

No. 828,793.

PATENTED AUG. 14, 1906.

G. W. WHITEMAN.  
RAIL FASTENING FOR METALLIC TIES.

APPLICATION FILED JAN. 15, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

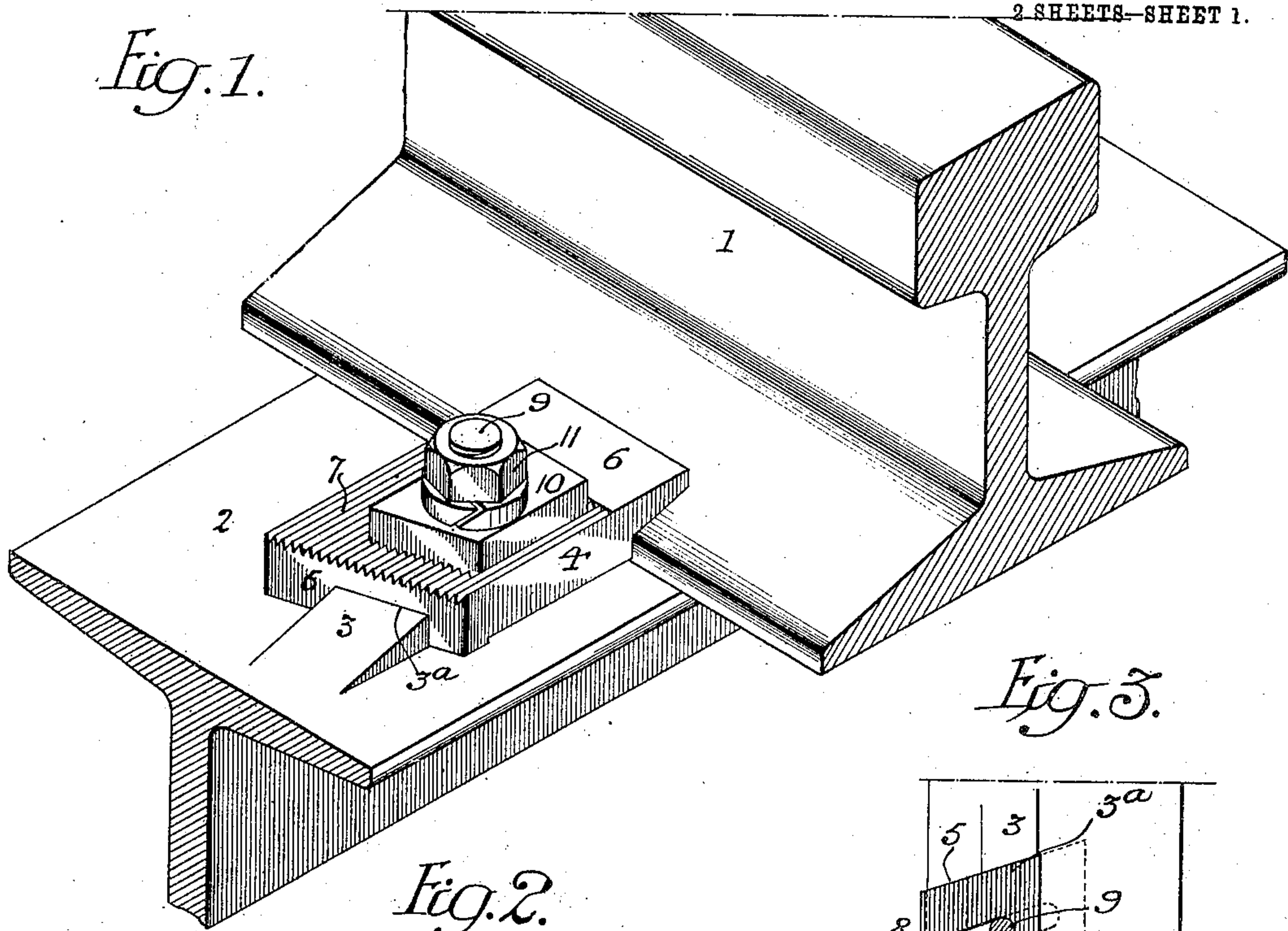


Fig. 2.

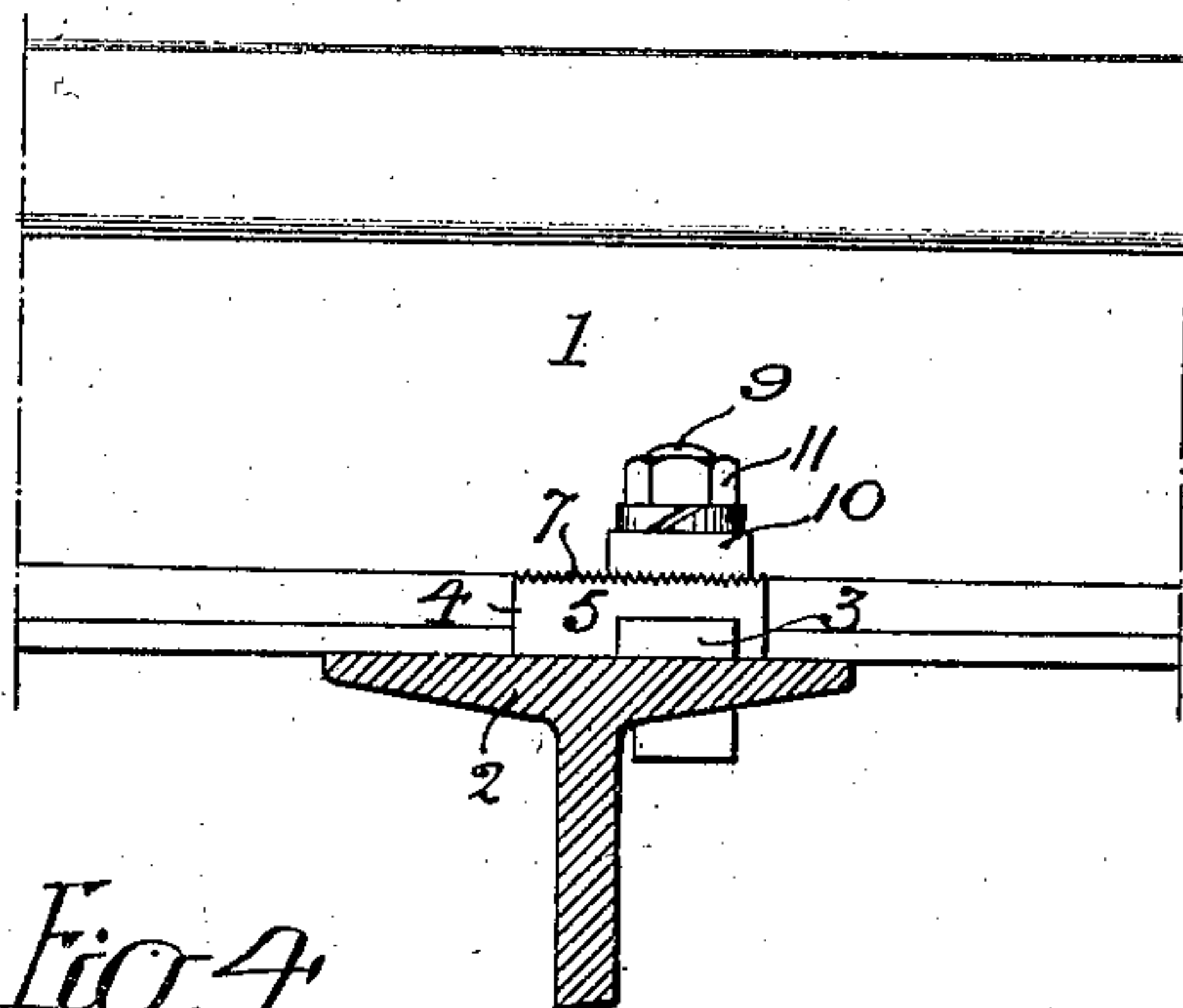
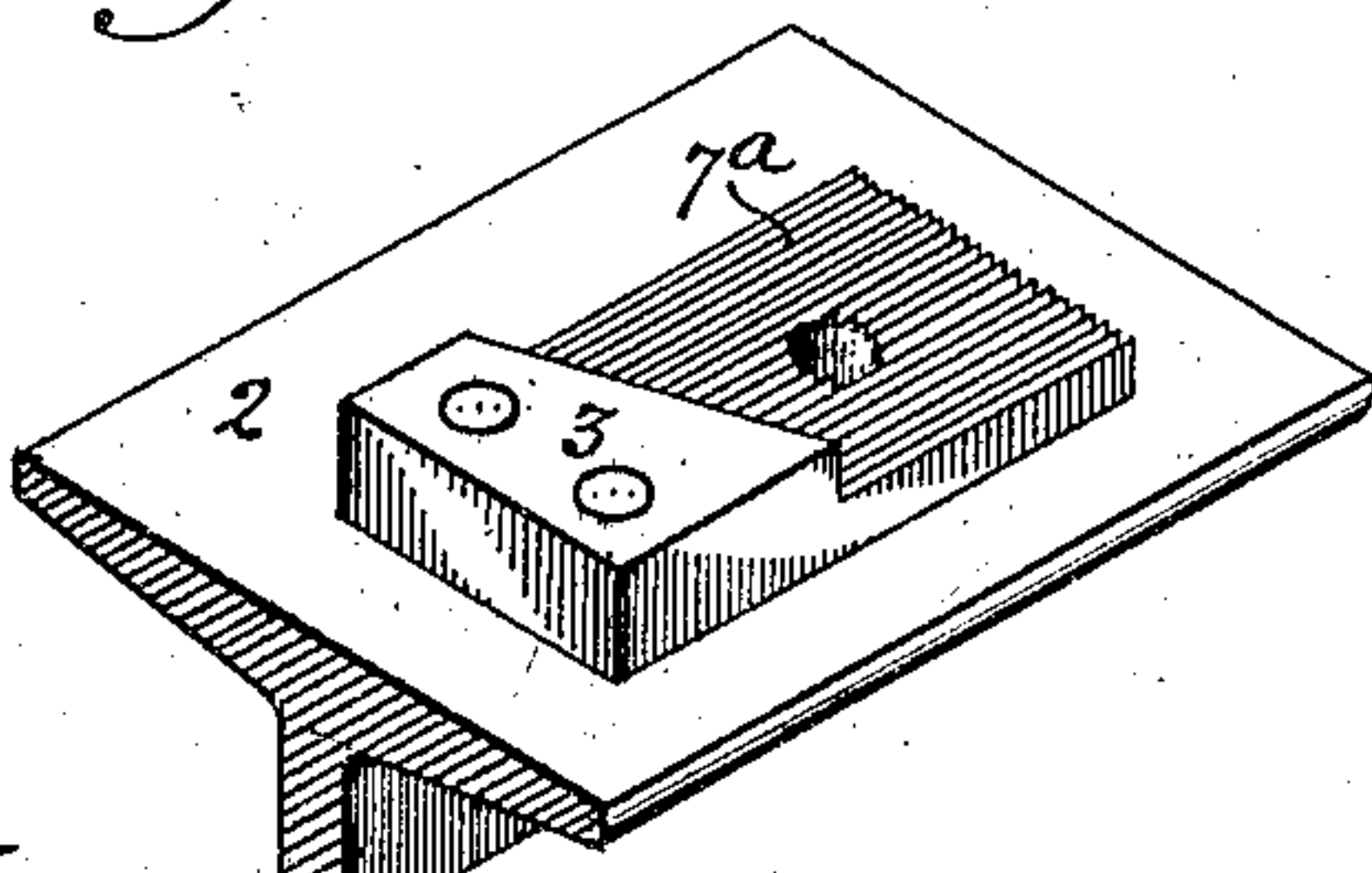


Fig. 4.



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Fig. 3.

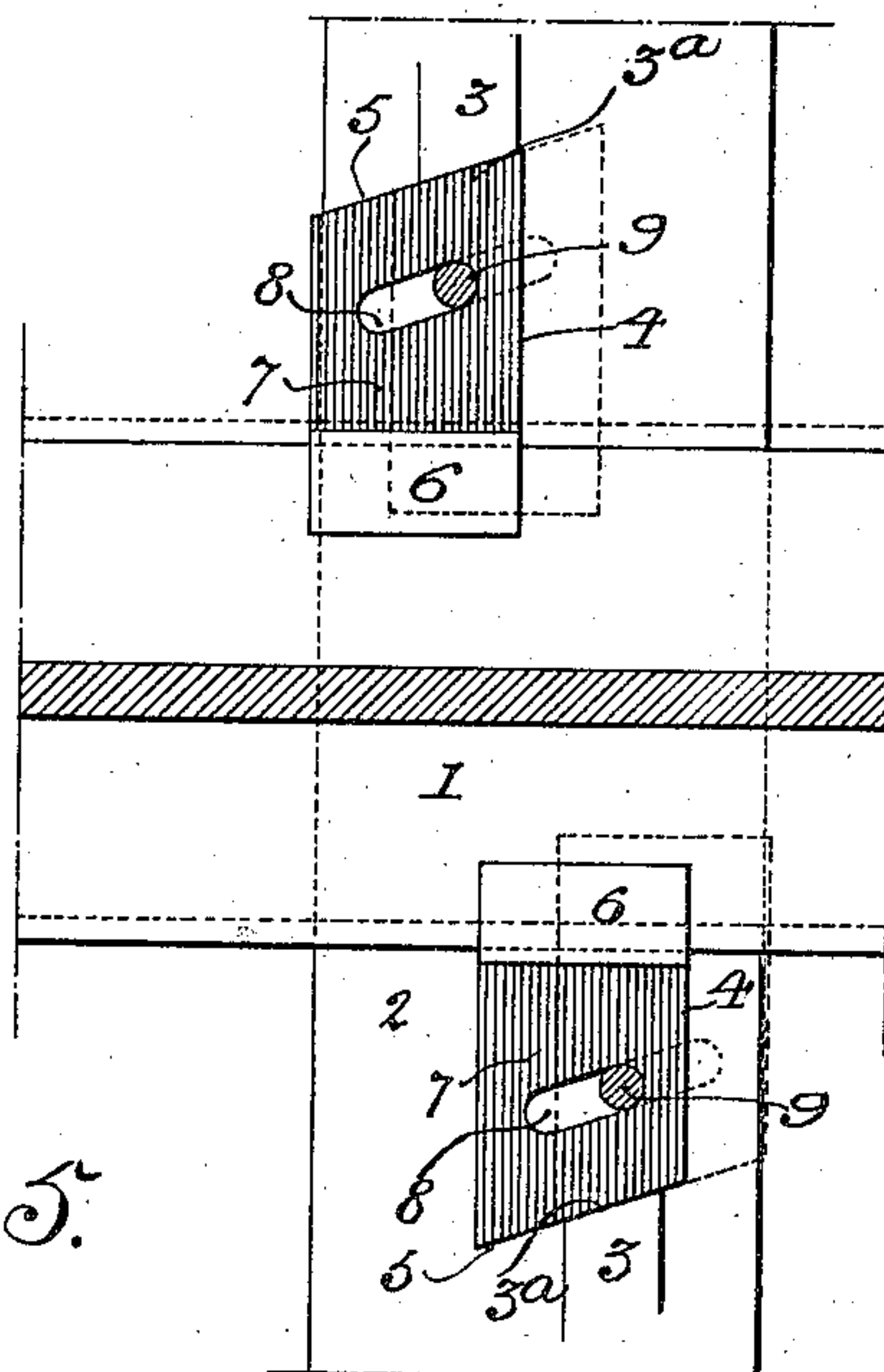


Fig. 5.

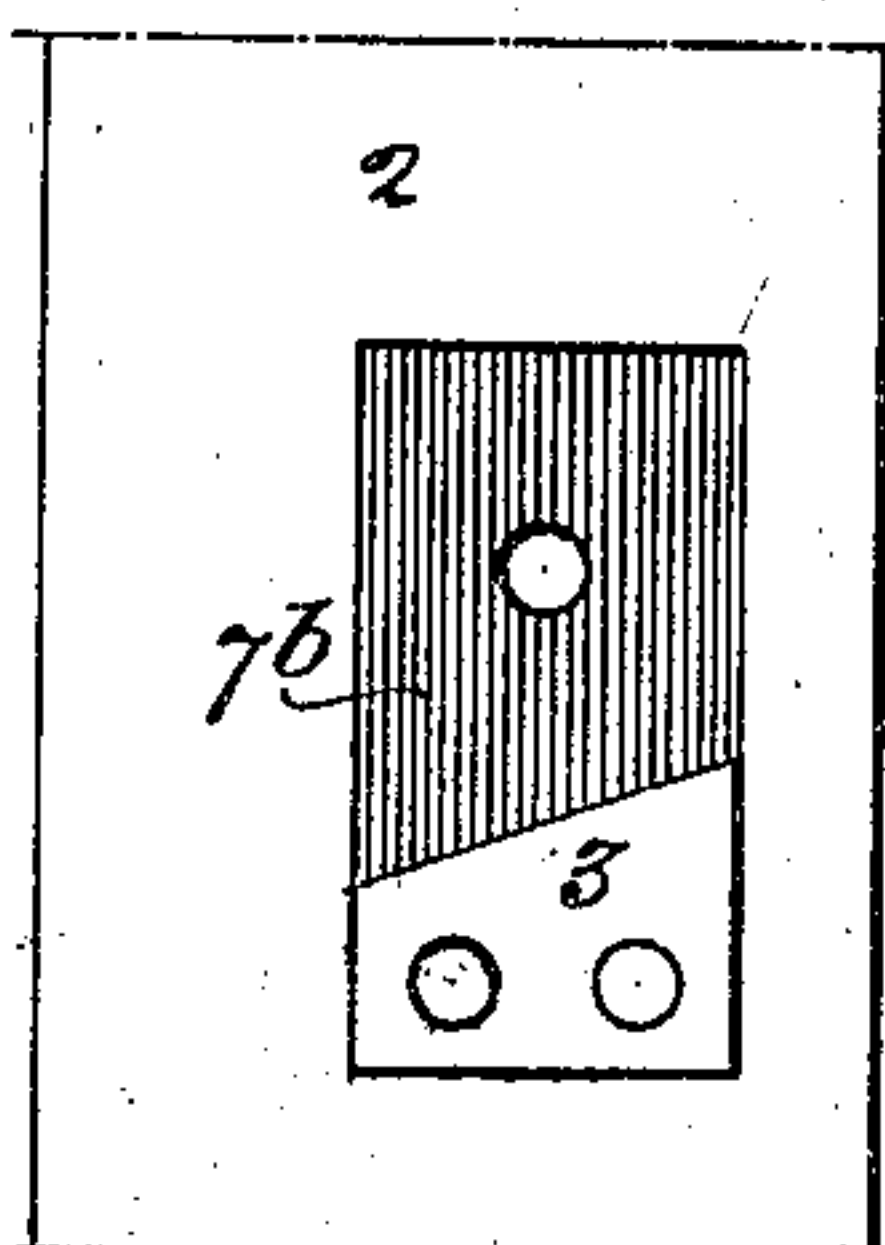
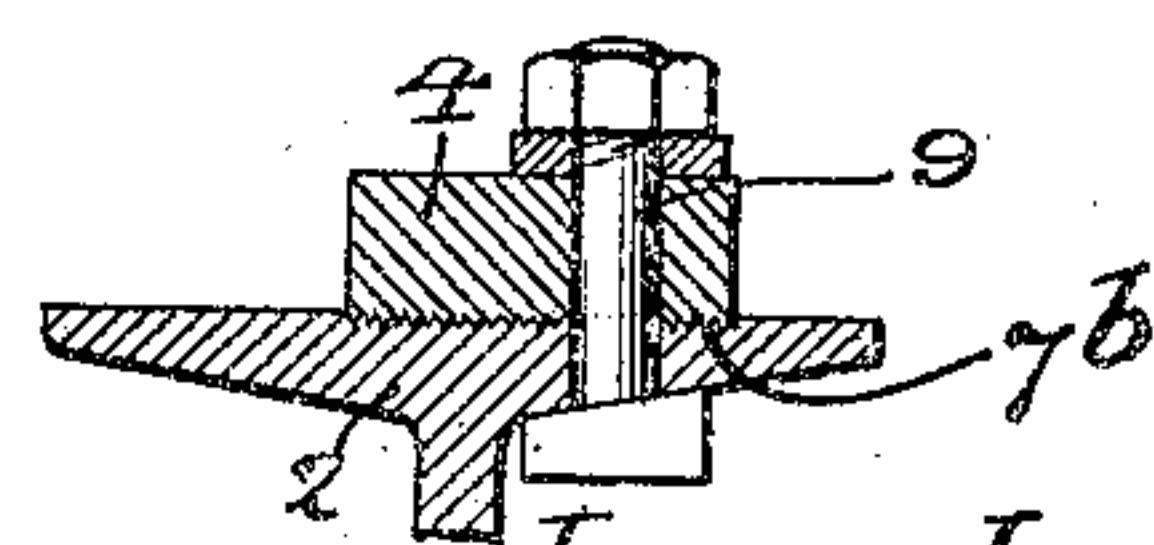


Fig. 6.



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2 SHEETS—SHEET 2.

Fig. 7.

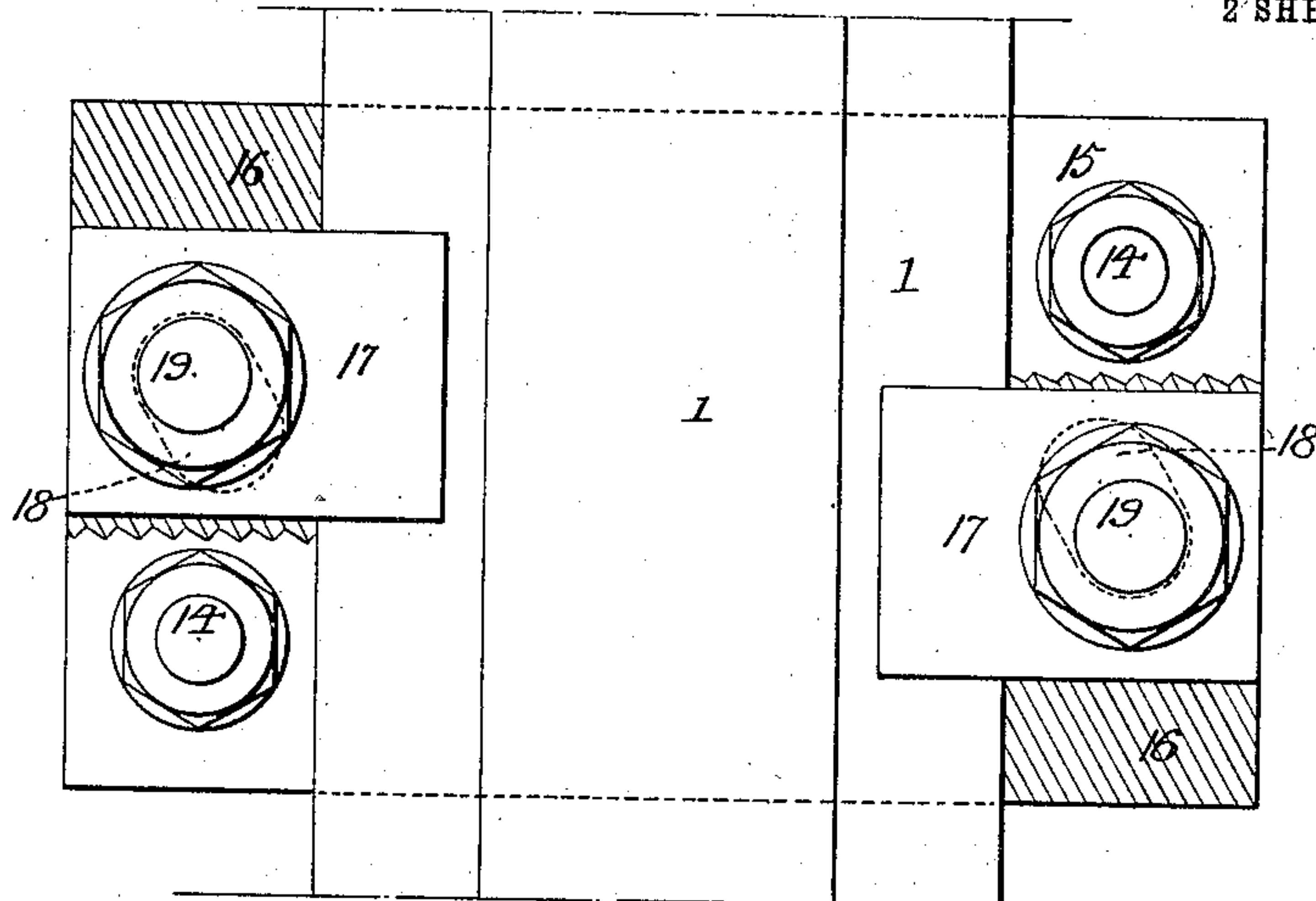


Fig. 8.

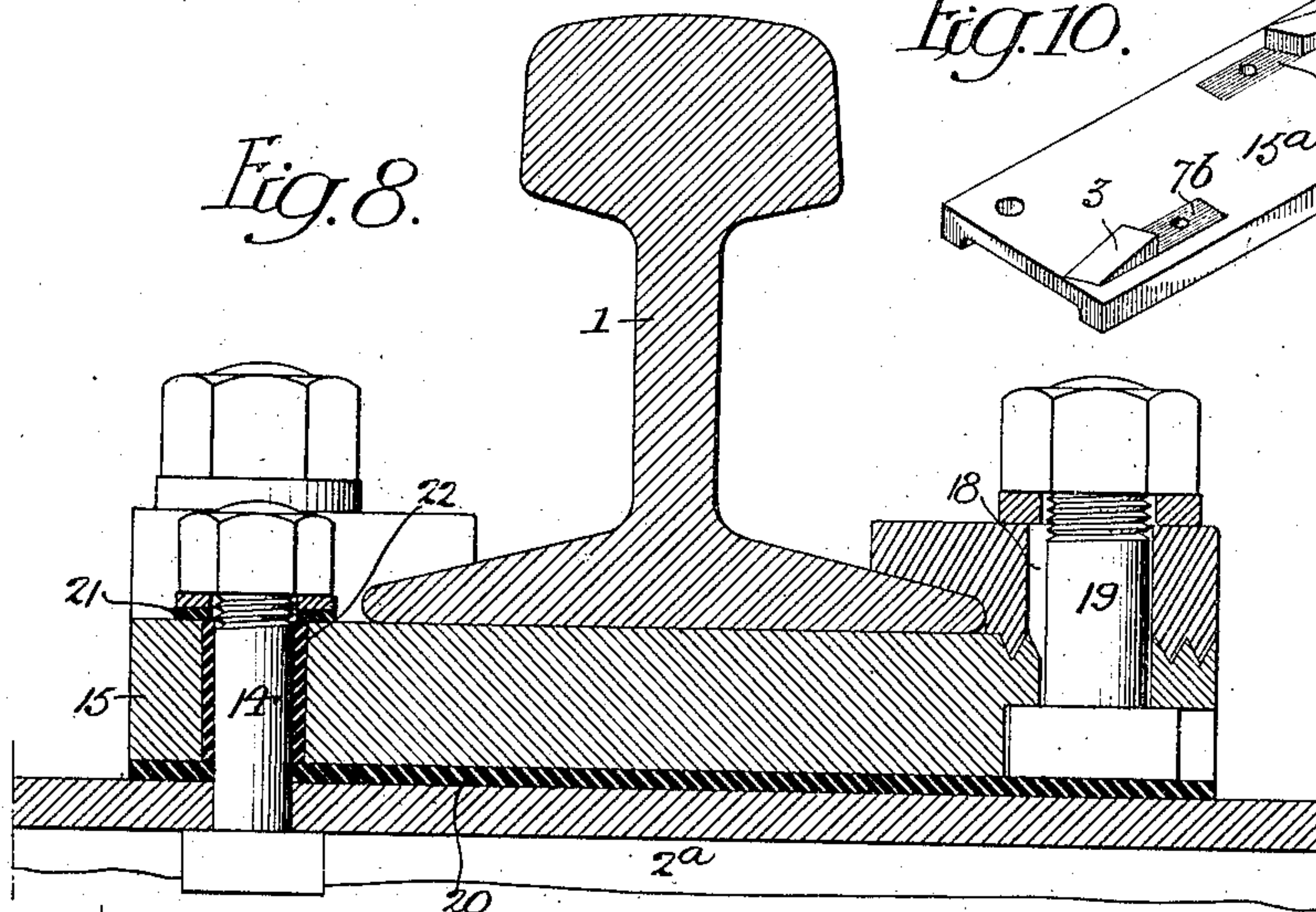


Fig. 10.

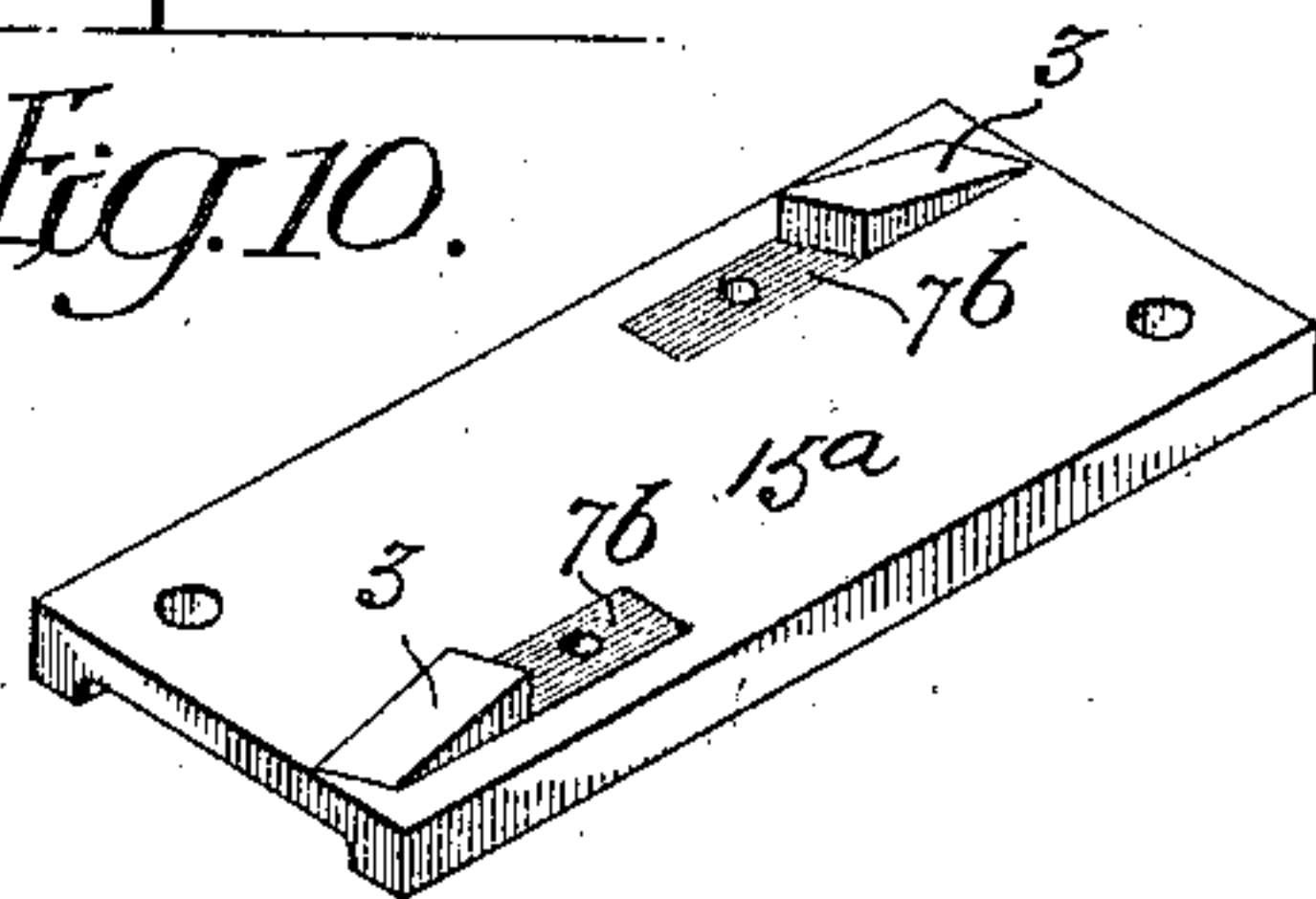
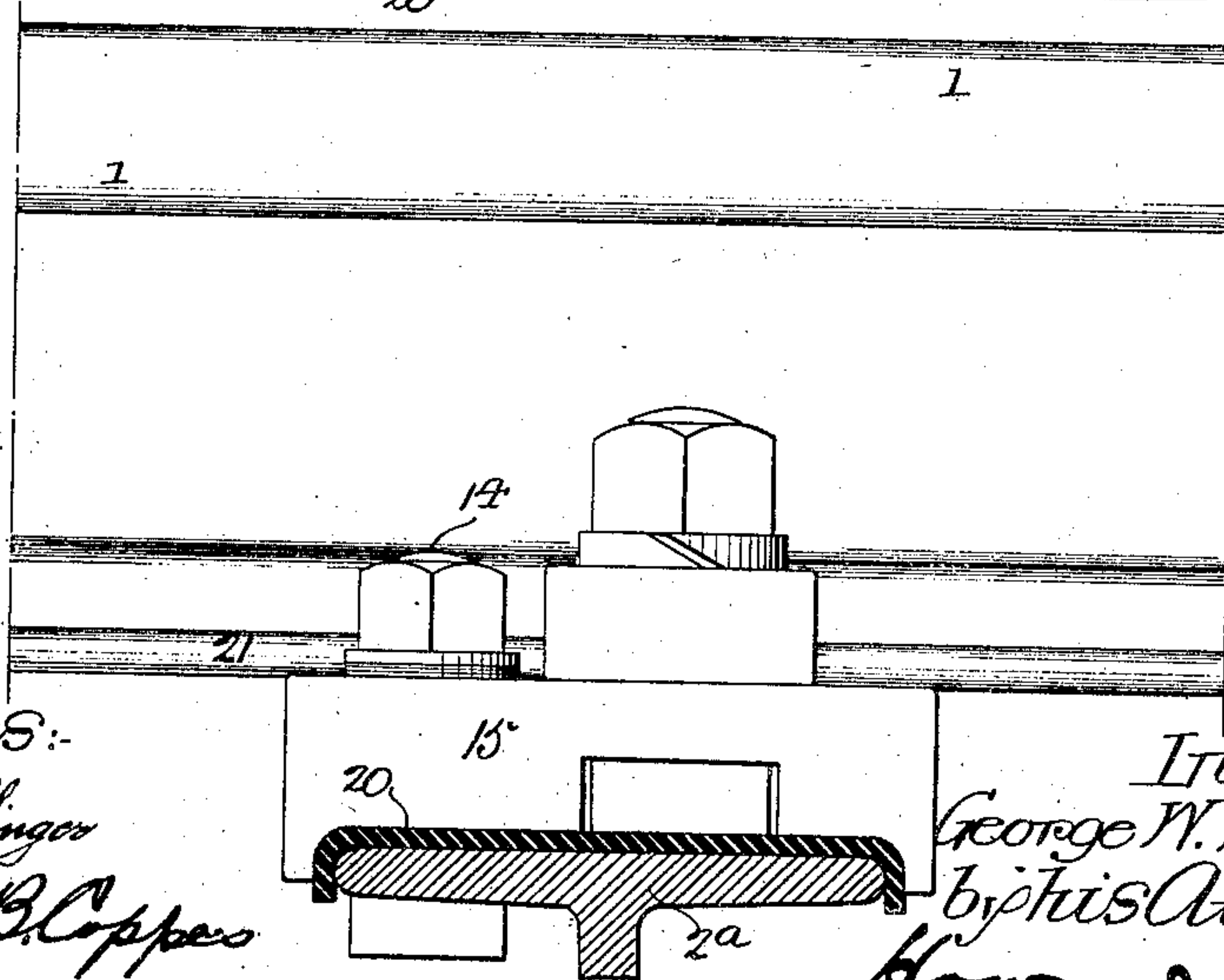


Fig. 9.



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# UNITED STATES PATENT OFFICE.

GEORGE W. WHITEMAN, OF PHILADELPHIA, PENNSYLVANIA.

## RAIL-FASTENING FOR METALLIC TIES.

No. 828,793.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed January 15, 1906. Serial No. 296,115.

*To all whom it may concern:*

Be it known that I, GEORGE W. WHITEMAN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Rail-Fastenings for Metallic Ties, of which the following is a specification.

My invention relates to tie-fastenings of the removable-clip type; and the object of my invention is to provide a fastening that will permit of lateral adjustment of the rails when owing to wear the same becomes necessary.

My invention is fully shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a rail and tie, showing one of my improved fastenings in place. Fig. 2 is an end elevation of the tie and fastening. Fig. 3 is a plan view of the fastening, partly in section. Figs. 4, 5, and 6 are views illustrating modifications of my invention; and Figs. 7, 8, 9, and 10 are respectively a plan, cross-section, side elevation, and perspective view of a modified form of fastening embodying my invention.

As is well known, it is necessary to fasten rails to metallic ties by means of clips secured in place by nuts and bolts. The wear on the rails, however, necessitates a closer setting of the same at certain intervals in order to bring them back to the original gage. As the bolts are usually disposed in openings having a fixed relation to the ties, the usual manner of setting up the track is to provide new clips of different sizes, larger for the outside of the rails and smaller for the inside of the same. This is a matter of very great nuisance, and I propose to overcome it by providing the ties with anchors or abutments between which and the flange of the rail a special form of adjustable securing-clip is placed.

In the drawings herewith, 1 represents the rail mounted on a metallic tie 2 of girder form, although it will be understood that my improved fastening may be employed with any form of tie. The tie is provided with anchors or abutments 3, which may be struck-up portions of the metal; each of said anchors or abutments having an angular face 3<sup>a</sup>. A movable clip 4, having an angular face 5 bearing against the angular face 3<sup>a</sup> of this anchor or abutment, a portion 6 overlapping and bearing against the rail, and a serrated or notched upper face 7, is provided to secure the rails to the ties. The clip is slot-

ted at 8 for the reception of a bolt 9, bearing a fixed relation to the tie, and said clip is capable of movement along the abutment 3 to take up wear on the rail, amounting in practice to about one-quarter inch on the inner side of the head. A notched or serrated washer 10 is provided to engage the notched or serrated face of the clip 4 and the washer is held in this engagement by a nut 11.

When it is desired to take up wear, it is only necessary to release the nut, raise the washer 10, move the rail the desired distance laterally, and then move the clip along until it is wedged between the rail in its new position and the anchor or abutment 3. After this has been done the washer is fastened down into engagement with the clip by the nut 11, and the clip will be retained in the adjusted position, firmly holding the rail in place. Instead of providing the anchor or abutment 3 as an integral part of the tie it may consist of an independent piece secured in any suitable manner to the tie, as shown in Fig. 4. Instead of having a notched or serrated washer the clip 4 may be notched or serrated on the bottom and the anchor may have a notched portion 7<sup>a</sup>, as shown in Fig. 4, or the tie may be provided with a complementary notched or serrated portion 7<sup>b</sup> adjacent to the point at which the anchor or abutment is fastened, as shown in Figs. 5 and 6, and this portion of the tie may be rolled therein.

In Figs. 7, 8, and 9 I have shown a form of fastening for use when it is desired to insulate the rail from the tie. Secured by bolts 14 to the tie 2<sup>a</sup> is a rail-plate 15, having notched or serrated portions 16, disposed at opposite corners. Mounted in engagement with these notched or serrated portions and arranged to abut and overlie the rail are the clips 17, having complementary notched or serrated portions to engage the similar portions of the rail-plate. The rail-plate is provided with the slots 18 for movement of the bolts 19, serving to secure such clips to the rail-plate and permitting adjustment of said clips when it is desired to change the position of the rail. To insulate the tie from the rail, a plate of insulating material 20 is disposed between said rail plate and tie, as clearly shown in Figs. 8 and 9, and the bolts securing said rail-plate to the tie are also provided with insulating-washers 21 and sleeves 22. The under side of the rail-plate is preferably of the contour illustrated in Fig. 9, serving to compress the insulating-plate around the



flanges or edges of the tie. I may also employ a rail-plate, as shown at 15<sup>a</sup> in Fig. 10, which is provided with the anchors or abutments 3 and has the notched or serrated portions 7<sup>b</sup> adjacent thereto for use with the form of clip shown in Figs. 5 and 6, with openings for the bolts securing said rail-engaging clips in place. If desired, however, the form of fastening shown in Figs. 1, 2, and 3 may be employed.

I claim—

1. The combination of a tie, an abutment carried thereby, a rail, an adjustable member disposed between said abutment and the flange of the rail and overlying the latter, said member having a notched or serrated face, complementary notched or serrated portions carried by the tie, and means for confining said notched or serrated portions in contact with each other.

2. The combination of a tie for supporting rails, an abutment carried thereby having an engaging face disposed at an angle with respect to the rail, an adjustable member disposed between said abutment and the flange of the rail and overlying the latter, a series of ribs or projections carried by said member, a series of complementary ribs or projections carried by the tie, and means for confining said ribbed portions in engagement with each other.

3. The combination of a tie for supporting rails, an abutment carried thereby, an adjustable member disposed between said abutment and the flange of the rail and overlying the latter, said member having one of its faces notched or serrated, a series of complementary notches or serrations carried by another portion of the tie, and means for confining said notched or serrated members in contact with each other.

4. The combination of a tie for supporting rails, an abutment carried thereby formed by striking up a portion of the tie and having an angular face, an adjustable member disposed between said abutment and the flange of the rail and overlying the latter, said member having one of its faces notched or serrated, a washer for engagement therewith having a series of complementary notches or serrations, and means for confining said notched or serrated members in engagement with each other.

5. The combination of a rail-supporting tie, an abutment carried by said tie and having an angular face, an adjustable member disposed between said abutment and the rail and overlying the flange of the latter, and means fixed with respect to said tie and cooperating with said adjustable member for securing the latter in its adjusted positions.

6. The combination of a rail-supporting tie, an anchor or abutment carried thereby having a face disposed at an angle with respect to the rail, an adjustable member arranged between said anchor and the rail and overlying the flange of the latter, said member being slotted, a fixed bolt carried by the tie and extending through said slot, and means carried by said bolt for holding the rail-engaging member in its adjusted positions.

7. The combination of a rail-supporting tie, an anchor or abutment carried thereby having a face disposed at an angle with respect to the rail, an adjustable member arranged between said anchor and the rail and overlying the flange of the latter, said member being slotted, a series of ribs carried by the upper face of said member, a fixed bolt carried by the tie and extending through the slot of the rail-engaging member, a washer ribbed to engage the surface of said rail-engaging member, and means carried by the bolt for holding said parts together.

8. The combination of a rail-supporting tie, an anchor or abutment having a face disposed at an angle to the rail carried by said tie, a clip disposed between said anchor and the rail and overlying the flange of the latter, ribs or projections carried by said clip, said clip being slotted, a fixed bolt carried by the tie and passing through said slot, and means carried by said bolt for engaging the ribbed surface of the clip to retain it in its adjusted positions.

9. The combination of a rail-supporting tie, a pair of anchors or abutments carried thereby having engaging faces paralleling each other but disposed at an angle with respect to the rail, adjustable clips disposed between said anchors or abutments and the flanges of the rail and overlying the latter, fixed bolts carried by the tie, said clips being slotted to permit movement with respect to the bolts, and means carried by said bolts for confining the clips in their adjusted positions.

10. The combination of a rail-supporting tie, an abutment carried by said tie and having an angular face, an adjustable clip disposed between said abutment and the flange of the rail and overlying the latter, and means fixed with respect to the tie for confining said clip in its adjusted positions.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. WHITEMAN.

Witnesses:

MURRAY C. BOYER,  
JOS. H. KLEIN.