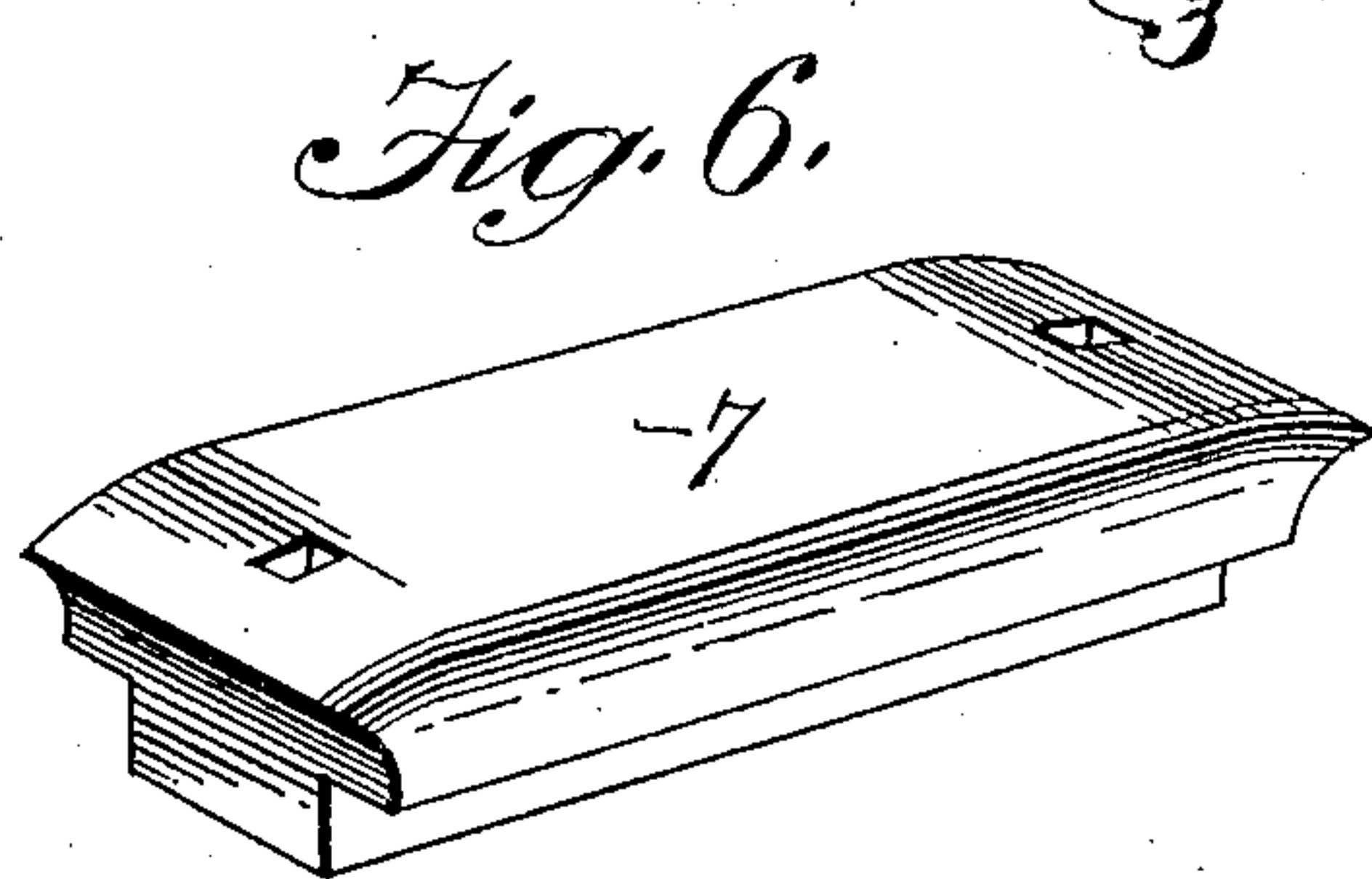
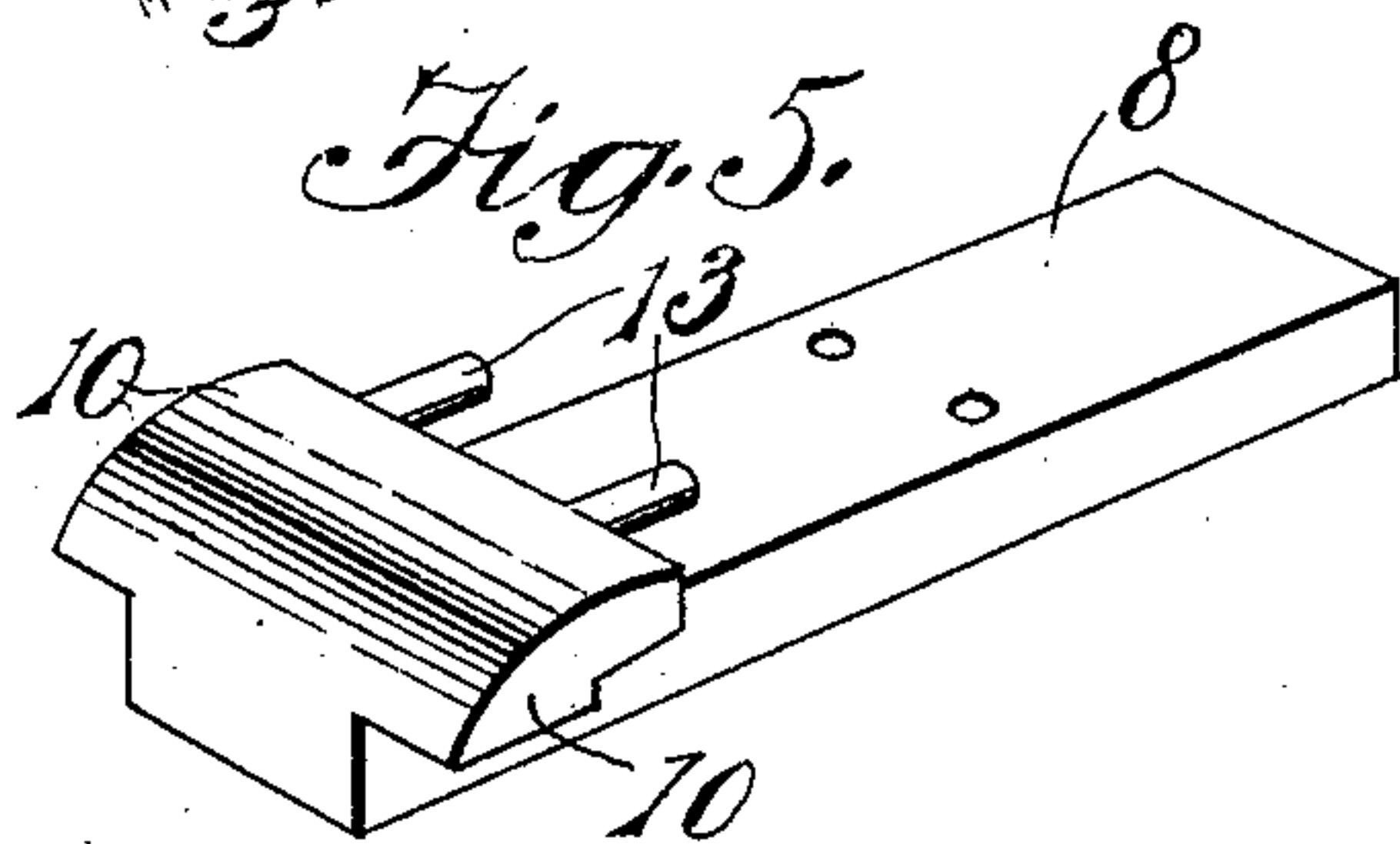
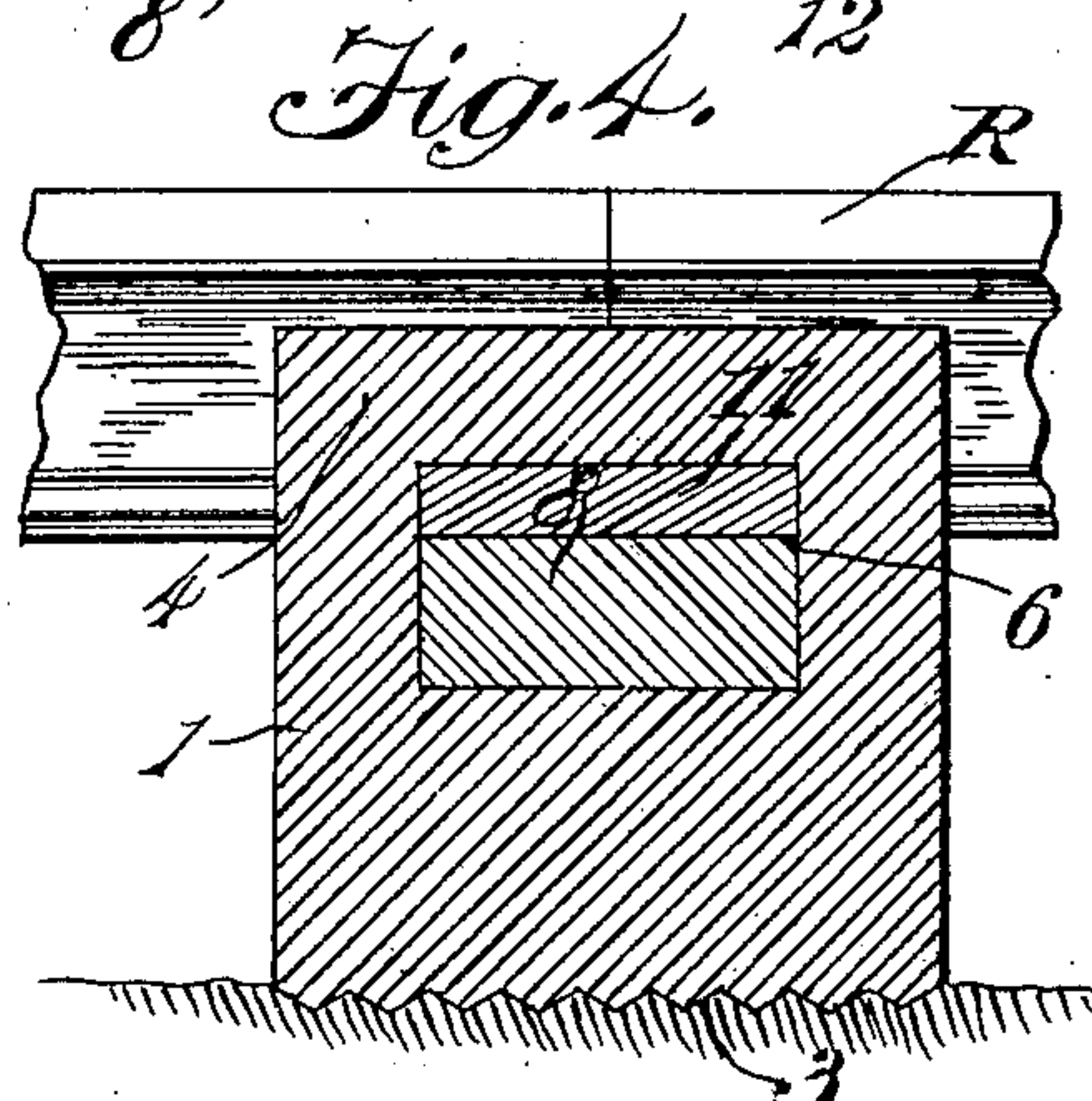
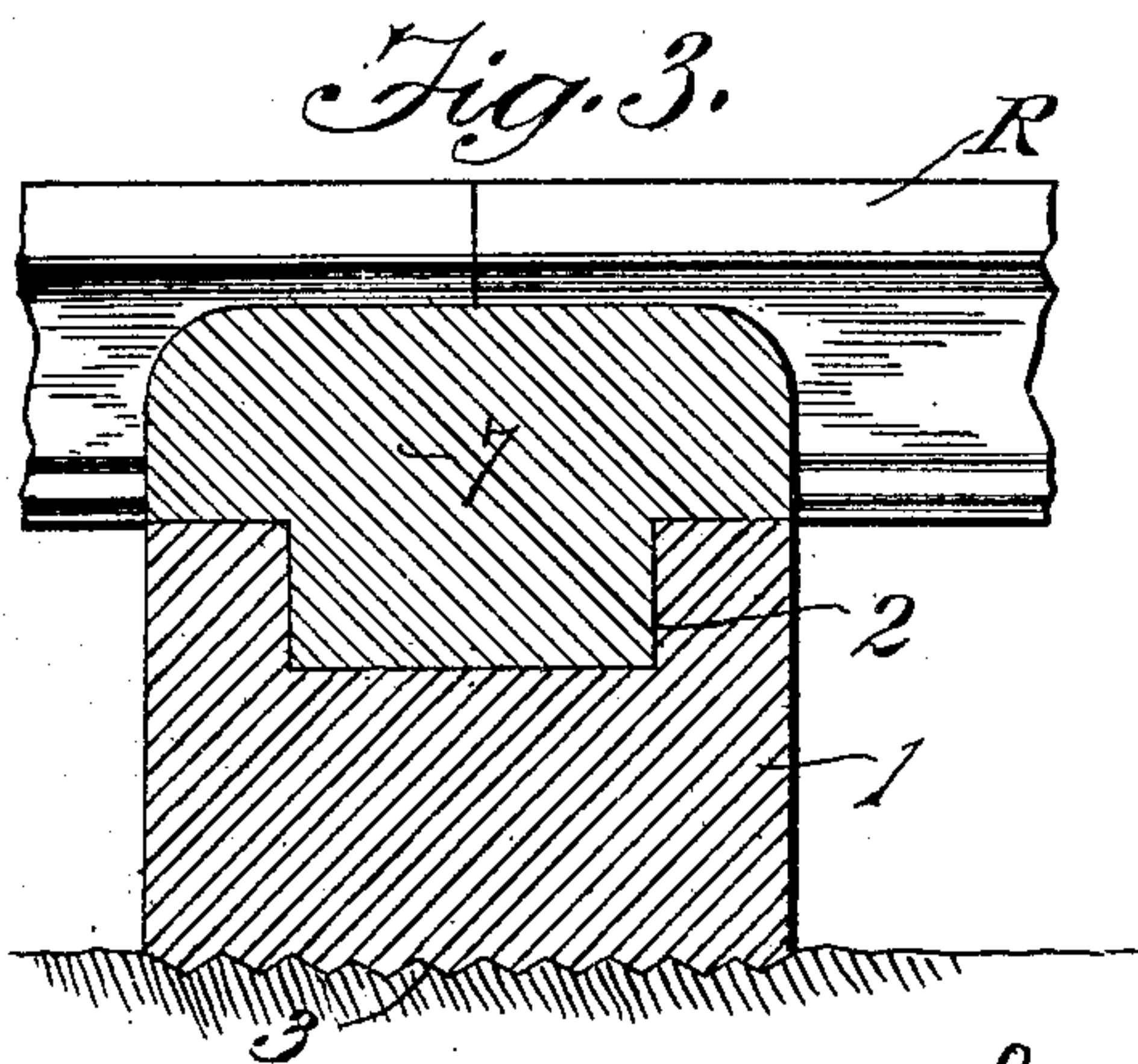
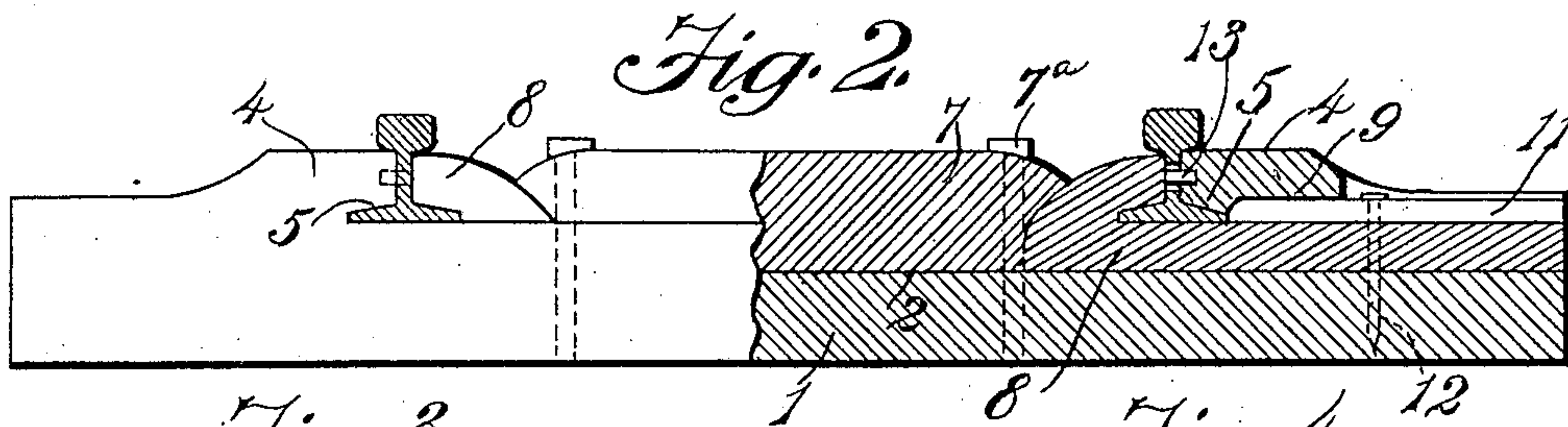
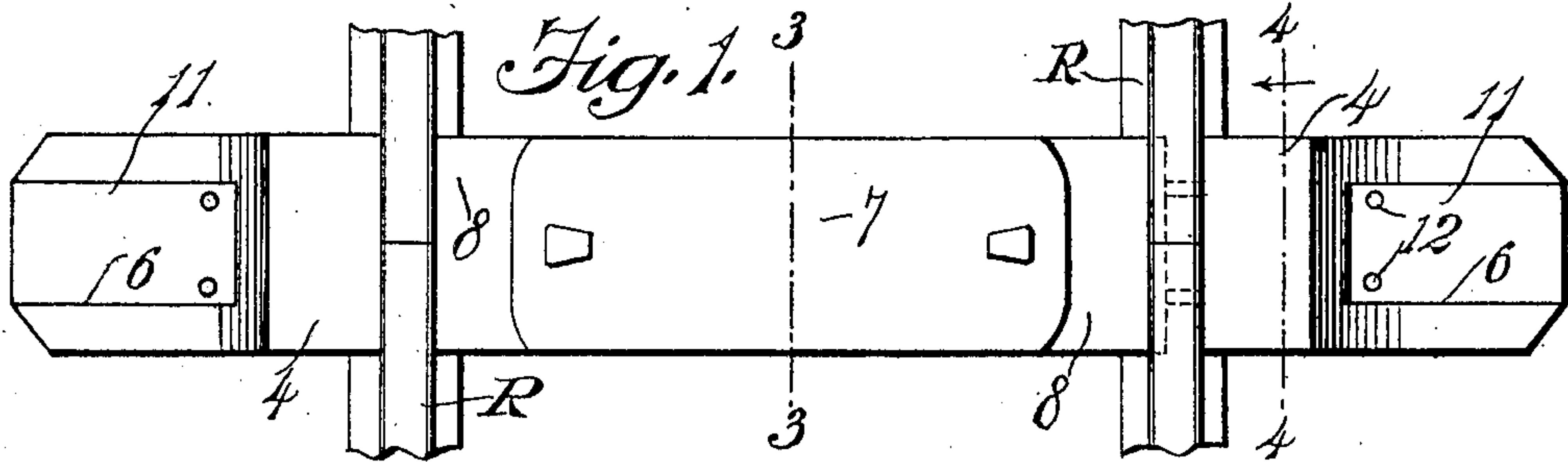


C. ENGLISH.
CROSS TIE AND RAIL FASTENER.
APPLICATION FILED DEC. 29, 1908.

925,999.

Patented June 22, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

CLARENCE ENGLISH, OF BYRNEDALE, PENNSYLVANIA.

CROSS-TIE AND RAIL-FASTENER.

No. 925,999.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed December 29, 1908. Serial No. 469,845.

To all whom it may concern:

Be it known that I, CLARENCE ENGLISH, a citizen of the United States, residing at Byrnedale, in the county of Elk and State of Pennsylvania, have invented certain new and useful Improvements in Cross-Ties and Rail-Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in railway cross ties and rail fasteners, and it consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed.

The object of the invention is to provide a simple and practical metallic cross tie and an improved means for fastening track rails thereto without the use of fish-plates and bolts.

The above and other objects of the invention are attained in its preferred embodiment illustrated in the accompanying drawings, in which—

Figures 1 and 2 are plan and side views of my improved cross tie and rail fastener, one end of the tie in Fig. 2 being shown broken away and in section; Figs. 3 and 4 are vertical transverse sections taken on the planes indicated by the lines 3—3 and 4—4 in Fig. 1; Fig. 5 is a detail view of the rail clamping member; and Fig. 6 is a detail perspective of the cushioning block.

In the drawings 1 denotes the body of my improved metallic tie which is substantially rectangular in cross section and has its central portion formed with a vertical channel 2. The bottom face of the tie is ribbed or corrugated longitudinally, as shown at 3, so that it will firmly engage the road bed and be prevented from shifting. At each end of the body of the tie is an upwardly projecting enlargement 4 of a height corresponding to the height of the web of one of the track rails R and having its inner face undercut, as shown at 5. The rail R is adapted to rest upon the top of the tie 1 and its outer base flange projects into the undercut portion 5 of said enlargement. The inner base flange of the rail is adapted to be secured by a clamping member 8 having a body portion disposed partly in the channel 2 in the tie and partly in a longitudinal opening or channel 9 formed in the end of the tie beneath the enlargement or rail engaging projection 4. Said rail clamping member 8 has the upper portion of its inner end enlarged and formed with oppositely

projecting flanges 10 adapted to rest upon the top of the tie and to slide thereon as said member is moved outwardly to cause it to clamp the rail against the enlargement or projection 4. 7 denotes a cushioning block made preferably of wood and secured in the central portion of the channel 2 by vertical fastenings 7^a, the ends of said block being shaped to engage the opposing inner ends of the members 8. Said clamping member is also tightened and secured by one or more wedge-shaped keys 11 passed through the openings 9 and in engagement with the outer portions of the clamping members 8, as clearly illustrated in the drawings. Split pins 12 or other suitable fastenings may be passed through openings in the wedge keys 11, the members 8 and the tie to retain the wedge keys 11 in the tie. Upon the rail clamping member 8 are provided two pins 13 adapted to project through elongated openings in the web portions of the track rails and to enter seats in the rail engaging portion 4 of the tie, as will be readily understood upon reference to Figs. 1, 2 and 5 of the drawings.

From the foregoing it will be seen that my invention provides an exceedingly simple, strong and durable cross tie and rail fastener which will dispense with the necessity of fish-plates and screw bolts and which will effectively fasten the rails. It will be understood that two rails may be secured by the invention by arranging their abutting ends between the projection 4 and the clamping member 8 and that they will be held in perfect alinement.

Having thus described my invention what I claim is:

1. The combination of a tie provided in its top with a longitudinal channel and having adjacent its ends enlargements provided with undercut inner portions, said channels extending into the enlargements, rails upon the tie and engaged with the undercut inner portions of said enlargements, rail clamping members engaged with the inner sides of the rails and having portions disposed in the channel of the tie and extending under the rails and through the openings or recesses in said enlargements and a cushioning block secured in the central portion of the channel of the tie and having its ends engaged with the inner ends of said rail clamping members.

2. The combination of a tie provided in its top with a longitudinal channel and having adjacent its ends enlargements provided with

undercut inner portions, said channels extending into the enlargements, rails upon the tie and engaged with the undercut inner portions of said enlargements, rail clamping members engaged with the inner sides of the rails and having portions disposed in the channel of the tie and extending under the rails and through the openings or recesses in said enlargements, wedge members or keys inserted in the outer portions of the openings or recesses in the enlargements of the tie and engaged with the outer base flanges of the track rails and fastenings passed through said wedge keys, the outer portions of the rail clamping members and the tie.

3. The combination of a tie provided in its top with a longitudinal channel and having adjacent its ends enlargements provided with undercut inner portions, said channels extending into the enlargements, rails upon the tie and engaged with the undercut inner portions of said enlargements, rail clamping members engaged with the inner sides of the

rails and having portions disposed in the channel of the tie and extending under the rails and through the openings or recesses in said enlargements, wedge members or keys inserted in the outer portions of the openings or recesses in the enlargements of the tie and engaged with the outer base flanges of the track rails, vertical fastenings passed through said wedge keys, the outer portions of the rail clamping members and the tie, a cushioning block arranged in the central portion of the channel of the tie and having its ends engaged with the inner ends of said rail clamping members and vertical fastenings passed through said cushioning block and the tie.

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

CLARENCE ENGLISH.

Witnesses:

DAVID THOMAS,
W. A. McCafferty.