No. 849,542. PATENTED APR. 9, 1907.

B. F. HAMILTON.

METALLIC RAILWAY TIE.

APPLICATION FILED DEC. 22, 1906.

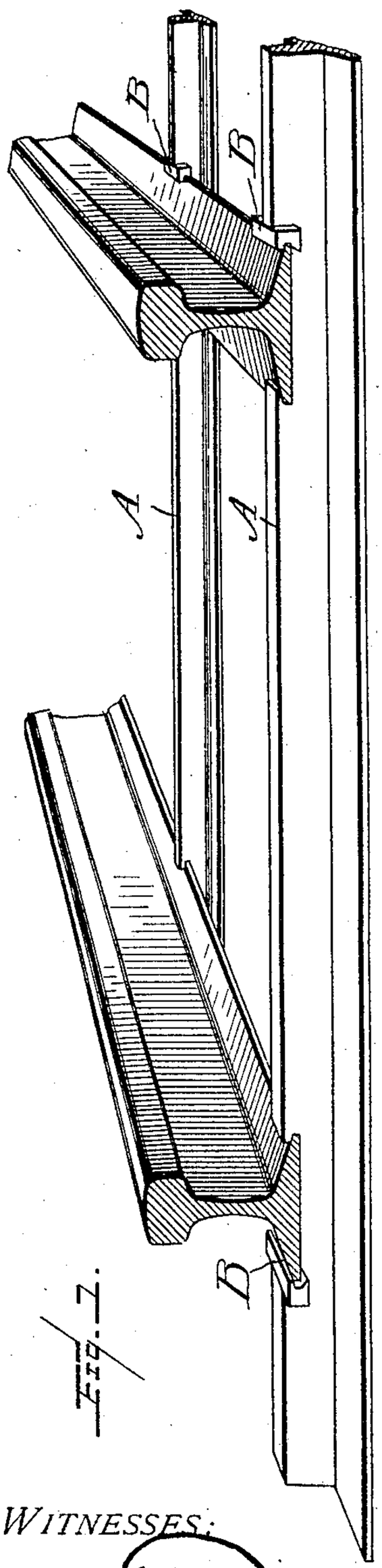

Fig. 1.

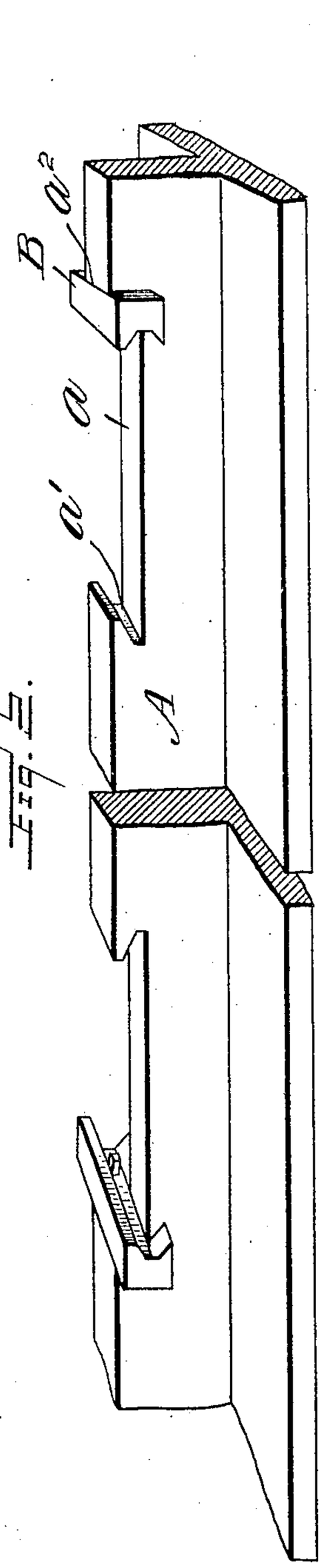

Fig. 2.

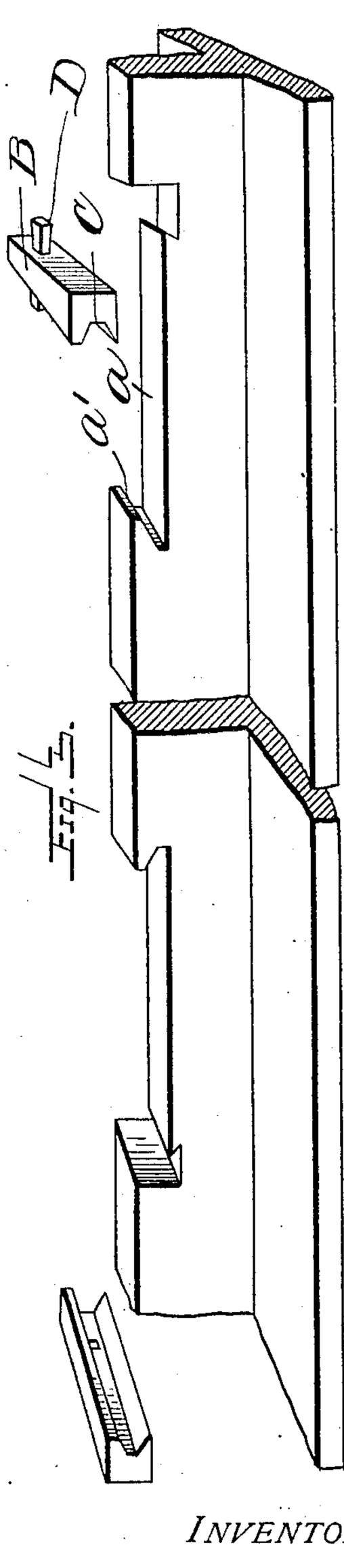

Fig. 3.

WITNESSES:

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BENJAMIN F. HAMILTON, OF MARLINTON, WEST VIRGINIA.

METALLIC RAILWAY-TIE.

No. 849,542. Specification of Letters Patent. Patented April 9, 1907.

Application filed December 22, 1906. Serial No. 349,151.

To all whom it may concern:

Be it known that I, BENJAMIN F. HAMILTON, a citizen of the United States, residing at Marlinton, in the county of Pocahontas and State of West Virginia, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

My invention relates to improvements in railway-rail connections and means for securing the meeting ends of the same in place, and consists, essentially, of a metallic railway-tie which is provided with rail-receiving portions at each end to receive the rails and wedges or keys for locking the rails in position on the tie; and the object is to simplify and improve the construction and at the same time reduce the cost of the manufacture thereof over the existing prior state of the art.

With these and other objects in view the invention consists in the novel construction and combination of parts, as will be hereinafter more in detail described and specifically claimed.

I have fully and clearly illustrated my invention in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved tie, showing the ties and rails assembled in position and the latter securely locked to the former. Fig. 2 represents the rail-receiving portions of a tie, on an enlarged scale, showing the locking-wedges in position; and Fig. 3 is a similar view showing the recesses and notches in the tie and locking-wedges detached.

Similar letters of reference denote corresponding parts in the several figures, in which—

A designates a central rib of a metallic tie, having its upper edge recessed at its rail-receiving ends, as at *a a*, one end of these recesses being provided with a V-shaped notch *a'* on the inside of a rail and the other with a notch a^2 on the outside of a rail, in which gradually-tapering locking wedges or keys B, having V-shaped grooves therein, serve as detachable fastening means for locking securely and firmly in place in said recesses the flanges of the meeting ends of the rails, by which they are held from displacement or spreading incident to constant travel thereon of railway-trains. The base of the tie consists of a thickened central rib A, flanged slightly taperingly upon each side from where it merges into the lower part of the rib outwardly to the edges of the flanges, which describe with said central rib an inverted-T-shaped construction, as clearly shown in Figs. 2 and 3 of the drawings.

The locking keys or wedges B are slightly tapering in form and are provided with V-shaped grooves C, corresponding to the flanges of the rail, so as to increase the friction of the flanges of the rails with which they engage. These wedges or keys take in the V-shaped or dovetailed notches formed in the recesses in the tie between the walls of the tie in the vertical central rib, and each of the outside flanges of the rails in turn take in the V-shaped notches in the wedges. The ties can be laid on the track or road-bed so as to have solid fastening means on every other one, which makes it impossible for the track to spread or turn over, and by this means wrecks may be avoided. These wedges or keys are a little longer than the width of the tie and have formed in their smaller tapering end openings therethrough, through which a smaller key D is passed at right angles to the wedges B and by which said wedges B are firmly locked to the ties and rails.

The operator in assembling the parts places the rails in the recesses in the rail-receiving portions, when the inner flanges of the rails are closely and snugly seated in the notches in the inner ends of the recesses, the notches on the opposite end of the recesses and outer side of the rails receiving the locking keys or wedges having the V-shaped grooves therein engaging the tapering and corresponding outer flanges of the rails after the locking keys or wedges have been driven home in the notches. Thus by this means both flanges of the rails are securely and rigidly held in place.

When it becomes necessary from any cause to release the rails from the tie, the locking keys or wedges are withdrawn easily and conveniently from the notches in the recessed portion of the tie, and the rails are then readily and quickly released, and the assembling of the parts can be as quickly and easily accomplished.

I desire it to be understood that I do not confine myself to the precise construction

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herein shown and described, but may vary the same without departing from the scope of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

A metallic railway-tie having a rail-receiving inverted-T-shaped base portion composed of a central rib, flanges formed integral with the rib, said rib having recesses and V-shaped notches formed integral with the recesses; in combination with a tapering key having a V-shaped groove therein to engage with one of the notches of the recesses in the vertical central rib, all constructed as herein shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN F. HAMILTON.

Witnesses:
D. L. ANDERSON,
T. S. MCNEEL.