

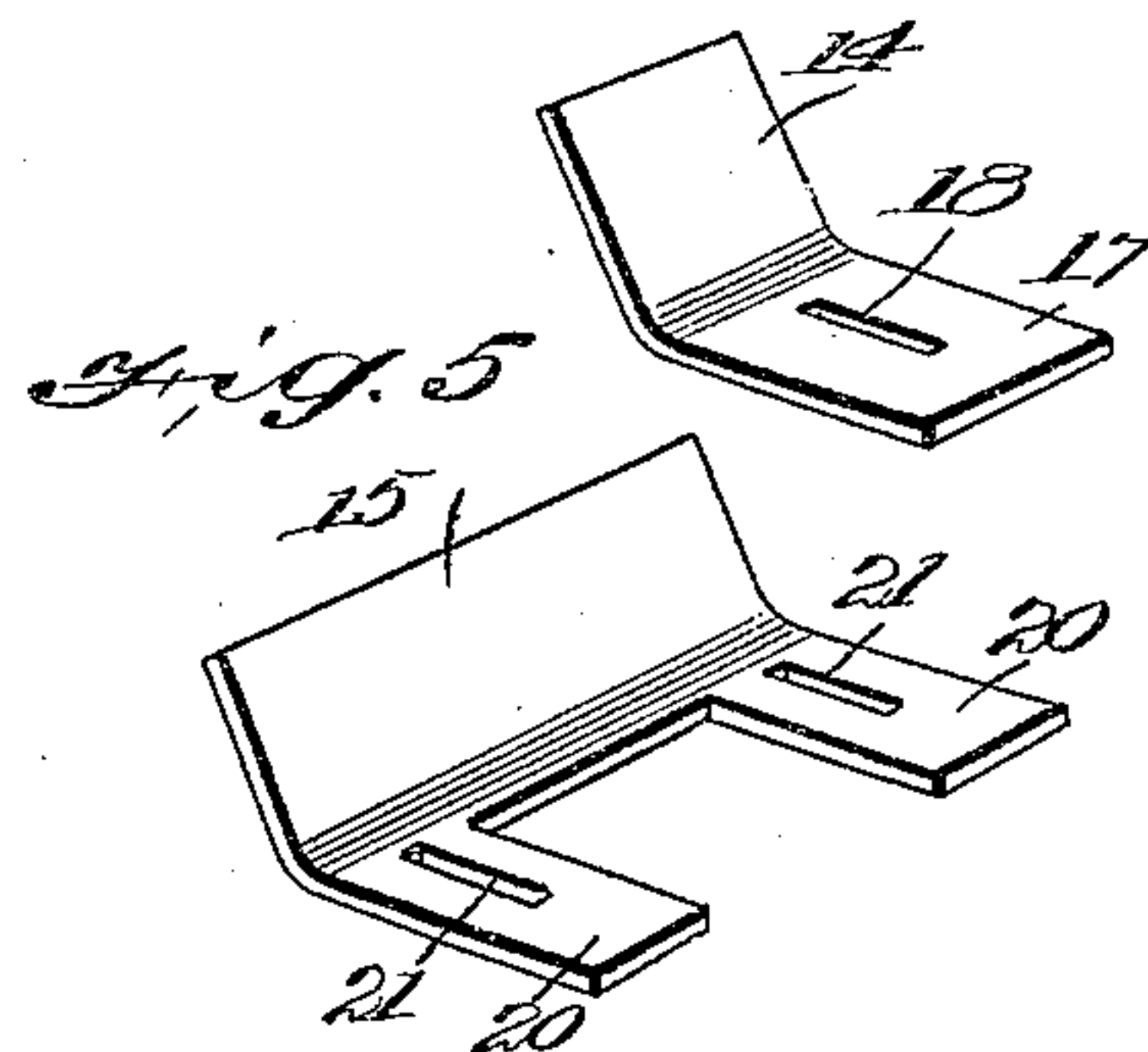
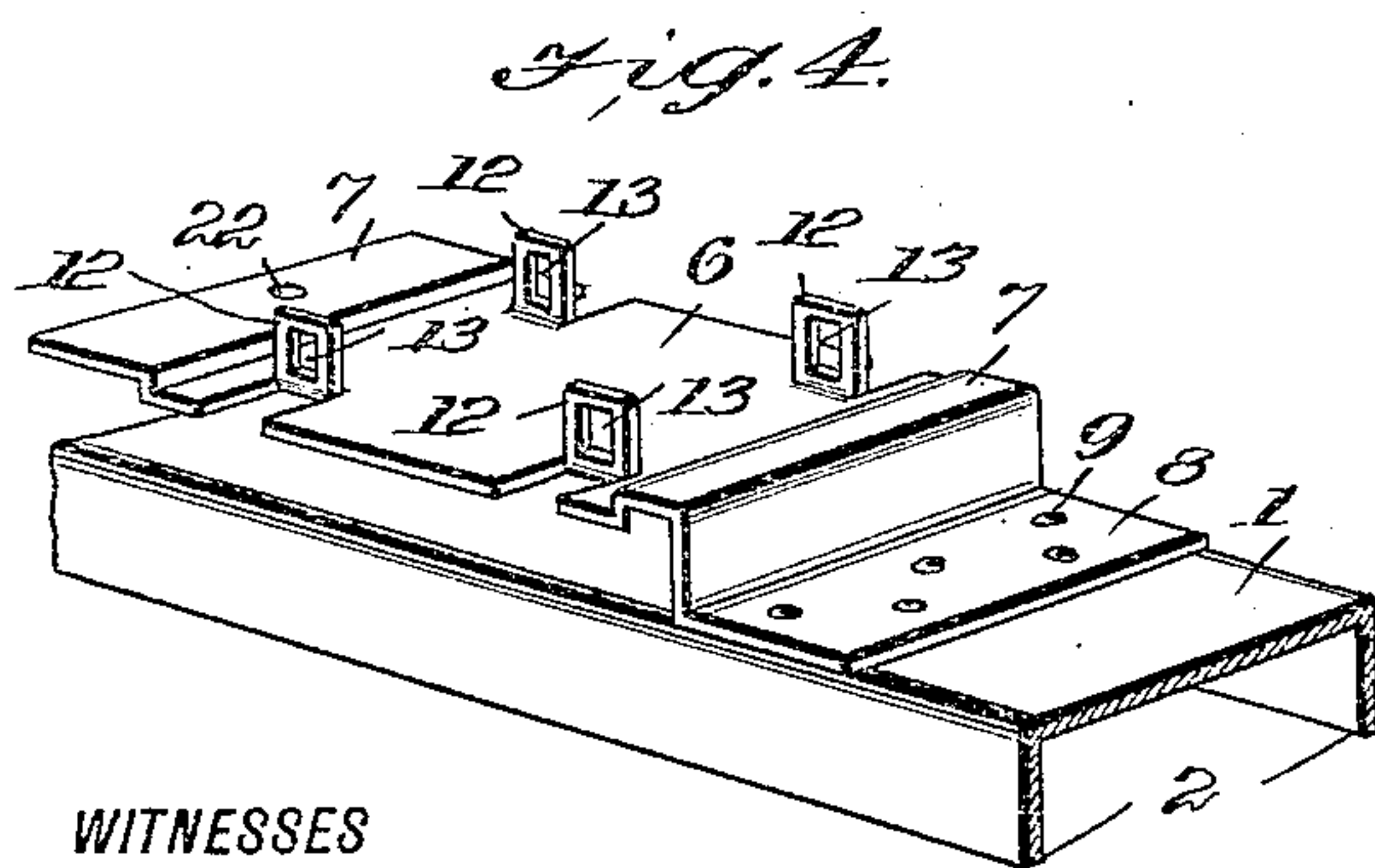
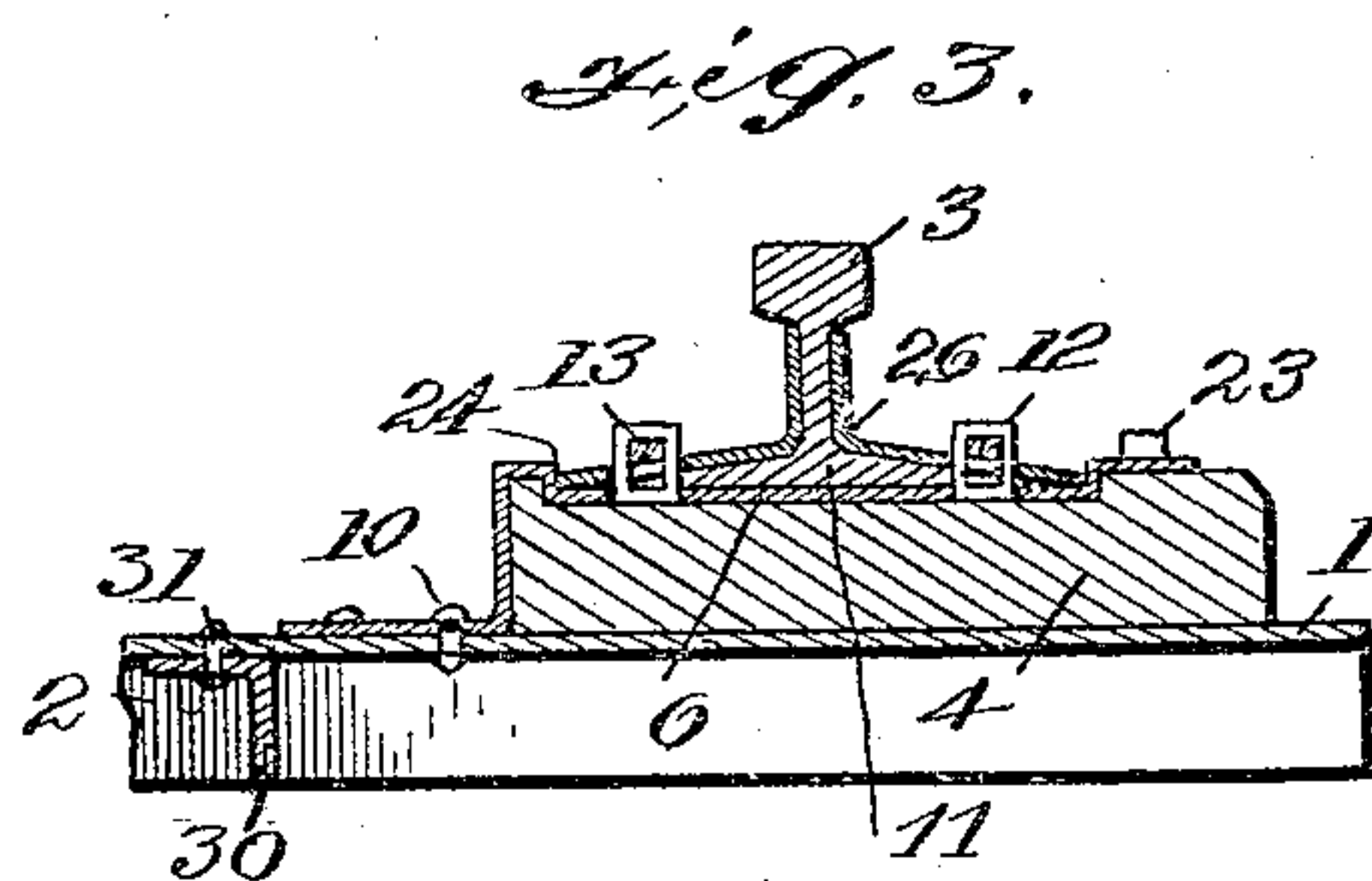
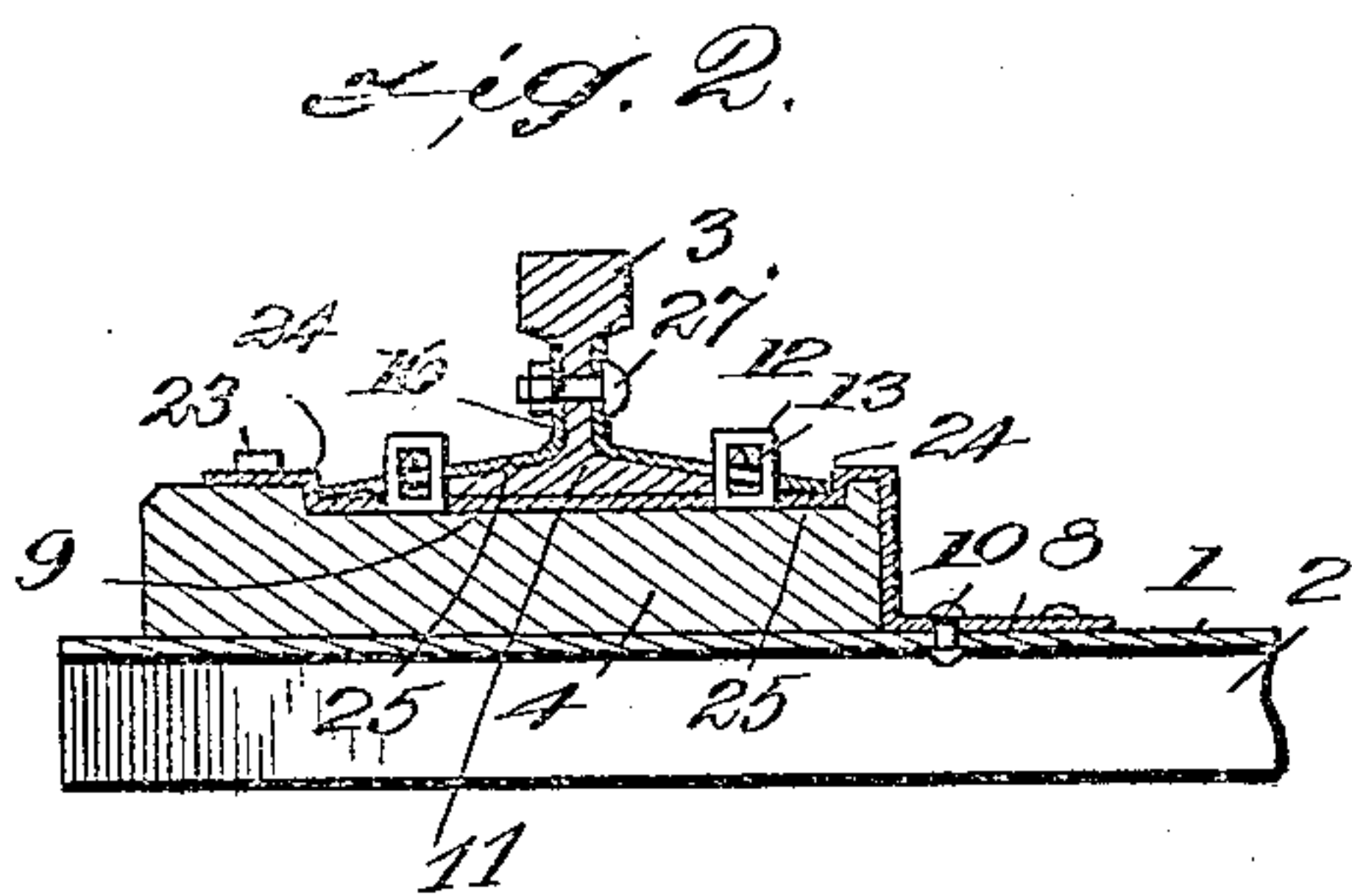
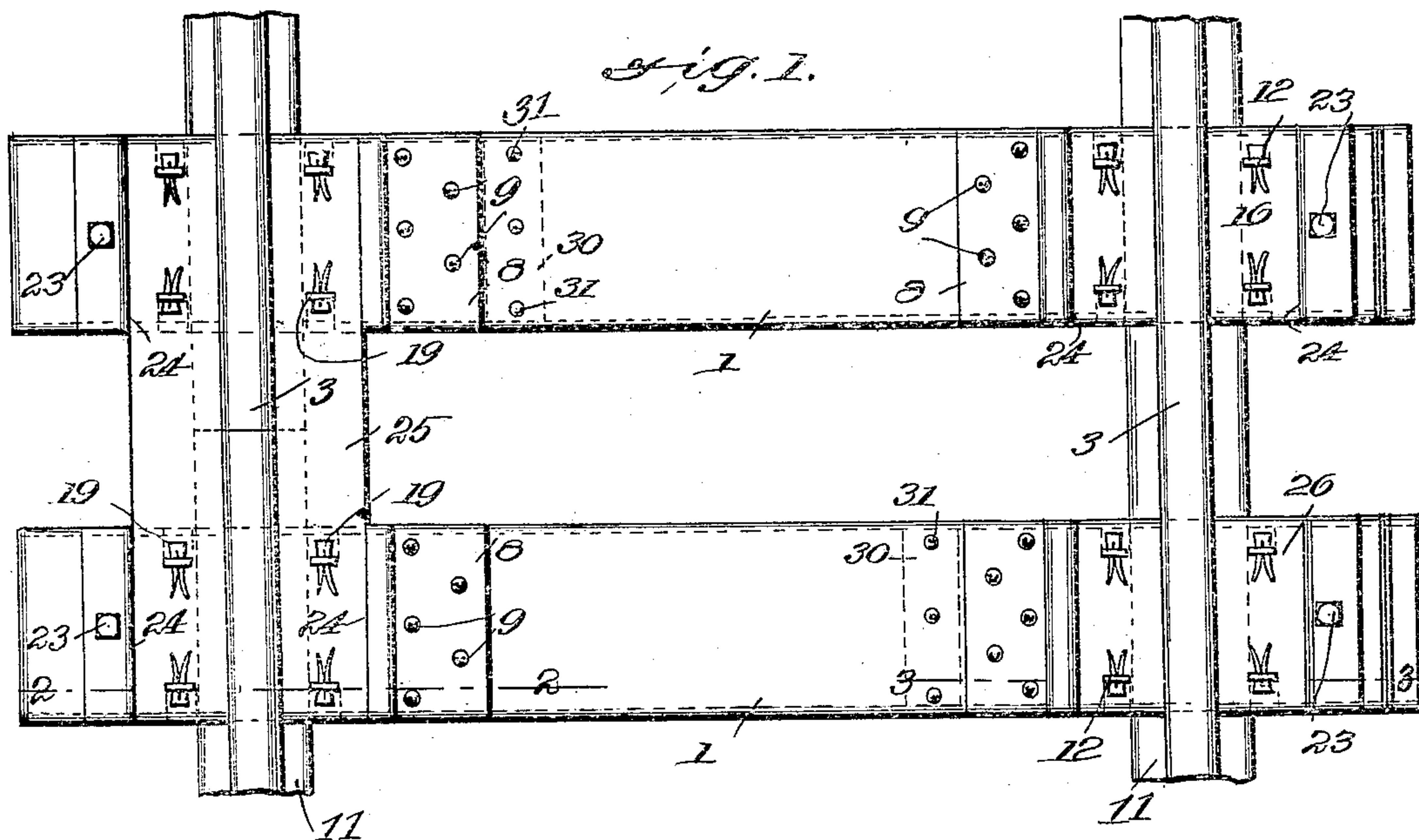
S. T. WILSON & C. K. McDERMOTT.

METALLIC RAILROAD TIE.

APPLICATION FILED OCT. 4, 1909.

962,996.

Patented June 28, 1910.



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UNITED STATES PATENT OFFICE.

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METALLIC RAILROAD-TIE.

962,996.

Specification of Letters Patent. Patented June 28, 1910.

Application filed October 4, 1909. Serial No. 520,836.

To all whom it may concern:

Be it known that we, SAMUEL T. WILSON and CHARLES K. McDERMOTT, citizens of the United States, and residents of Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Metallic Railroad-Ties, of which the following is a specification.

Our invention is an improvement in metallic railroad ties, and consists in certain novel constructions and combinations of parts, hereinafter described and claimed.

The object of the invention is to provide a tie of the character specified, which will hold the rails to the proper gage regardless of their size, and wherein a special cushioning device is provided for the rail.

Referring to the drawings forming a part hereof, Figure 1 is a plan view of a section of track laid with the improved ties. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a section on the line 3—3 of the same figure. Fig. 4 is a perspective view of a portion of a tie, showing the means for securing the rail in place and Fig. 5 is a similar view of different modifications of angle plates.

In the embodiment of the invention shown in the drawings, the tie consists of a body 1, and lateral flanges 2, the flanges extending the full length of the sides of the body. The tie is laid with the flanges down, and their engagement with the road bed prevents lateral movement of the tie. The rails 3 extend across the ends of the ties in the usual manner, and a block 4 of wood, or other suitable cushioning material, is arranged between the rail and the end of each tie. The block is of a width equal to that of the tie, and of a length somewhat greater than the width of the rail as shown in Figs. 2 and 3. A plate is arranged on top of each of the blocks, each of the plates comprising a body portion 6, and ribs 7 at each side of the body portion, and with one of the ribs is connected an offset foot 8 provided with openings 9, for receiving rivets 10, by which the plate is secured to the tie. The rail rests on the body portion, and at each side of the base 11 of the rail, lugs 12 are struck up, each of the lugs having a square opening 13 therethrough. After the rail is laid, angle plates 14, 15 or 25 are arranged on each side of the rail. Each of the angle plates 14 consists of a portion for engaging the web 16 of

the rail, and a portion 17 for engaging the body 6 of the plate, and the said portion 17 is provided with a slot 18, through which a lug 12 passes, and the plate is secured in place by a square wedge-shaped cotter pin 19. The plate 15 is longer than the plate 14, and consists of a portion for engaging the web of the rail, and spaced lugs 20, each of which is provided with a slot 21, for receiving the lug 12, and the plate is secured in place by the cotter pin before mentioned. The plate 25 extends the full distance between the outer faces of adjacent ties, and is intended to connect the ends of the adjacent rails. The construction is the same as the plate 14 except as to the length. The rib 7 not provided with the offset foot has a spike opening 22, for receiving a spike 23, which secures the free end of the plate to the block 4. The portion 17 of the angle plate 14, and the lugs 20 of the plate 15, are of such length, that their outer edges will engage the shoulder 24, which is formed between the body 9 of the plate and the ribs 7.

When two rails meet plates 25 (Fig. 1) should be used. The said plates are of a length equal to the width of two ties, plus the width of the space between the ties, so that the angle bars at the joints of the rails are solid on each side of the rails. Elsewhere the plates 26 shown at the right of Fig. 1 may be used. Each of the plates 26, is equal in length to the width of the tie, and is provided with two slots in the portion which rests upon the tie. That portion of the plates 25 which rests against the web of the rail is provided with openings for receiving the bolts 27, and the said plates act as fish plates for securing the ends of the rails together. With either form of angle plate, the rail is firmly held to the tie, the engagement of the outer edges of the plates with the shoulders preventing lateral movement of the rail, while the lugs and cotter pins prevent upward movement.

It will be evident from the description, that the improved tie may be constructed with comparative cheapness, for a considerable amount of material is dispensed with, by the use of the blocks. The tie is also cushioned to a considerable extent by the block, thus increasing the life of the rail, and also lessening the wear on the rolling stock.

The block 4 has its upper surface shaped to fit the plate, and the position of the block and plate may be varied to suit the gage.

The blocks may be easily removed when worn, and a new one replaced, by taking out the spike 23, and knocking out the block.

As shown in Figs. 1 and 3, the tie is provided intermediate its ends and on its lower face with transversely arranged angle plates 30, one side of which is secured to the tie by rivets 31 while the other is vertical. The cross plates are to assist in preventing longitudinal movement of the tie.

We claim:

1. A tie of the character specified comprising a body having side flanges, a plate secured to each end of the tie, and having a body portion offset upwardly from the tie, said body portion having at each side a rib forming a shoulder between the rib and the body portion, and with lugs at each side of the position of the rail base, said lugs having square perforations, a block of fibrous material between the plate and the body portion of the tie, and angle plates having a portion for engaging the web of the rail, and a portion resting on the body portion of the plate, said plate portion having openings for receiving the lugs, the free edge thereof engaging the adjacent shoulder, and cotter pins square in cross section engaging the openings of the lugs.

2. A tie comprised of a sheet of metal having its side edges flanged, and provided near each end with a plate of metal secured thereto, and having a body portion offset upwardly from the tie, a block of fibrous material beneath the plate, said body portion having at each side thereof a rib, angle plates whose side edges bear against the ribs, the plate having upwardly projecting lugs at the sides of the rail base, and the plates slots through which the lugs pass, said lugs having polygonal openings, and cotter pins fitting the openings.

3. A tie having flanged side edges, a plate

secured to the tie near each end thereof, said plate having a body portion offset upwardly from the tie, and provided at each side edge with perforated lugs, a block of fibrous material beneath each plate, the plate having a rib near each end, and angle plates having their outer edges engaging the ribs, and having openings to receive the lugs, and pins passing through the lugs.

4. In combination, a metallic tie, a plate secured to the tie near each end thereof and having a portion offset upwardly from the face of the tie and substantially parallel therewith, a block of fibrous material beneath the plate, means for securing the block in place, said plate being grooved transversely to receive the rail base, and means in connection with the plate for securing the rail in place.

5. In combination, a metallic tie, a plate secured to the tie near each of the ends, said plate having a transverse groove and struck up perforated lugs, near the sides of the groove, angle plates for engaging the rails and having slots through which the lugs pass, and pins traversing the lugs.

6. In combination, a metallic tie, a plate secured to the tie at each end thereof and having a portion offset upwardly from the face of the tie and substantially parallel therewith, the said offset portion having an intermediate depressed part, a block of fibrous material beneath the offset portion of the plate and recessed for the reception of the depressed part thereof, means for securing the block in place, and means in connection with the plate for securing the rail in place.

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