

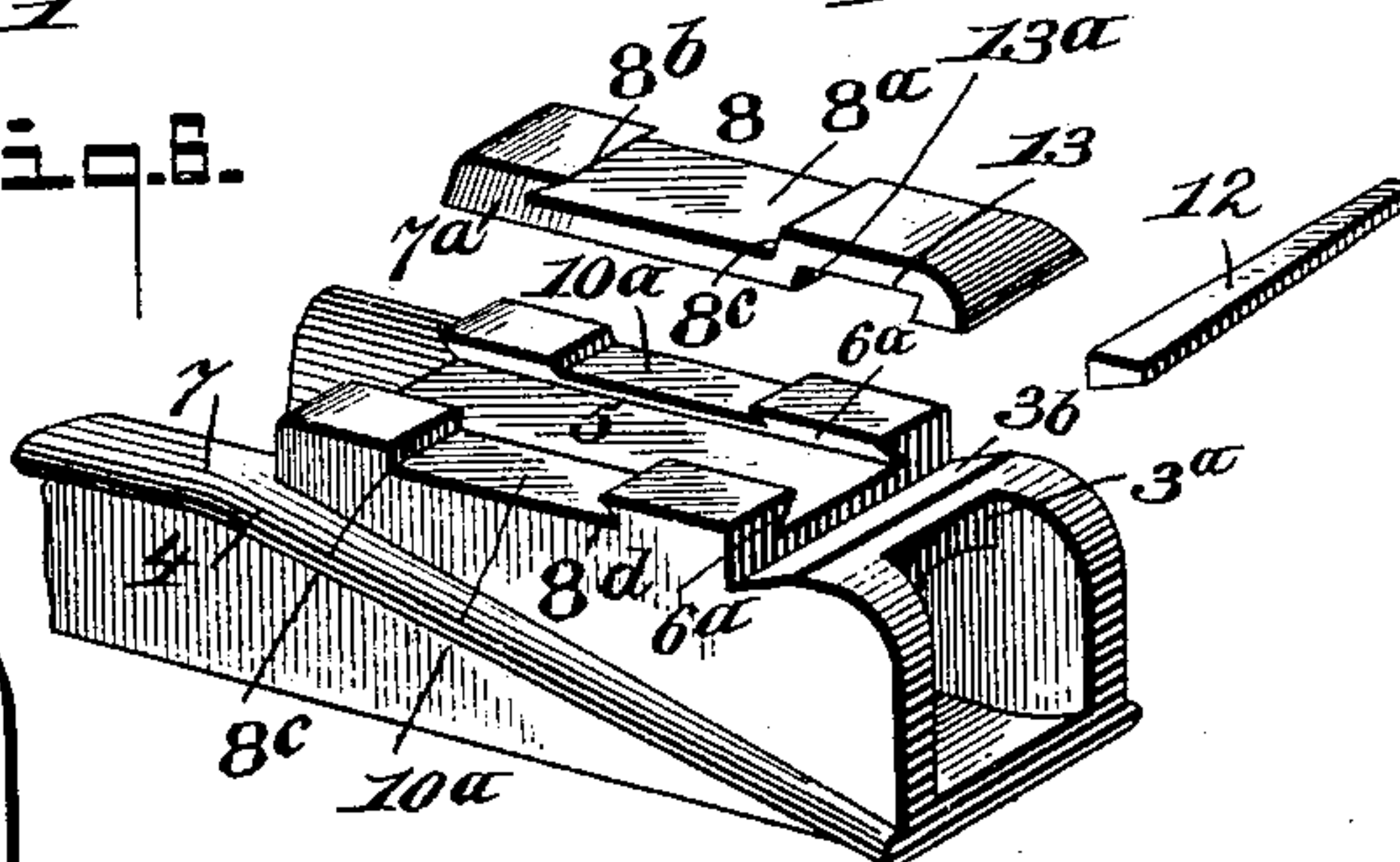
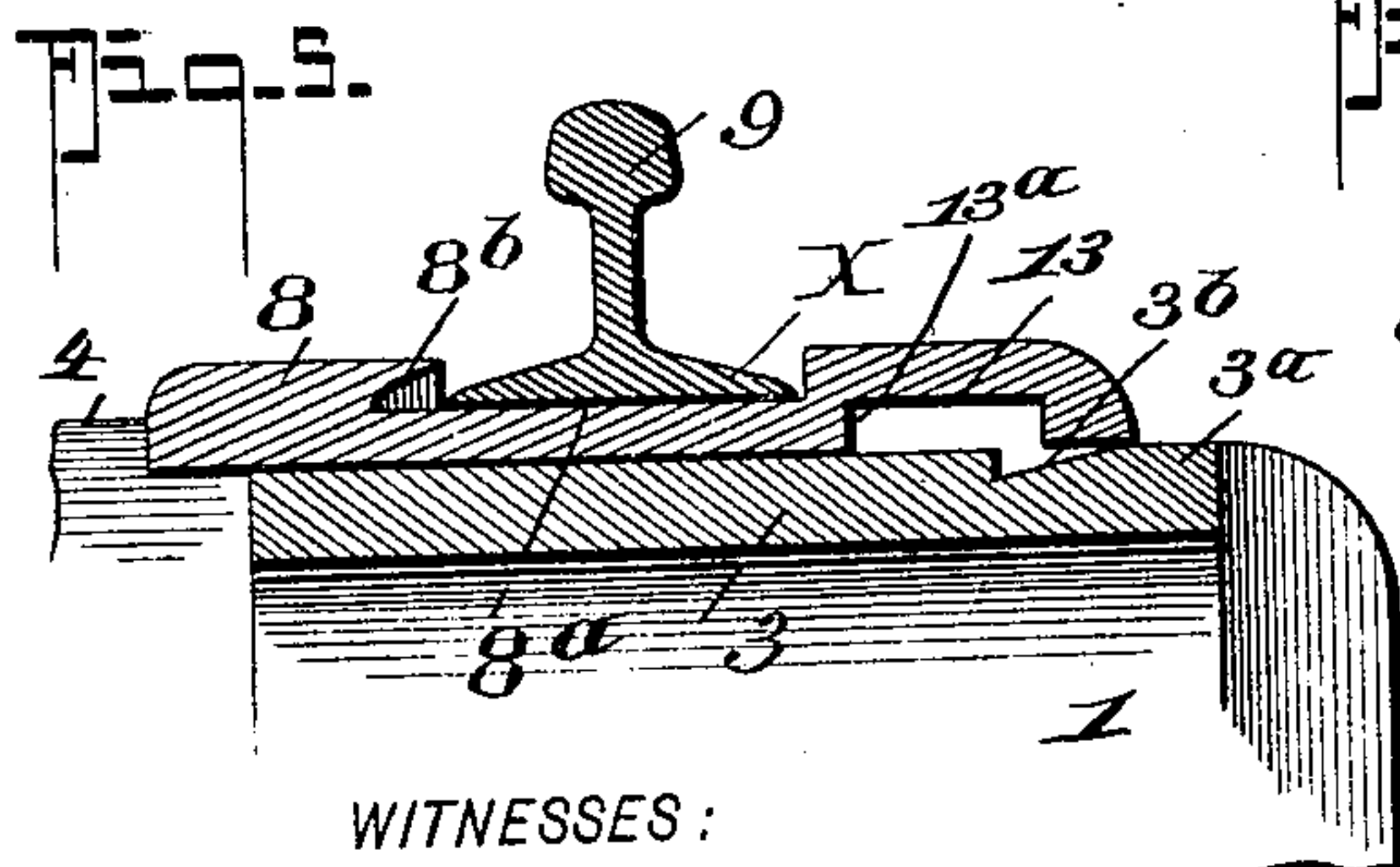
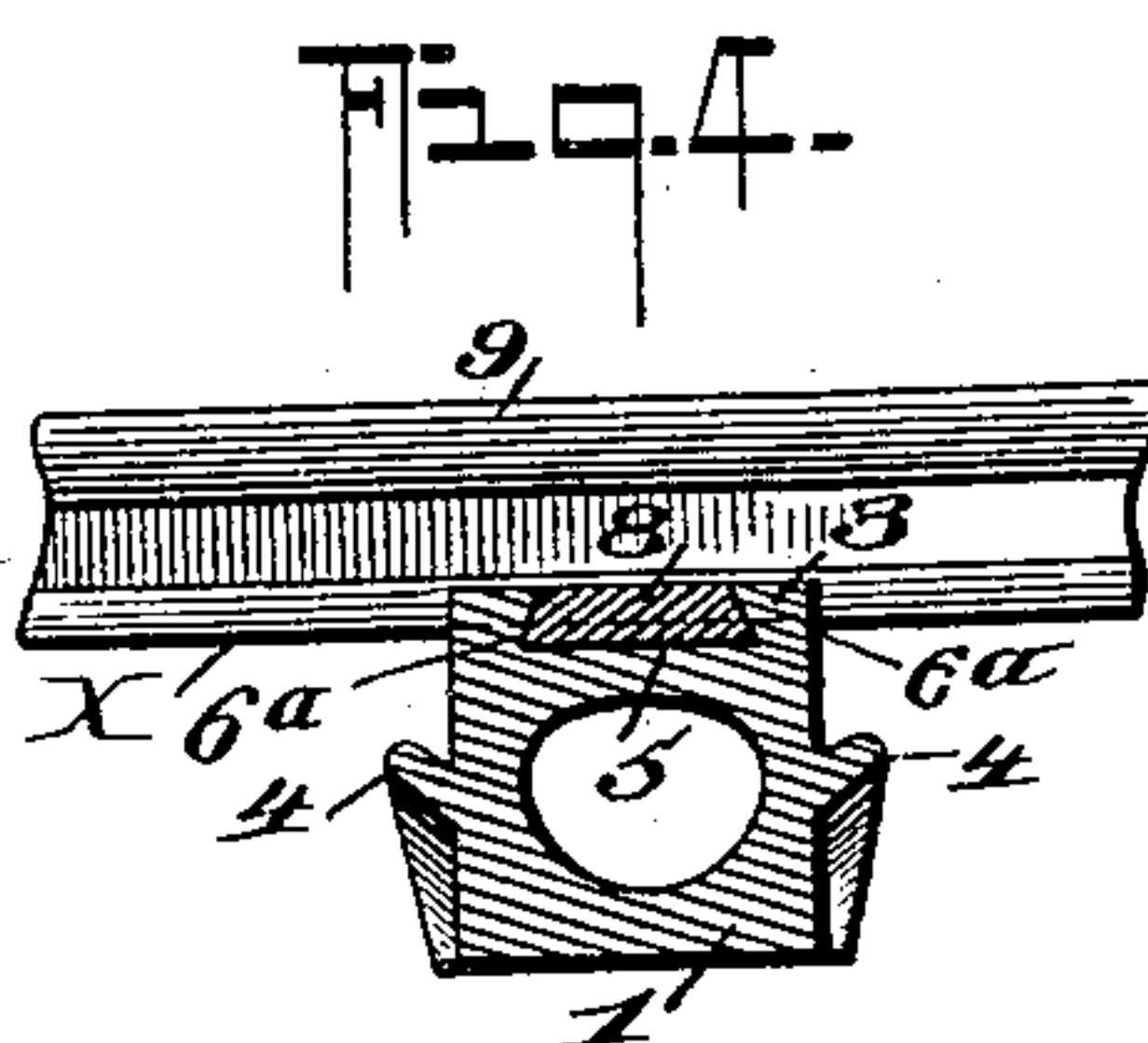
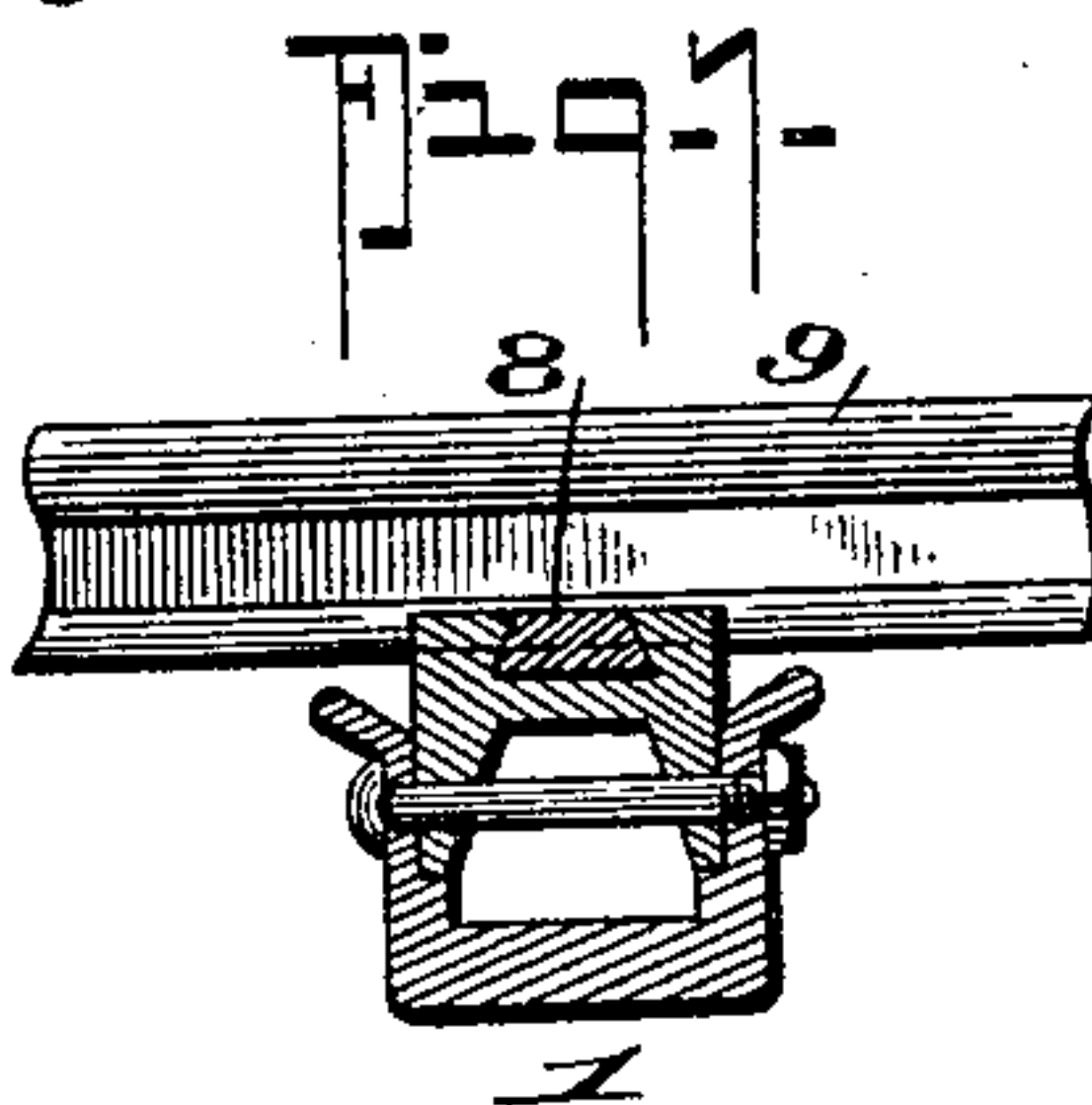
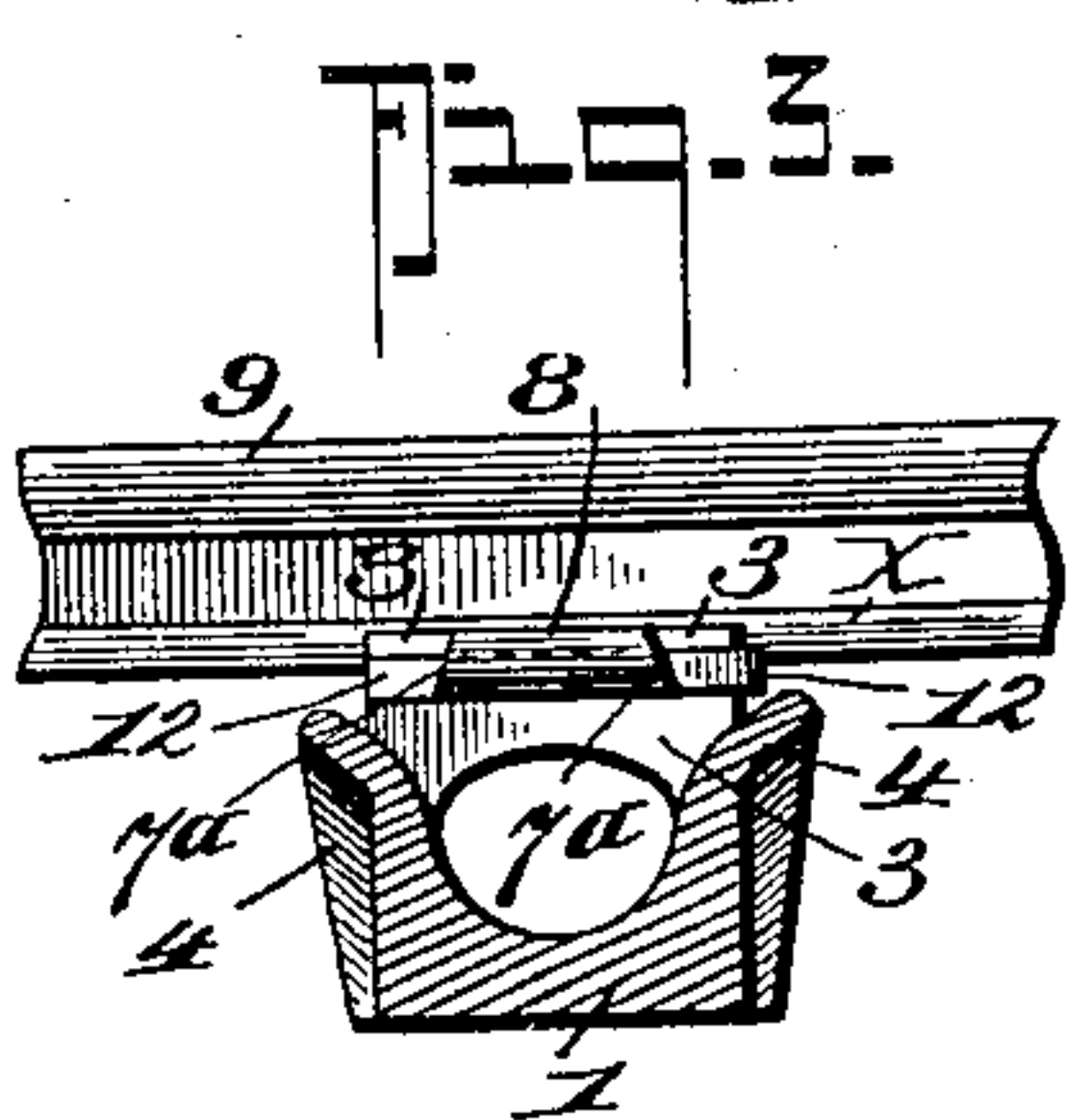
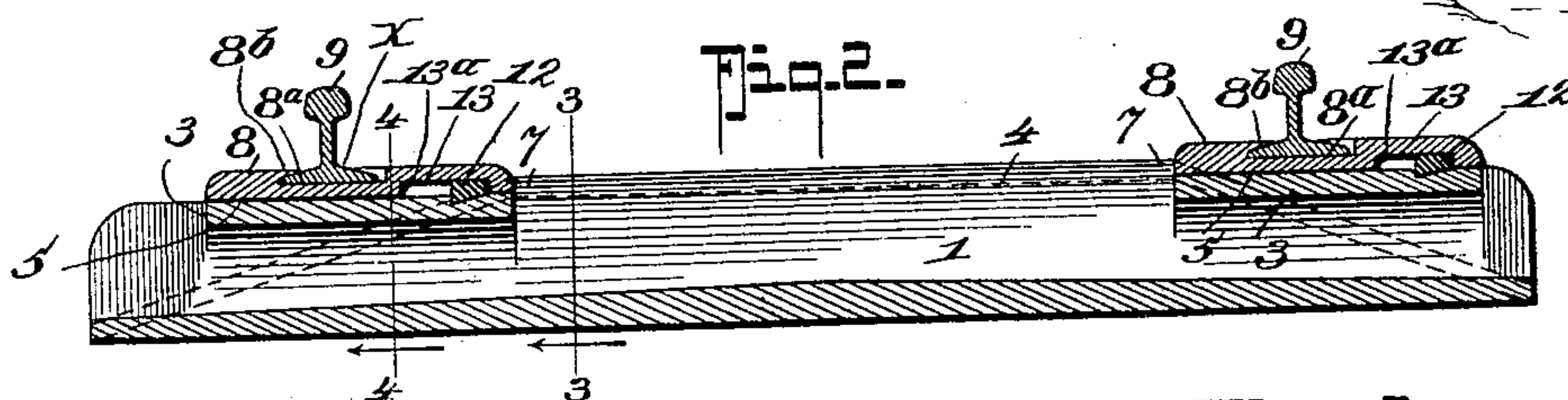
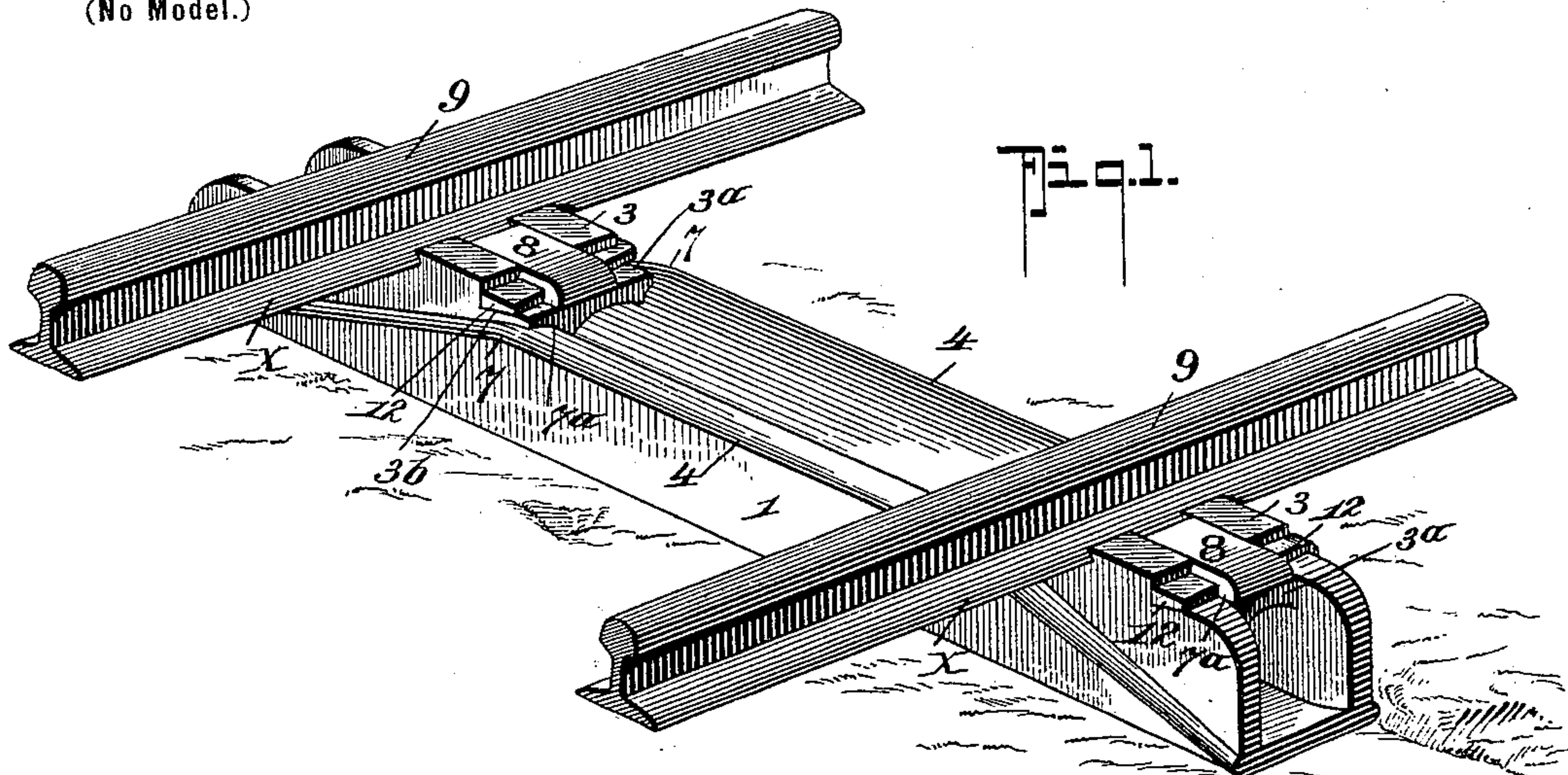
**No. 611,037.**

**Patented Sept. 20, 1898.**

**T. G. JACKLIN.**  
**METALLIC RAILROAD TIE.**

(Application filed Mar. 31, 1898.)

(No Model.)



WITNESSES :

H. G. Dieterich  
E. McCormie

INVENTOR

*Thomas G. Jacklin*

BY

*Fred G. Dietrich & Co.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

THOMAS G. JACKLIN, OF INOLA, INDIAN TERRITORY, ASSIGNOR OF ONE-HALF TO JOHN J. HENDRICKS, WOODSON W. HUBBARD, AND CURTIS E. COLLINS, OF SAME PLACE.

## METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 611,037, dated September 20, 1898.

Application filed March 31, 1898. Serial No. 675,921. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS G. JACKLIN, residing at Inola, Creek Nation, Indian Territory, have invented certain new and useful  
5 Improvements in Metallic Railroad-Ties, of which the following is a specification.

This invention, which relates generally to improvements in metallic railway-ties, more particularly refers to that class of metallic  
10 ties having adjustable means for clamping the rails to the seat or chair of the tie and in which the tie *per se* is adapted to serve as a drain for the road-bed.

My invention primarily, therefore, has for  
15 its object to provide a combined rail and drain tie of a very simple and economical construction, which can be readily set up in place and which will effectively serve as a ballast-holder and to drain the road-bed to maintain it al-  
20 ways in a solid and desired condition.

This invention also comprehends a construction of combined drain and rail tie and clamp mechanism in which very simple and novel wedge clamp devices are embodied,  
25 which can be quickly and easily manipulated, and which will serve to securely hold the rails always securely at right angles to the tie and on a solid rigid bearing.

In its subordinate features my invention  
30 consists in certain features of construction and peculiar combination of parts, such as will be first described in detail and then specifically pointed out in the appended claims, reference being had to the accompanying  
35 drawings, in which—

Figure 1 is a perspective view of my improvement. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section on the line 3 3 of Fig. 2. Fig. 4 is a trans-  
40 verse section of the same on the line 4 4. Fig. 5 is an enlarged detail section of one end of my improved tie, showing the rail and the clamp device set to an unclamped position; and Fig. 6 is a detail view of the chair end of  
45 the tie and the detachable clamp members. Fig. 7 illustrates a modified construction of parts hereinafter specifically referred to.

In its practical construction the body of my

improved tie is in the nature of a U-shaped member 1, which at the ends is bridged by  
50 the chair or seat portions 2, integrally formed therewith and which serve to strengthen the same, as also to form a solid or fixed seat or chair portion for the rails 3 3. At points be-  
55 tween the chair portions 3 3 and beyond the outer ends thereof the tie is an open trough to receive ballast-filling of any kind and also to form a transverse channel or culvert to drain the road-bed, it being understood that  
60 as the sides and bottom of the tie are solid the ballast-filling therein will not affect the draining qualities thereof.

To provide a solid bearing for the tie and a proper ballasting of the road-bed, the ver-  
65 tical sides of such tie have integral lateral flanges 4 4, which at points between the portions 3 3 are disposed at the upper edge of the said vertical sides and inclined vertically  
70 upward, as clearly shown in Fig. 3, to the more readily deflect the side drainage toward the trough-body 7, and such flanges 4 from the inner ends of the said portions 3 incline  
75 downward under the rails to form clearly-defined retaining-ribs for holding the tie firmly embedded in the ballast.

The seat or chair portions 3 3 are con-  
80 structed alike, and each has a longitudinal slideway 5, the sides of which form guide-ways 6, which, as will be readily seen from Fig. 4, have undercut grooves 6<sup>a</sup> for the bev-  
85 eled or dovetail edges 7<sup>a</sup> of the clamp-slide 8, presently again referred to.

The guides 8 each have a seat 8<sup>a</sup> at a point above the slideway 5, which are in transverse  
85 alinement and have one edge terminating vertically, while the other forms a clamp-lip 8<sup>b</sup>. The seats 8<sup>a</sup> are of a length slightly in excess of the width of the base of the rail  
90 9, whereby such rail can be readily seated thereon and moved sidewise to bring its inner or outer flange, as the position of the clamp-lip may be, under the clamp-lips 8<sup>b</sup> and held securely clamped thereby. The rail-base is also adapted to rest on the seat  
95 10<sup>a</sup>, of a length equal to the seats 8<sup>a</sup>, such seats 10<sup>a</sup> being formed in the upper face of the



chair portions 3 and having a vertical edge 8<sup>c</sup> and a clamp-lip 8<sup>d</sup>, which lip 8<sup>d</sup> is, however, disposed alternately to the lip 8<sup>b</sup> of the guide 8, so as to engage the base-flange of the rail 5 opposite that flange engaging the lip 8<sup>b</sup>.

In practice the slide-clamp 8 is adjusted on the slideway 5 to bring its seat 8<sup>a</sup> to register with the seats 8<sup>a</sup>. The rail is then set on the seats 8<sup>a</sup> and 8<sup>c</sup>, after which the slide-clamp is drawn in the slideway 5 to bring its lip 8<sup>d</sup> into engagement with its coincident rail-flange, which it grips, and as it (the slide) is still drawn over the rail will be moved side-wise with it to bring its flange X under the lip 8<sup>b</sup>, as clearly shown in the drawings.

As a simple means for effecting the clamping of the rail and shifting the slide 8, I provide the seat portions 3 with an extension 3<sup>a</sup>, having a transverse groove 3<sup>b</sup>, made beveled or inclined in cross-section to receive a wedge-shaped tapering key 12, which is made of sufficient thickness to project above the said groove 3<sup>b</sup> and engage the straight edge 13<sup>a</sup> on the transverse groove 13 on the under side of the front end of the slide 8.

In practice the groove 3<sup>b</sup> is arranged adjacent the vertical ends of the seat portion 3, which forms an abutting or lock bearing for the wedge-key 12 as it is driven home. In practice after the wedge-key has been driven to securely clamp the rail in place the outer end is bent down by a tap of the hammer to hold it from accidentally wearing loose.

From the foregoing description, taken in connection with the drawings, it is thought the complete coaction of the several parts and the advantage of my invention will be readily apparent to those skilled in the art to which it appertains.

It will be noticed that, excepting the slide-clamp and the wedge-key, all of the remaining parts are integrally formed, thereby making the manufacture economical and the tie one of great strength and durability. By providing a sliding clamp of the character stated the rail can be quickly and securely secured to the tie to maintain at all times the proper position and gage. By making the body trough-shaped and bridging it at the rail-seats the same, while embodying the elements of lightness and strength, will also serve as an effective drain-trough for leading off the water from the road-bed and discharging it at the sides thereof, it being understood by reference to Fig. 2 that the said tie has its bottom dished from the center to the ends to avoid the collecting or standing of water therein. Furthermore, by arranging the side ribs with a central upper portion and downwardly-inclined end portions additional

strength is imparted to the tie-body and a more secure binder-rib produced.

Change in the several details of my invention as described may be made without departing from the scope of the appended claims. Instead of making the chair or seat portions integral, as shown in Figs. 3 and 4, the same may be made of a separate body detachably connected to the U-shaped member 1 by the nut-and-bolt devices, as shown in Fig. 7.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A metallic rail and drain tie; comprising a trough-shaped body having bridge portions at the ends, said bridge portions having each a longitudinal dovetailed groove, and transverse depressed seats of a width slightly in excess of the base of the rail, said seats having one wall undercut; in combination with the clamps 8, slidable in the longitudinal dovetail grooves, and having transverse seats of a width corresponding to the transverse seats in the bridge portions, one wall of such clamp-seats being undercut; said clamps also having transverse grooves 13, and means for drawing the clamps to a locked position, whereby to bring one flange of the rail under the undercut portions of the bridge-seats, all being arranged substantially as shown and for the purposes described.

2. A metallic rail and drain tie; consisting of a U-shaped body having bridge portions at the ends provided with adjustable clamp devices for locking the rail thereto, said U-shaped body having lateral flanges disposed at the upper edge of the body at points between the bridge portions and extending diagonally downward in opposite directions from the ends of the upper or straight portion, substantially as shown and described.

3. The herein-described improved rail and drain tie, comprising, in combination; the U-shaped body, the bridge portions detachably secured to the ends of such body, said bridge portions having wedge-engaging edges 6<sup>a</sup>; longitudinal dovetail grooves, and transverse depressed seats 10<sup>a</sup>, having one edge 8<sup>b</sup> undercut; the slide-clamps 8, having a transverse seat 8<sup>a</sup>, having one edge 8<sup>b</sup> undercut and having on its opposite end on the under face a transverse wedge-receiving groove 13, and the wedge 12, all being arranged substantially as shown and for the purposes described.

THOMAS G. JACKLIN.

Witnesses:

JAS. E. HATHAWAY,  
A. B. COLLINS.