

(No Model.)

J. MAHONEY & D. W. SHOCKLEY.

RAILWAY CROSS TIE.

No. 370,634.

Patented Sept. 27, 1887.

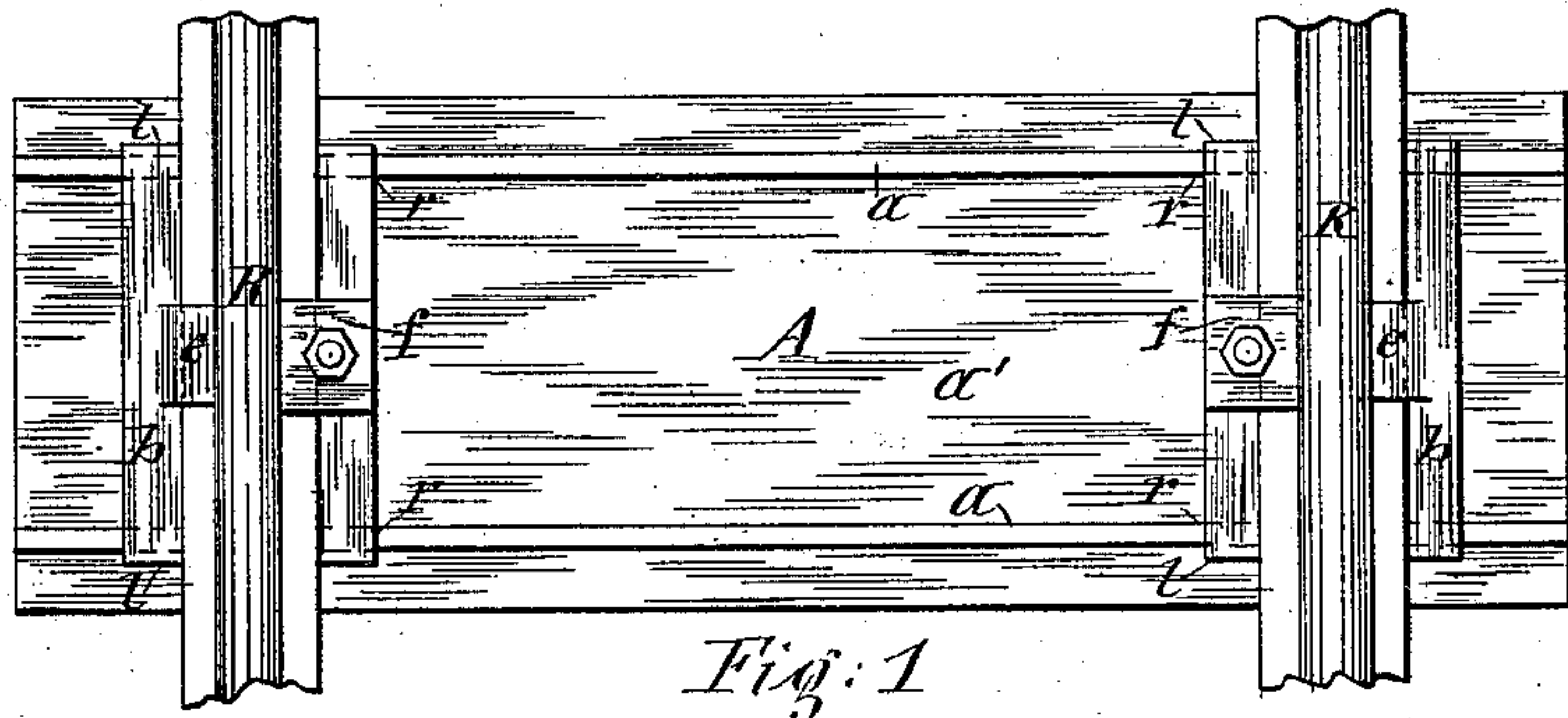


Fig. 1

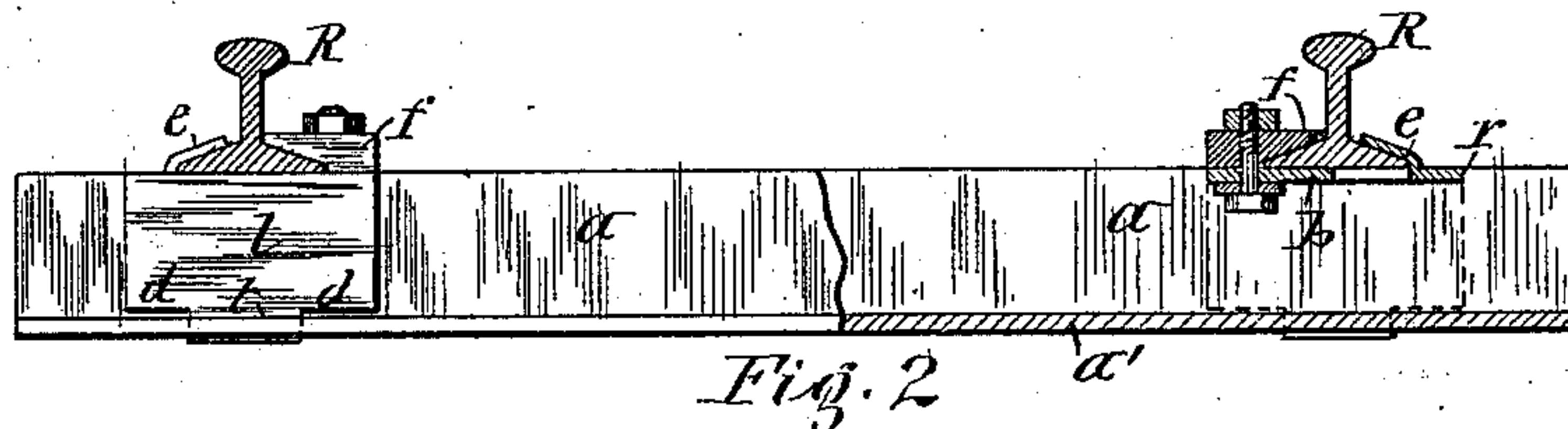


Fig. 2

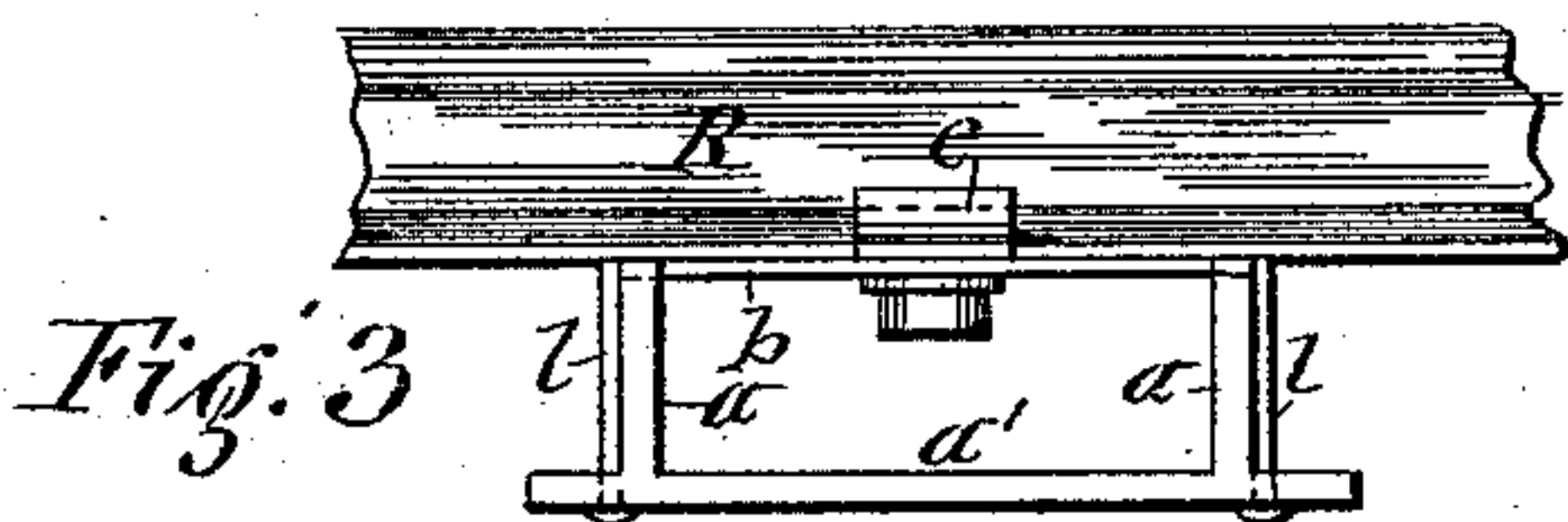


Fig. 3

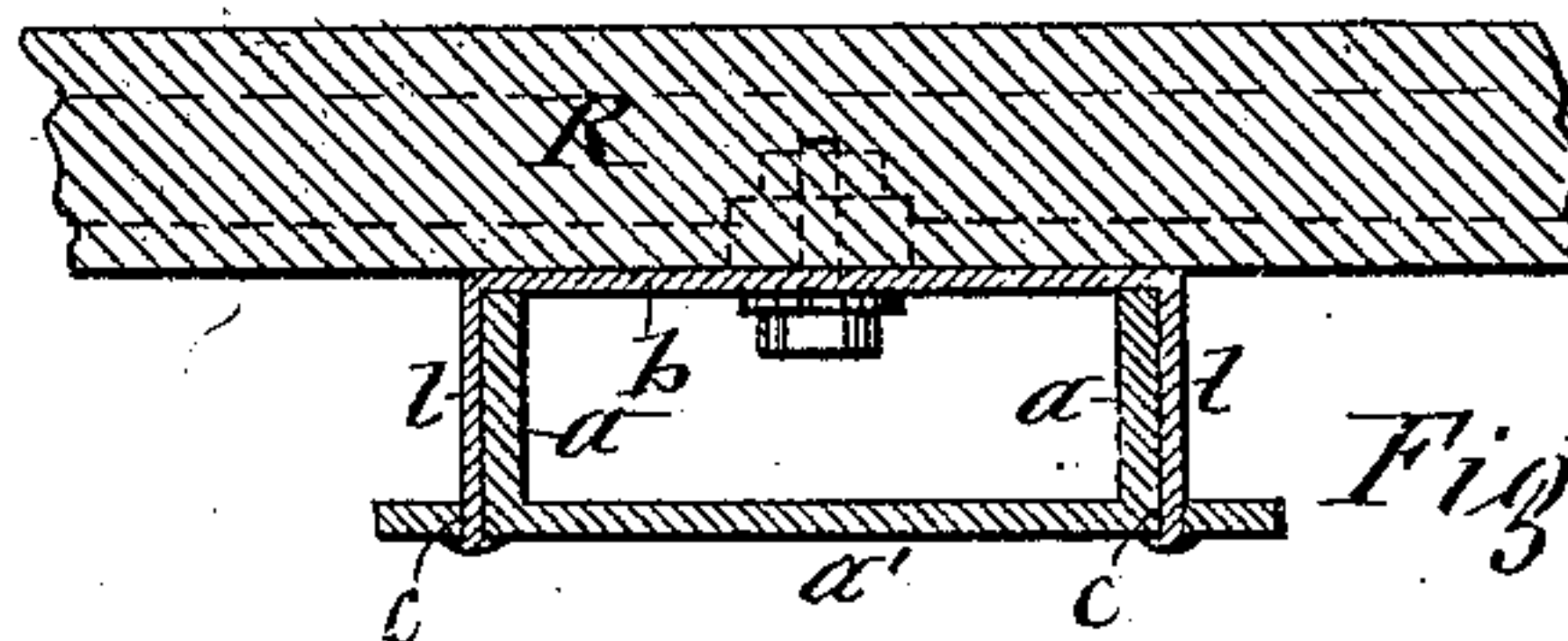


Fig. 4

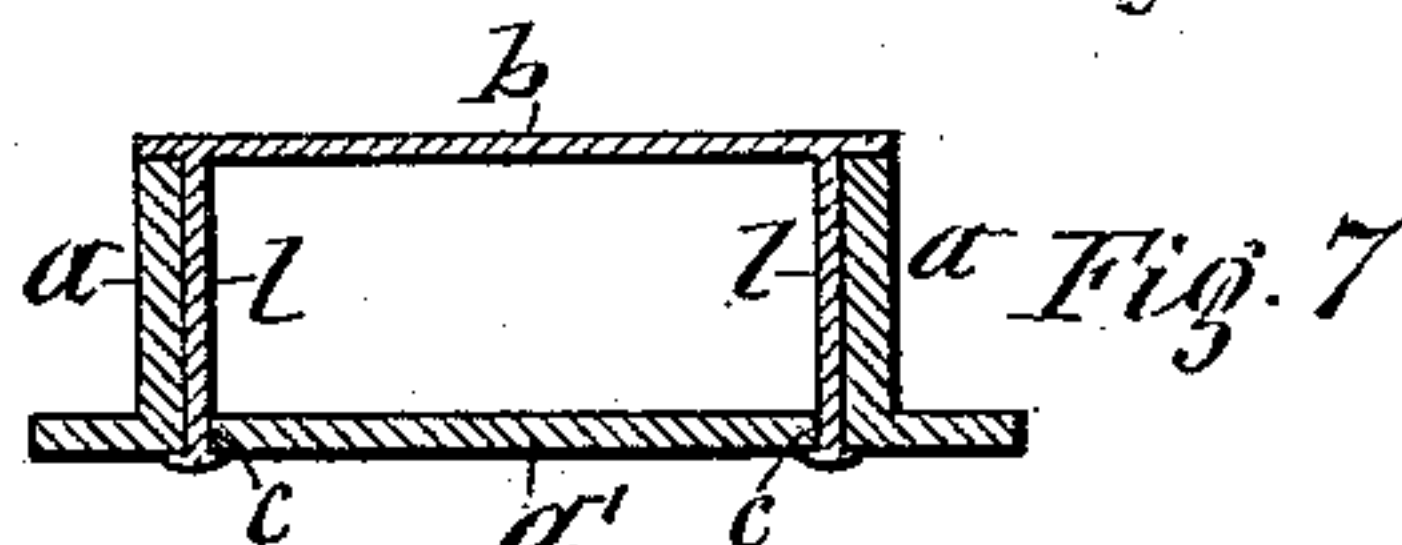


Fig. 7

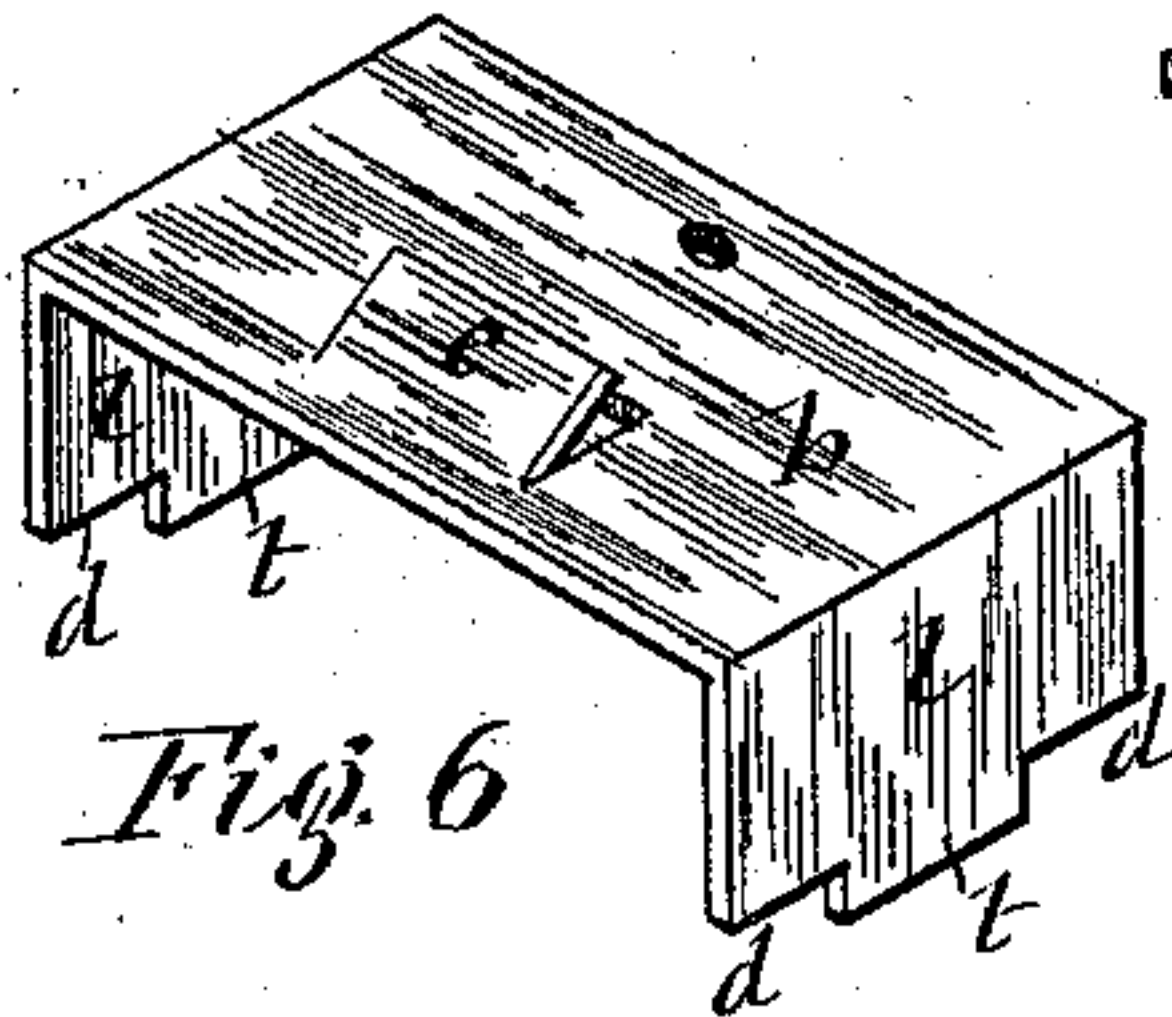


Fig. 6

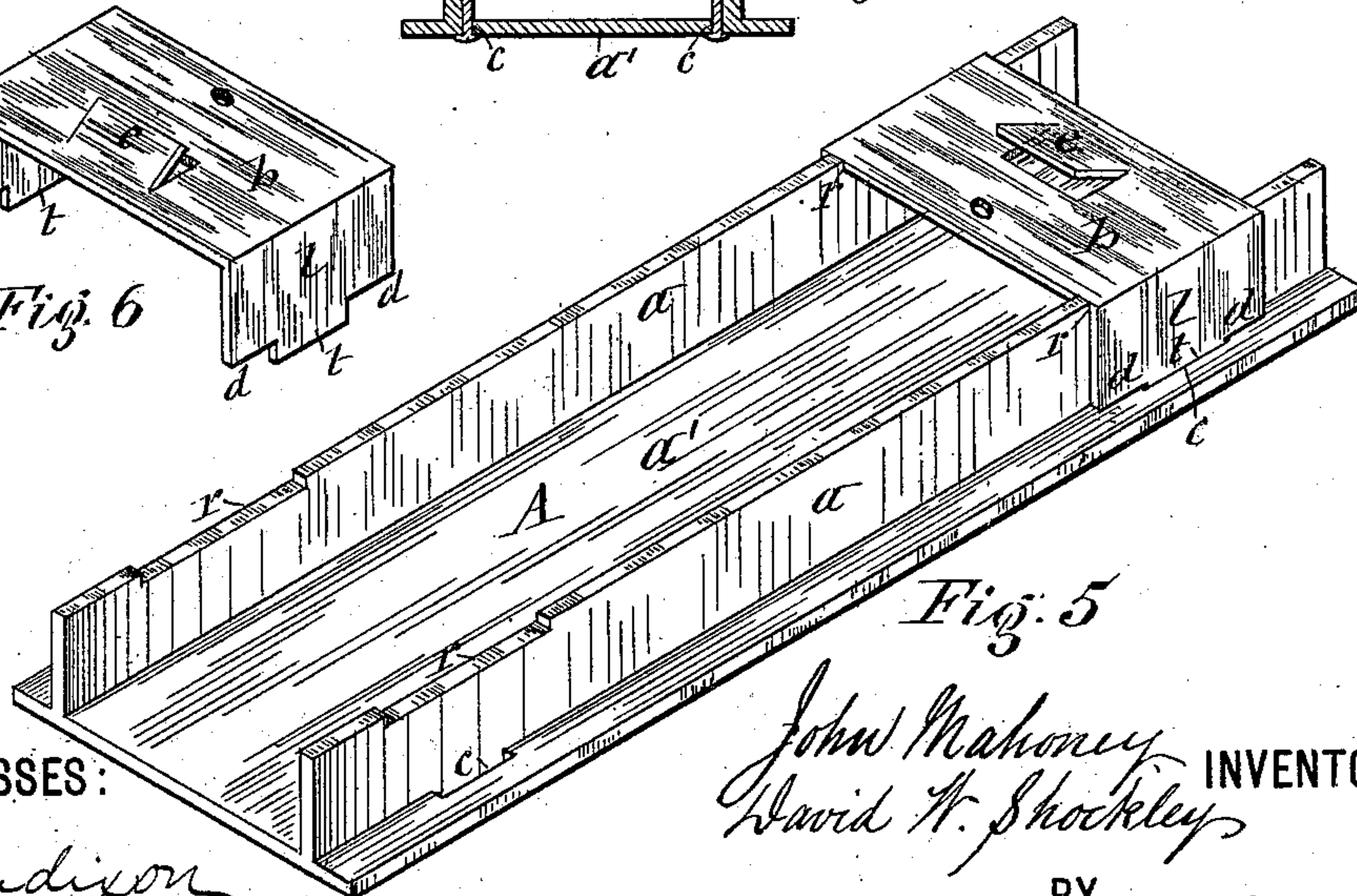


Fig. 5

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# UNITED STATES PATENT OFFICE.

JOHN MAHONEY AND DAVID W. SHOCKLEY, OF WILMINGTON, DELAWARE.

## RAILWAY CROSS-TIE.

SPECIFICATION forming part of Letters Patent No. 370,634, dated September 27, 1887.

Application filed June 29, 1887. Serial No. 242,832. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN MAHONEY and DAVID W. SHOCKLEY, of Wilmington, in the county of New Castle, in the State of Delaware, have invented new and useful Improvements in Railway Cross-Ties, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention has special reference to the metallic cross-tie for which we have obtained Letters Patent of the United States, No. 280,200, dated June 26, 1883.

Our present invention consists in an improved construction and combination of the devices for securing the track-rails to the tie, as hereinafter fully described, and specifically set forth in the claims.

In the accompanying drawings, Figure 1 is a plan view of our improved railway cross-tie with the rails mounted thereon. Fig. 2 is partly a side view and partly a longitudinal sectional view of the same. Fig. 3 is an end view; Fig. 4, a transverse section. Fig. 5 is an isometric view of the tie with one of the bearing-plates mounted thereon. Fig. 6 is a detached isometric view of one of the bearing-plates; and Fig. 7 is a transverse section of the tie, illustrating a modification of the attachment of the bearing-plate.

Similar letters of reference indicate corresponding parts.

R R denote the track-rails, and A the metallic cross-tie supporting said rails. Said cross-tie we construct of iron or steel and with upward-projecting flanges *a a* rising from a base or bed plate, *a'*, at or near the side edges thereof, similar to the cross-tie shown in our prior patent hereinbefore referred to. Heretofore we have mounted the rails R R directly on the flanges *a a*, and secured them to the tie by clip-plates fastened to the base of the tie between the flanges *a a*, and blocks were fitted between the flanges and clamped between the clip-plates to afford additional bearings for the rails. This construction and combination of parts we find complicated and expensive and do not afford the secure fastening for the rails.

The object of our present invention is to obviate the aforesaid defects, and to that end we resort to the following improved construction and combination of parts.

Across the top of the two flanges *a a*, near each end thereof, we place horizontally a bearing-plate, *b*, which we secure in position by providing the top of the flanges with recesses *r r*, in which the aforesaid plate is seated. We form the plate *b* with legs *l l*, which rest either against the inner sides of the flanges *a a*, as represented in Fig. 7 of the drawings, or against the outer sides of said flanges, as shown in Figs. 4 and 5 of the drawings, and terminate with shoulder *d d*, by which they rest on the base *a'* of the tie, and with tenons *t* between said shoulders, which tenons pass through slots *c c* in the base *a'* and are clinched or otherwise fastened to the under side of the tie.

To secure the rail R to the bearing-plate *b*, we provide said plate with a lip, *e*, which we preferably strike up from the plate between the flanges *a a*, said lip being adapted to receive underneath it and bear on one of the flanges to the rail R at the outer side thereof. The flange on the inner side of the rail is embraced by a clip, *f*, bolted or otherwise clamped onto the bearing-plate *b*, as shown in Fig. 2 of the drawings.

Having described our invention, what we claim is—

1. In combination with the metallic tie formed with upward-projecting flanges *a a*, provided with recesses *r r*, the bearing-plates *b b*, seated in said recesses and secured to the tie, and the rails R R, mounted on said bearing-plates, as set forth.

2. The combination of the metallic tie formed with upward-projecting flanges *a a*, and provided with slots *c c*, and the bearing-plates *b b*, riding on said flanges and provided with tenons *t t*, passing through the said slots and fastened to the under side of the tie, substantially as set forth.

3. The combination of the metallic tie formed with upward-projecting flanges *a a*, and provided with slots *c c*, and the bearing-plates *b b*, riding on said flanges and formed with the legs *l l*, provided with the tenons *t t*, and with shoulders *d d*, substantially as described and shown.

4. The combination of the metallic tie formed with upward-projecting flanges *a a*, and provided with the recesses *r r* and slots *c c*, and the bearing-plates *b b*, seated in said



recesses and formed with legs *l l*, provided with supporting-shoulders *d d*, and with tenons *t t*, clinched on the under side of the tie, substantially as described and shown.

5 5. The combination of the metallic tie formed with upward-projecting flanges *a a*, and provided with recesses *r r* in said flanges, and with the slots *c c* in the base of the tie, the bearing-plates *b b*, seated in said recesses and  
10 formed with legs *l l*, provided with the supporting-shoulders *d d*, and with tenons *t t*, clinched on the under side of the tie, and clamps on top of the bearing-plates for securing the rails thereto, substantially as described and  
15 shown.

6. The combination of the metallic tie formed with the upward-projecting flanges *a a*, and provided with the recesses *r r* in said flanges, and with the slots *c c* in the base of  
20 the tie, the bearing-plates *b b*, seated in said

recesses and formed with legs *l l*, provided with supporting-shoulders *d d*, and with tenons *t t*, clinched on the under side of the tie, and lips *e e*, struck up from the bearing-plates between the flanges *a a*, the rails *R R*, mounted  
25 on the bearing-plates, and each having one of its flanges under the lip *e*, and the clip *f*, clamped on the bearing-plate and bearing on the other flange of the rail, substantially as described and shown. 30

In testimony whereof we have hereunto signed our names and affixed our seals, in the presence of two attesting witnesses, at Wilmington, in the county of New Castle, in the State of Delaware, this 25th day of June, 1887. 35

JOHN MAHONEY. [L. S.]

DAVID W. SHOCKLEY. [L. S.]

Witnesses:

JOHN OTTO,

GEO. C. WARD.