

No. 688,901.

Patented Dec. 17, 1901.

B. H. TRIPP.  
RAIL CHAIR AND JOINT.

Application filed Sept. 10, 1901.

(No Model.)

Fig. 1.

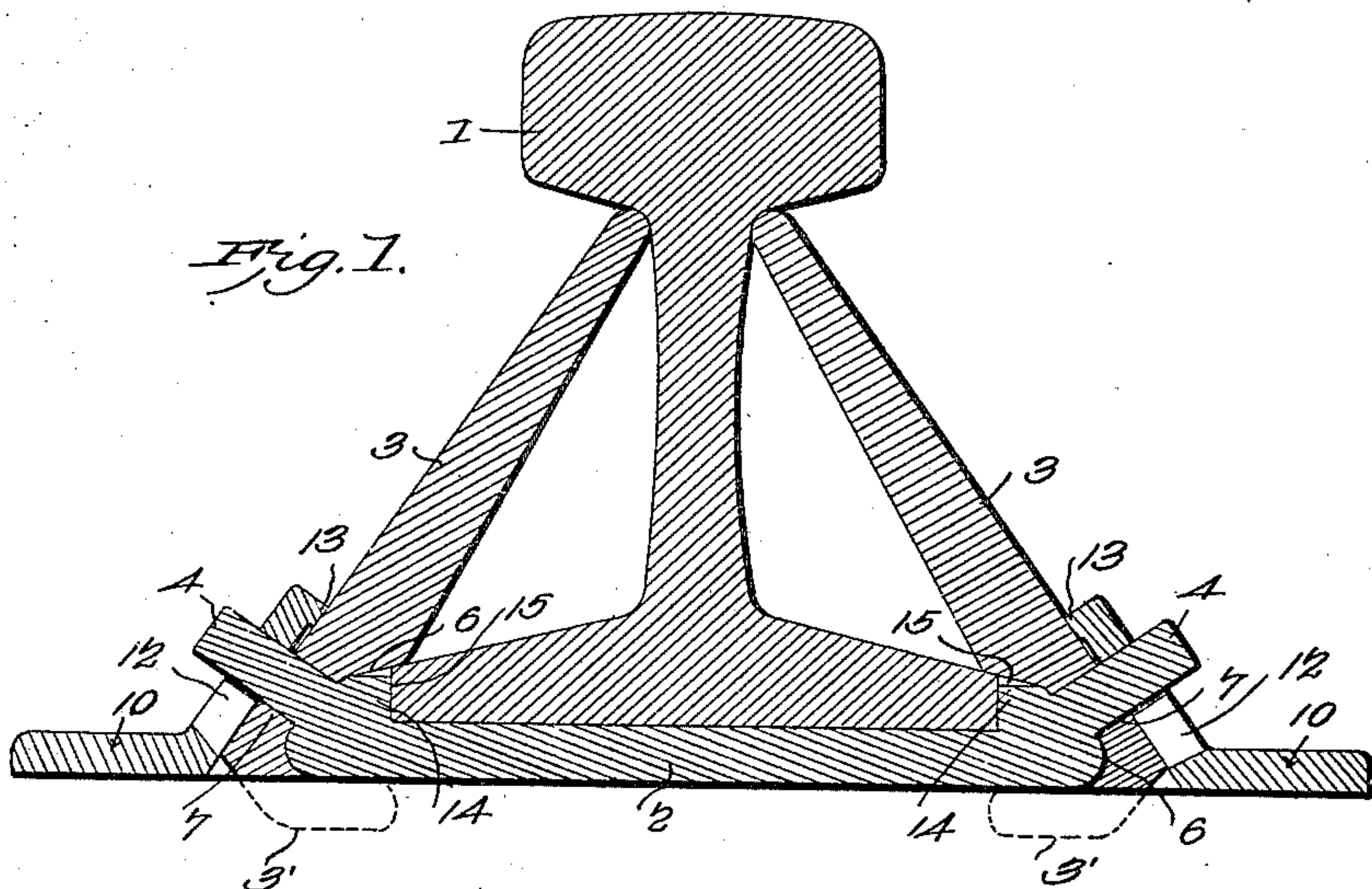


Fig. 4.

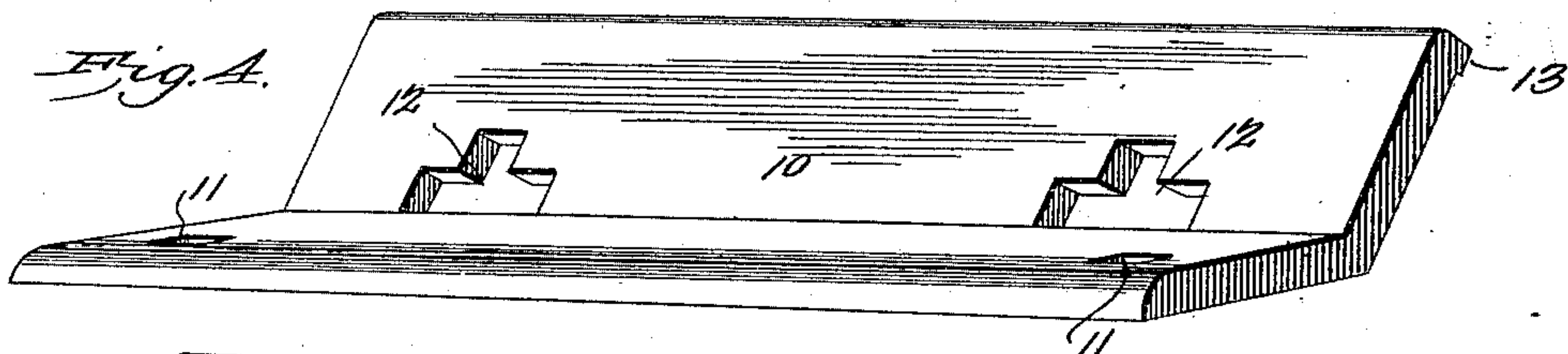


Fig. 3.

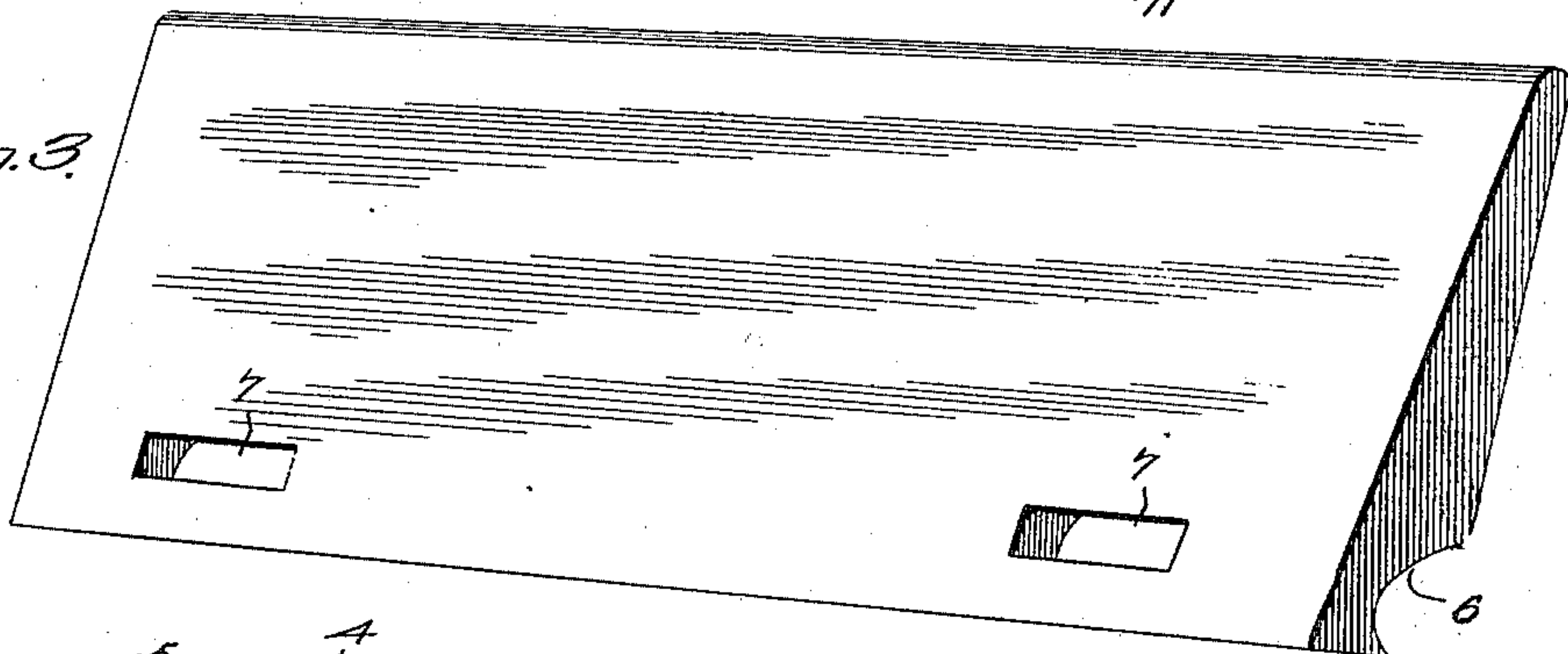
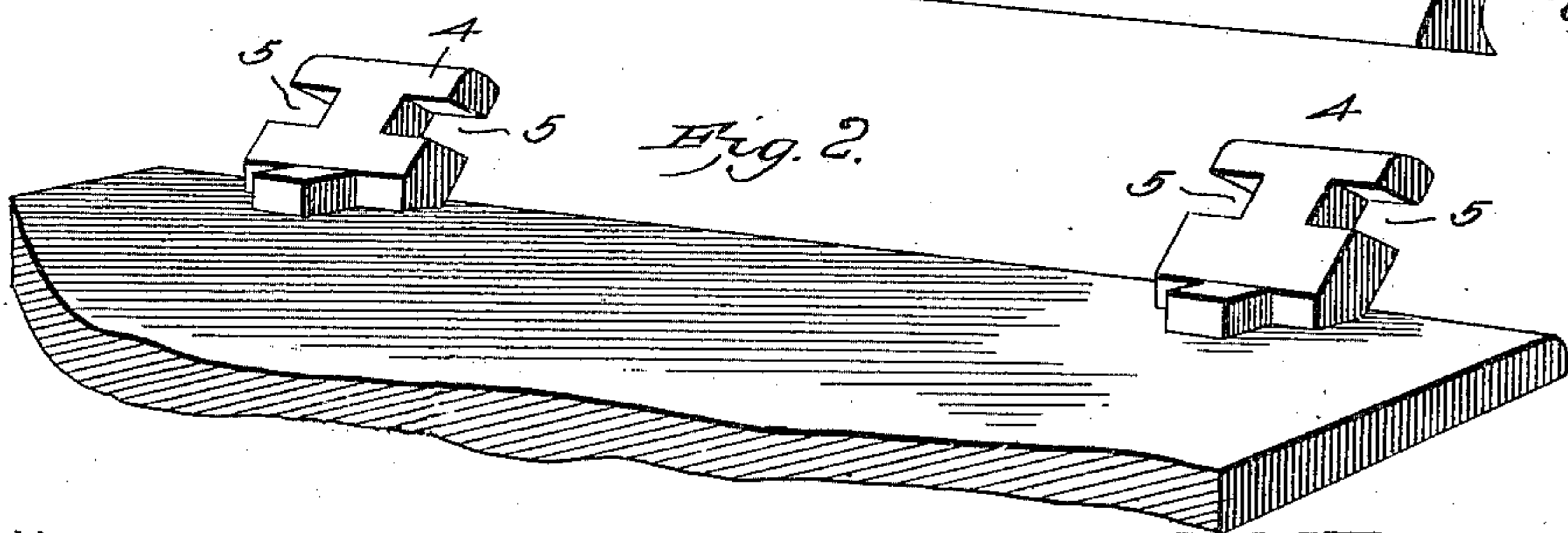


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

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TO FRANCIS S. BARNES AND BENJAMIN RADCLIFFE, OF MARCUS,  
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## RAIL CHAIR AND JOINT.

SPECIFICATION forming part of Letters Patent No. 688,901, dated December 17, 1901.

Application filed September 10, 1901. Serial No. 74,930. (No model.)

*To all whom it may concern:*

Be it known that I, BRADFORD H. TRIPP, a citizen of the United States, residing at Marcus, in the county of Cherokee and State of Iowa, have invented a new and useful Rail Chair and Joint, of which the following is a specification.

My invention relates to certain improvements in rail-joints, and has for its object to construct a joint which will not only connect the adjacent ends of rails, but will also serve to brace and strengthen the same and form a structure in every respect self-sustaining.

The device forming the subject of my invention may be used either as an ordinary rail-joint and spiked in position on a tie or may be used as a bridge or suspended joint between two adjacent ties.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a transverse sectional elevation of a rail-joint constructed in accordance with my invention and illustrating it in position on a rail. Fig. 2 is a detached perspective view of the supporting-chair on which the rail rests. Fig. 3 is a similar view of one of the truss-braces forming part of the chair. Fig. 4 is a detached perspective view of the angle-bar employed at each side of the joint for uniting the sections to each other and to the railway-tie.

Similar numerals of reference indicate corresponding parts throughout the various figures of the drawings.

1 designates a railway-rail of any ordinary or desired construction. The rail or the adjacent ends of two rails are supported on a flat chair 2, somewhat wider than the foot of the rail and having their longitudinal edges rounded for engagement with the lower curved edges of truss-braces 3. On each side of the chair are formed lugs 4, inclined at an angle to the horizontal line of the chair and each lug being provided with oppositely-disposed notches or recesses 5. The truss-braces 3 are somewhat thicker at the lower than at

the upper edge, and at the inner side of the lower portion is an ogee-shaped groove 6, the shoulder of which engages with the top of the foot of the rail, and at the same time the lower curved portion engages the rounded edge of the chair, as shown more clearly in Fig. 1. In each of the truss-braces are slots 7 of a width to permit the entrance of the lugs 4, and the metal at this point of the truss-brace is of sufficient thickness to extend a trifle beyond the lower edge of the notches 5. When the truss-braces 3 are placed in position, their upper edges are engaged in the rounded corners formed at the under side of the head and web of the rail, and the whole forms an exceedingly-rigid structure tending to support and strengthen the rails.

10 designates an angle-bar, the two sides of which are bent at an obtuse angle, the lower portion being flat and adapted to rest upon the tie or ties, suitable spike-openings 11 being provided for the purpose of enabling its being secured in position. The opposite portion of the angle-bar is provided with an inverted-T-shaped slot 12, the horizontal portion of which is of sufficient width to admit the lug 4 and the vertical portion being contracted to a width equal to the distance between the adjacent bases of the notches 5, so that after the angle-bar has been adjusted in position it may be forced down until the body of the angle-bar is engaged by the notches 5, and the whole structure is firmly bound together. In order to render the clamping action more efficient, the angle-bar is provided at its upper edge with an inwardly-projecting rib 13, adapted to bind upon the face of the truss-bar 3.

In some instances where a bridge or suspended joint is to be made between two ties the lower portions of the truss-braces are inwardly bent to engage under the body of the chair, as shown by dotted line 3' in Fig. 1, and the various sections of the joint are made of sufficient length to bridge the space between two adjacent ties.

The whole structure is thoroughly and rigidly braced and serves not only to strengthen the connections at the end of the rails, but by reason of the pressure exerted by the up-



per ends of the truss-plates under the head of the rail serves to keep adjacent rails in perfect alinement.

As a further and important feature of the invention it will be noted that the chair 2 is provided on its upper face with lugs 14, which are adapted to engage suitable notches or recesses 15, formed in the foot of the rail, and prevent any creeping or longitudinal displacement of the rail under the influence of high or low temperatures.

The device may be modified in a variety of ways, and the shape of the truss-braces may be altered to accommodate rails of varying contour, or the device may be employed in other connections, such as bracing curved or guard-rails, without departing from the spirit or sacrificing any of the advantages of my invention.

Having thus described my invention, what I claim is—

1. A rail-joint comprising a lower chair for the support of the rail, truss-braces connected to said chair and adapted to engage with the body of the rail, angle-bars arranged outside the truss-braces, and means for securing the truss-braces and angle-bars to the chair.

2. A rail-joint comprising a chair having rounded longitudinal edges, truss-braces having their upper edges in engagement with the head of the rail, the lower edges of said truss-braces being provided with curved grooves for the reception of the edge of the chair and the foot of the rail, and means for securing the truss-braces to the chair.

3. A rail-joint comprising a chair, slotted lugs or flanges arranged on each side of said chair, truss-braces having slots for the reception of said lugs, and angle-bars also slotted for the reception of the said lugs and adapted to hold the truss-braces and chair in operative position.

4. A rail-joint comprising a chair having at each side slotted lugs or flanges, truss-braces slotted for the reception of said lugs and adapted to engage with the edges of the chair and with the rail, and angle-bars having T-shaped slots for the reception of the slotted lugs of the chair, substantially as specified.

5. A rail-joint comprising a chair-section

having on its upper face lugs for the engagement of notches or recesses in the foot of the rail and forming an integral part of said chair-section, truss-braces engaging the edges of the chair and the foot of the rail, auxiliary angle-bars arranged outside the truss-braces, and means for securing the truss-braces and angle-bars to the chair, substantially as specified.

6. A rail-joint comprising a chair of a width greater than the foot of the rail and having rounded or curved longitudinal edges, truss-braces 3 having their upper ends in engagement with the head of the rail, said truss-braces having at their lower inner faces grooves for the reception of the edges of the chair and the foot of the rail, locking-lugs 4 arranged on each side of the rail and having oppositely-disposed notches or recesses 5, and angle-bars having T-shaped slots 12 for engagement with said notched lugs, substantially as specified.

7. A rail-joint comprising a flat plate forming a chair for the support of the foot of the rail, said plate being of a width greater than the width of the rail and having rounded longitudinal edges, lugs 14 arranged on the surface of said plate for the engagement of notches in the foot of the rail, inclined lugs 4, having recesses 5 arranged on either side of said plate, truss-braces 3 having their upper ends in engagement with the under side of the head of the rail and having at their lower inner edges grooves for the reception of the plate and the foot of the rail, slots 7 arranged at the lower portion of said truss-braces for the reception of the lugs 4, and angle-bars having T-shaped slots for the reception of the notched portions of said lugs, the upper inner edges of said angle-bars being provided with flanges for engagement with the sides of the truss-braces, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

BRADFORD H. TRIPP.

Witnesses:

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G. M. WIXCEL.