

No. 773,622.

PATENTED NOV. 1, 1904.

C. D. ANDERSON.
RAILWAY TIE.

APPLICATION FILED JUNE 27, 1904.

NO MODEL.

Fig. 1.

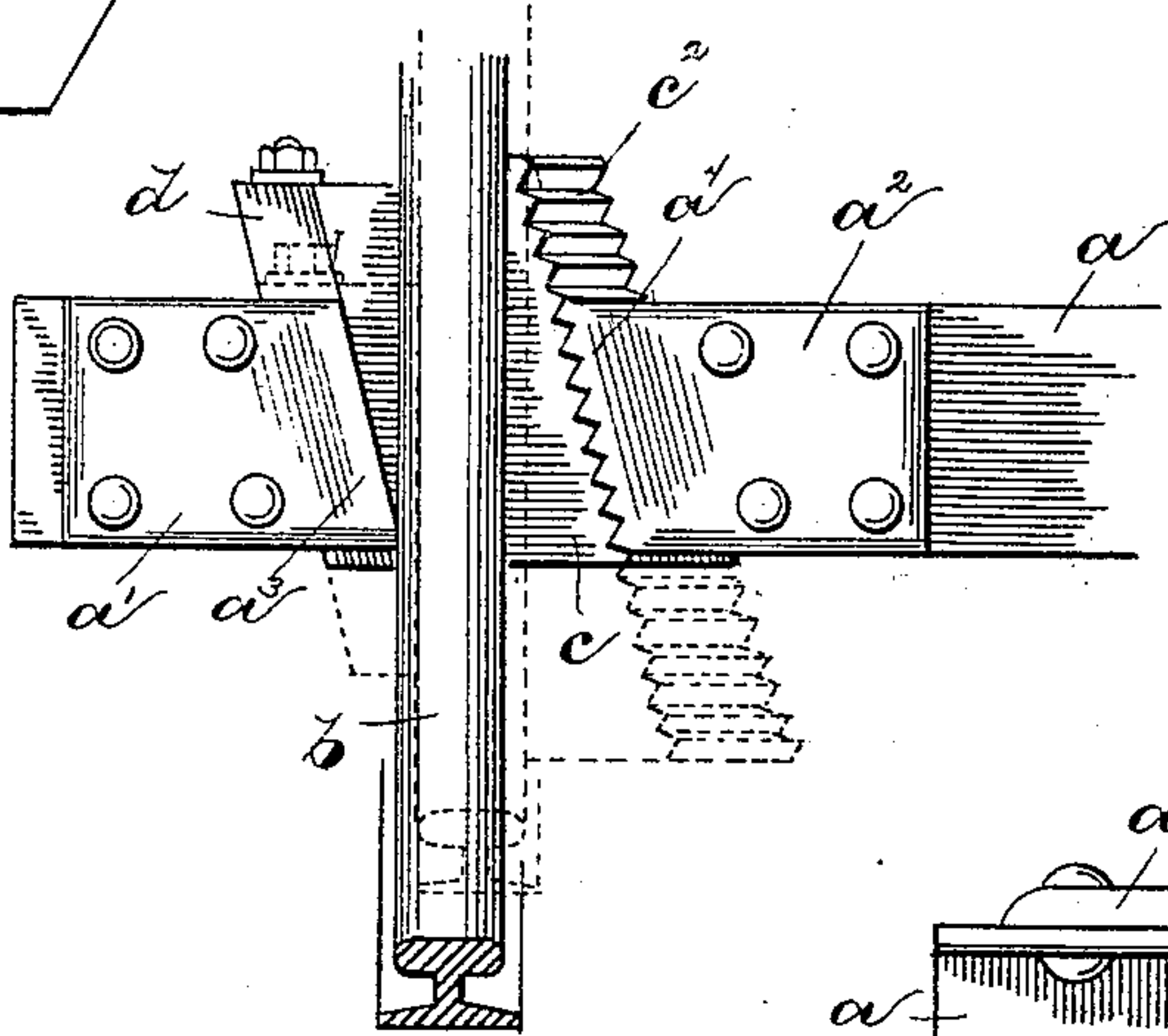


Fig. 2.

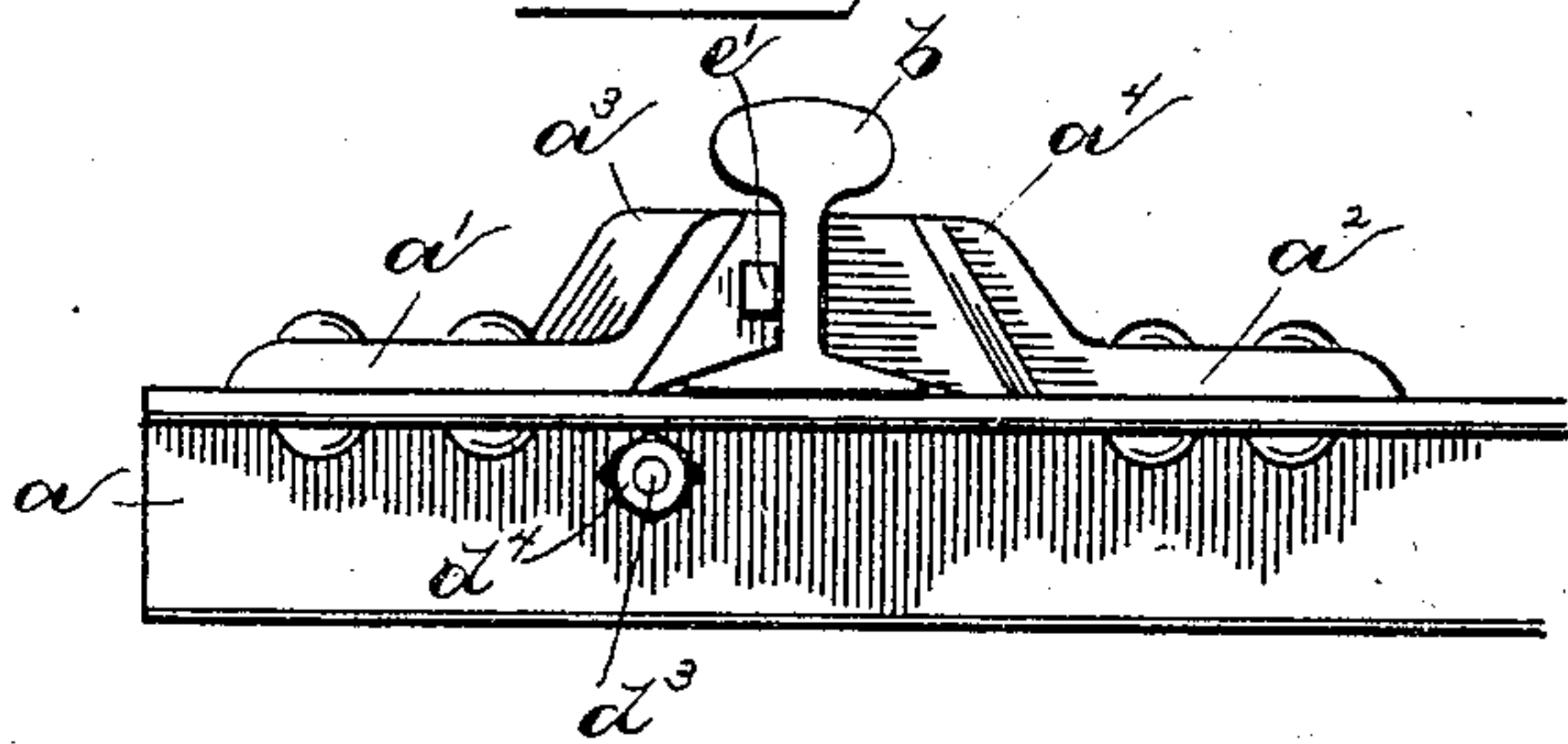


Fig. 4.

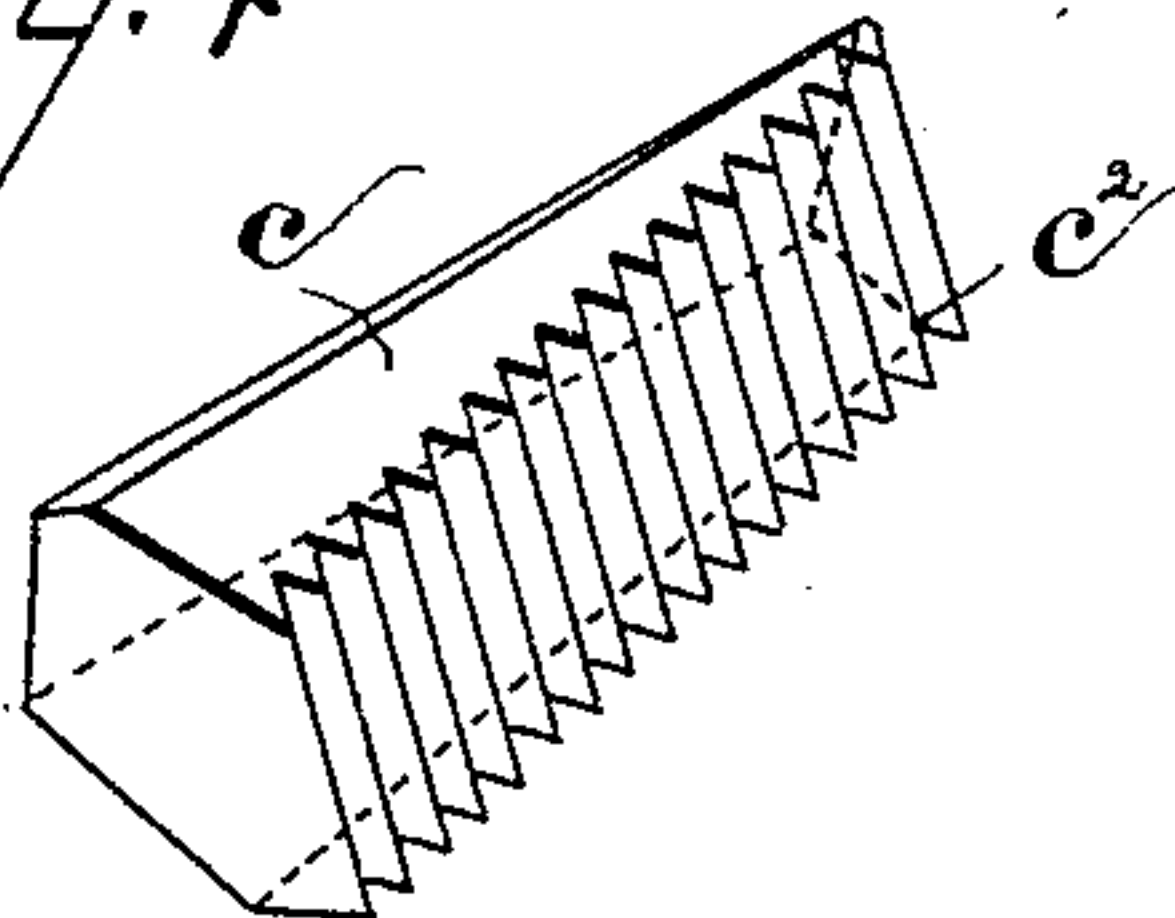


Fig. 3.

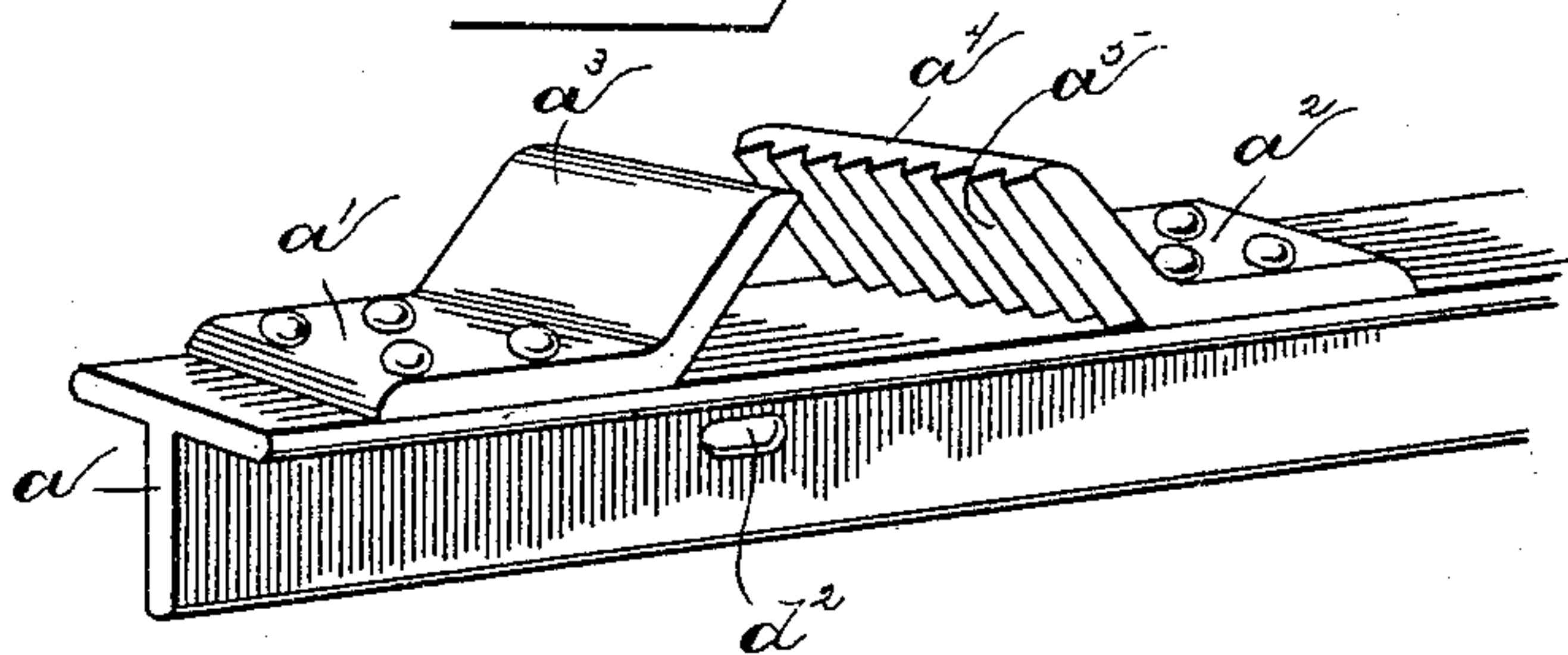


Fig. 5.

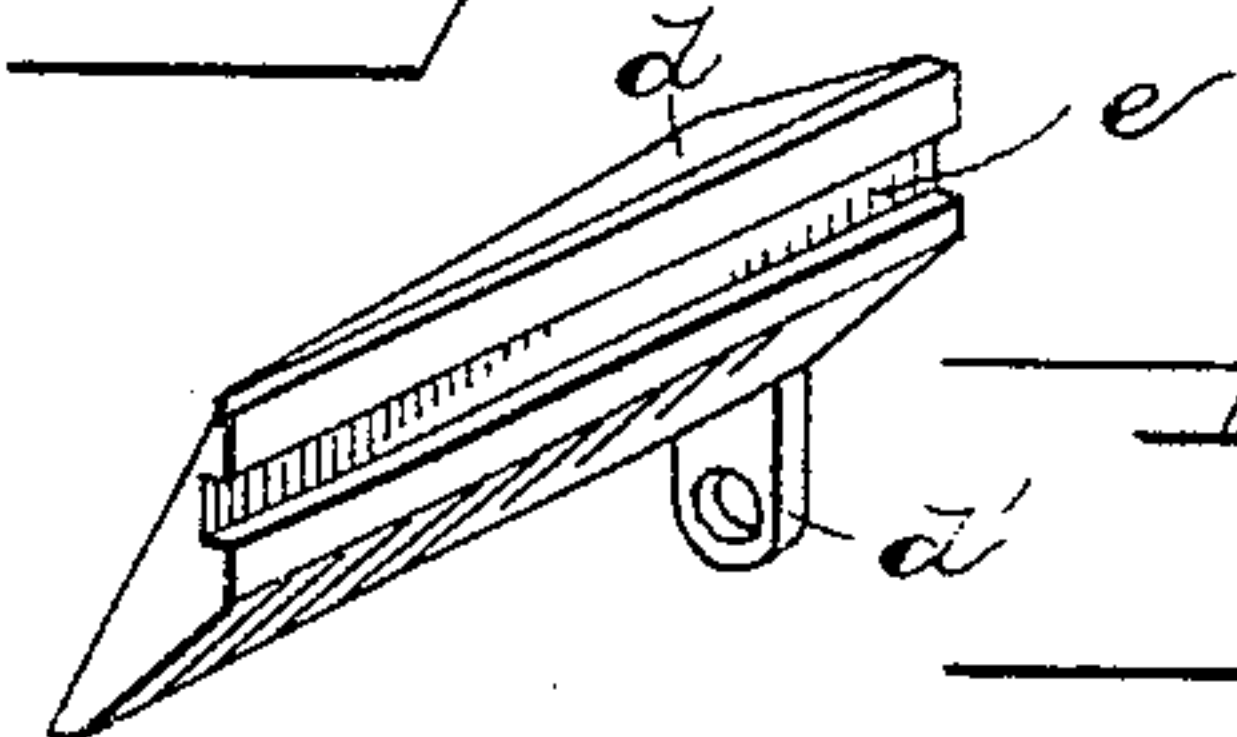


Fig. 6.

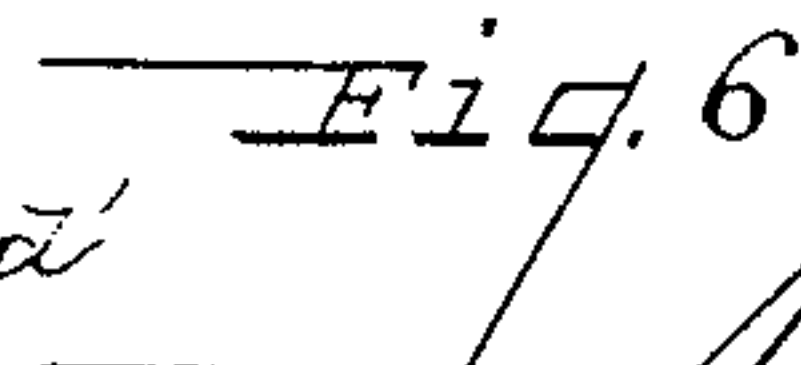
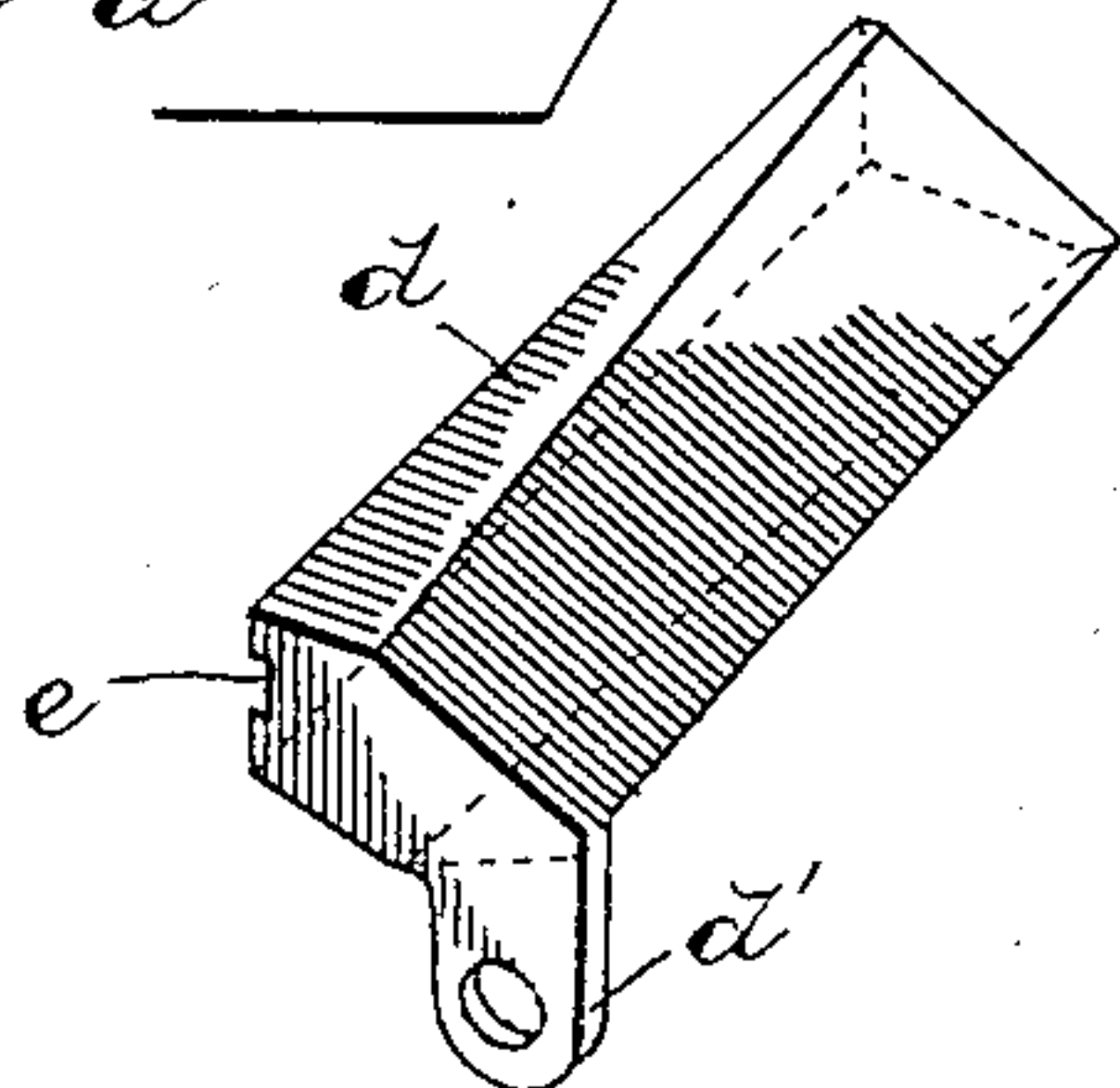
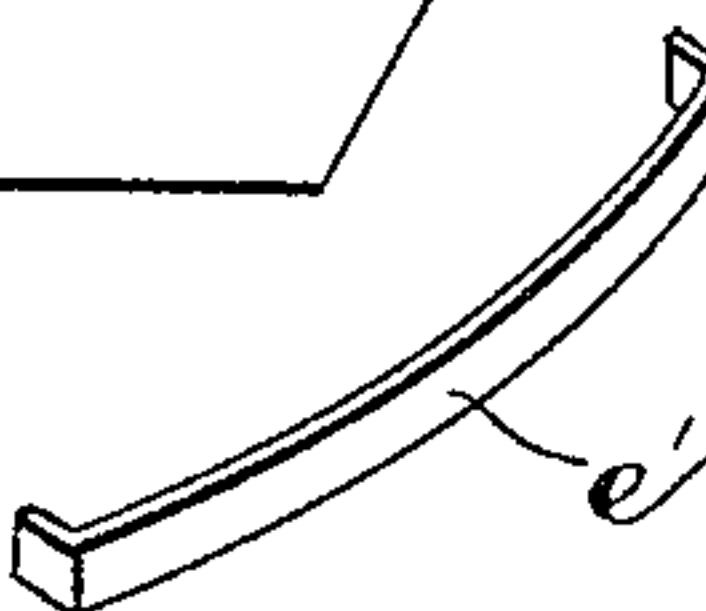


Fig. 7.



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UNITED STATES PATENT OFFICE.

CON D. ANDERSON, OF URBANA, OHIO, ASSIGNOR OF TWO-THIRDS TO
ELMER ELLIS, OF URBANA, OHIO, AND CHARLES A. MILLER, OF LIMA,
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RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 773,622, dated November 1, 1904.

Application filed June 27, 1904. Serial No. 214,309. (No model.)

To all whom it may concern:

Be it known that I, CON D. ANDERSON, a citizen of the United States, residing at Urbana, in the county of Champaign and State of Ohio, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to improvements in railway-ties, and particularly to metallic ties. The object of my invention is to provide simple and effective devices for securing the rails to metallic ties in a manner that will securely fasten the rails to the ties and yet allow the rails to be readily removed for purposes of renewal or otherwise, a further object being to provide for readily shifting the rails laterally to bring them into proper alignment to compensate for wear thereon.

My invention consists in the constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a device embodying my invention. Fig. 2 is an end view of the same. Fig. 3 is a perspective view of a tie such as I employ with some of the securing devices shown attached thereto. Figs. 4, 5, 6, and 7 are details hereinafter referred to.

Like parts are represented by similar characters of reference in the several views.

In the said drawings, *a* represents a metallic tie of the form which I preferably employ, the said tie being of a T shape throughout its length, the exact shape, however, being immaterial. Secured to the upper side of this tie by riveting or otherwise are two plates *a'* and *a''*, having upwardly angularly projecting portions *a'''* and *a''''* to form a dove-tailed groove. The said projecting portions not only project angularly in a vertical direction, but also extend across the tie at an angle, as shown in Fig. 1. Between the projecting portions of these plates *a'* and *a''* the rail *b* is seated, the web and base of said rail forming with said projecting portions *a'''* *a''''* tapering openings, the tapers of the respective openings extending in opposite directions. Within these tapered openings are

fitted wedges *c* and *d*, the sides of said wedges being formed of a shape to fit the peculiar-shaped openings formed by the said projecting portions *a'''* and *a''''* and the web and base of the said rail. The wedge *c* is adapted to fit the opening formed by the rail and the projecting portion *a''* and is formed on its side adjacent to said portion *a''* with serrations or teeth *c''*, said portion *a''* being formed with corresponding serrations or teeth *a''''*. After the rails are set to positions on the ties and the proper gage secured the serrated wedge *c* is first placed in position, with its teeth engaging the teeth of the portion *a''*. The wedge *d* is then driven in until the parts are all firmly wedged or clamped together.

In order that there may be no danger of the wedge *d* working loose, I have provided means for positively holding the same in position. To the large end thereof I provide a downwardly-projecting perforated lug *d'*, and in the tie *a*, at a point opposite said lug, is placed a slotted opening *d''*. Through the perforated lug and slotted opening is extended a bolt *d'''*, screw-threaded at the end to receive a nut *d''''*, which is screwed up against the web portion of the tie, and thus forms a means of holding said wedge *d* in its proper position.

As shown in Fig. 5, I have provided on the side of the wedge *d* adjacent to the rail a groove *e*, and in this groove *e* is placed a spring *e'*, the object of this spring being to prevent any rattling which might occur in the parts should the same become loosened to a slight extent. This device, however, can be used or not, as desired.

It will be seen by this construction that I have provided a simple and effective device for securing the rails to metallic ties and one which will permit the rails to be readily removed at any time. If it is desired to move one of the rails laterally toward the other to take up wear, this can be readily accomplished by first loosening the wedge *d* and then moving the wedge *c* for a distance of one or more teeth in the direction shown in dotted lines in Fig. 1.

Having thus described my invention, I claim—

1. In a railway-tie, a dovetailed groove formed on said tie, a rail seated in said groove and adapted to form with the sides of said groove tapered openings on either side of the said rail, wedges to fit in said openings, one of said wedges having serrations or teeth on its side adjacent to the side of the groove, and corresponding teeth or serrations on the side of the groove, substantially as specified.

2. The combination of a railway-tie having a dovetailed groove, a rail seated in said groove, said groove being disposed at an angle across said tie so as to form with said rail tapered openings on either side of said rail, wedges adapted to fit said openings, and means for holding said wedges in place in said openings, substantially as specified.

3. The combination of a railway-tie, a rail thereon, tapered grooves or openings on either side of said rail, wedges in said grooves, one of said wedges being provided with serrations

or teeth, and serrations or teeth in one of said grooves to engage with said wedge-serrations, for the purpose specified.

4. The combination of a railway-tie, a rail thereon, tapered grooves on either side of said rail and wedges in said grooves to secure said rail therein, a perforated lug on one of said wedges, a perforation in said tie, and a bolt or similar device extending through said perforations, for the purpose specified.

5. The combination of a railway-tie, a rail thereon, said tie having tapered grooves on either side of said rail, wedges in said grooves, one of said wedges being provided with a recess extending along the side thereof, and a spring located in said recess, for the purpose specified.

In testimony whereof I have hereunto set my hand this 21st day of June, A. D. 1904.

CON D. ANDERSON.

Witnesses:

CHAS. I. WELCH,
ELMER ELLIS.