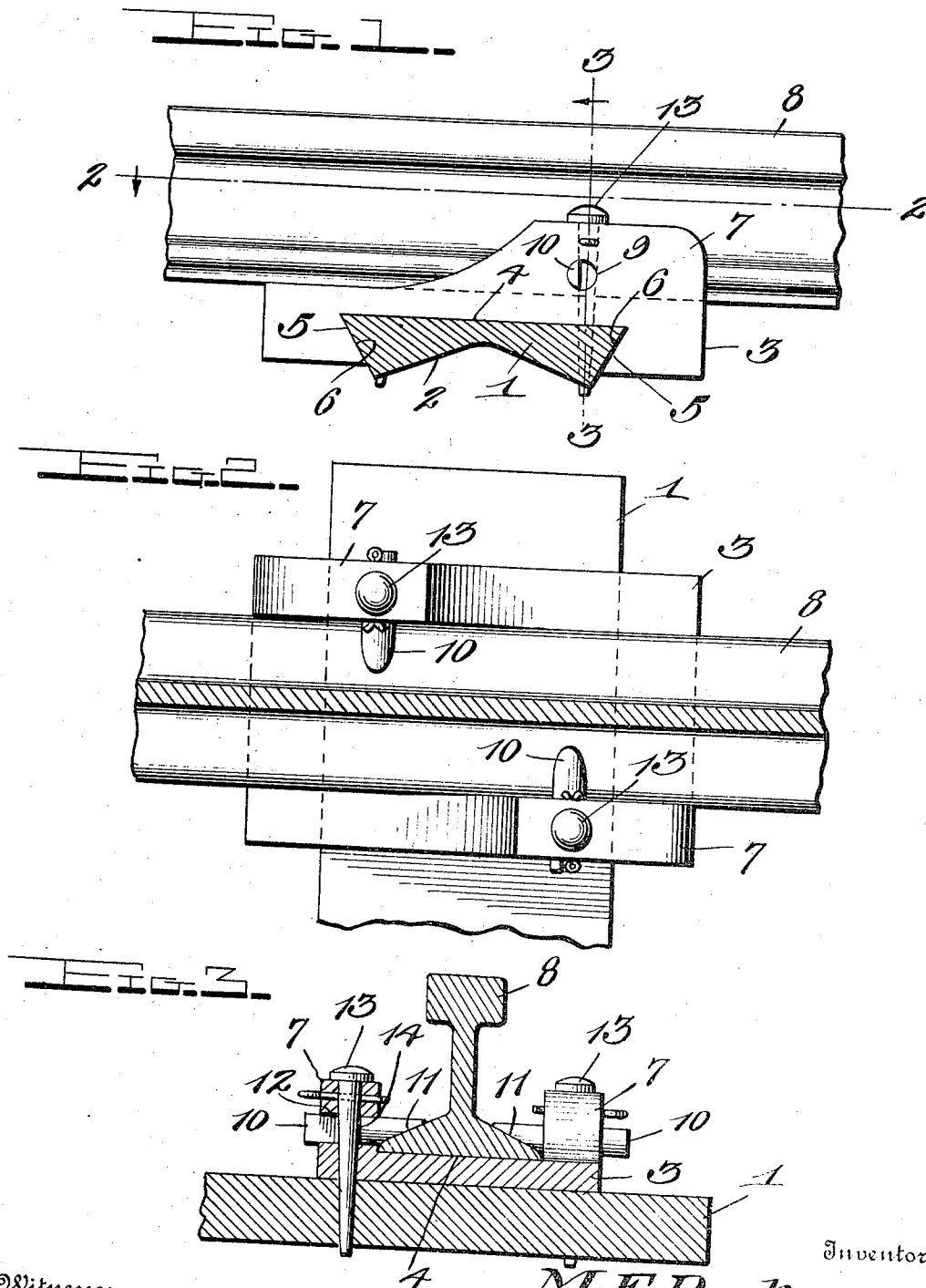


M. E. PACKER.
METALLIC TIE AND RAIL CHAIR.
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1,041,337.

Patented Oct. 15, 1912.



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METALLIC TIE AND RAIL-CHAIR.

1,041,337.

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To all whom it may concern:

Be it known that I, MARION E. PACKER, a citizen of the United States, residing at Rockwell City, in the county of Calhoun and State of Iowa, have invented certain new and useful Improvements in Metallic Ties and Rail-Chairs, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in rail fasteners and metallic cross ties, the object of the invention being to provide means whereby the rail can be securely fastened to the tie.

15 A further object of the invention is to provide a rail fastener of novel construction which is adapted for use in connection with a novel form of metallic cross tie.

20 Another object of the invention is to provide a device of this character which will possess advantages in points of efficiency and durability, is inexpensive of manufacture and at the same time is simple in construction and operation.

25 With the above and other objects in view my invention consists in the novel features of construction and in the arrangement and combination of parts hereinafter more fully described, pointed out in the claims and shown in the accompanying drawings, in which,

30 Figure 1 is a side elevation; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; and Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

35 Referring more particularly to the drawings, 1 indicates a cross tie preferably constructed of metal or other suitable material, such as wood if desired. The under side of the tie is channeled as shown at 2. Mounted upon the tie is a rail chair 3, said chair being provided on its under side with a transverse groove 4 having the undercut side walls 5 adapted for the reception of the beveled edges 6 of the tie which forms a substantially dovetailed connection between the tie and the chair to prevent any longitudinal movement of the chair. Reversely disposed vertical flanges 7 are formed on the top side of the chair and arranged upon the opposite sides of the rail 8. A transverse opening 9 is formed in each of the flanges and adapted for the reception of the locking pin 10, said pin having its inner end provided with the beveled face 11 adapted to fit snugly upon the base flange

of the rail. A vertical opening 12 is formed in each of the flanges communicating with the transverse opening 9 and adapted to receive the securing pins 13, said pins being disposed within the opening 12 and having their lower ends passing entirely through the tie 1. The locking pin 10 is cut away to form a shoulder 14 against which the securing pin 13 is adapted to abut to hold the locking pin in its operative position.

It will be seen that by having the pins 13 passing entirely through the chair and the tie it will prevent any lateral movement of the chair. Any suitable fastening means may be applied to the lower ends of the pins 13 to hold them securely in place.

In placing the chair 3 upon the tie the same is to be placed at the end of the tie so that the beveled portions 6 of the tie will fit into the under cut side walls 5 of the groove 4. The chair will then be slid upon the tie till the openings 12 in the chair register with the openings in the tie, the locking pins 13 will be inserted in the openings to hold the chair in place. When the rails are laid the pins 13 will have to be removed to allow for the insertion of the locking pin 10, the securing pins will then be replaced to hold the locking pin and also the chair.

From the above description taken in connection with the drawings it will be readily apparent that I have provided a rail fastener on metallic cross ties whereby the rails will be securely fastened to the tie.

While I have shown and described the preferred form of my invention it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying my invention into practice without sacrificing any of the novel features or departing from the scope thereof.

What I claim is:—

1. In a device of the character described, the combination of a tie having a channeled base, and beveled faces formed on the longitudinal edges thereof, of a rail chair having a transverse groove formed on its under side, said groove being provided with undercut side walls adapted for the reception of the beveled faces of the tie, longitudinally disposed vertical flanges formed on the upper face of the chair and arranged upon opposite sides of the rail, said flanges being each provided with a transverse opening,

a locking pin disposed within said opening and adapted to engage the base flange of the rail, means for holding said pin in a locked position, said means being also
5 adapted to prevent lateral movement of the chair upon the tie.

2. In a device of the character described, the combination with a metallic cross tie, having a channeled base and beveled faces
10 formed upon its longitudinal edges, a rail chair having a transverse groove formed in its under side, said groove being provided with undercut side walls adapted for the reception of the beveled faces of the tie,
15 longitudinally disposed vertical flanges formed upon the upper face of the chair and arranged upon opposite sides of the rail, each of said flanges being provided with a transverse opening, a locking pin
20 disposed in said opening, a beveled face formed upon one end of the pin and adapted to engage the base flange of the rail, each of said flanges being also provided with a vertical opening communicating with
25 the transverse opening, and securing pins arranged within the vertical openings and holding the locking pin in place, said securing pins being disposed through open-
30 ings in the tie to prevent lateral movement of the chair upon the tie.

3. In a device of the character described, the combination with a metallic cross tie, having beveled faces formed upon its longitudinal edges, of a rail chair having a
transverse groove on its under side, said
35 groove being provided with undercut side walls adapted for the reception of the beveled faces of tie, longitudinally disposed vertical flanges formed upon the upper face of the
40 chair and arranged upon opposite sides of the rail, each of said flanges being provided with a transverse opening, a locking pin disposed within the opening and adapted to engage the base flanges of the rail, each
45 of said flanges having a vertical opening adapted to communicate with the transverse opening, said locking pin being cut away to form a shoulder against which the securing pin is adapted to abut and hold the
50 same in position, said securing pin being disposed through an opening in the tie to hold the chair against lateral movement upon the tie.

In testimony whereof I hereunto affix my
signature in the presence of two witnesses. 55

MARION E. PACKER.

Witnesses:

JOHN BEANE,

A. MEWSBURGER.