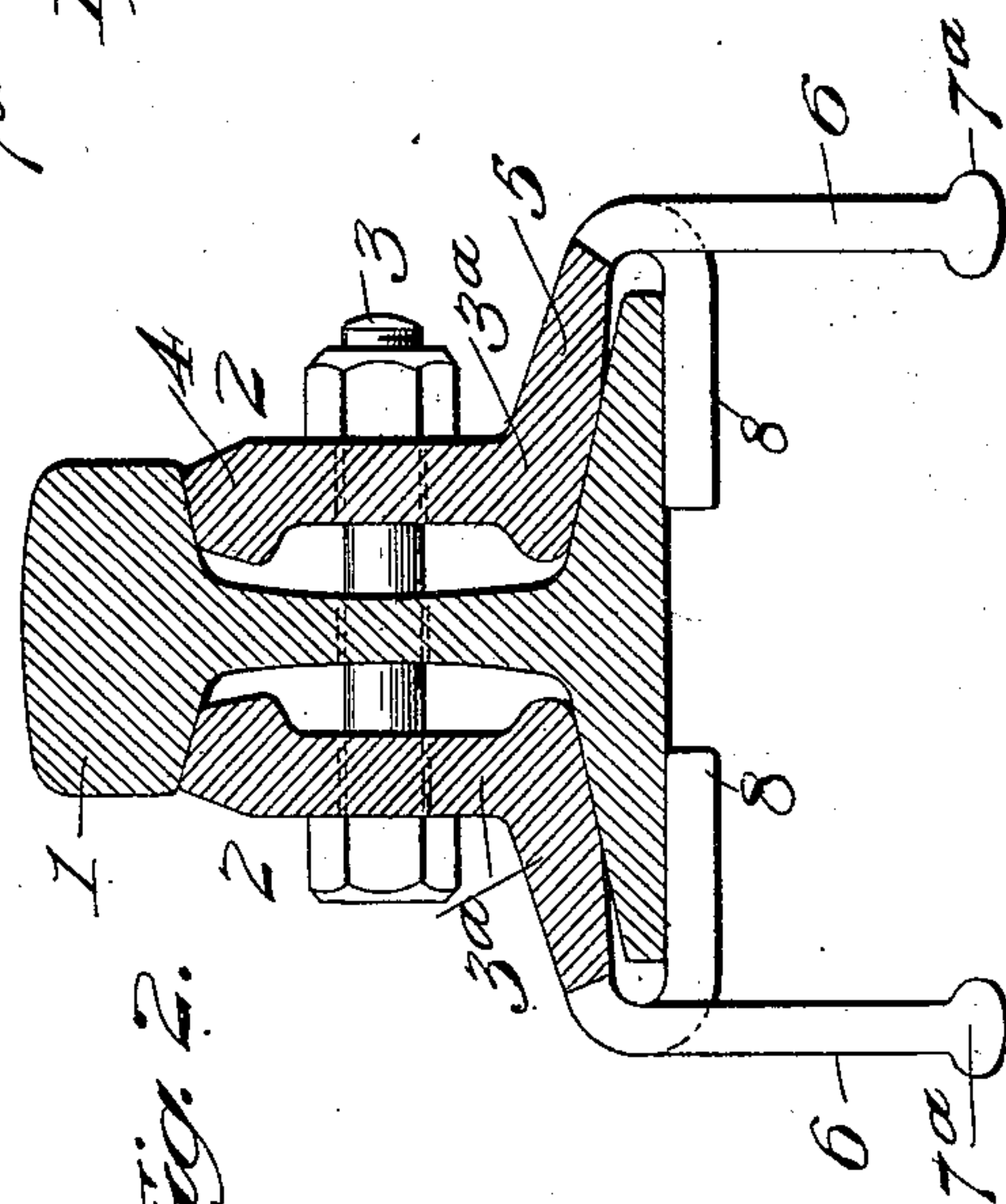
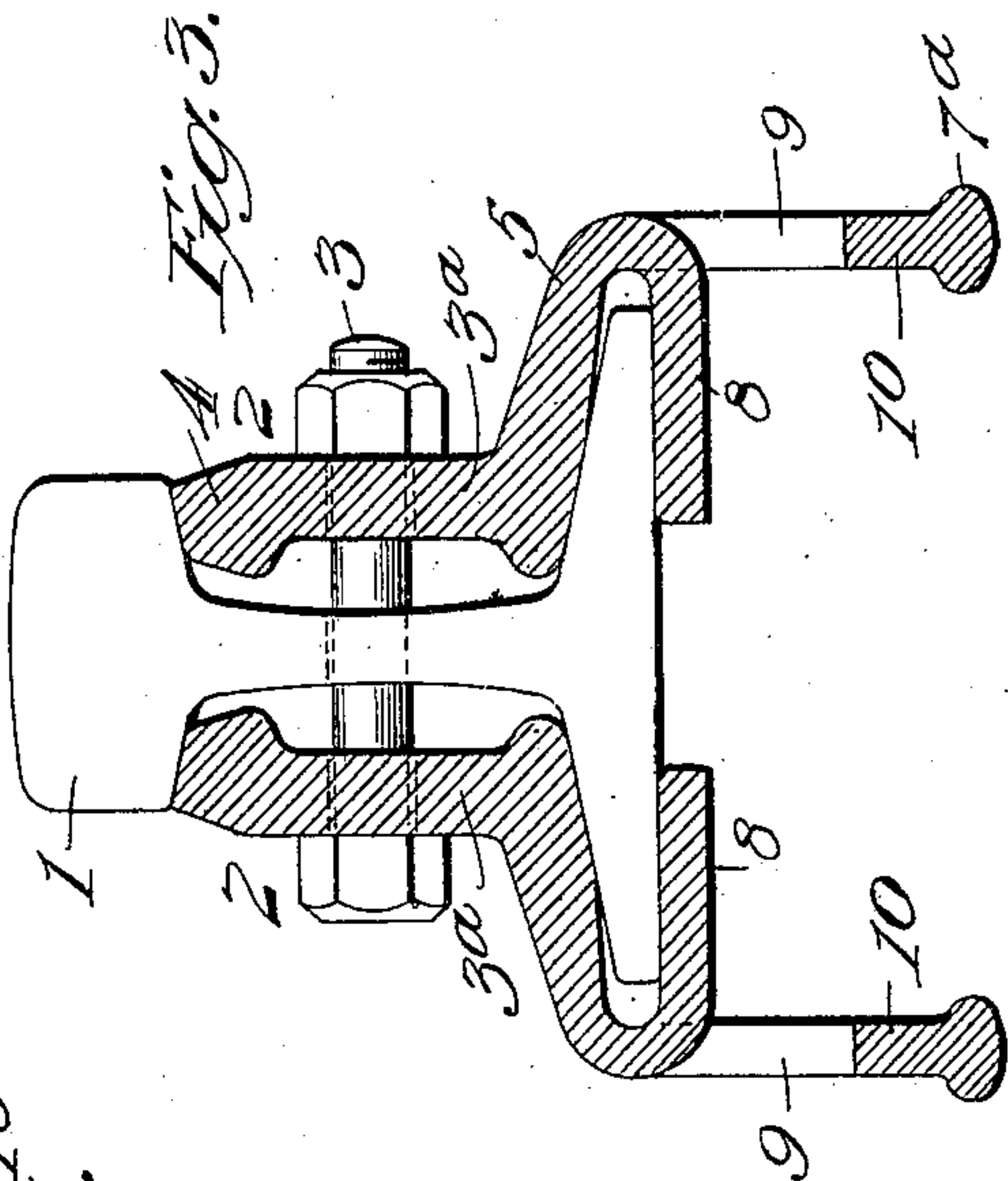
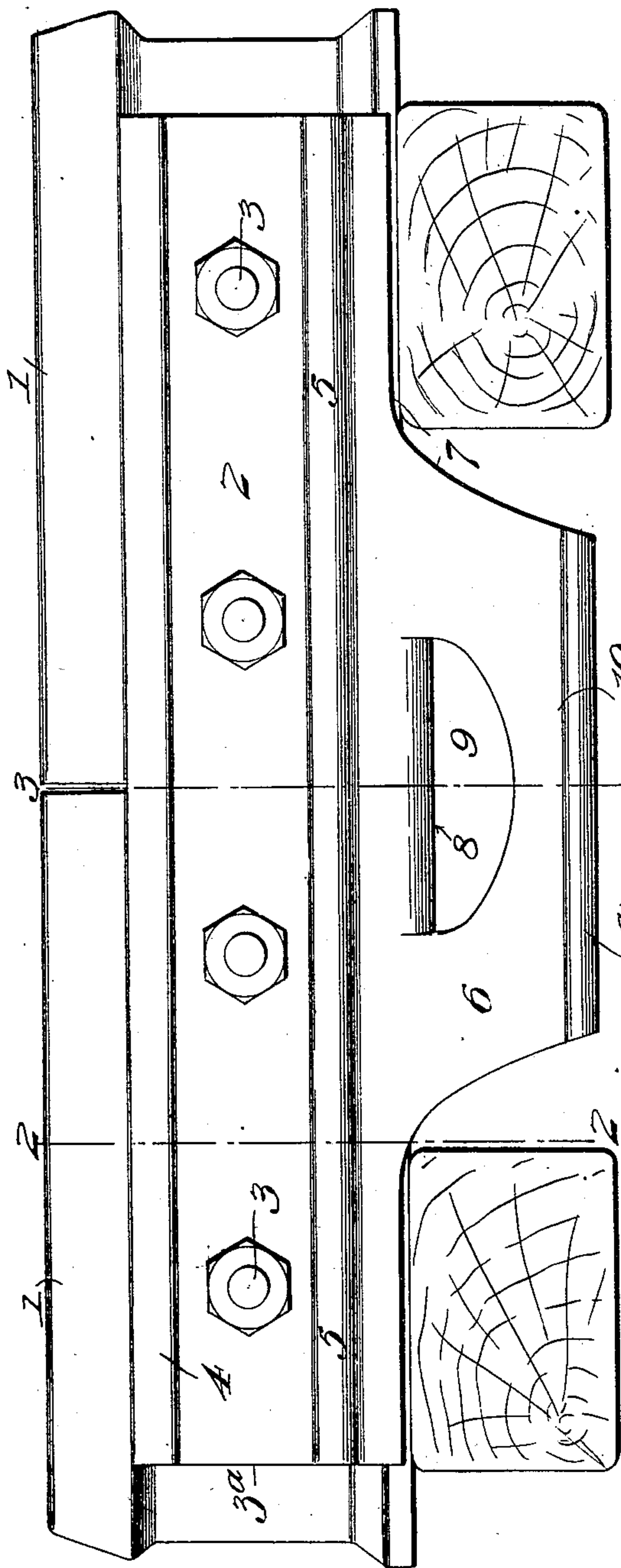


B. WOLHAUPTER.
REINFORCED ANGLE BAR.
APPLICATION FILED OCT. 18, 1910.

991,683.

Patented May 9, 1911.

2 SHEETS—SHEET 1.



WITNESSES
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2 SHEETS-SHEET 2.

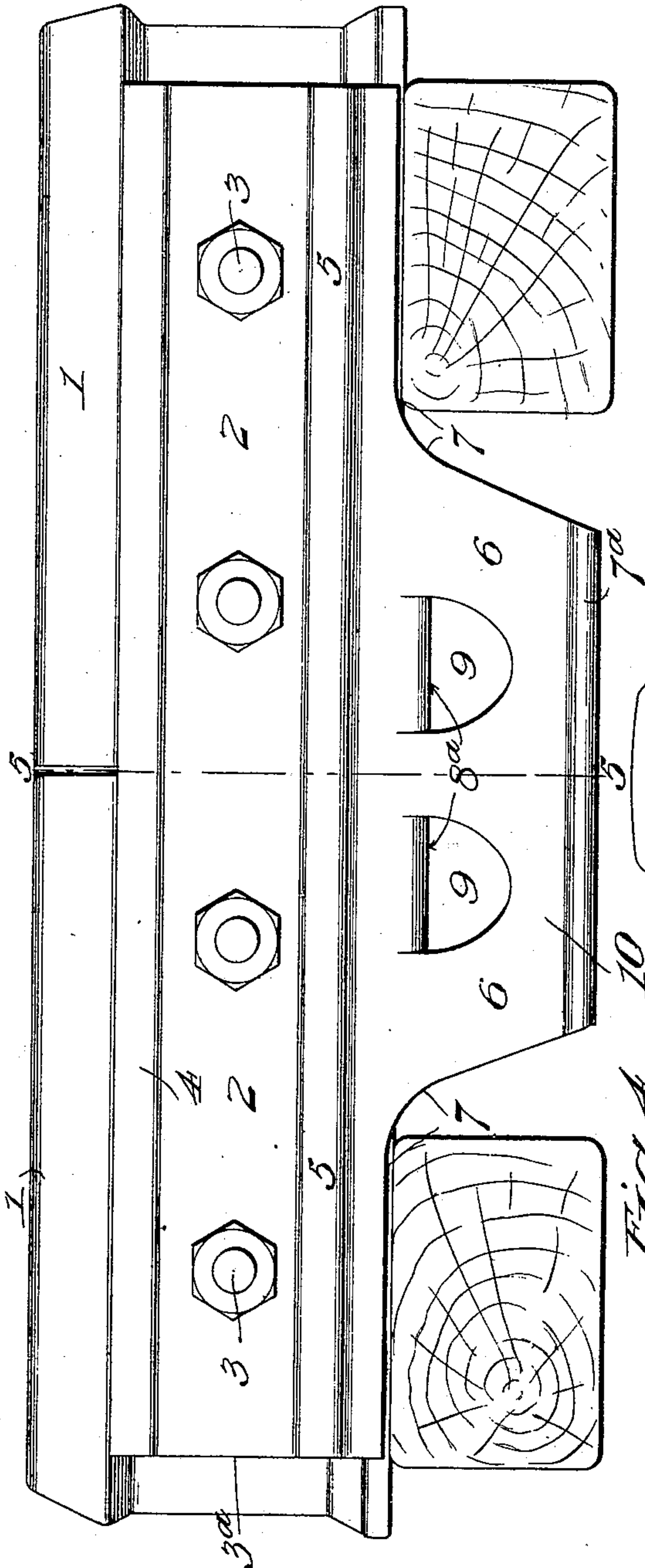


Fig. 4.

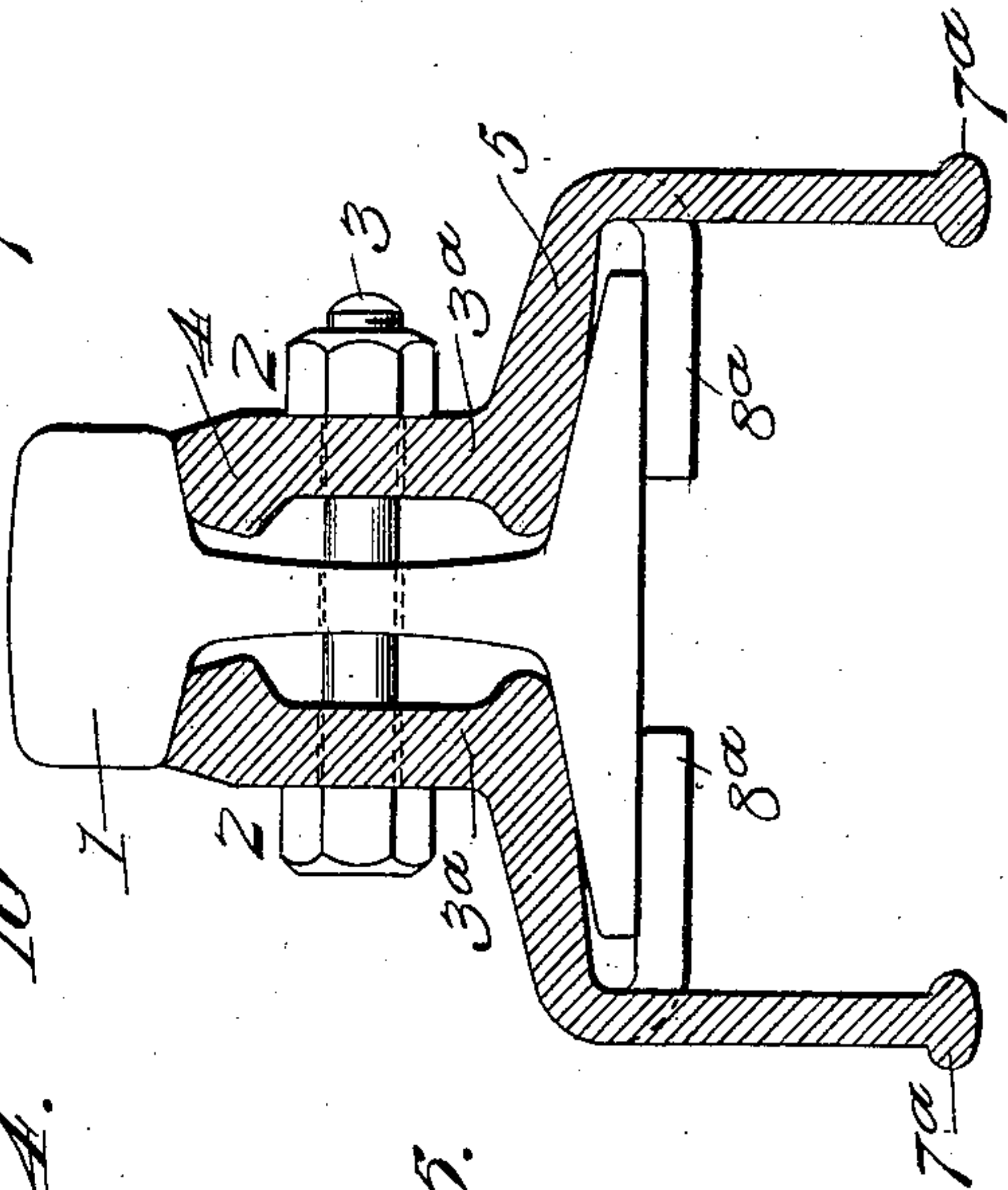


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

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REINFORCED ANGLE-BAR.

991,683.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed October 18, 1910. Serial No. 587,776.

To all whom it may concern:

Be it known that I, BENJAMIN WOLHAUPTER, a citizen of the United States, residing at New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Reinforced Angle-Bars, of which the following is a specification.

This invention relates to the subject of rail joints, and particularly to an improved construction and design of angle bar of the reinforced type.

The primary object of the invention is to provide a simple and practical improvement in the conventional type of reinforced angle bars whereby such bar will preserve its maximum strength and reinforcement, while at the same time providing a firm and substantial base support for the rail ends of the joint to rest upon, thus combining in a joint bar all of the desirable features of a central girder reinforcement for the bar, and a base support for the rail ends.

To this end the invention contemplates a simple and practical design of reinforced angle bar for rail joints capable of being applied with the same facility and readiness as the ordinary forms of splice bars or fish plates, while at the same time embodying in its construction a substantial center reinforcement so as to secure a bar of maximum strength with a minimum amount of material, and also embodying a rail supporting base plate upon which the rail ends rest, and are supported, in the same manner as provided in the well known continuous type of rail joint bars.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated and claimed.

The essential feature of the invention involved in the girder reinforcement and rail supporting base is necessarily susceptible to embodiment in various designs of bars and in various types of rail joint plates without departing from the scope of the invention, but certain practical embodiments are shown in the accompanying drawings, in which:—

Figure 1 is a side elevation of a rail joint

embodying in its construction the improved reinforced angle bars constructed in accordance with the present invention. Fig. 2 is a vertical cross sectional view on the line 2—2 of Fig. 1. Fig. 3 is a similar view at the center of the joint on the line 3—3 of Fig. 1. Fig. 4 is a side elevation of a rail joint embodying reinforced angle bars of a modified design constructed in accordance with the present invention. Fig. 5 is a vertical cross sectional view at the center of the joint on the line 5—5 of Fig. 4.

Like references designate corresponding parts in the several figures of the drawings.

As shown in the drawings, a rail joint embodying the present invention comprises, in combination with the rails 1—1 the oppositely arranged side angle bars 2, and the usual series of joint bolts 3. Hence, the invention involves or requires no change in the general form and manner of setting up the ordinary types of rail joints employing angle bars or splice bars, but is confined to the design and reinforcement of the individual angle bars.

Referring particularly to the design and construction of each angle bar 2, the same essentially consists of the upright splice member 3^a formed at its upper edge with the usual thickened head portion 4 engaging beneath the rail head, and at its lower edge provided with the inclined outturned foot piece 5 which overlies and rests upon the inclined top surface of the rail flange. These elements constitute the usual elements of the conventional angle bar for rail joints, but in addition thereto the present invention contemplates the feature of providing each angle bar 2 with a depending girder-flange 6 which is sheared off along each end of the bar, as indicated at 7, so as to provide for the proper placing of the ties and at the same time dispose the said girder-flange centrally between the ends of the bar and hence at the center of the joint.

According to the present invention, the depending girder-flange 6 is formed integrally with the foot piece 5 of the angle bar and is bent downwardly from such foot piece so as to lie beyond and project below the edge of the rail flange. Also, the present invention is not restricted to the dimensions or shape of the said girder-flange 6,

nor to the angle bar. And, in order to provide additional strength and reinforcement, the said girder-flange 6 may be formed along its lower edge with a projecting reinforcing rib 7^a.

A distinctive feature of the present invention resides in cutting out from the metal body of the girder-flange 6 an integral section 8 and forcibly pressing said section out of the opening 9 left thereby in the girder-flange up to a position where it lies in a substantially horizontal plane and projects inwardly from the outer edge of the angle bar, thus forming a rail supporting base plate which engages beneath and supports the rail at the bottom thereof in a manner similar to rail base supporting joint bars like the continuous type of joint bars.

In the embodiment of the invention shown in Figs. 1, 2 and 3, there is shown a single base plate 8 cut and pressed from the girder-flange, while in Figs. 4 and 5 there is suggested the modification of cutting and pressing out from each girder-flange two base plates 8^a, one respectively for each rail end. The single base plate 8, shown in Figs. 1, 2, and 3 bridges the joint between the meeting ends of the rails and engages and supports both rail ends.

In all forms of the invention there remains at the bottom of the cut-out opening

9 an intact lower chord 10 which provides the girder-strength of the flange 6.

I claim:

1. A rail joint having oppositely located reinforced angle bars each of which angle bars adjustably fits the fishing spaces and is provided with an integral centrally located depending girder flange and with an inwardly extending base plate displaced from the body of the girder flange.

2. A reinforced angle bar for rail joints provided with a centrally located depending girder flange and with a horizontal base plate cut out of and displaced from the flange and engaging beneath both rail ends at the center of the joint.

3. A reinforced angle bar for rail joints provided with a centrally located depending girder flange, and with a horizontal centrally located rail supporting base plate cut out of and displaced from the girder flange, said girder flange having an integral lower chord at the bottom of the opening from which the base plate is displaced.

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

BENJAMIN WOLHAUPTER.

Witnesses:

E. F. SCHENNERHORN,
K. McNALLY.