

(No Model.)

W. B. DUNNING.
FASTENING FOR RAILROAD RAILS.

No. 412,370.

Patented Oct. 8, 1889.

Fig. 1.

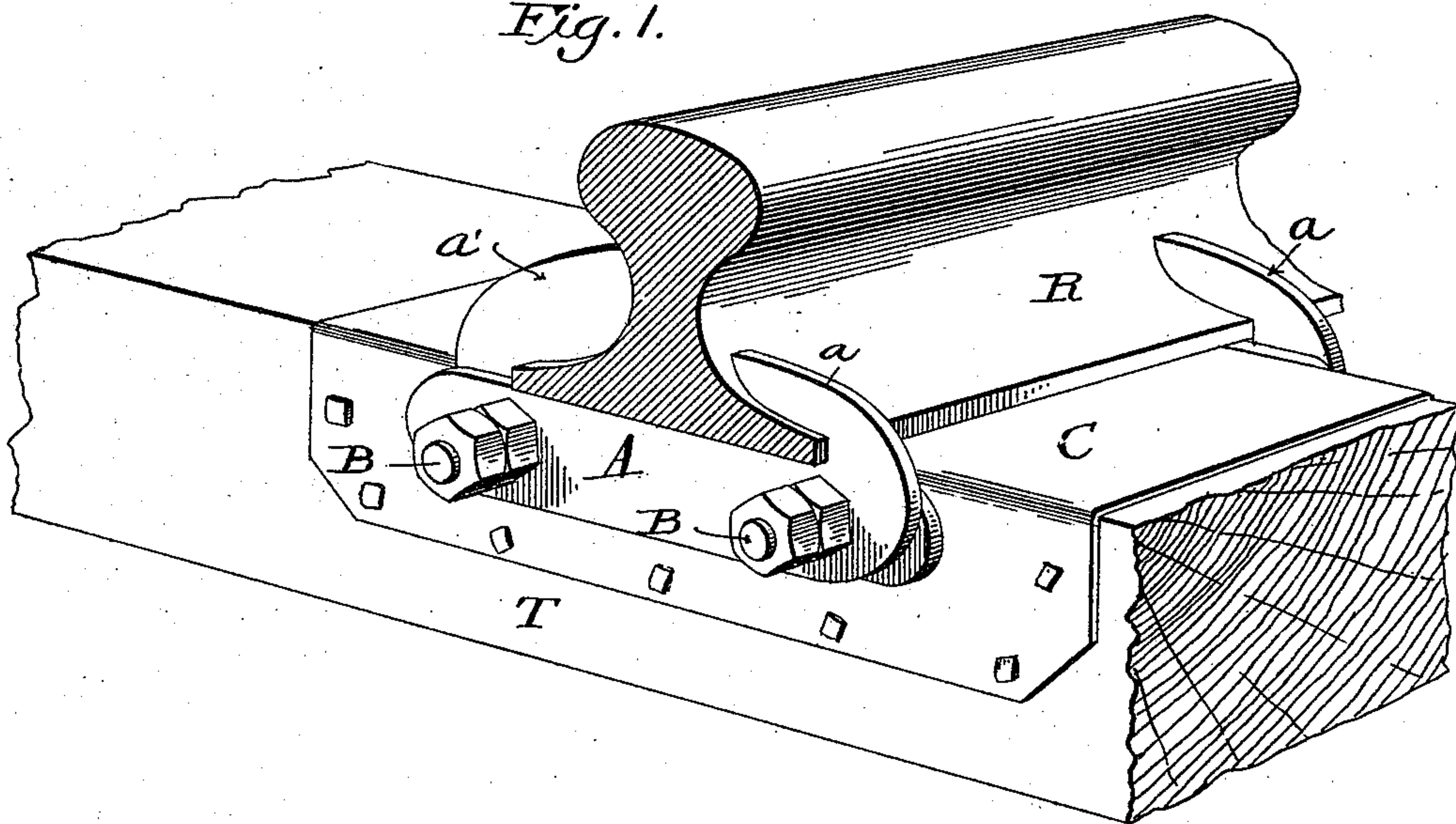


Fig. 2.

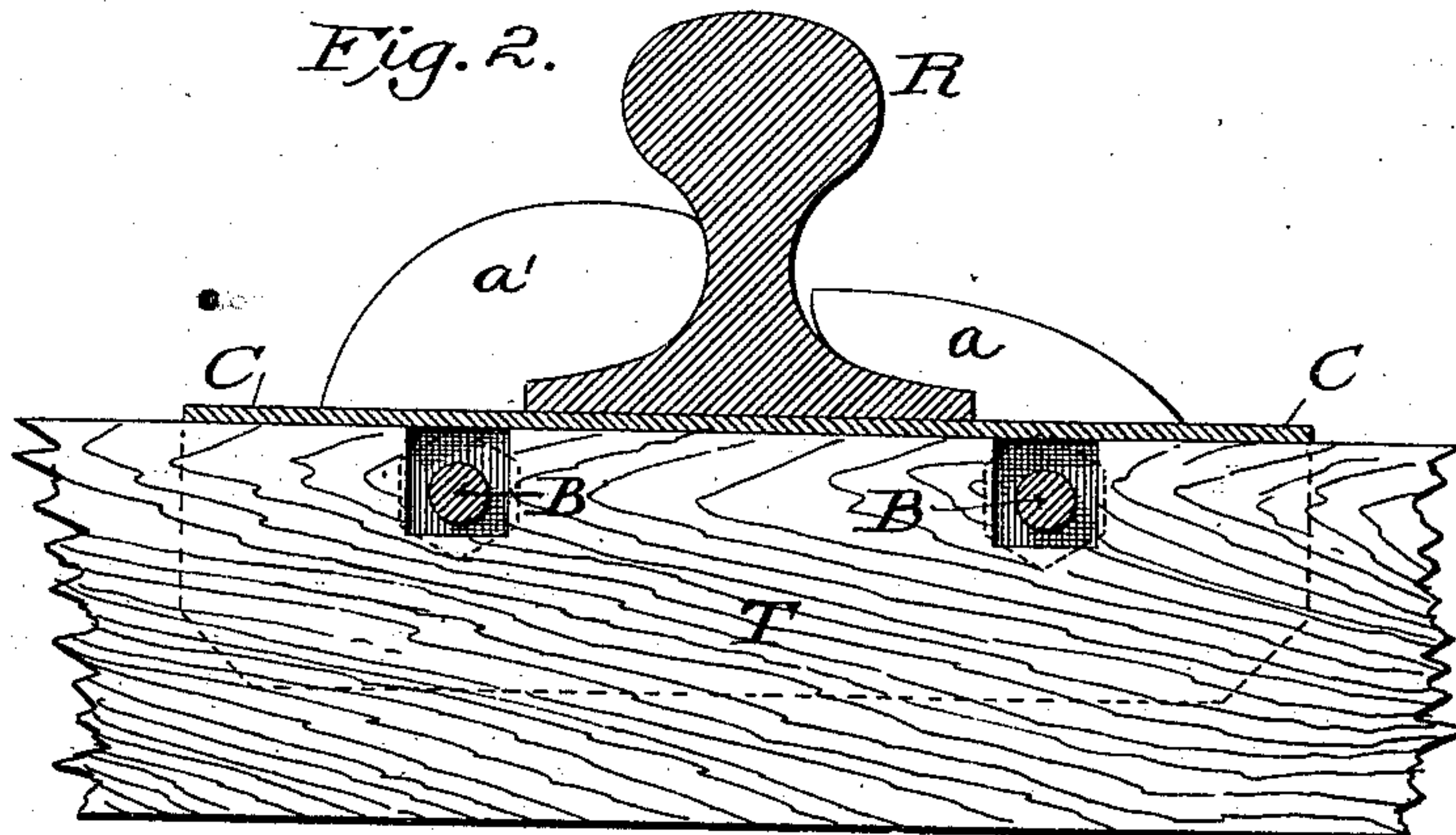
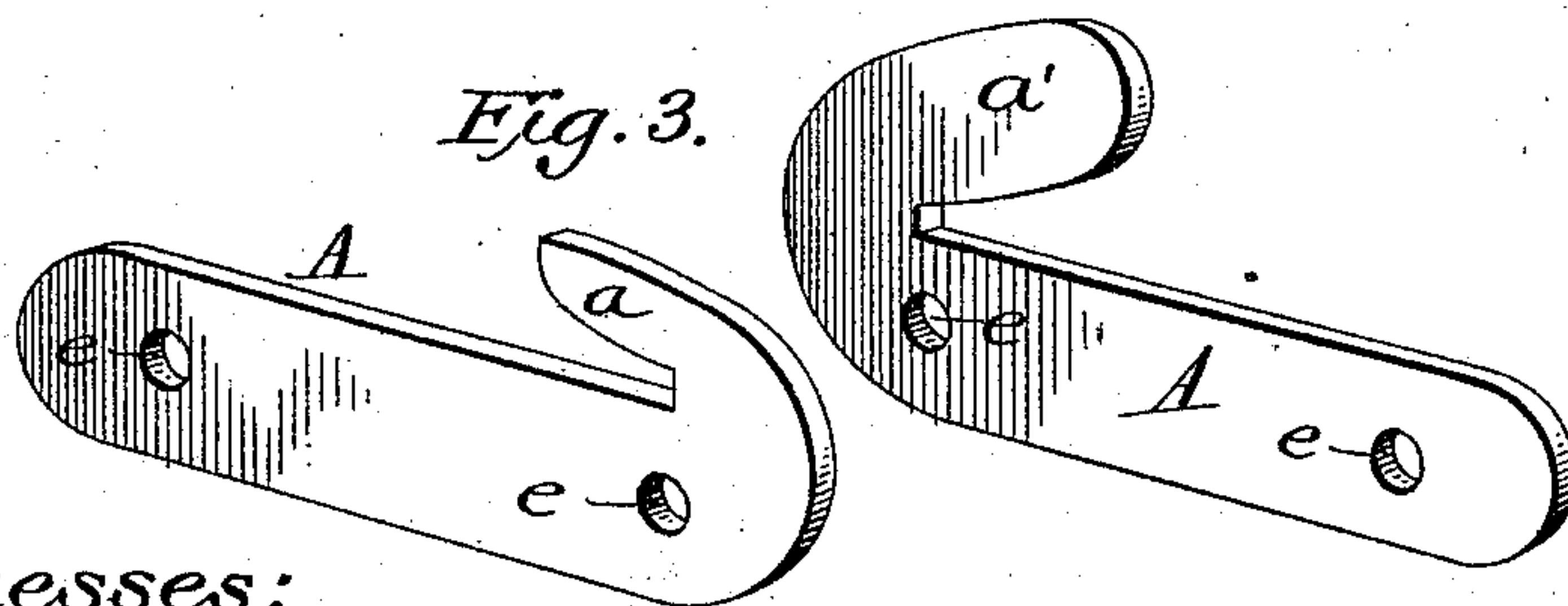


Fig. 3.



Witnesses:

James D. Duhamel
Horace A. Dodge.

Inventor,
W. B. Dunning.
by Dodge & Sons
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM B. DUNNING, OF GENEVA, NEW YORK.

FASTENING FOR RAILROAD-RAILS.

SPECIFICATION forming part of Letters Patent No. 412,370, dated October 8, 1889.

Application filed February 20, 1889. Serial No. 300,559. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. DUNNING, of Geneva, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Fastenings for Railroad-Rails, of which the following is a specification.

My invention relates to means for securing railroad-rails to the ties; and the invention consists in certain devices for that purpose, as hereinafter more fully described.

Figure 1 is a perspective view, and Fig. 2 is a longitudinal sectional view, of a tie with my improvements applied thereto. Fig. 3 is a perspective of the fastening-hooks shown detached.

As is well known to persons having practical experience in railroad affairs, much trouble is experienced in the methods in common use in securing the rails to the ties by means of spikes, the latter working loose in consequence of the vibration of the rails produced by the passing trains, the failure of the wood to hold the spikes firmly in place, and the decay of the wood in consequence of moisture entering it where the fiber is crushed or broken and split by the driving of the spikes, &c., and that as a consequence serious accidents frequently occur from the spreading of the rails, and in various other ways unnecessary to detail.

The object of my invention is to provide a more secure means of fastening the rails to the ties. To accomplish this result I provide hooks A, as shown detached in Fig. 3, and which consist of straight flat bars a little longer than the bottom of the rail is wide, having one end bent over to form a hook *a* to engage with the flange of the rail, as shown clearly in Fig. 1, these hooks being provided with two holes *e e* for the insertion of bolts to fasten them to the tie. I also provide a metal cap or plate C, which consists of a flat plate having its sides bent at a right angle to fit against the sides of the tie, as clearly shown in Fig. 1, and which when in forms the bearing for the rail, thereby dispensing with the ordinary shoe. These caps are fastened to the ties by means of spikes driven through holes in their side flanges, as shown in Fig. 1, and are also provided with holes for the reception of the bolts B, which secure the hooks

A in place. Before applying these caps a notch is cut in the upper face of the tie at the point where the bolts B are located, as shown in Fig. 2, these notches being of such a size that the bolts B shall not touch the wood, but leave an air-space all around them to prevent the decay of the wood by the accumulation of moisture between the bolt and the wood, as would be the case if the bolt fitted in a hole bored through the tie.

The holes for the bolts in the cap are purposely made as near the top of the tie as possible, so they can be conveniently got at without removing the earth at the sides of the tie when it is desired to remove or replace a rail.

The bolts B, I prefer to make with a thread to receive a nut at each end, so that the hooks A can be removed from either or both sides, as may be desired, without removing the bolts, any approved style of jam-nuts being used to prevent the nuts from becoming loose.

As shown in Fig. 3, the ends of the hooks which engage over the flange of the rail may be made of only such width as is required to give it the necessary strength, as shown at *a*, Figs. 1 and 3; or, if desired, they may be made of such a width as to bear against the sides of the rail above the flange, as shown at *a'*, Figs. 1 and 3.

To apply my invention the ties are first sized or reduced to the proper width at the points where the caps are to be applied. The notches for the bolts are then cut in the upper face of the tie, after which the caps C are fastened in place, all this, together with the bolts, being prepared at the shop. In laying the rails it is then only necessary to place the tie in position, lay the rails on the caps, and then apply the hooks and fasten them in place by the nuts, the bolts being inserted either before or at the time, as may be found most convenient. Either one or two of the hooks A may be applied at either or both sides of the tie, the two bolts serving to hold them all, the holes *e* in all the hooks being equidistant from each other, so the same bolts may pass through any number of hooks.

Having thus described my invention, what I claim is—

1. The metal cap C, having its downwardly-projecting flanges provided with holes for securing the cap to the tie by means of spikes,

and also with holes for the reception of the bolts B to secure the hooks A to the cap, substantially as shown and described.

2. In combination with the tie T, having
5 the metal cap C secured thereon, the hook or hooks A, and bolts B, arranged to hold the rail R, substantially as shown and described.

3. The tie T, having notches cut in its upper edge, in combination with the metal cap
10 C and bolts B, the parts being arranged as

shown, whereby the bolts are kept from contact with the tie, substantially as and for the purpose set forth.

In witness whereof I hereunto set my hand in the presence of two witnesses.

WM. B. DUNNING.

Witnesses:

M. S. SANDFORD,

F. L. NARES.