D. ASHWORTH.

RAIL FASTENER.

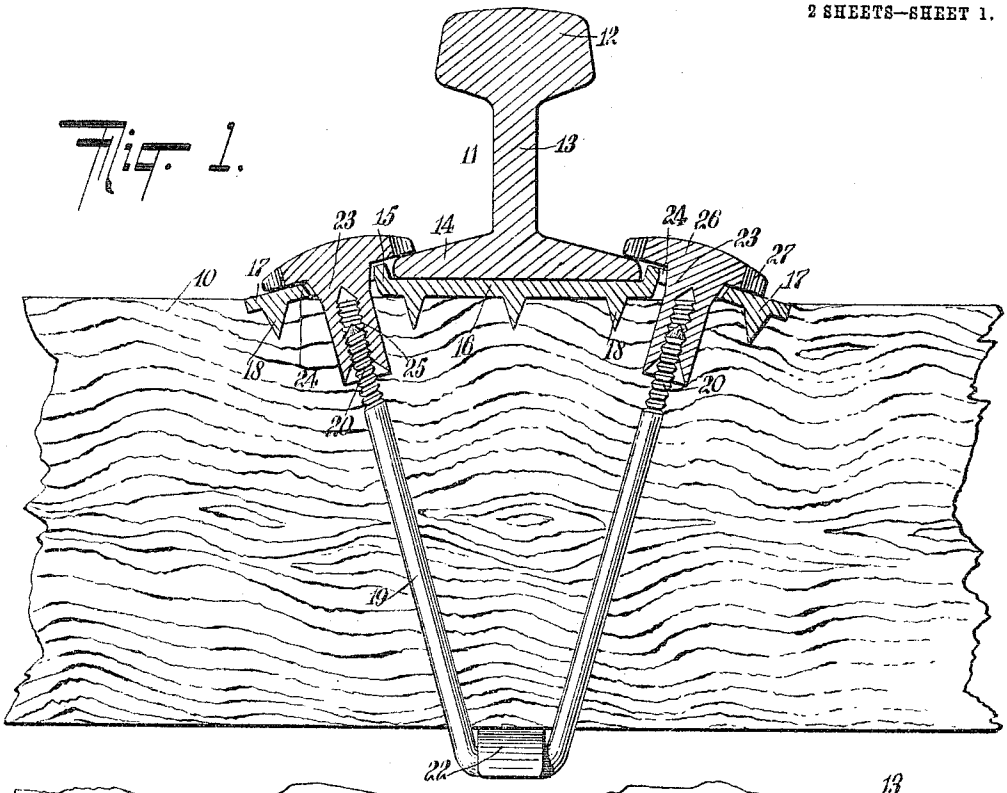
APPLICATION FILED NOV. 24, 1909.

957,641.

Patented May 10, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



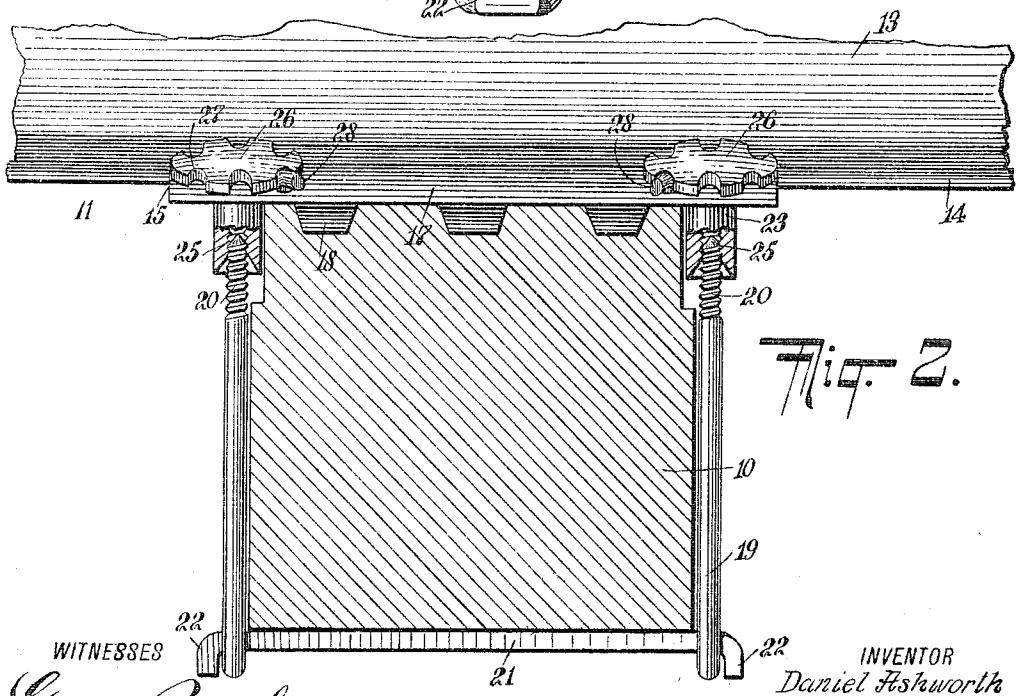


Fig. 2.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3.

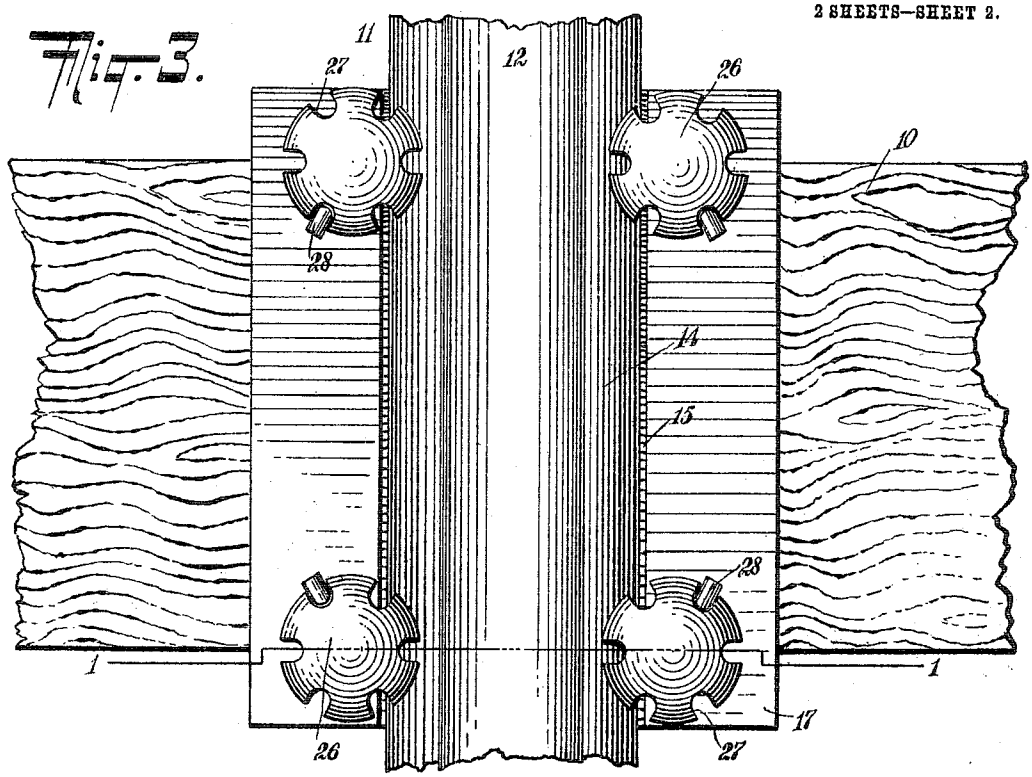


Fig. 5.

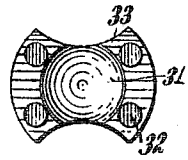
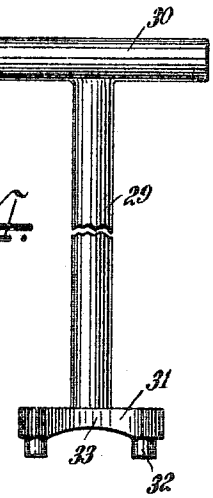


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RAIL-FASTENER.

957,641. Specification of Letters Patent. Patented May 10, 1910.

Application filed November 24, 1909. Serial No. 529,707.

To all whom it may concern:

Be it known that I, DANIEL ASHWORTH, a citizen of the United States, and a resident of Wappingers Falls, in the county of Dutchess and State of New York, have invented a new and Improved Rail-Fastener, of which the following is a full, clear, and exact description.

This invention relates to fasteners for securing railroad rails upon cross ties, and relates more particularly to a device of this class comprising a chair adapted to carry a rail and to rest upon a tie, a holding member extending from the chair to the under part of the tie, and means for securing the member at the under part of the tie.

The object of the invention is to provide a simple, strong and economic fastening for railroad and like rails, by means of which rails can be securely fastened upon the cross ties so that they are held against spreading or other accidental displacement, which tends to lengthen the life of the tie in that it obviates the use of spikes or other devices frequently apt to cause splitting of the ties, which can be easily mounted in place and can be as easily removed, and which cannot become loose through the jarring of the rails, incident to the passage of the trains thereupon.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a transverse section on the line 1—1 of Fig. 3, of an embodiment of my invention showing the same in use for securing a railroad rail upon a cross tie; Fig. 2 is a transverse section of a tie, showing part of a rail, and a fastener of my invention, in side elevation, parts of the fastener being in section; Fig. 3 is a plan view showing the fastener in use; Fig. 4 is a side elevation showing a wrench for use in connection with my fastener; and Fig. 5 is an end view of the wrench.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that while the device is particularly useful in connection with wooden railroad ties, it can also be advantageously employed with other ties, and is well adapted for use with concrete and metal ties in which it is impossible to drive spikes or other like rail-holding devices. My invention is particularly useful with ties of this kind, as it obviates the use of spikes.

Certain of the details of construction form no part of the invention and can be varied in accordance with individual preference and special condition, without departing from the underlying spirit of the invention.

Referring more particularly to the drawings, I have shown for example, a wooden cross tie 10, of the common form used to carry the ordinary track rails 11, each having a head 12, a web 13 and a base 14. I employ a chair plate 15, fashioned by stamping or otherwise forming a plate of suitable metal, having a central, depressed part 16, so proportioned that the rail base 14 fits therein, and having further, offset side portions 17, which are relatively inclined so that when a rail is positioned upon the chair, the surfaces of the parts 17 are substantially flush with the upper surfaces of the respective sides of the rail base, as is shown most clearly in Fig. 1. The plate, if so desired, may be provided at the under side with spikes or spurs 18, adapted to penetrate the tie and to hold the chair against displacement, if wooden or like ties are employed.

I employ U-shaped holding members 19, the sides of which are outwardly inclined, and the extremities 20 of which are threaded. A keeper bar 21 having bent extremities 22 is positioned at the under side of the tie and serves to hold the members 19, engaging at the bends of the same. Nuts 23 are movably mounted in openings 24 of the parts 17 of the chair and have threaded recesses 25 receiving the threaded ends 20 of the members 19. The nuts have flattened heads 26 which engage at the upper surfaces of the parts 17 and extend over the rail base to hold the rail in position.

The head of each nut has edge recesses 27 which are adapted to receive a stop 28 of any suitable form, removably mounted in a depression or opening of the chair. In this way the nuts can be held against loosening, due to jarring caused by the passing of trains over the rails. I prefer to employ a special implement for manipulating the nuts; this implement or wrench comprises a shank 29 having a cross bar or handle 30 by means of which it can be easily turned,

and having at the lower end a plate 31 provided with studs 32 adapted to engage the edge recesses 27 of the nut heads, so that the nuts can be easily turned by means of the wrench. At opposite sides, the part 31 of the wrench has sections 33 cut away so that as it is used, certain of the edge recesses 27 are uncovered to permit their being brought into alinement with the points at which the stops 28 are to be positioned.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A device of the class described, comprising a rail chair adapted to carry a rail and to rest upon a tie, U-shaped holding members, a keeper adapted to be positioned under the tie and engaging at the bends of said holding members, said keeper having bent extremities, and nuts having laterally extended heads and mounted upon said chair and extending to the under side thereof, said holding members being removably engaged by said nuts, said nuts engaging directly said chair and the base of the rail.

2. A device of the class described, comprising a chair adapted to carry a rail and to rest upon a tie, holding members extending to the under part of the tie, a keeper arranged under the tie and engaging said holding members, and nuts for securing said holding members on said tie, said chair having stops adapted to engage said nuts to hold the same against displacement, said nuts having recesses adapted to receive said stops.

3. A device of the class described, comprising a rail chair adapted to carry a rail and to rest upon a tie, said chair having openings therethrough, U-shaped holding members, a keeper adapted to be positioned under the tie and engaging at the bends of said holding members, said keeper having bent extremities, and nuts having laterally extended heads, engaging said chair and the base of the rail directly, said nuts being located in said openings of said chair, said holding members having threaded extremities adapted to be removably received by said nuts.

4. A device of the class described, comprising a rail chair adapted to carry a rail and to rest upon a tie, said chair having openings therethrough, U-shaped holding members, a keeper adapted to be positioned under the tie and engaging at the bends of said holding members, said keeper having bent extremities, nuts having laterally extended heads, said nuts being located in said openings of said chair, said holding members having threaded extremities adapted to be removably received by said nuts, said heads of said nuts having edge recesses, and stops removably carried by said chair and adapted to be received by said recesses.

5. In a device of the class described, a chair of substantially uniform thickness adapted to carry a rail, and having offset side parts relatively inclined, whereby the surfaces of said parts are substantially flush with the respective upper surfaces of the base of a rail mounted upon said chair, a holding member, and a nut removably associated with said member and seating directly upon one of said side parts and the base of the rail.

6. In a device of the class described, a chair formed from a plate of substantially uniform thickness, having offset side parts arranged to receive a rail therebetween, said side parts being inclined so that their upper surfaces are substantially flush respectively with the upper surfaces of the base of a rail mounted therebetween.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL ASHWORTH.

Witnesses:

D. IRVING ASHWORTH,

D. WILLIAM ASHWORTH.