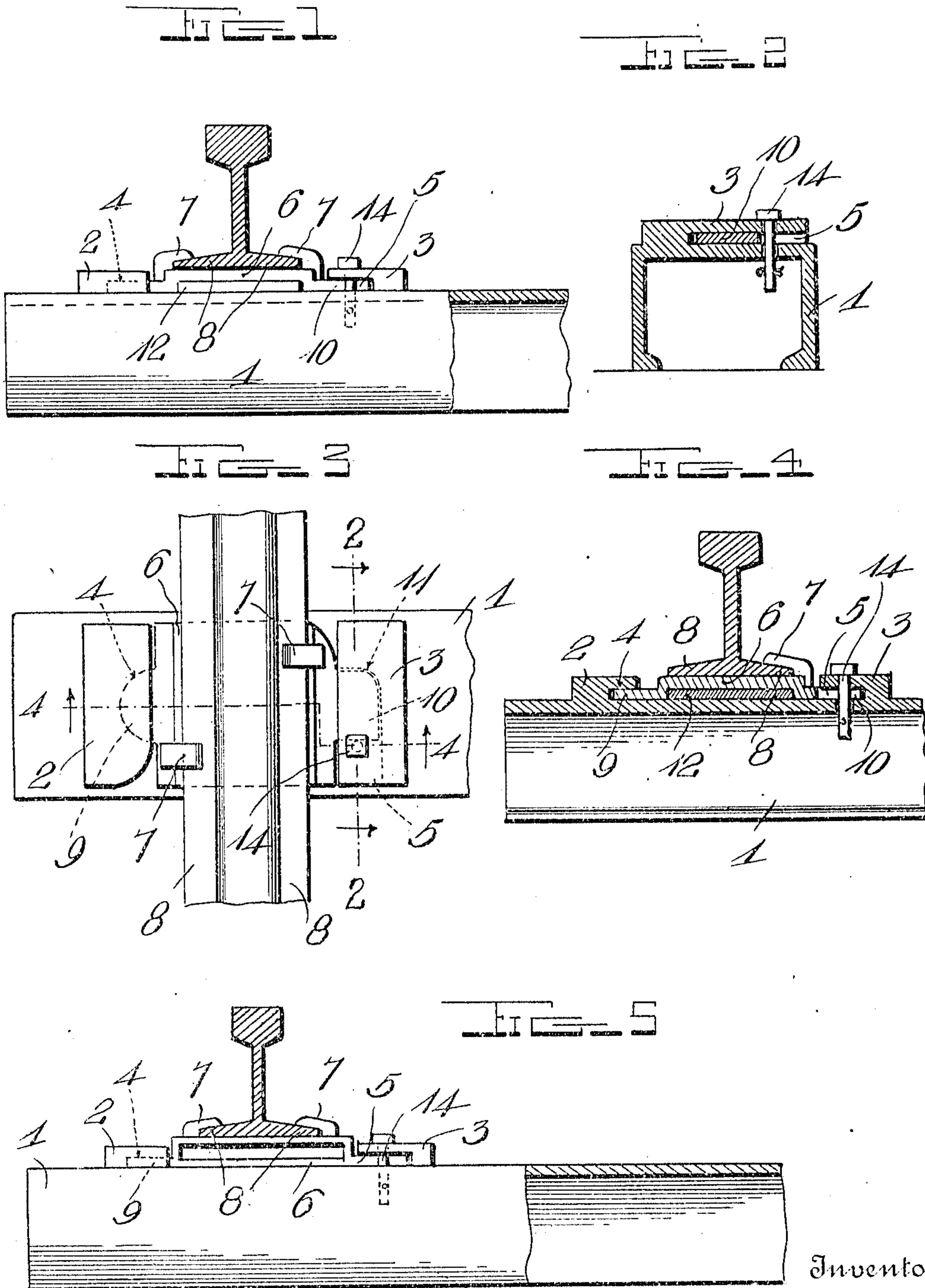


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RAIL TIE AND FASTENING.  
APPLICATION FILED SEPT. 9, 1909.

954,248.

Patented Apr. 5, 1910.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## RAIL TIE AND FASTENING.

954,248.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed September 9, 1909. Serial No. 516,861.

*To all whom it may concern:*

Be it known that I, WILLIAM F. BECK, a citizen of the United States, residing at Waltham, in the county of Mower and State of Minnesota, have invented certain new and useful Improvements in Rail Ties and Fastenings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a rail tie and fastening and has for its object to provide a fastening whereby the rails may be securely held against spreading upon the ties, thereby obviating the liability of wrecks, now due to this common cause.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of the tie, illustrating the application of the rail fastening means, the tie being shown partly in section and the end of the rail in section; Fig. 2 is a transverse section, taken on the line 2—2 of Fig. 3; Fig. 3 is a plan view of Fig. 1; Fig. 4 is a longitudinal section taken on line 4—4 of Fig. 3, and Fig. 5 is a view similar to Fig. 1, illustrating a modified view of rail engaging plate.

Referring to the drawings for a more particular description of the invention, 1 indicates the tie which is made of metal and is provided upon its top and at each end with a pair of longitudinally spaced keepers 2 and 3, which are cast with the tie. The keeper 2 is provided with a central opening 4, in its inner edge, while the other keeper 3 is provided at one of its inner corners with a recess 5, which extends the greater portion of the length of the keeper. The rail engaging plate 6, which is of flat approximately rectangular form, is provided at diagonally opposite corners with projections 7, adapted to engage the base flanges 8 of the rails. This plate is provided at one side edge with a central semi-circular extension 9, which fits in the opening or recess 4 of the keeper 2, while it is provided at its opposite edge with a laterally projecting extension 10, having one corner as 11, beveled or cut away.

A cushioning block 12, of wood or other like material is interposed between the rail engaging plate and the top of the tie to reduce the jar or vibrations induced by the rolling stock as the train passes along the track.

In Fig. 5, the rail engaging plate is shown in the form of a hollow boxing but the construction of the fastening is otherwise the same as that disclosed in Figs. 1 to 4.

The fastening is applied by inserting the extension 9 of the rail engaging plate in the opening of the keeper 2, and then swinging the plate in the arc of a circle, with said extension as a pivot to engage the rail engaging projections of the plate with the base flanges of the rail and to bring the other extension 10, in the recess 5 of the other keeper 3. The bolt 14 is then passed through the recessed corner of the keeper 3 and the top of the tie in position to engage the straight edge of the extension 10, thus holding the rail engaging plate in position.

From the foregoing description, taken in connection with the accompanying drawing, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described my invention, what I claim is:—

1. In combination with a metal tie having a pair of longitudinally spaced keepers with recessed inner edges cast upon its top, a rail engaging member having projections at diagonally opposite corners to engage the base flanges of the rail, lateral extensions at opposite sides to engage the recessed edges of the keepers, and a bolt passing through the recessed portion of one of the keepers against the outer edge of the adjacent extension of the rail engaging plate.

2. In combination with a metal tie having a pair of longitudinally spaced keepers with recessed inner edges cast upon its top, a rail engaging member having projections at diagonally opposite corners to engage the base flanges of the rail, lateral extensions at opposite sides to engage the recessed edges of the keepers, a bolt passing through the recessed portion of one of the keepers against

the outer edge of the adjacent extension of the rail engaging plate, and a cushioning block interposed between the rail engaging plate and the top of the tie.

- 5 3. In combination with a hollow tie having a pair of longitudinally spaced keepers cast upon its top face and at one end, the outer keeper having a semi-circular recess formed in its inner edge, a rail engaging member  
10 having means to engage the base flanges of the rail, a lateral semi-circular extension at one end to fit in the recessed edge of the outer keeper, the rail engaging member being

adapted to swing in the arc of a circle with said extension as a pivot, and means for 15 locking the opposite side of the rail engaging plate to the inner keeper when the former is in rail engaging position.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 20 nesses.

WILLIAM F. BECK.

Witnesses:

GEORGE GAIBISH,  
AUGUST KOMMRES.