

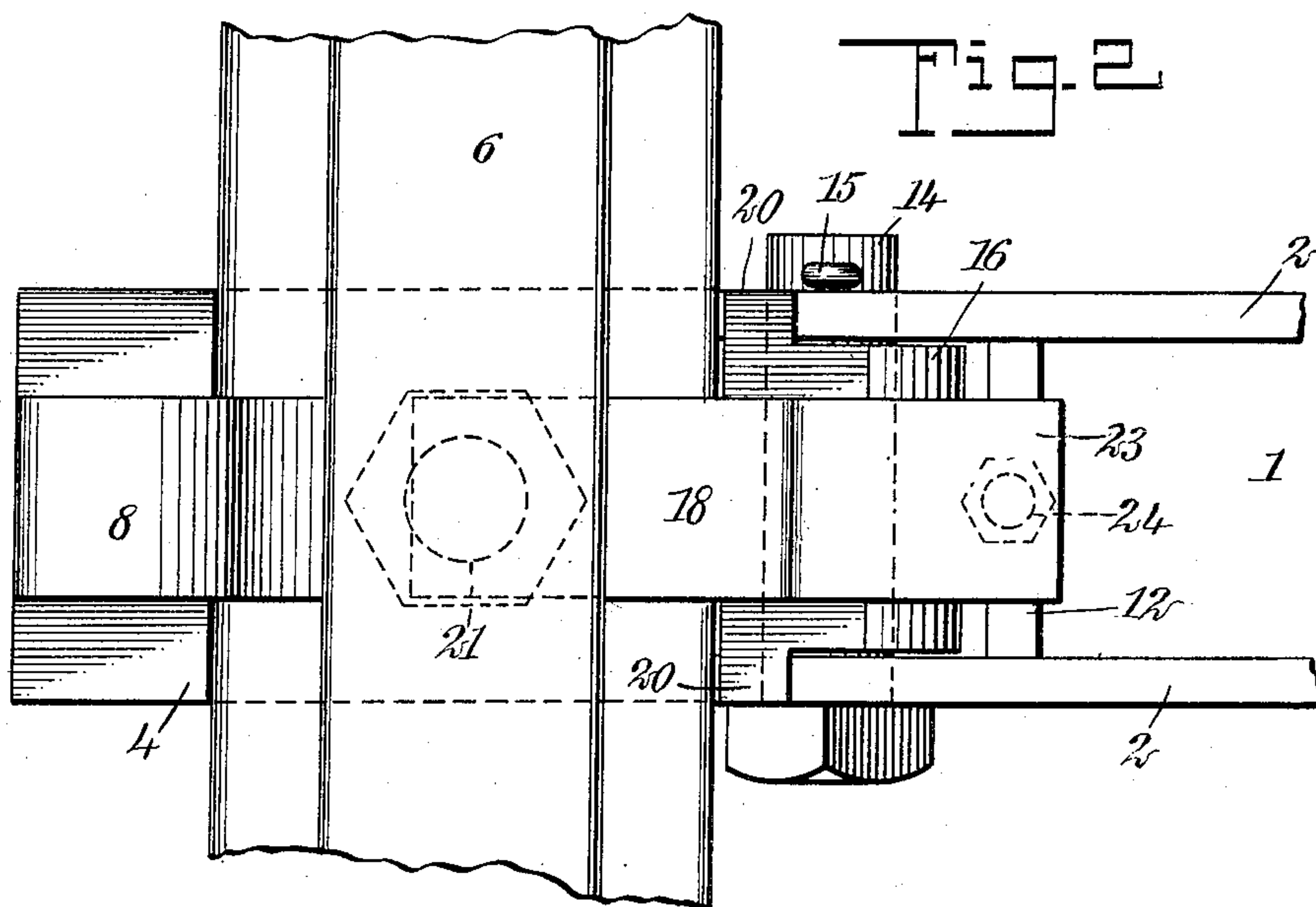
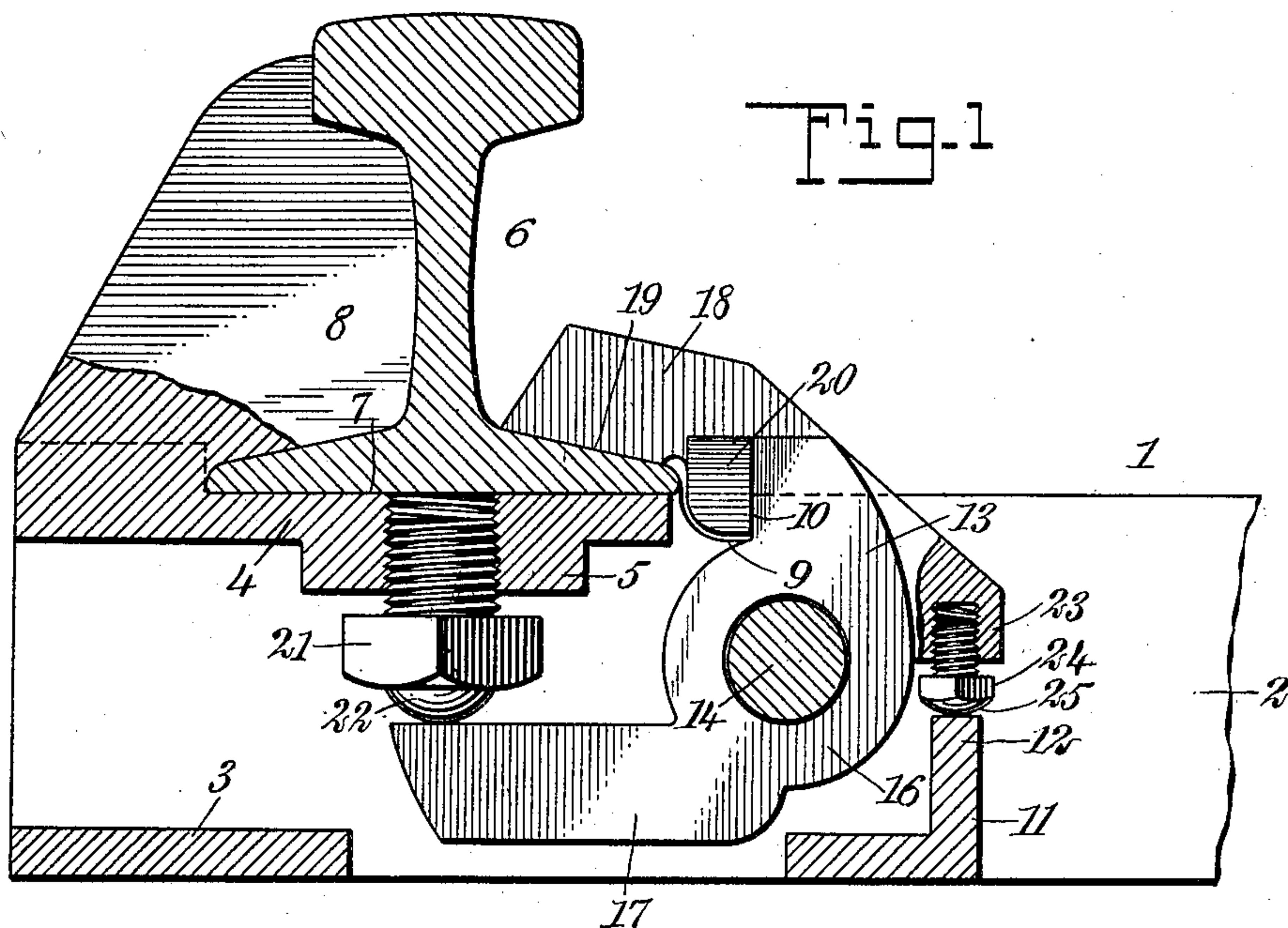
No. 897,127.

PATENTED AUG. 25, 1908.

A. NEWELL.

RAIL FASTENING.

APPLICATION FILED JULY 22, 1907.



WITNESSES

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ALLEN NEWELL, OF GUADALAJARA, MEXICO.

RAIL-FASTENING.

No. 897,127.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed July 22, 1907. Serial No. 384,859.

To all whom it may concern:

Be it known that I, ALLEN NEWELL, a citizen of the United States, and a resident of Guadalajara, Mexico, have invented a new and Improved Rail-Fastening, of which the following is a full, clear, and exact description.

This invention relates to fastenings.

While the invention is capable of use in many connections, it is adapted more particularly for use in connection with metal ties for holding railway rails thereon.

The object of the invention is to produce a fastening device which, if subjected to jars or vibrations, will operate to clamp a member such as a rail, and maintain the clamping force with the same or greater intensity by reason of the vibration or jar to which the parts are subjected.

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 both figures.

Figure 1 is a longitudinal section taken through the end of a railway tie to which my rail fastening is represented as applied; certain parts are shown in elevation and the rail is shown in cross section; and Fig. 2 is a plan of the parts shown in Fig. 1.

Referring more particularly to the parts, 1 represents the body of the railway tie. This tie presents oppositely disposed parallel side bars 2 which are connected at their ends on the lower side by a tie bar 3. At the end of the tie above this tie bar 3 another cross bar or bridge 4 is formed, which integrally connects the side bars 2. This bridge is formed with a reinforcing boss 5 directly beneath the position of the rail 6, the said rail being received upon a flat seat or face 7 flush with the upper edges of the side bars 2, as shown. The rail is disposed near the outer end of the tie, and the end of the tie beyond the rail is formed into a massive rail support or chair 8, which fits the outline of the rail as shown, and supports its outer side. Near the inner edge of the rail flange the upper edges of the side bars 2 are provided with notches 9. These notches have curved forward edges and abrupt rear edges 10, the edges 10 being disposed substantially vertically and removed a slight distance from the edge of the

rail flange as shown. On the under side the side bars 2 are connected by another cross bar or web 11, of angular form, as shown, presenting an upwardly projecting flange 12, the purpose of which will appear more fully hereinafter.

In the space between the side bars 2, a clamp 13 is mounted upon a pivot bolt 14 which passes horizontally through the tie. This pivot bolt projects at one end beyond the side of the tie, and receives a split pin 15 which holds it in position, as will be readily understood. In its construction, the clamp 13 consists of a hub 16, of substantially circular form, from the lower portion of which a horizontal toe 17 projects under the position of the rail as indicated. From the upper portion of the hub 16 an upwardly extending jaw 18 is formed, which is provided with an inclined clamping face 19 which is adapted to conform to the inclined position of the upper side of the rail flange when the clamp is rotated upon the pivot bolt 14. The side faces of the jaw 18 near its root, that is, near its point of connection with the hub 16, are formed with lateral lugs 20 which conform substantially to the shape of the notches 9 and fit therein, as indicated in Fig. 1. In this way it will be understood that the rear faces of the lugs lie against the abrupt faces 10 of the notches, so as to prevent any tendency of the clamp to move backwardly away from the rail.

In the boss 5 a threaded opening is provided, which receives a downwardly extensible member such as a clamping screw 21, said clamping screw having a small rounded tip or knob 22 on the head thereof, disposed on the axis of the screw as shown.

On the side of the clamp 13 remote from the rail, an outwardly projecting shoulder 23 is formed, in which there is mounted a downwardly extensible member such as a set screw 24, which is also provided with a rounded knob 25 on the under side thereof. This set screw 24 is disposed just above the flange 12, and in such a position that when unscrewed the head 24 will engage the upper edge of the flange, as indicated in Fig. 1. Likewise, the clamping screw 21 is disposed just over the toe 17, so that when unscrewed it will engage this toe.

In assembling the parts, the rail is placed in position against the chair 8. The clamp 13 is then placed in position by thrusting its toe 17 under the position of the rail and al-

lowing it to descend so that the lugs 20 seat themselves in the notches 9. The pivot bolt 14 is then placed in position and the screws 21 and 24 are unscrewed. As the screws 21 and 24 are unscrewed, they produce a slight rotation of the clamp upon the axis of the bolt 14, so that the jaw 18 is moved down and held firmly against the flange of the rail.

Attention is called to the fact that the action of gravity upon these clamping screws tends to unscrew them; in other words, they are suspended from above, and hence as the clamp mechanism is subjected to vibration, the action of gravity upon the clamping screws tends to make them become tighter instead of looser. In this way the jar or shock incident to the passing of trains tends not to loosen the fastening, but to tighten it. In this way a very efficient and durable fastening results.

Attention is called to the fact that the pivot bolt 14 is disposed to the right of the center of gravity of the clamp, so that the action of gravity tends to assist the clamping action of the jaw 18 upon the flange of the rail.

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

1. A fastening device having a downwardly extensible member and a pivoted clamp engaging said member and having a jaw adapted to be applied thereby.

2. A fastening device having a body with oppositely disposed side bars, a clamp lying between said side bars and having lugs en-

gaging the same, a pivot bolt supporting said clamp, and a screw mounted in a vertical position in said body and engaging said clamp to apply the same.

3. A fastening device having a body with oppositely disposed side bars and a bridge therebetween constituting a seat for the member to be fastened, a clamp pivotally mounted between said side bars, and a clamping screw mounted in said body and engaging said clamp to tighten the same.

4. A railway tie having a seat for the rail and a chair formed therein adapted to engage the outer side of the rail, a clamp pivoted in said body having a toe projecting under said seat, said clamp further having a jaw adapted to engage the flange of said rail opposite said chair, and a screw mounted in said seat on the under side thereof and engaging said toe to apply said clamp.

5. A fastening device having a body with oppositely disposed side bars, a clamp lying between said side bars and pivotally supported upon said body, said clamp having a clamping jaw and a laterally projecting shoulder, a transverse web connecting said side bars adjacent to said shoulder, and a set screw mounted in said shoulder and bearing against said web to apply said clamping jaw.

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

ALLEN NEWELL.

Witnesses:

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G. E. PURNELL.