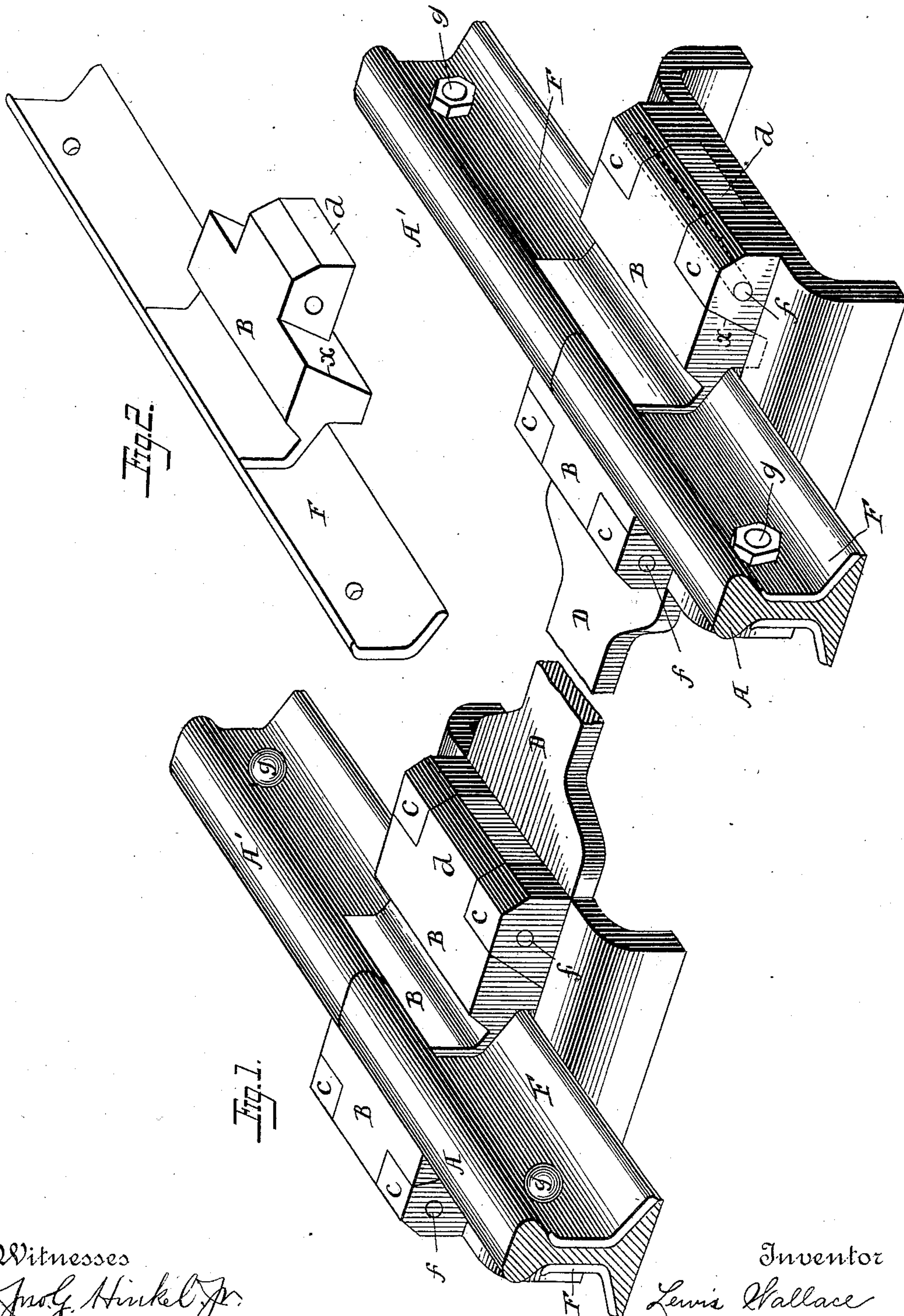


(No Model.)

L. WALLACE.  
COMBINED JOINT BAR AND RAILWAY TIE.

No. 427,812.

Patented May 13, 1890.



Witnesses

Jno. G. Hinkel Jr.

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# UNITED STATES PATENT OFFICE.

LEWIS WALLACE, OF CRAWFORDSVILLE, INDIANA.

## COMBINED JOINT-BAR AND RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 427,812, dated May 13, 1890.

Application filed December 3, 1889. Serial No. 333,937. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS WALLACE, a citizen of the United States, residing at Crawfordsville, in the county of Montgomery and State of Indiana, have invented certain new and useful Improvements in a Combined Joint-Bar and Railway-Tie, of which the following is a specification.

My invention preferably consists of devices, fully set forth hereinafter, whereby the meeting ends of the rails of a railway are securely locked in place upon the chairs or ties.

In the accompanying drawings, Figure 1 is a perspective view of a railway-tie with my improvement. Fig. 2 is a detached perspective view of one of the blocks and fish-plates.

The railway-ties D are constructed in any suitably manner, but preferably in that set forth in my application for Letters Patent, Serial No. 313,470. Each end of each tie constitutes, preferably, a chair for the reception of the abutting ends of the rails A A', and this end is provided upon one or both sides of the seat of the rails with lugs c c, separated to receive between them the tongue d of a block B, which is secured in its place by means of a key f, that passes transversely through openings in the lugs and in the tongue d of the block B. These features are substantially those set forth in my aforesaid application.

In order to support the rails at the points where the ends meet, and in order to avoid the necessity of employing a separate and independent rail-joint at such points, as usual, and at the same time to secure the advantages of the fastening device set forth in my aforesaid application for Letters Patent, I make use of the construction which I will now describe. At the inner end of each block B is a plate F, which may be secured to or is preferably cast with the block B, so that both are in one piece. This plate F is adapted to fit against the side of the rail between the flange and the head in the same manner as an ordinary fish-plate and constitutes, practically, one of the fish-plates, through which the bolts g g pass to a similar plate upon the opposite side of the rail. When the blocks B, with their extensions forming the fish-plates F, are inserted in place, as

shown in Fig. 1, and are secured by means of the keys or pins f, they not only lock the rails to the tie, but they further serve to maintain the ends of the rails in line with each other, so that they are immovably locked in place and maintained in coincidence, preventing the battery and injury which would result if one could play independently of the other. It will be seen that when the block B is removed the fish-plate is also carried with it, and consequently the rails are left free, so that they can be readily removed and replaced. In order to permit this movement of the block B, the meeting faces of the block and of the lugs c are made inclined, as shown at x in the drawings. This permits the block to be at once freely removed as soon as the key f is taken out of its place. The inclined faces further serve as a means of forcing the block and the fish-plate, which latter may spring or yield to a slight degree firmly against the sides of the rails, bringing them into line when the block is forced into its place. It will be seen that as thus constructed the tie, with its adjuncts, serves as a tie, as a chair, a securing device, and also as a rail-joint, affording a positive rest and an immovable fastening device for the rail.

I prefer to use two blocks and plates, one on each side of the meeting end of the rail, as shown in the drawings; but, if desired, one of the blocks and plates may be fixed or formed integral with the tie to afford a bearing at one side of the rail, the other only being movable.

While I prefer to combine the features described with the tie, they may be combined in a chair secured to the tie.

I also desire it well understood that the plate F, as shown, may be constructed long or short, at pleasure; also, that the application of the plate F is not intended to be limited to the junction-place of rails. As a fixed part of the block B it may be applied to the rails intermediately. For this the block B, with the plate F, may be attached to every tie used, making the plate long or short, at discretion, the object being by such resort to so stay, re-enforce, and support the rails as to obviate any necessity for adding to their weight.

Without limiting myself to the precise construction shown, I claim—

1. The combination, in a rail joint or fastening, of a bottom support for the rails provided with separated lugs, a block fitting between said lugs and carrying a plate extending laterally beyond the lugs and fitting the sides of the rails and united thereto by transverse bolts, and a key passing transversely through openings in the lugs and block, substantially as set forth.

2. The combination of a tie provided with

bearings and blocks and fastenings adapted to hold the rails to the tie, and laterally-extending perforated plates carried by said blocks and constituting fish-plates, substantially as described.

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

LEWIS WALLACE.

Witnesses:

HELEN ELSTON SMITH,  
MARY E. BRADEN.