metallic ties and rail-fasteners; and the invention has for its object to provide a simple and inexpensive tie upon which rails can be easily and quickly fastened.

15 Another object of this invention is to provide a tie having a novel fastener for preventing the displacement of rails mounted thereon.

Briefly described, my improved tie comprises a plate having outer integral fasteners and inner detachable fasteners, the detachable fasteners being held by a novel form of key disposed at an angle to the rail-seats of said tie.

25 The detail construction of the tie and fastener will be presently described and then specifically pointed out in the appended claims, and referring to the drawings forming part of this specification like numerals of reference designate corresponding parts throughout the several views, in which—

30 Figure 1 is a perspective view of a portion of a tie constructed in accordance with my invention. Fig. 2 is a perspective view of a detached fastener. Fig. 3 is a similar view of a key employed for locking the fastener in a tie. Fig. 4 is a plan of a portion of the tie, illustrating a section of rail fastened thereon.

To put my invention into practice, I construct my improved tie of a metallic plate 1, having integral outer rail-fasteners 2, said fasteners corresponding to overhanging flanges adapted to engage the outer base-flange 3 of a rail 4. In the accompanying drawings I have simply illustrated the outer end of one tie, it being understood that both ends of the tie are similar to the end illustrated.

40 At an angle to the seat 5 of the rail 4 I provide the tie 1 with an inverted-T-shaped groove 6, the horizontal portion of said groove at one side thereof being of a greater width than the opposite side to provide a key-way 7.

55 The detachable fastener adapted to hold one side of the rail 4 comprises a tapering plate 8, recessed, as at 9, to accommodate the

inner base-flange 10 of the rail 4. The inner edge of the tapering plate 8 is adapted to lie parallel with the rail 4, while the outer edge lies parallel with the angularly-disposed 60 groove 6 of the tie 1. The plate 8 adjacent to the outer edge thereof is provided with a depending inverted-T-shaped tongue 11, one side of the tongue being of a greater width than the other side to provide a recess 12 for 65 a lug 14, carried by a locking-key 15, said key being of a greater length than the width of the tie 1.

To secure the detachable fastener upon the tie 1 to firmly hold the rail 4 thereon, the 70 key 15 is first placed in engagement with the tongue 11 of the fastener, the lug 14 seating in the recess 12 of said tongue. The fastener and the key are then placed in engagement with the tie by sliding the tongue 11 in the 75 groove 6 until it becomes firmly wedged therein. The protruding end of the key 15 is then bent to engage the side of the tie 1, as at 16, thus firmly locking the detachable fastener in engagement with the tie 1. 80

My improved fastener is applicable to rail-joints where it is desired to secure the confronting ends of two sections upon a tie, the fasteners allowing sufficient space for the ordinary fish-plate or bar commonly used for 85 holding the web portions of two rails together.

From the novel construction of my improved tie and rail-fastener it will be observed that the use of spikes is dispensed with, also nuts and bolts, and that by providing the 90 locking-key 15 in connection with the detachable fastener I am enabled to quickly secure a rail to a tie without the use of skilled labor. It is obvious that various kinds of material may be used in constructing my im- 95 proved tie and rail-fastener and that such changes in the size, proportion, and minor details of construction as are permissible by the appended claims may be resorted to without departing from the spirit and scope of the in- 100 vention.

What I claim, and desire to secure by Letters Patent, is—

1. In a metallic tie and rail-fastener, the combination with rails, of a plate, outer fasteners carried thereby and adapted to engage 105 the outer base-flanges of rails, said tie having angularly-disposed grooves formed adjacent to said outer fasteners, detachable fasteners mounted over said grooves and adapted to en- 110 gage the inner base-flanges of rails, said fasteners having depending tongues for en-

gaging in said grooves, keys engaging said tongues and adapted to have their ends bent to engage said tie, substantially as described.

2. A metallic tie and rail-fastener embody-
5 ing a plate, an outer integral fastener carried thereby; said tie having a groove formed therein at an angle to said outer fastener, and detachable fasteners mounted over said groove, a depending tongue carried by said
10 fastener and adapted to engage in said groove, a key mounted in said groove and adapted to have its end bent to engage the side of said plate, a lug carried by said key and engaging said tongue.

15 3. A metallic tie and rail-fastener embodying a plate, an outer fastener carried thereby, an inner fastener detachably connected to said plate, a depending tongue carried by

said fastener adapted to engage in said plate, a locking-key coinciding with said tongue, a
20 lug carried by said key and engaging said tongue.

4. A metallic tie and rail-fastener embodying a plate, an outer fastener carried by said plate, a detachable inner fastener, a depend-
25 ing recessed tongue carried by said fastener and adapted to engage in said plate, and a locking-key engaging said tongue for holding said fastener upon said tie.

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

EMIL THORNBERG.

Witnesses:

MAX H. SROLOVITZ;
K. H. BUTLER.