

(No Model.)

T. J. BUSH.
COMBINED SUPPORT AND FASTENING FOR RAILWAY RAILS.
No. 446,282. Patented Feb. 10, 1891.

Fig. 1.

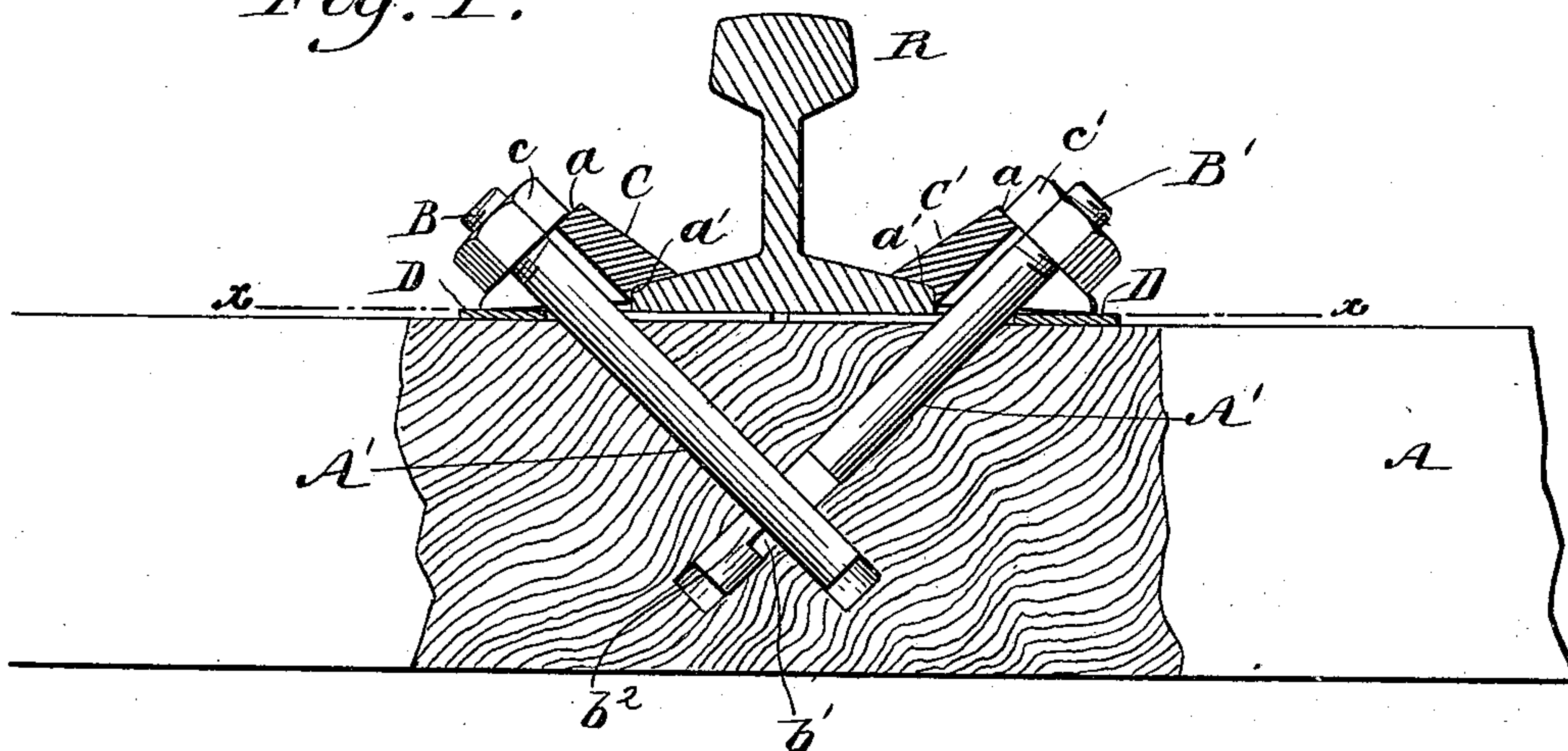


Fig. 2.

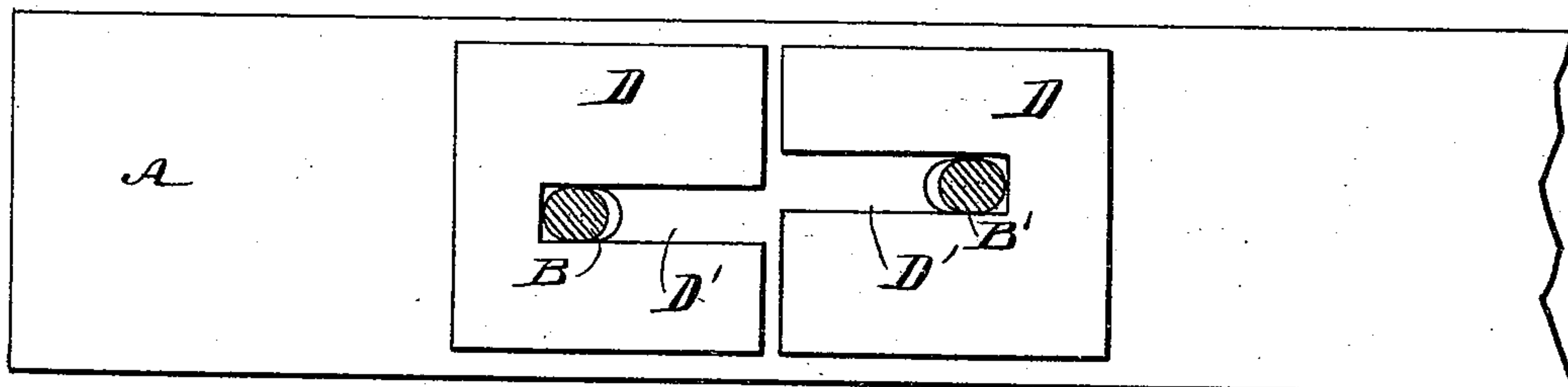


Fig. 3.

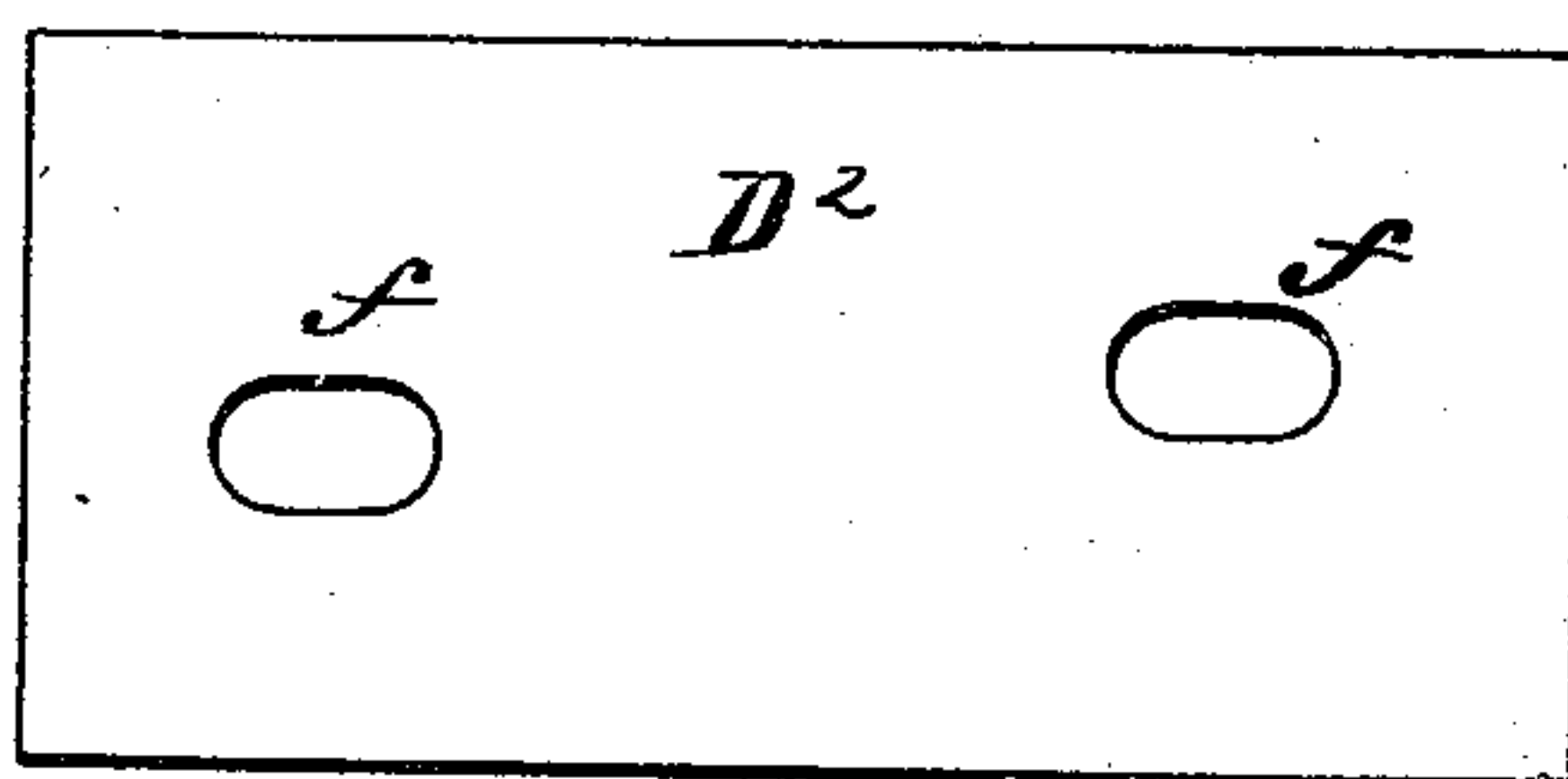
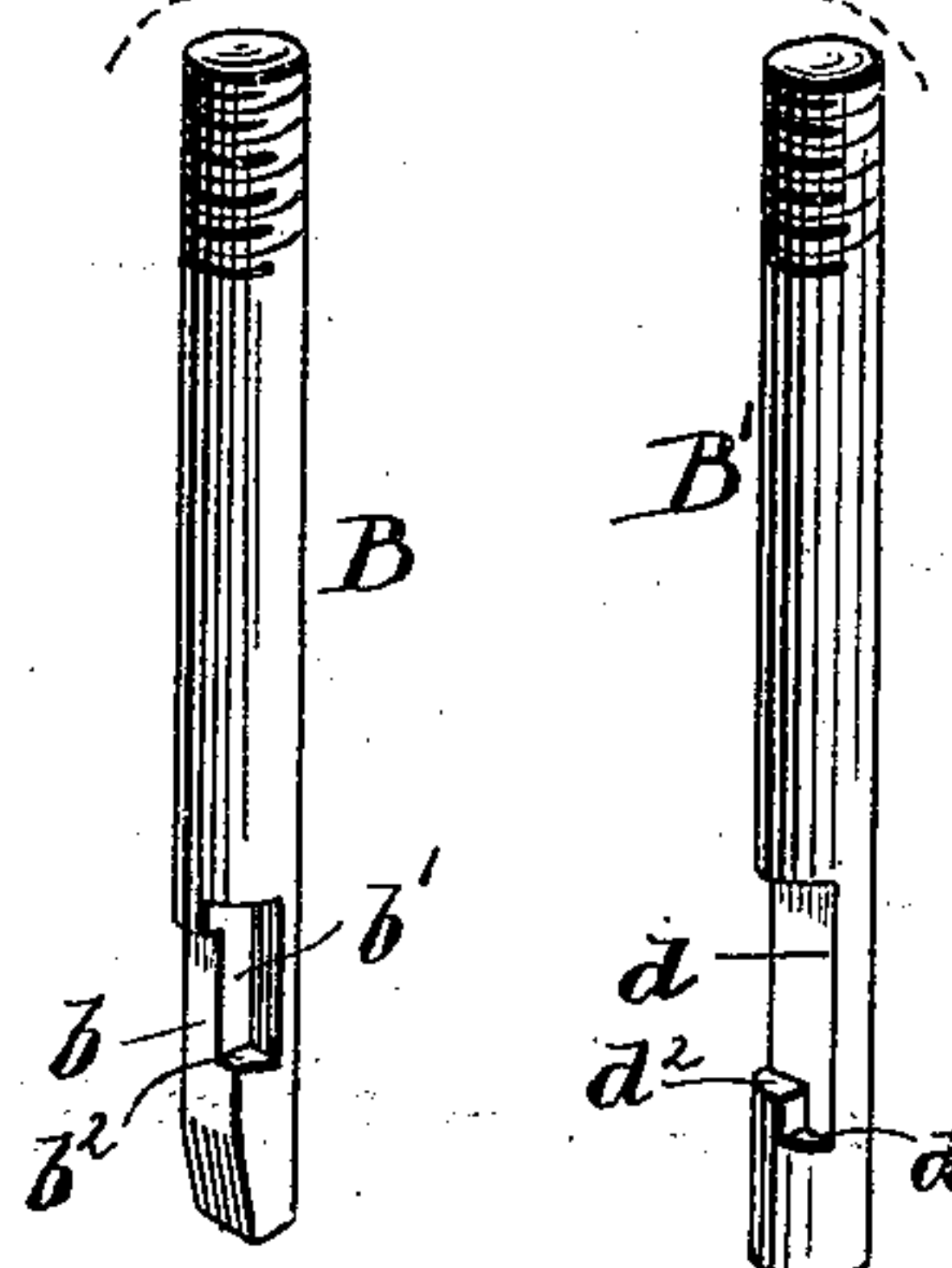


Fig. 4.



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THOMAS J. BUSH, OF LEXINGTON, KENTUCKY.

COMBINED SUPPORT AND FASTENING FOR RAILWAY-RAILS.

SPECIFICATION forming part of Letters Patent No. 446,282, dated February 10, 1891.

Application filed May 5, 1890. Serial No. 350,613. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. BUSH, of Lexington, in the county of Fayette and State of Kentucky, have invented a new and Improved
5 Combined Support and Fastening for Railway-Rails, of which the following is a full, clear, and exact description.

The object of my invention is to provide a support and fastening for securing railway-rails to wood ties which shall prevent the rail from settling into the tie and prevent the rail from shifting out of gage; and to this end my invention consists in the novel construction and combination of parts, as hereinafter described and claimed.

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.

20 Figure 1 is a sectional elevation showing my invention. Fig. 2 is a sectional plan view on line $x x$ of Fig. 1. Fig. 3 is a plan view of a modified base-plate, and Fig. 4 shows the interlocking bolts.

25 A represents a wood cross-tie having diagonal intersecting holes $A' A'$ bored therein to receive the interlocking bolts $B B'$. These bolts pass through triangular or sloping clamp-plates $C C'$, and they are notched at their
30 lower ends to interlock with each other, and they are screw-threaded at their outer ends to receive the screw-nuts $c c'$, which take the place of heads. The bolt B is faced off at b and recessed at b' to form the locking-shoulder b^2 , while the bolt B' is faced off at d and recessed at d' to form the locking-shoulder d^2 , which engages with the shoulder b^2 of the bolt B , as illustrated in Fig. 1, so that the bolts firmly hold each other in the holes while the
40 nuts are screwed up against the clamp-plates.

Between the rail R and the cross-tie A are placed the plates D . The clamp-plates $C C'$ rest upon these plates, so that the bottoms of the clamp-plates will always be on a level
45 with the bottom of the rail, and the interlocking bolts pass through them, so that all danger of displacement of the plates D is obvi-

ated and all settling of the rail and clamp-plates into the tie is prevented.

In Figs. 1 and 2 the plates are each formed 50 with a slot D' to span the bolts and to adapt them to be inserted and renewed without withdrawing the interlocking bolts; but I may use, and for new tracks I prefer to use, a single base-plate D^2 , (shown in Fig. 3,) formed with 55 large or oblong holes $f f$ for the bolts $B B'$, out of line or offset from each other, as shown.

The clamp-plates are formed with an oblique face a , at right angles to the length of the bolts, to form flat seats for the nuts $c c'$, and 60 they are recessed at a' to embrace the edges of the flange of the rail, and they rest at their rearedges upon the base-plate, as shown clearly in Fig. 1, so that the clamp-plates and the rail always have the same uniform and level 65 foundation, which prevents relaxation of the interlocking bolts, which might occur if the rail or either clamp-plate should settle. Furthermore, by this means, should the wood tie be treated with creosote, chloride of zinc, or 70 otherwise to preserve it, the whole becomes as durable and firm as a metallic tie and is much cheaper.

Having thus described my invention, I claim as new and desire to secure by Letters 75 Patent—

1. The cross-tie A , having diagonal intersecting holes $A' A'$, and the bolts $B B'$, fitted in said holes and interlocked at their inner ends and provided with screw-nuts at their 80 outer ends, in combination with the rail R , clamps $C C'$, formed with sloping surfaces a , and the clamp plate or plates formed with offset elongated openings to receive the diagonal bolts, substantially as described. 85

2. The cross-tie having diagonal intersecting holes, in combination with the rail, the diagonal interlocking bolts, and the chafe-plates D , formed with open slots D' to fit upon the bolts, substantially as described.

THOMAS J. BUSH.

Witnesses:

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C. SEDGWICK.