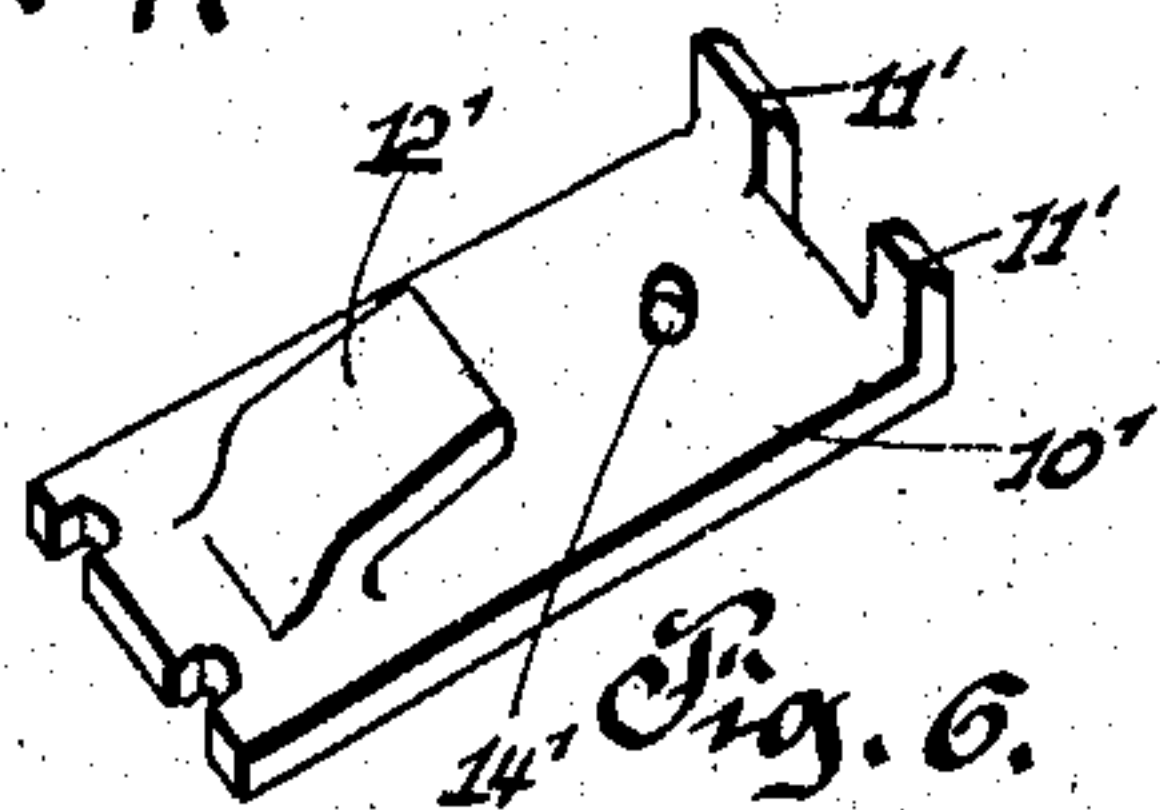
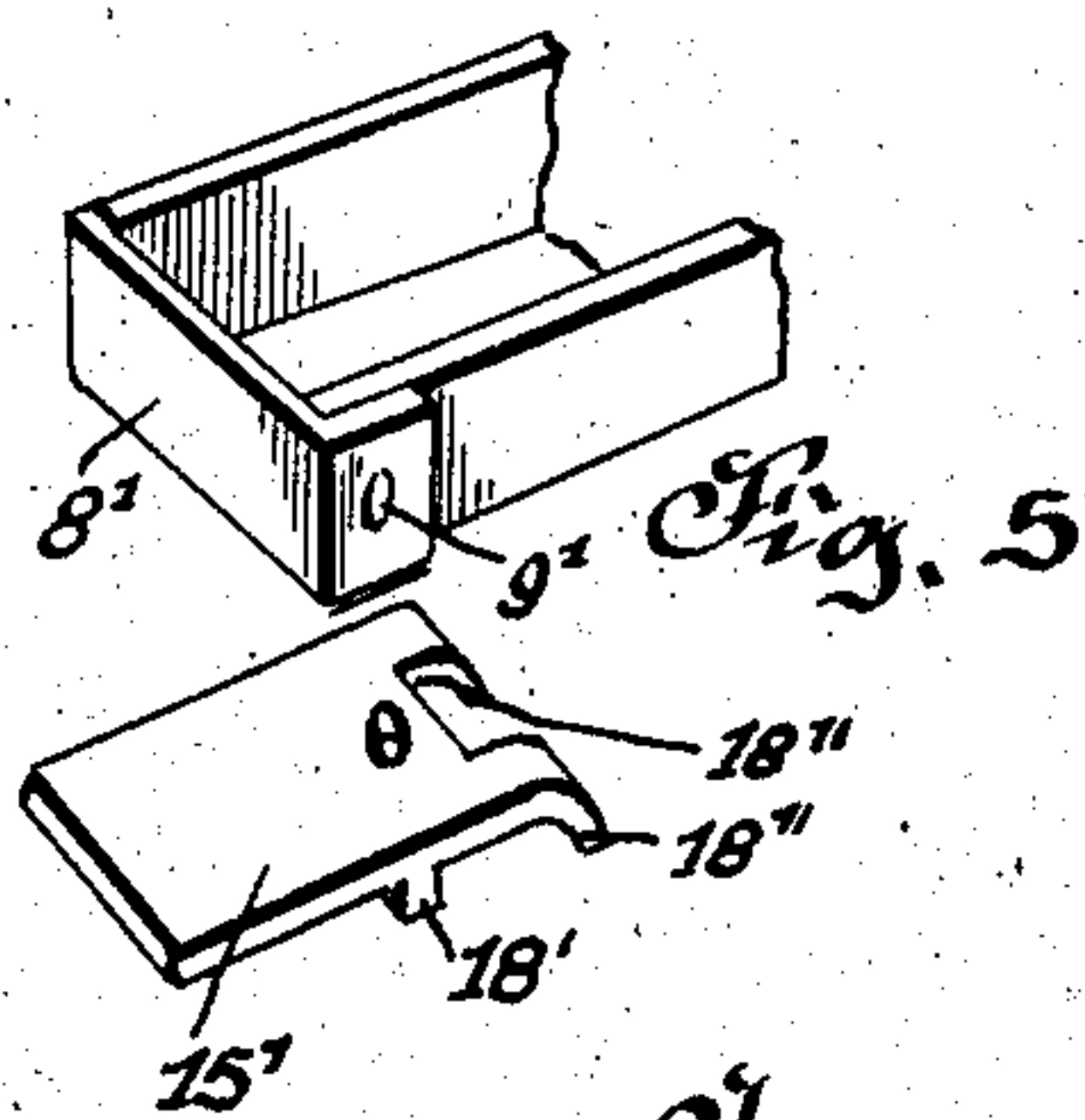
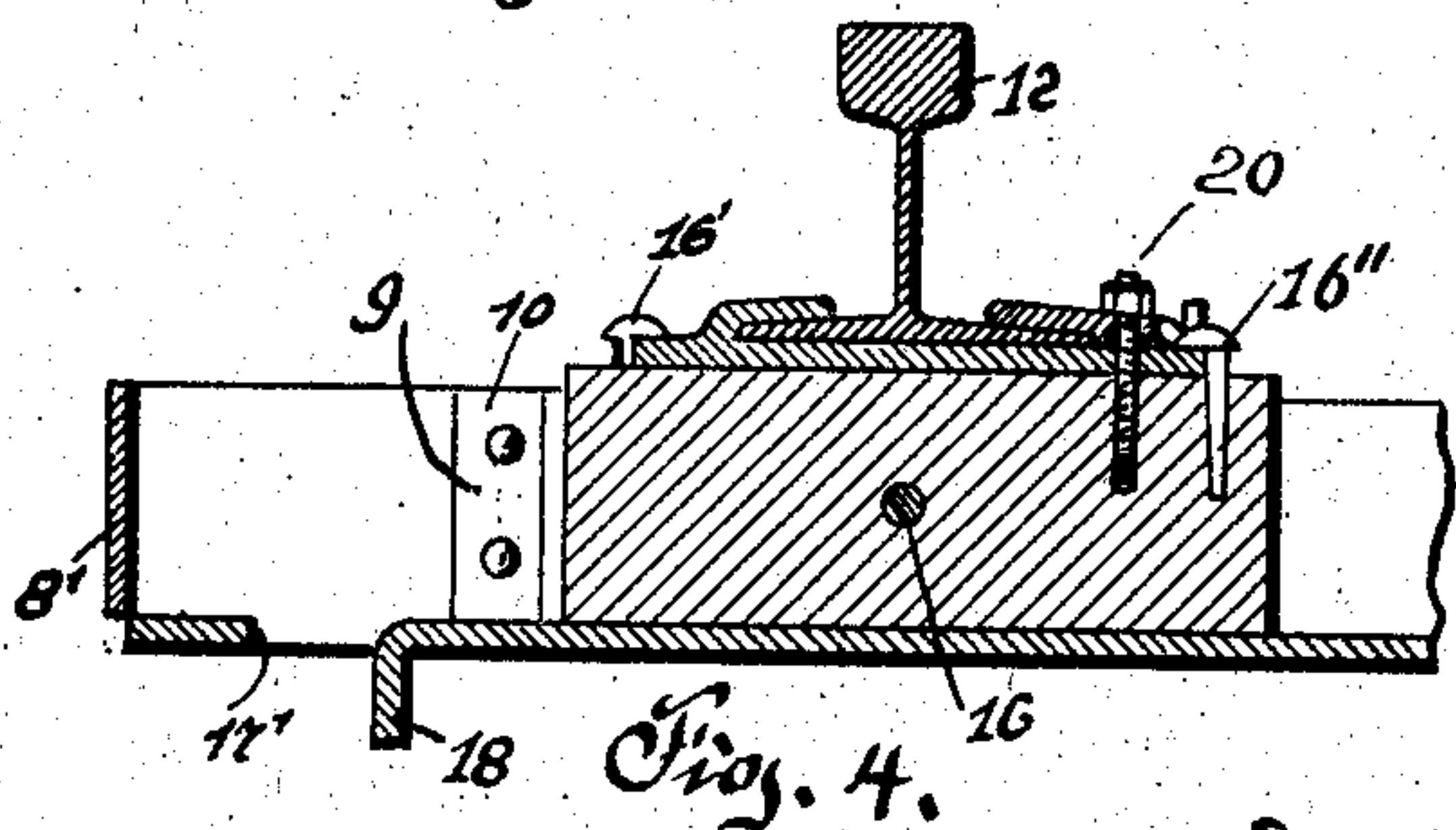
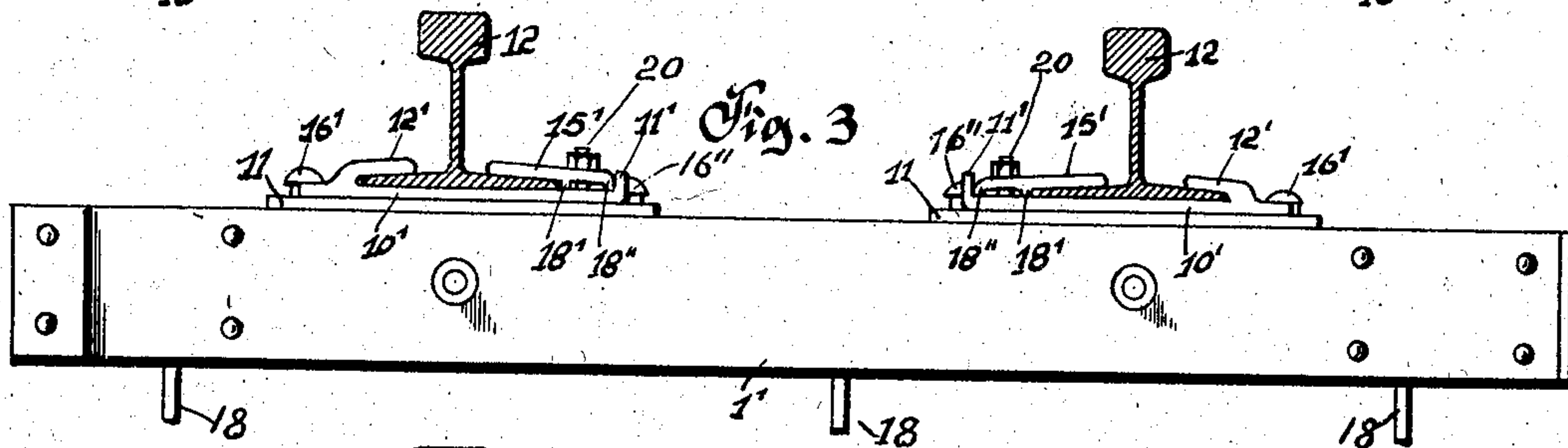
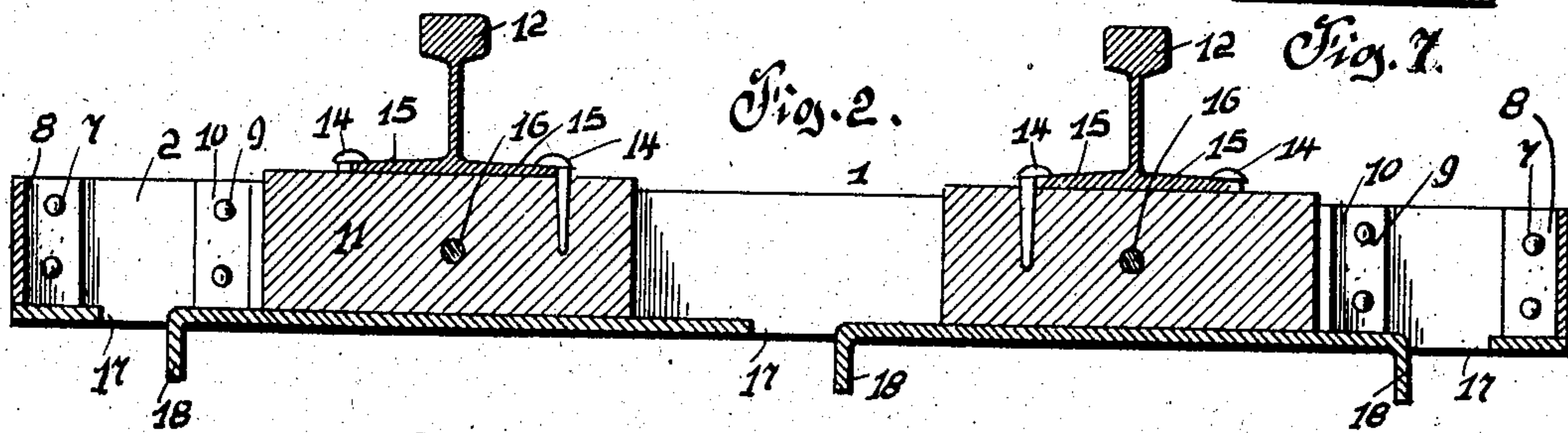
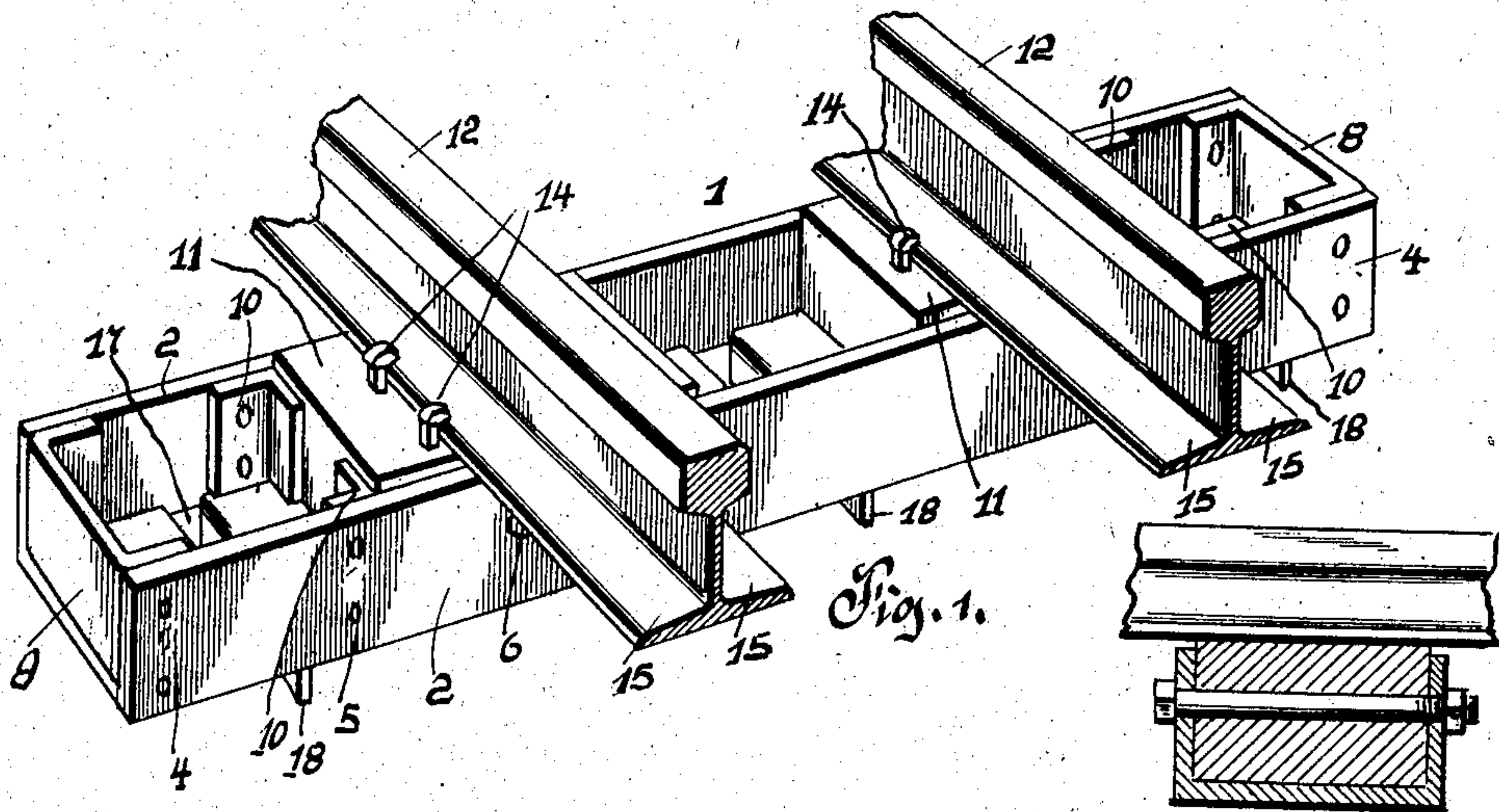


No. 815,718.

PATENTED MAR. 20, 1906.

B. A. LEGG.  
METALLIC TIE.

APPLICATION FILED OCT. 31, 1905.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

BENJAMIN A. LEGG, OF PITTSBURG, PENNSYLVANIA.

## METALLIC TIE.

No. 815,718.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed October 31, 1905. Serial No. 285,301.

*To all whom it may concern:*

Be it known that I, BENJAMIN A. LEGG, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in metallic ties and rail-fasteners; and the primary object of the invention is to provide a simple and inexpensive tie to which one or more rails can be easily and quickly fastened.

My invention aims to provide a metallic tie of a form that can be readily rolled and to which rails can be fastened. In this connection I have devised novel means for firmly holding a metallic tie in engagement with the ballast or foundation upon which it is laid, also novel means for fastening one or more rails to the tie. To this end I employ a channel-shaped tie having closed ends in which blocks are placed to support rails, and the rails may either be spiked to the blocks or secured thereto by a rail-fastener, such as illustrated and described in a patent granted to me October 24, 1905. The channel-bar from which the tie is formed has its bottom cut or sheared to provide depending flanges adapted to prevent the tie from being displaced when once placed in position upon the ballast or foundation.

The detail construction of my improved tie, together with the rail-fastener, will be hereinafter more fully described, and reference will now be had to the drawings accompanying this application, wherein like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of my improved tie, illustrating two rails secured thereto. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a side elevation of a tie, illustrating a modified form of construction and showing my improved rail-fastener used in connection therewith. Fig. 4 is a longitudinal sectional view of a portion of the same. Fig. 5 is a perspective view of one end of the tie illustrated in Figs. 3 and 4 of the drawings. Fig. 6 is a detail perspective view of my improved rail-fastener, and Fig. 7 is a cross-sectional view of the tie.

My improved metallic tie embodies a

channel-shaped bar 1, the vertical sides 2 2 of the bar being provided with apertures 4 4, 5 5, and 6 6. The apertures 4 4 at each end of the channel-bar are adapted to receive rivets 7, employed to retain end plates 8 8 within the tie. The apertures 5 5 receive rivets 9, employed to retain the confronting vertically-disposed cleats 10 within the channel-bar, these cleats being employed to brace wooden blocks 11, mounted within the channel-bar, said cleats being adapted to prevent lateral displacement or spreading apart of the wooden blocks. Upon the blocks are placed rails 12 12, adapted to form a track over which rolling-stock may travel. Spikes 14 14 may be used for retaining the base-flanges 15 15 of the rails 12 upon the top surface of the wooden blocks 11 11.

In conjunction with the cleats 10 of the tie I employ tie rods or bolts 16, which pass transversely through the blocks 11 and the apertures 6, formed in the vertical sides of the channel-bar 1.

To prevent displacement of the channel-bar when positioned upon ballast or a suitable foundation, I shear or cut the bottom of the channel-bar, as at 17, to provide a depending flange 18, which will engage in the ballast or foundation of the tie. I preferably provide a depending flange at each end of the tie and one centrally thereof, as clearly illustrated in Fig. 2 of the drawings.

In Figs. 3 to 5, inclusive, a slight modification is illustrated, wherein the channel-bar 1' is provided with end plates 8', said plates being L-shaped and secured to the one vertical side of the channel-bar, as at 9'. In connection with the modified form of construction I have illustrated a rail-fastener embodying a base-plate 10', having upwardly-extending lugs 11' 11' at one end and an angularly-disposed lug 12' at its opposite end. The base-plate is pierced, as at 14', to permit of it being secured, together with a tie-plate 15', to one of the wooden blocks of the channel-bar. The base-plate 10' is held in engagement with the wooden block by spikes 16' 16' and 16, and after a rail is placed upon the base-plate 10' and moved until its base-flange engages beneath the lug 12' the tie-plate 15' is placed in position. The tie-plate is formed with a transverse ridge 18', adapted to engage the edge of the base-flange of the rail, while the body portion of the tie-plate overlies said flange. The end of the tie-plate is provided with downwardly-extending lugs 18'' 18'',



which are adapted to engage the upwardly-extending lugs 11' 11' of the base-plate 10', and by passing a bolt 20 through the tie-plate 15' and the base-plate 10' into the wood block 5 of the channel-bar a rail will be firmly retained in position and prevented from becoming vertically or laterally displaced relative to the tie.

I preferably employ the construction illustrated in Figs. 1 and 2 of the drawings, as it is comparatively inexpensive to manufacture, strong and durable, and capable of withstanding the rough usage to which it is subjected.

Such changes in the construction of the tie as are permissible by the appended claims may be resorted to without departing from the spirit and scope of the invention.

What I claim, and desire to secure by Letters Patent, is—

1. In a metallic tie and rail fastener, a tie of channel-bar form, depending flanges carried by the base of said tie, blocks seated in the tie, angle-cleats secured to the inner 25 faces of the channel-bar and against which cleats the outer ends of the blocks abut, means to secure rails to said blocks, and

bolts passing transversely through the channel-bar and blocks to secure the latter in the channel-bar.

2. In a metallic tie and rail fastener, the combination of a channel-bar, depending flanges carried by the bottom of said bar, cleats mounted within said bar, blocks engaging said cleats, means to secure rails to said blocks, and bolts passing through said bar and through said blocks to secure said blocks within said bar, substantially as described.

3. In a metallic tie and rail fastener, the combination of a channel-bar, blocks secured in said bar, fasteners mounted upon said blocks and adapted to retain rails thereon, vertical bolts passing through said fasteners and into said blocks to hold said fasteners in engagement with said blocks, substantially as described.

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

BENJAMIN A. LEGG.

Witnesses:

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