

No. 848,197.

PATENTED MAR. 26, 1907.

P. D. NICOLS, DEC'D.  
E. A. NICOLS, ADMINISTRATRIX.  
RAILWAY TIE.  
APPLICATION FILED DEC. 11, 1905.

FIG. 1.

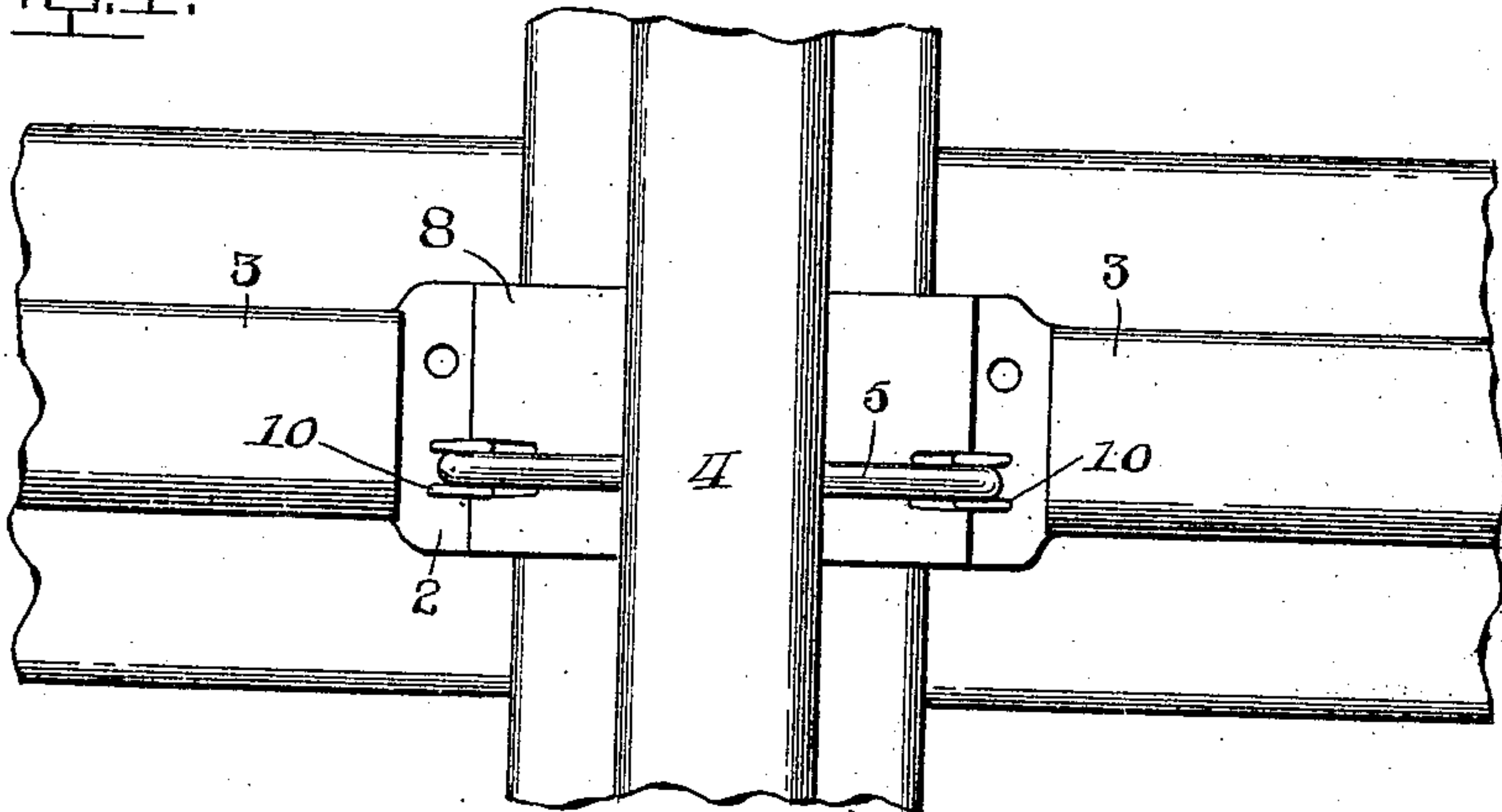


FIG. 2.

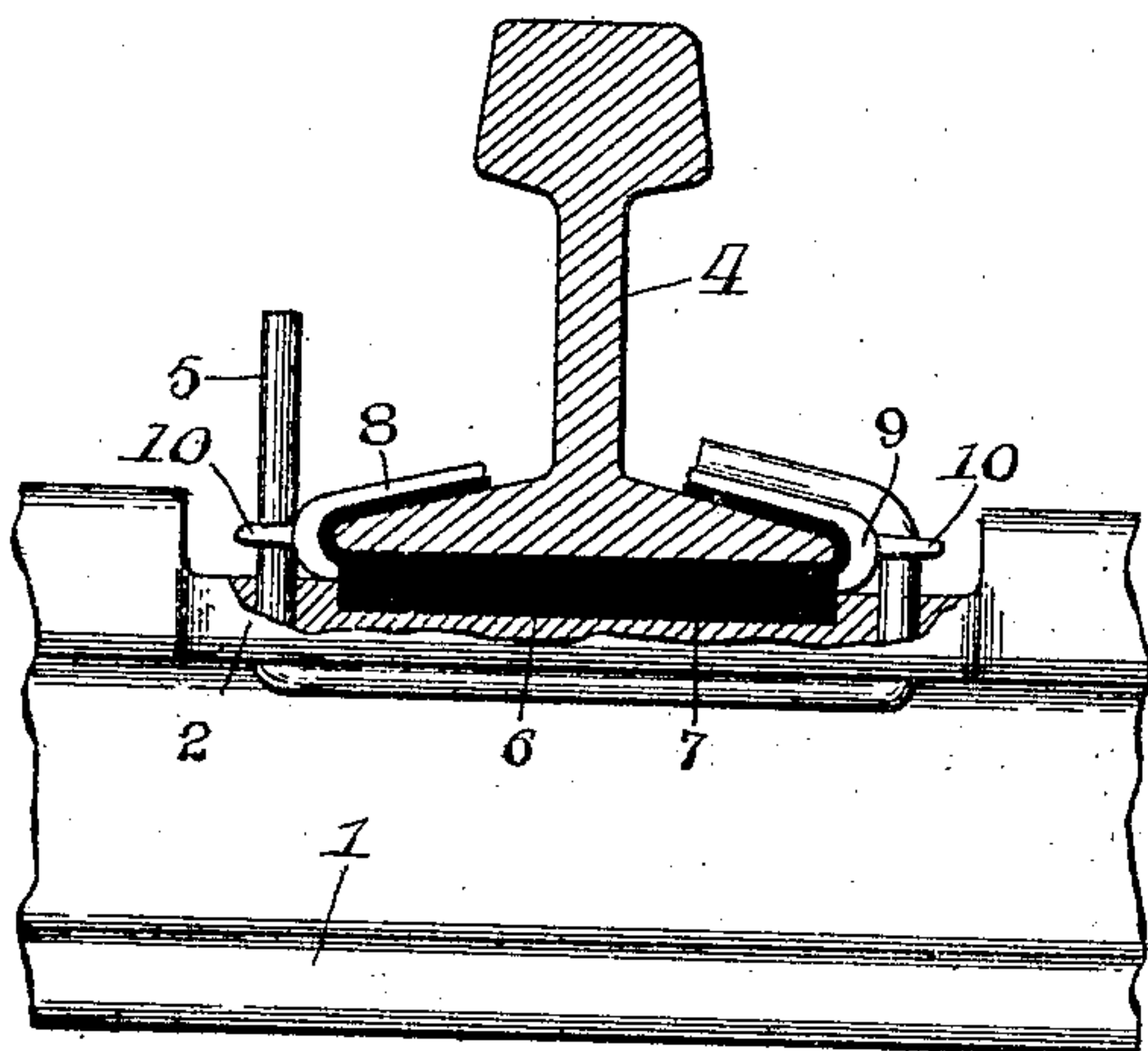


FIG. 3.

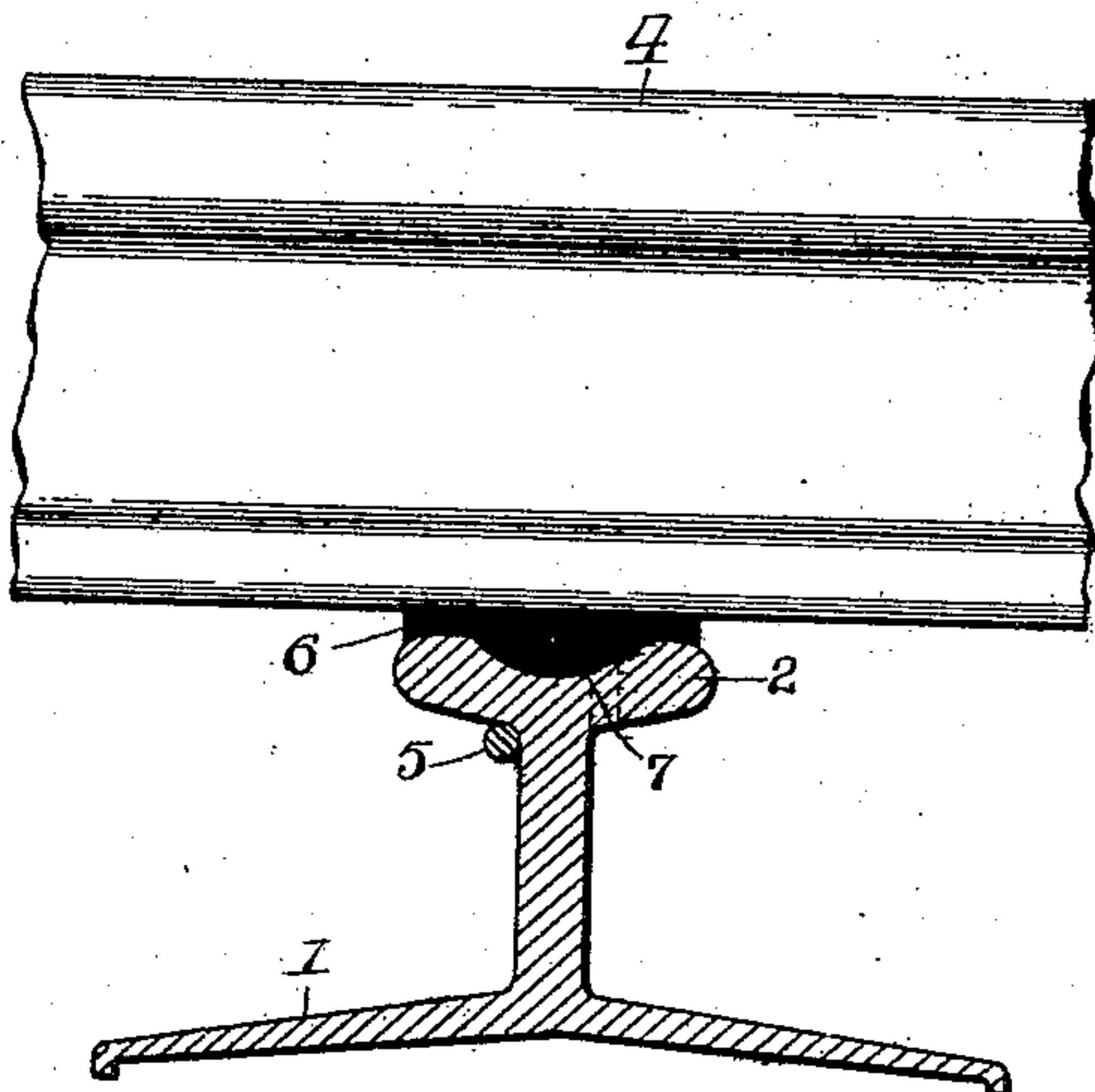
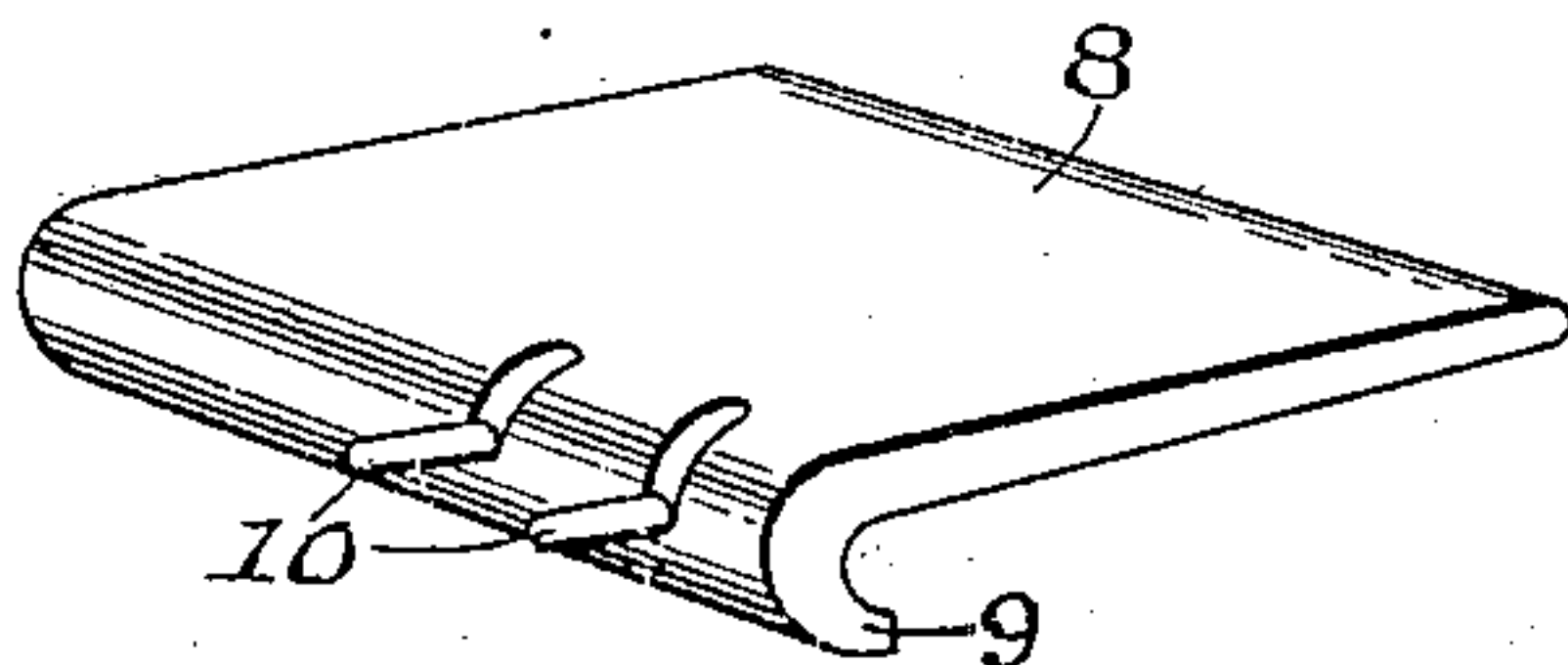


FIG. 4.



WITNESSES:

*W. P. Pongus*  
*Herbert Bradley*

INVENTOR

*Parohall D. Nicols*  
*Christy & Christy Atty's*

# UNITED STATES PATENT OFFICE.

PARSHALL D. NICOLS, OF EDGEWORTH BOROUGH, PENNSYLVANIA;  
ELIZABETH A. NICOLS ADMINISTRATRIX OF SAID PARSHALL D.  
NICOLS, DECEASED.

## RAILWAY-TIE.

No. 848,197.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed December 11, 1905. Serial No. 291,297.

*To all whom it may concern:*

Be it known that I, PARSHALL D. NICOLS, residing at Edgeworth borough, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Railway-Ties, of which improvements the following is a specification.

The invention described herein relates to certain improvements in cross-ties for railroads, and consists, generally stated, in a tie formed from a section of a railroad-rail having one of its parts or members spread laterally to form a broad base or foundation plate and having seats for the rail on another part or member.

The invention further consists in certain features of construction hereinafter more fully described and claimed.

In the accompanying drawing, forming a part of this specification, Figure 1 is a plan view of a portion of a tie having a rail secured thereto in accordance with my invention. Fig. 2 is a sectional elevation of the construction shown in Fig. 1. Fig. 3 is a view showing the cross-tie in section, the plane of section being through the rail-seat; and Fig. 4 is a perspective view of the clamping-plate.

In the practice of my invention a rail is cut into suitable lengths and the flange or head of such section is reduced in thickness and spread laterally to form a base or foundation plate 1, as described and claimed in an application filed by me December 11, 1905, Serial No. 291,296. Rail-seats 2 are formed in the part or member of the rail on the edge of the web opposite the base 1, as the head 3. These seats are preferably formed by reducing under a hammer the thickness of the head at the points where the rails 4 will bear. The metal displaced by the reduction in thickness spreads out laterally, as shown in Figs. 1, 2, and 3, thereby producing a comparatively wide seat or bearing for the rails 4.

While the rails may be secured in place in any suitable manner, it is preferred to use U-shaped bolts or staples 5. The legs of these staples are passed up through holes in the seats 2 and the projecting ends are bent down onto the flange of the rail.

Where the rails 4 are used to form portions of an electric circuit, it is necessary to insulate the rails from the cross-ties. This is usually accomplished by inserting insulating material 6 between the flange of the rail and the cross-tie, insulation being also interposed between the rail and the means whereby it is secured to the cross-tie. As there will always be some relative movement of the rail and tie, the insulation is liable to work out. In order to prevent this working out, a pocket 7 is formed in the rail-seat 2 for the reception of a portion of the insulating material which is forced into said pocket by the weight of the rail and passing trains. This projection of a portion of the insulating material into the pocket thereby locks it in position. When the rails are insulated, as stated, the insulating material extends over onto the flange of the rail, as shown in Fig. 2, and the exposed portions of the insulation are protected by clamping-plates 8, provided with lips 9, which project down around the flange of the rail. These plates are provided with suitable means, as the lugs 10, for engaging the legs of the staples, which are bent down onto the clamping-plates.

I claim herein as my invention—

1. A cross-tie for rails consisting of a rail-section having one of its members spread laterally to form the base-plate and having portions of its opposite members spread laterally to form seats for the rails.

2. A cross-tie for rails consisting of a rail-section having one of its members spread laterally to form the base-plate and having in its opposite member recesses for the rail-flange, said recesses being provided with pockets, in combination with rails arranged in said recesses, insulating material interposed between the rails and the tie and extending up onto the rail-flange, clamping-plates and means for securing the clamping-plates to the ties.

In testimony whereof I have hereunto set my hand.

PARSHALL D. NICOLS.

Witnesses:

ALICE A. TRILL,  
HERBERT BRADLEY.