

No. 771,033.

PATENTED SEPT. 27, 1904.

H. W. AVERY.
METALLIC RAILWAY TIE.
APPLICATION FILED FEB. 5, 1904.

NO MODEL.

Fig. 1.

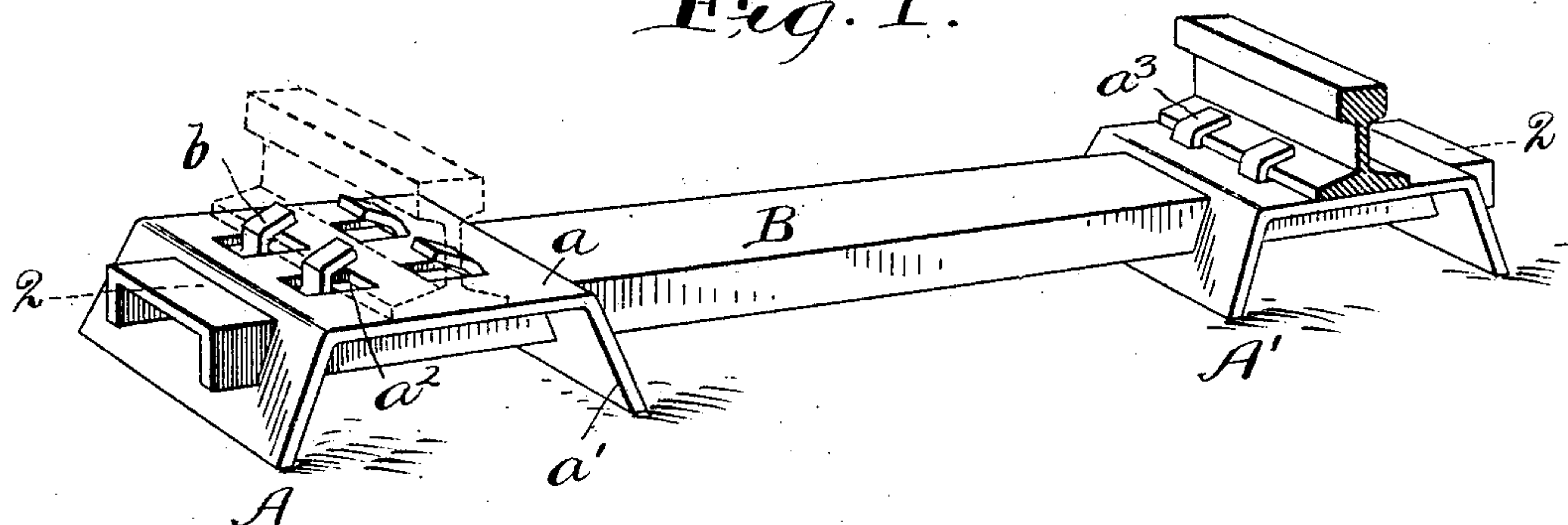


Fig. 2.

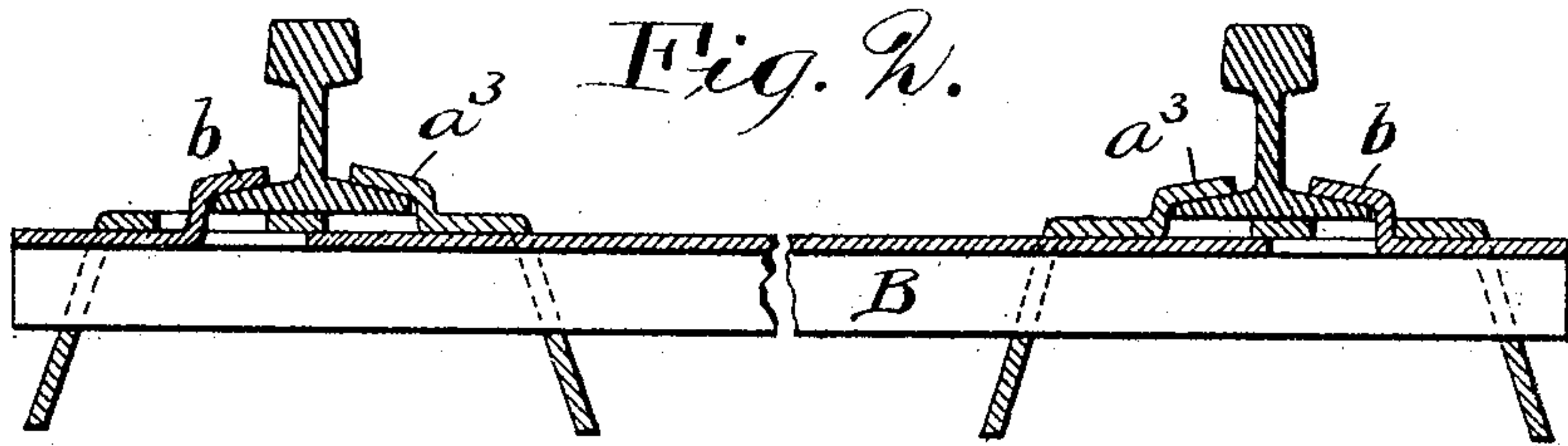


Fig. 3.

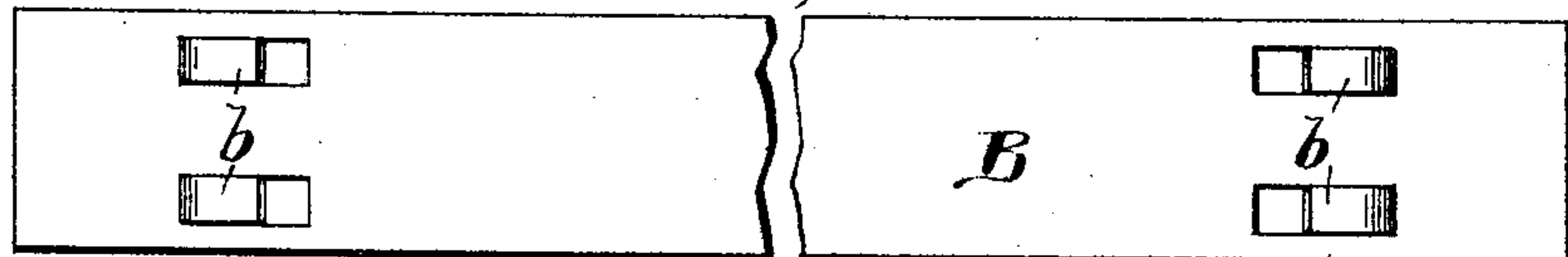


Fig. 4.



WITNESSES.

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Fig. 5.

INVENTOR

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UNITED STATES PATENT OFFICE.

HENRY W. AVERY, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO THE AVERY STAMPING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 771,033, dated September 27, 1904.

Application filed February 5, 1904. Serial No. 192,092. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. AVERY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Metallic Railway-Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention consists of improvements in metallic railway-ties, which include two chairs and a connecting tie-bar.

The invention may be summarized as consisting in the combination of parts shown in the drawings and hereinafter described, and pointed out definitely in the claim.

In the drawings, Figure 1 is a perspective view of the tie. Fig. 2 is a sectional view thereof in the plane of line 2 2 of Fig. 1. Fig. 3 is a plan view of the tie-bar shown in Fig. 1. Fig. 4 is a side elevation, partly in section, of a tie-bar having a different cross-sectional configuration; and Fig. 5 is a cross-section of the tie-bar shown in Fig. 4.

Referring to the parts by letters, A A' represent the chairs, which are of familiar configuration, having substantially flat tops or seats a and diverging sides a' .

B represents a tie-bar which may be of any suitable cross-sectional configuration, provided its top is in the form of a flat plate from which retaining-tongues b may be struck. This tie-bar passes through holes in the sides of the chair, and the top of the bar bears against the under side of the seat of the chair. It has been customary heretofore in railway-ties of this class to have these holes in the sides of the chair connected by a slot which extends through the seat of the chair. This slot was so formed to permit the passage through the seat of an upwardly-extended hook-carrying part of the tie-bar, and in most constructions this slot was necessary in order that the tie-bar and chairs might be assembled in proper relative position. This slot, however, weakens the chair and is there-

fore objectionable. In chairs forming part of my invention there is no such slot extending through and across the seat of the chair and connecting-holes through the sides. The holes for the tie-bar are in the sides only and are so placed that, as above stated, the top surface of the tie-bar, which passes through these holes, bears against the under side of the chair-seat, thereby strengthening instead of weakening the same. Through the chair-seat, however, are one or two transverse slots a^2 , (preferably two,) although the number of such slots will depend upon the number of tongues which are struck from the top plate of the tie-bar. These tongues b are punched from the top plate of the tie-bar, remaining attached thereto at one end. When the tie-bar is being passed through the sides of the chairs, these tongues remain in the plane of such top plate; but when the slots in the chairs have been brought over these tongues the tongues are punched up through said slots and are bent into the hook form shown for engagement with the flanges of the rails resting upon the chair-seats. Hooks a^3 are also formed upon the chair-seats for engagement with the flange on the opposite side of the rail. The tie-bars may have two depending flanges, as shown in Fig. 1, or one depending flange, as shown in Fig. 5, or it may have no depending flange at all, being merely a flat plate of metal. The latter construction is not, however, as strong as one in which such flanges are provided and is therefore not so desirable. The tie-bar may be in one piece, as shown, or it may be in two pieces adjustably connected together near the middle thereof, as shown in my copending application, Serial No. 187,889, the construction of the tie-bar in the respect mentioned being immaterial.

Having described my invention, I claim—

The combination of two metallic chairs, each having a flat seat and two depending sides in which are holes for the passage of the tie-bar fitted thereto, the seat of said chair being provided with a short transverse slot

which does not extend to the sides, and with one or more upwardly-projecting hooks, with a tie-bar extending through the holes in the sides of the chair and having a flat top plate
5 which bears against the under side of the chair-seat and has a tongue which is punched from the said top plate, remaining attached at one end thereto, and is bent upward into

hook form and caused to project up through the slot in the chair-seat. 10

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

HENRY W. AVERY.

Witnesses:

ALBERT H. BATES,
E. L. THURSTON.