

(No Model.)

T. A. DAVIES.  
CENTRAL RAIL FASTENING.

No. 376,945.

Patented Jan. 24, 1888.

Fig. 2.

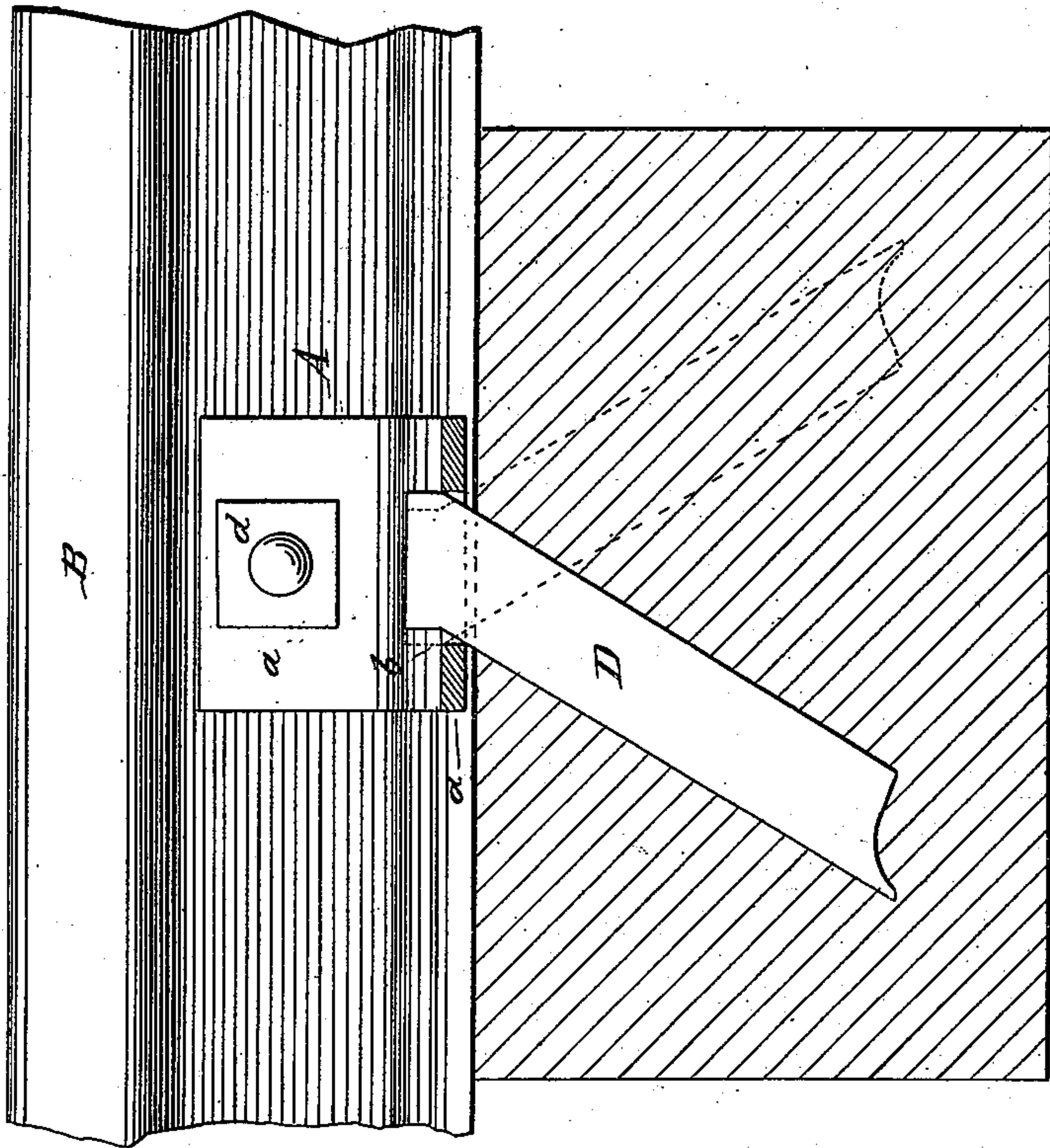


Fig. 1.

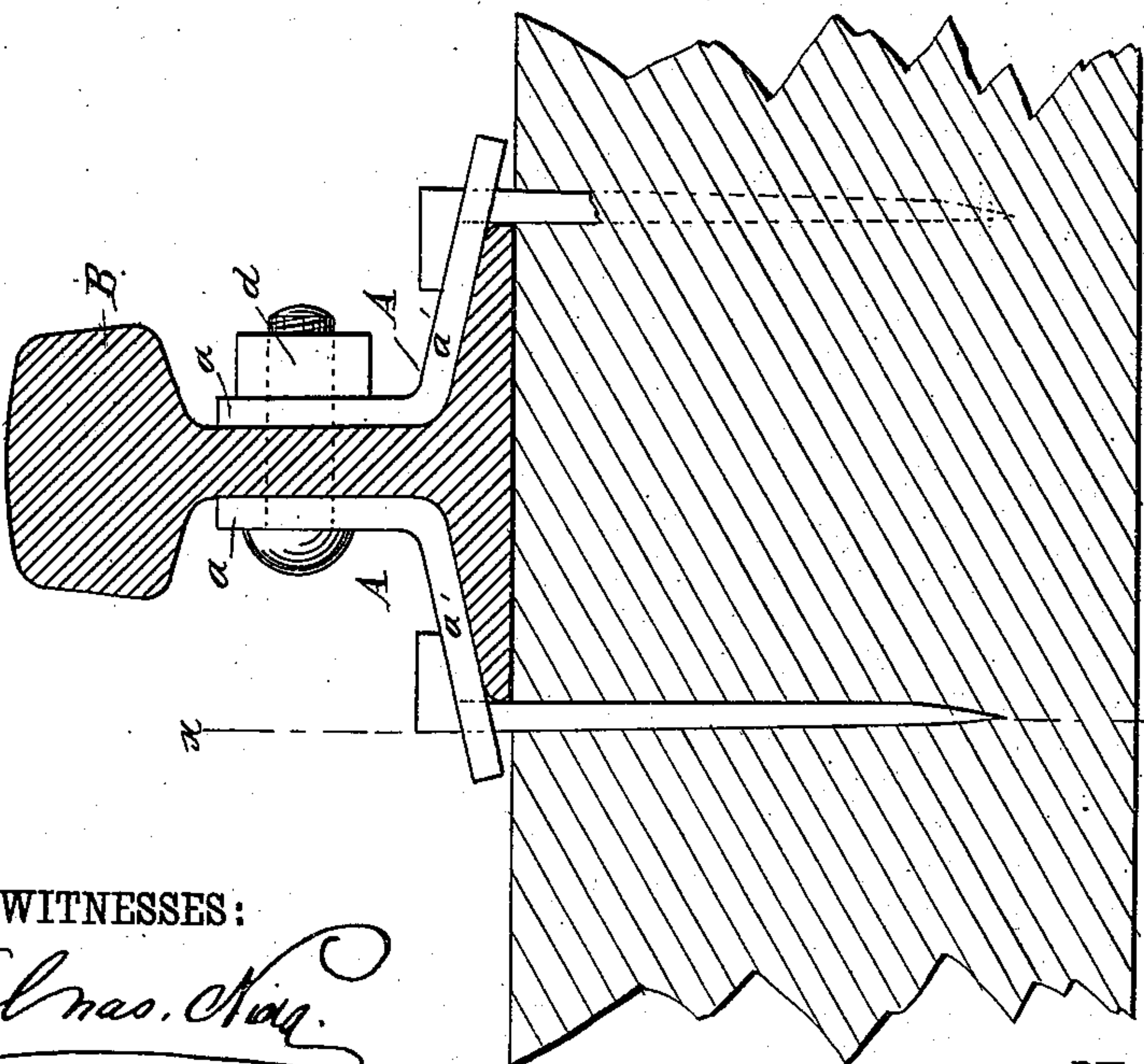
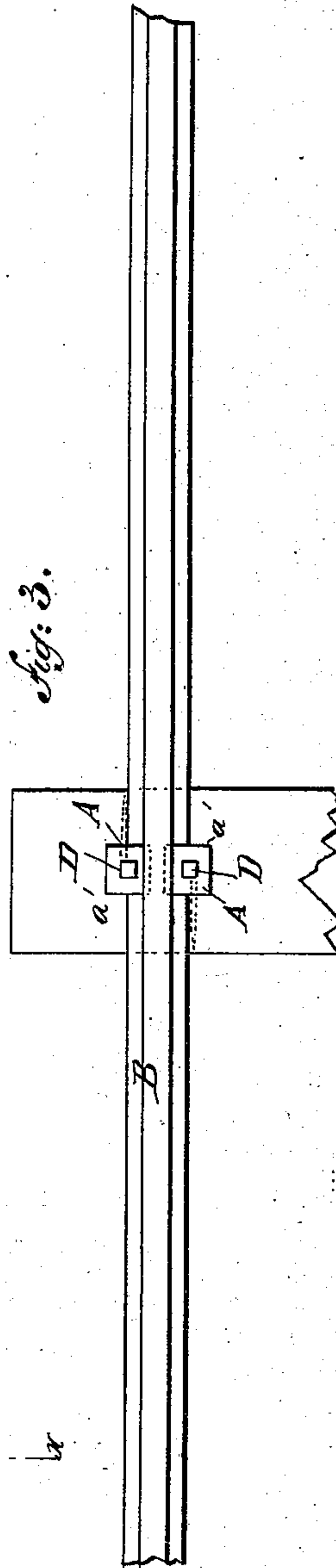


Fig. 3.



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# UNITED STATES PATENT OFFICE.

THOMAS A. DAVIES, OF NEW YORK, N. Y.

## CENTRAL RAIL-FASTENING.

SPECIFICATION forming part of Letters Patent No. 376,945, dated January 24, 1888.

Application filed October 4, 1887. Serial No. 251,424. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS A. DAVIES, of the city, county, and State of New York, have invented a new and Improved Central Rail-Fastening, of which the following is a full, clear, and exact description.

My invention relates to a central fastening for railroad-rails, and has for its object to provide a means whereby the rails will be prevented from creeping, and wherein a reduced and simple fish-plate may be employed to connect the rails, and the said fish-plates be called upon to serve simply as connecting-plates.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse section through a rail and tie having the central fastening applied, and Fig. 2 is a section on line *xx* of Fig. 1. Fig. 3 is a plan view.

It is the prime object of the present invention to prevent the creeping of railroad-rails, and at the same time to take the burden of wear and tear from the fish-plates, leaving said plates to simply perform the duties originally demanded of them—namely, that of a connection between abutting rails. In carrying out this object, at or about the center of each rail an angle-plate, *A*, is made to bear against the web of the rail *B* and upon the upper inclined face of the base, conforming to the united contour of said web and base, as illustrated in Fig. 1.

The upper or vertical member, *a*, of the angle-plates may reach to a contact with the under face of the tread of the rail, but, preferably, a space is made to intervene the two. The horizontal member *a'* of the plates is preferably made of sufficient length to project beyond the longitudinal edge of the base, which overhanging portion is provided with a slot, *b*.

The plates *A* need not be made of very great width, and are placed in alignment one with the other, as shown in Figs. 1 and 3, upon opposite sides of the rail, being held in engagement with the web by bolts *d*, passing through the latter and the plates, one bolt being all that is ordinarily requisite.

The plates are held in contact with the base of the rails by spikes *D*, passed through the aforesaid slots *b* and driven securely into the tie. The spike *I* prefer to use in connection with the fastening, and which is illustrated in Fig. 2, has been secured to me by Letters Patent dated August 23, 1887, No. 368,818, and I therefore lay no special claim thereto in this application.

When a central fastening as above described is used in connection with a rail, it is evident that the simplest form of fish-plate may be employed with perfect results, and the said fish-plate need not in any instance be bolted through the base or to the ties, as all the work required of the same will be merely to act as a connection between the abutting sections of rails, the central fastening effectually preventing all creeping and relieving the fish-plate from the burden of friction they have heretofore been subjected to.

The fastening herein presented obviates also any necessity for notching the bases of rails, which greatly weakens them, often causing a serious break.

I do not confine myself to one set of angle-plates, nor to placing a single set at the center of the rails, as one or more sets of plates may be positioned at any point in the length of the rails away from the fish-plates. The angle-plates may be made of suitable metal, and the form may be varied without departing from the spirit of the invention. The shape illustrated is, however, preferred.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with rails united by fish-plates, of opposing angle-plates located substantially centrally of the rails in engagement with the web and base, a fastening device passing through said web and plates, and spikes passing through the plates only and into the foundation of the rails, substantially as shown and described, whereby the rails are prevented from creeping and the fish-plates preserved from rapid wear, as set forth.

2. The combination, with rails united by fish-plates, of opposing angle-plates located substantially centrally of the rails and adapted to the contour of the web and upper face of the base, bolts passing through the vertical mem-

ber of the plates and through the web, and spikes projected through the horizontal member of the plates only and into the foundation of the rails, substantially as and for the purpose herein set forth.

5 3. The combination, with rails united by fish-plates, of opposing angle-plates located between the ends of the rails away from the fish-plates conforming to the contour of the web  
10 and upper face of the base, the horizontal member being adapted to extend beyond the base,

bolts passing through the vertical member of the plates and through the web, and spikes projected through the overhanging portion of the horizontal member of the plates and into  
15 the rail-bed, substantially as and for the purpose herein set forth.

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Witnesses:

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