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PATENTED JULY 12, 1904.

J. L. ALBIEZ, JR.

COMBINED TIE AND CHAIR FOR RAILWAYS.

APPLICATION FILED APR. 12, 1904.

NO MODEL.

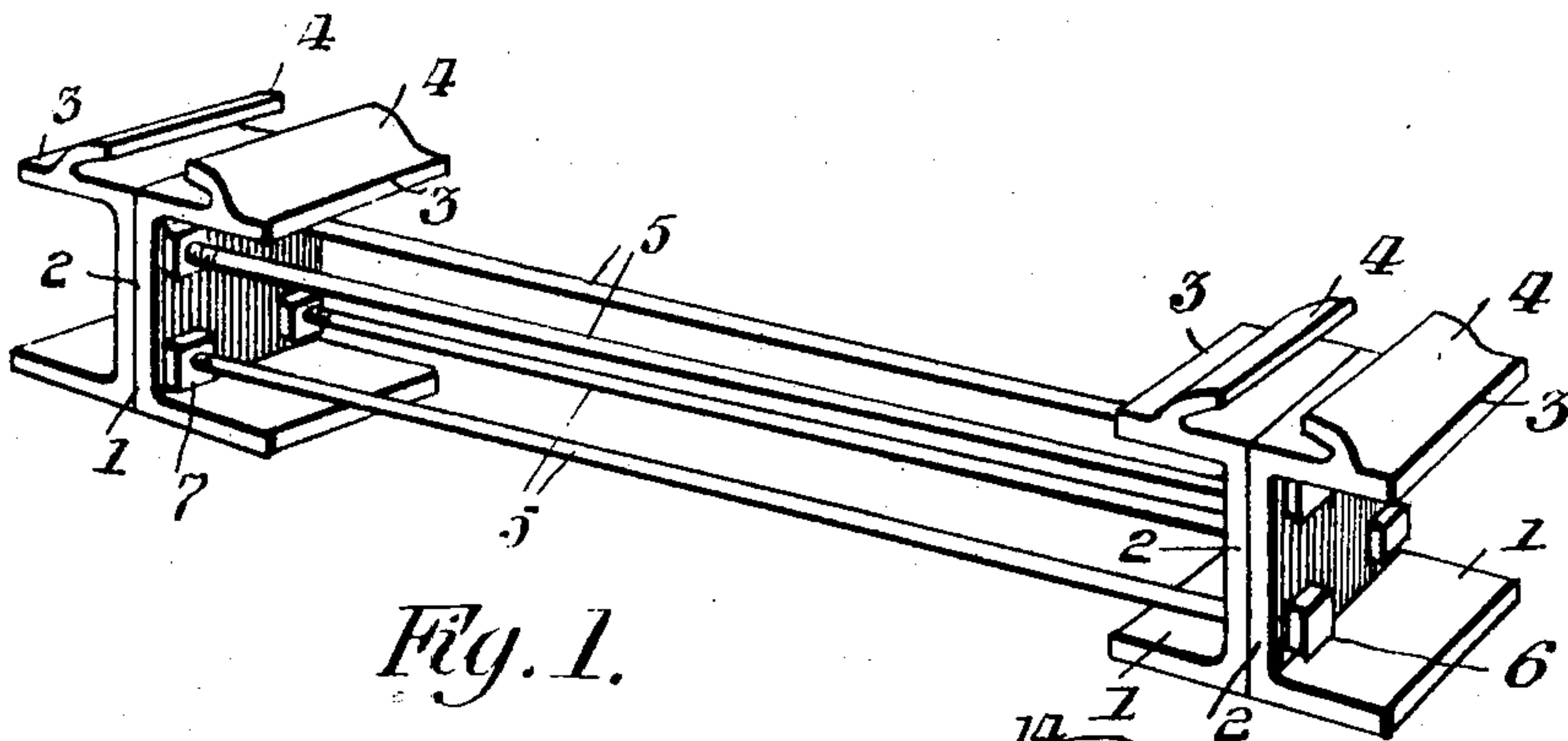


Fig. 1.

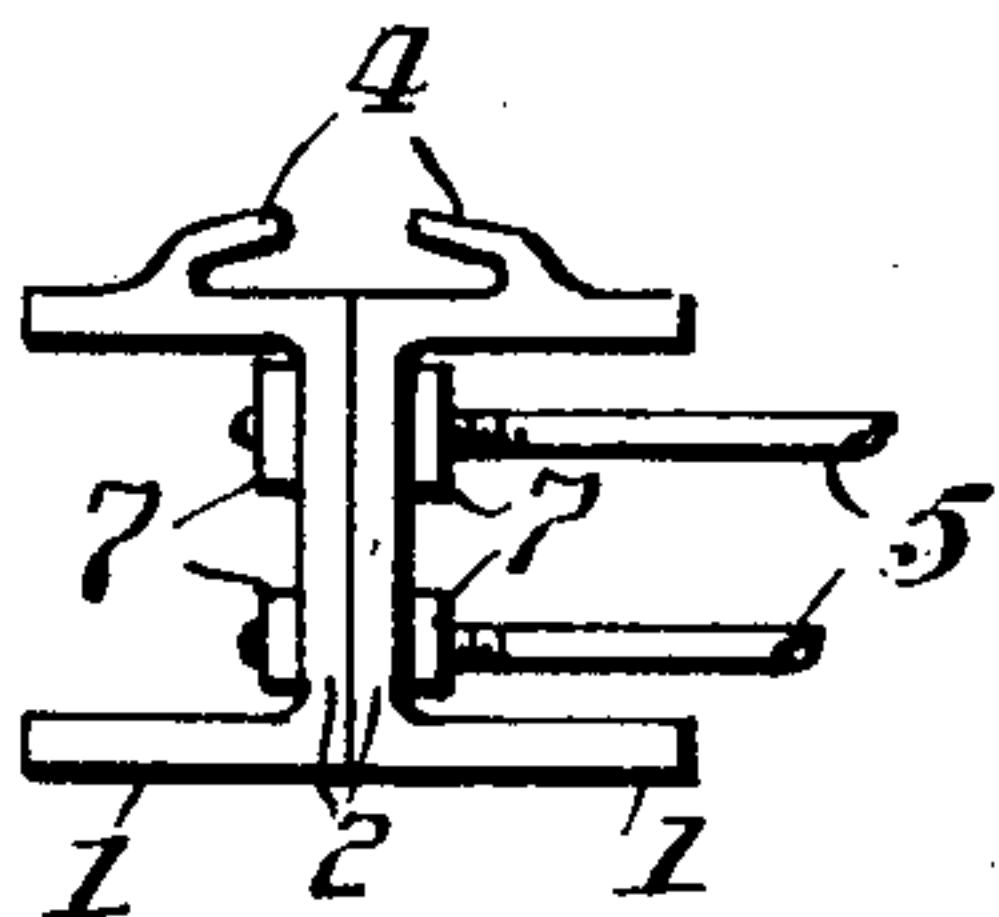


Fig. 2.

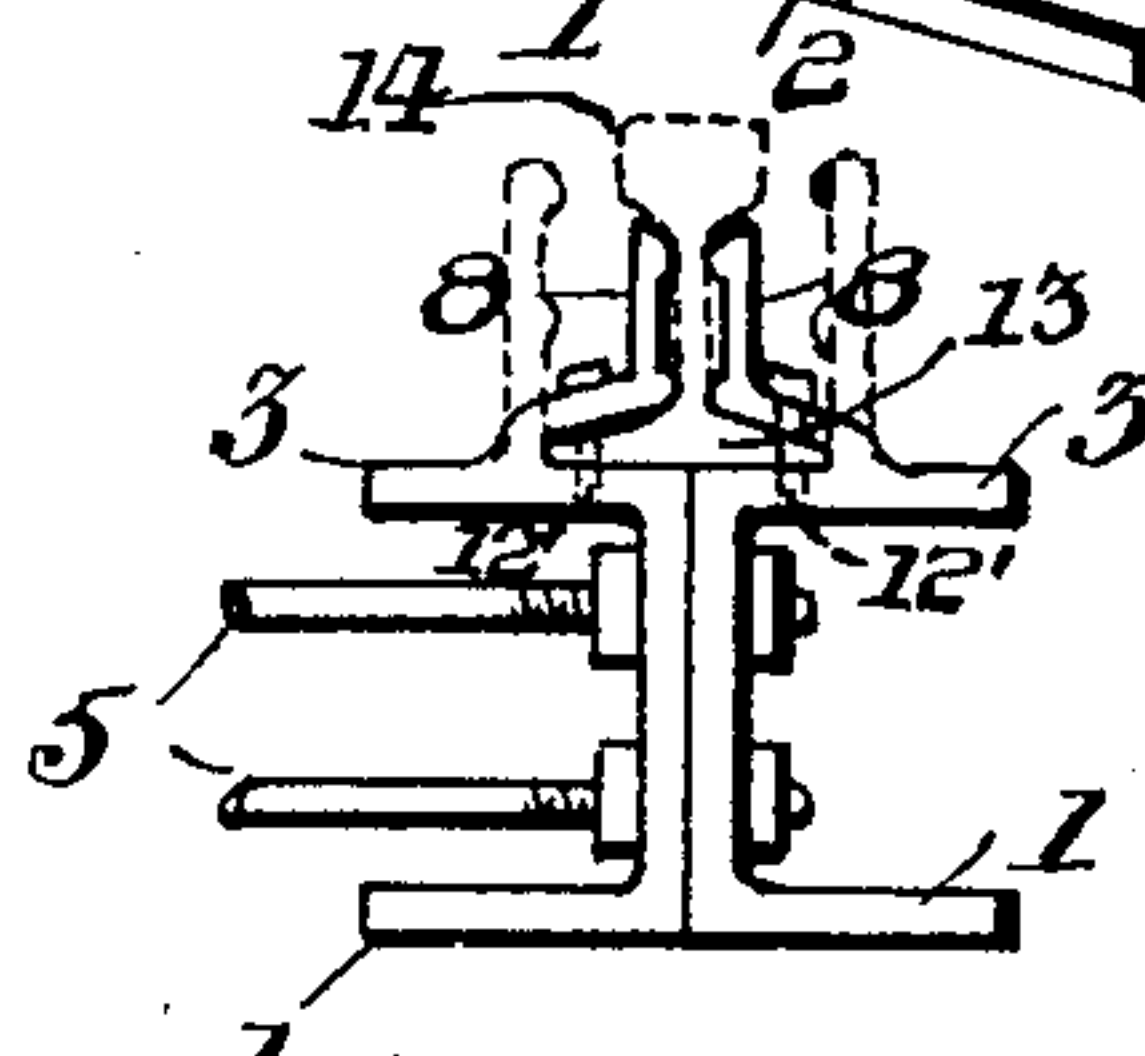


Fig. 3.

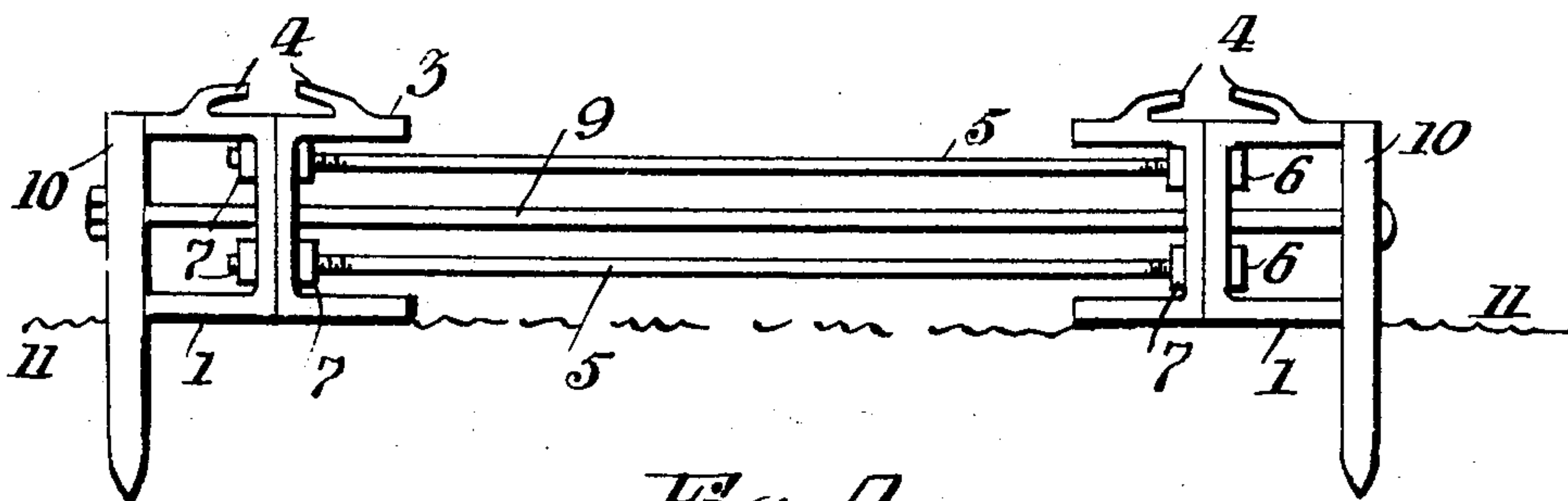


Fig. 4.

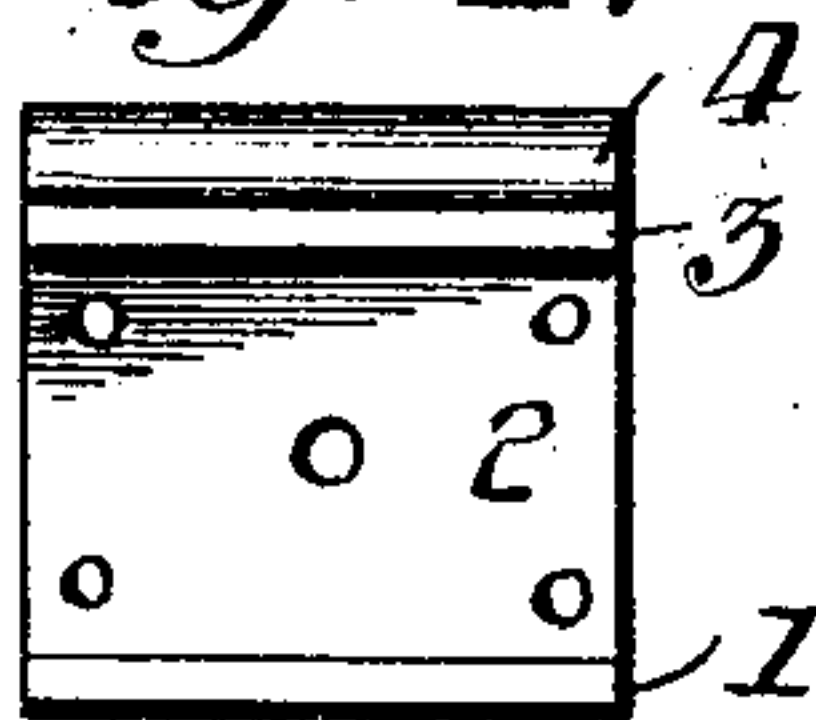


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN L. ALBIEZ, JR., OF WEST HOMESTEAD, PENNSYLVANIA.

COMBINED TIE AND CHAIR FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 764,972, dated July 12, 1904.

Application filed April 12, 1904. Serial No. 202,726. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. ALBIEZ, Jr., a citizen of the United States of America, residing at West Homestead, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Tie and Chair for Railways, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to combined metallic ties and chairs for railway-rails, and has for its object the provision of a novel combined tie and chair composed wholly of steel, which will serve to support the two rails of a railway at the joints or meeting-points of adjacent sections of a rail and which will dispense with the wooden ties and the steel chairs and equivalent steel devices now used for the same purpose.

In carrying my invention into effect I roll channel-irons of peculiar form, and I cut the channel-irons into sections of appropriate length and join two of these sections together and form a railway-chair and then connect the two sections so joined to two other similarly-joined sections by tie-bolts, so as to produce a complete tie having a chair at each end.

The novel construction, combination, and arrangements of parts which constitute my improvement will be hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, illustrating my improvements, Figure 1 is a perspective view of a structure embodying my improvement. Fig. 2 is a fragmentary view in elevation of one end of the combined tie and chairs. Fig. 3 is a view similar to Fig. 2, showing a modification. Fig. 4 is a side elevation showing a modified form of combined tie and chairs, and Fig. 5 is a side elevation of one of the sections of the tie shown in Fig. 1.

The two ends of the combined tie and chair shown in Fig. 1 of the drawings are of the same construction, and a description of one will therefore apply to the other, and I will use the term "tie end" to indicate one end of the tie with the chair, which forms a constituent and integral part of tie end of the tie. The tie end is composed of two similar half-sections, each of which is composed of the base 1, the web 2, and the head 3, the latter being formed with the abutments 4. The heads 3 3 and the abutments 4 4 constitute when the half-sections are joined together a complete chair adapted to receive the base of a rail or the bases of two adjacent sections of rail.

The half-sections of tie ends constructed as above described are composed of sections cut from a channel-iron, which is formed to the desired shape in rolls of suitable construction. The channel-iron so formed is cut into sections each of the length of one of my improved tie ends, and two of these sections are joined together to form each tie end.

A pair of the tie ends constructed in the above-described manner are joined together at a distance apart dependent on the gage of the railway-track upon which the tie is to be employed by means of tie-bolts 5, which have heads 6 and nuts 7 7 7 arranged as shown and abutting against the webs of the tie ends. Any suitable number of such tie-bolts may be employed, and the tie ends, with these bolts, constitute a complete tie provided, as before described, with chairs at each end to receive the railway-rails. The bases of the tie ends rest upon or they are partly buried in the ballast or any suitable foundation and constitute a firm, rigid, durable, and comparatively inexpensive tie and chairs, which can, if desired, be applied to railway-tracks already in place without disturbing the tracks or interfering with the traffic merely by removing the wooden ties separately and substituting one of my ties for each of the wooden ties as it is removed.

In the modified form shown in Fig. 3 the tie ends are constructed in the same manner as those shown in Fig. 1; but the abutments 4, which constitute the chairs 8 8 and the heads 3, are pierced to receive bolts 12', which also pass through the base 13 of the rail 14, rendering this form of my improvement particularly applicable to the meeting ends of adjacent sections of rail and obviating the necessity of employing separate fish-plates at such points. In the form shown in Fig. 3 the abutments 4 are rolled in the form shown in dotted lines in that figure, and the holes are

then punched in the abutments and in the heads 3. After the holes have been punched the abutments are rolled or otherwise bent over to the form shown in full lines, the rails 5 having holes punched in their bases to coincide with the holes in the abutments 4 and the heads 3.

In the modified form shown in Fig. 4 I employ, in connection with the tie ends shown 10 in Figs. 1 and 2 and the tie-bolts 5 5, a supplementary tie-bolt 9, which extends through the webs of the tie ends and also through the tie-plates 10 10, which bear against the outer edges of the bases 1 and the heads 3 of the 15 outer sections of the tie ends and extend down below the bases and into the ballast 11, these tie-plates serving to anchor the ties more firmly in place than if the latter were merely laid upon the ballast. The plates 10 are formed 20 with sharpened lower ends to facilitate driving the tie-plates into the ballast.

Having described my invention, I claim—

1. In a device of the character described, a tie end composed of jointed half-sections of 25 similar form, each half-section comprising a base, a web, a head and a curved abutment, the heads and abutments of the half-sections constituting when the latter are joined together, a railway-chair.

30 2. A combined railway-tie, and chairs consisting of similar tie ends, each composed of

half-sections constituting when joined a railway-chair, and comprising a base, a web, and a head, and the said tie ends being joined by a plurality of tie-bolts. 35

3. A tie composed of two sections of channel-iron comprising the half-sections of a chair.

4. In a device of the character described, tie ends composed of jointed half-sections of 40 similar form, each half-section comprising a base, a web, a head and a curved abutment, the heads and abutments of the half-sections constituting, when the latter are joined together, a railway-chair, tie-bolts connecting 45 said tie ends, tie-plates abutting against said tie ends and projecting below the same, a supplementary tie-bolt projecting through said tie-plates and through the webs of both tie ends. 50

5. A tie end composed of two half-sections of channel-iron, each having a head and an abutment forming one-half of a chair, said head and said abutment having holes for the reception of bolts adapted to pass through 55 the tread of a rail.

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

JOHN L. ALBIEZ, JR.

Witnesses:

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E. E. POTTER.