

RAIL JOINT.

Patented Nov. 8, 1910.

2 SHEETS--SHEET 1.

974,951.

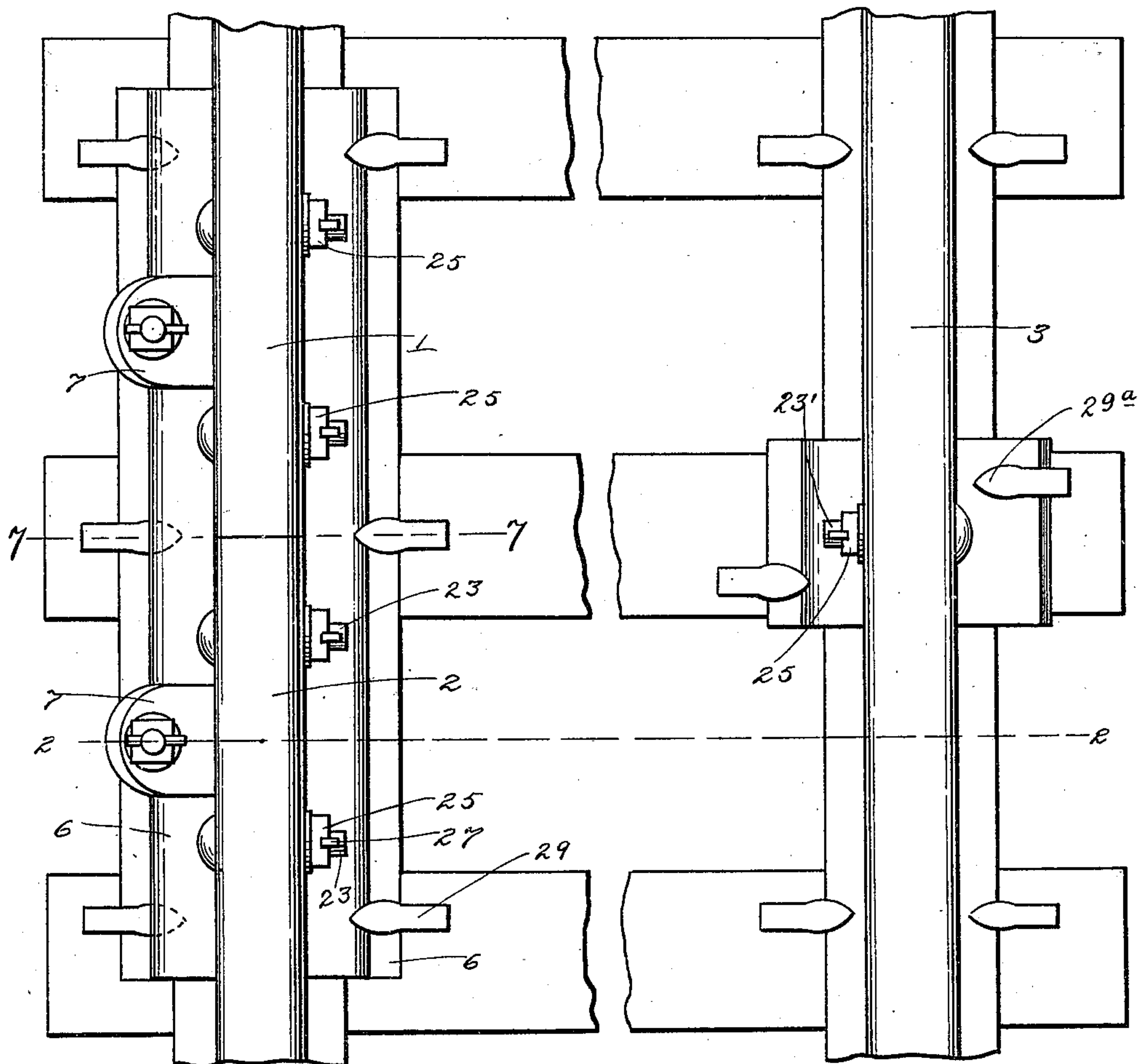
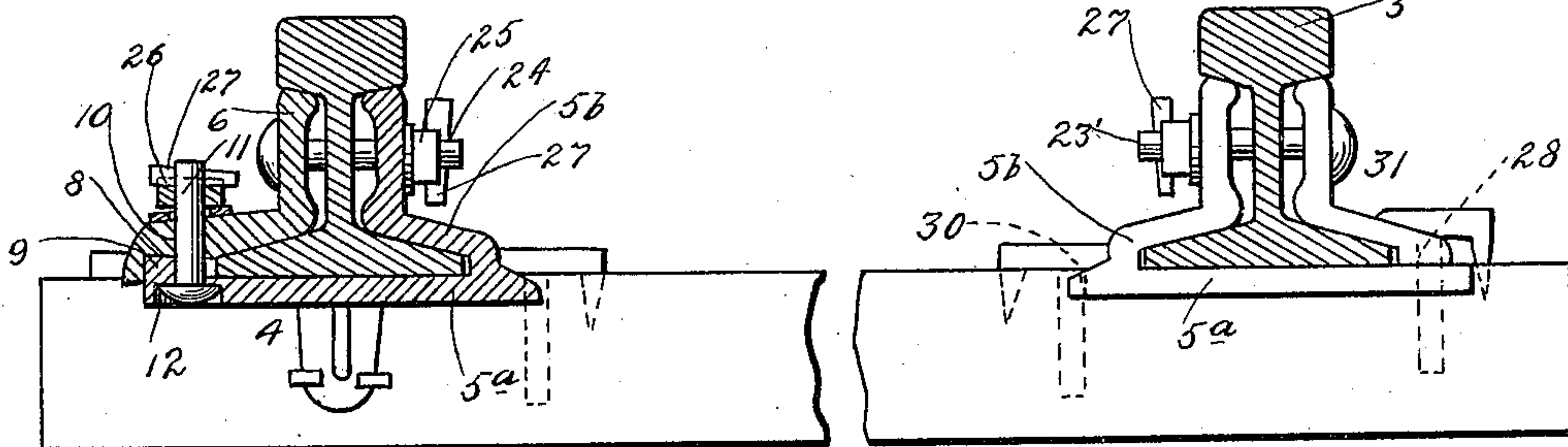


Fig. 1



*Fig. 2*

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RAIL JOINT.

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2 SHEETS—SHEET 2.

974,951.

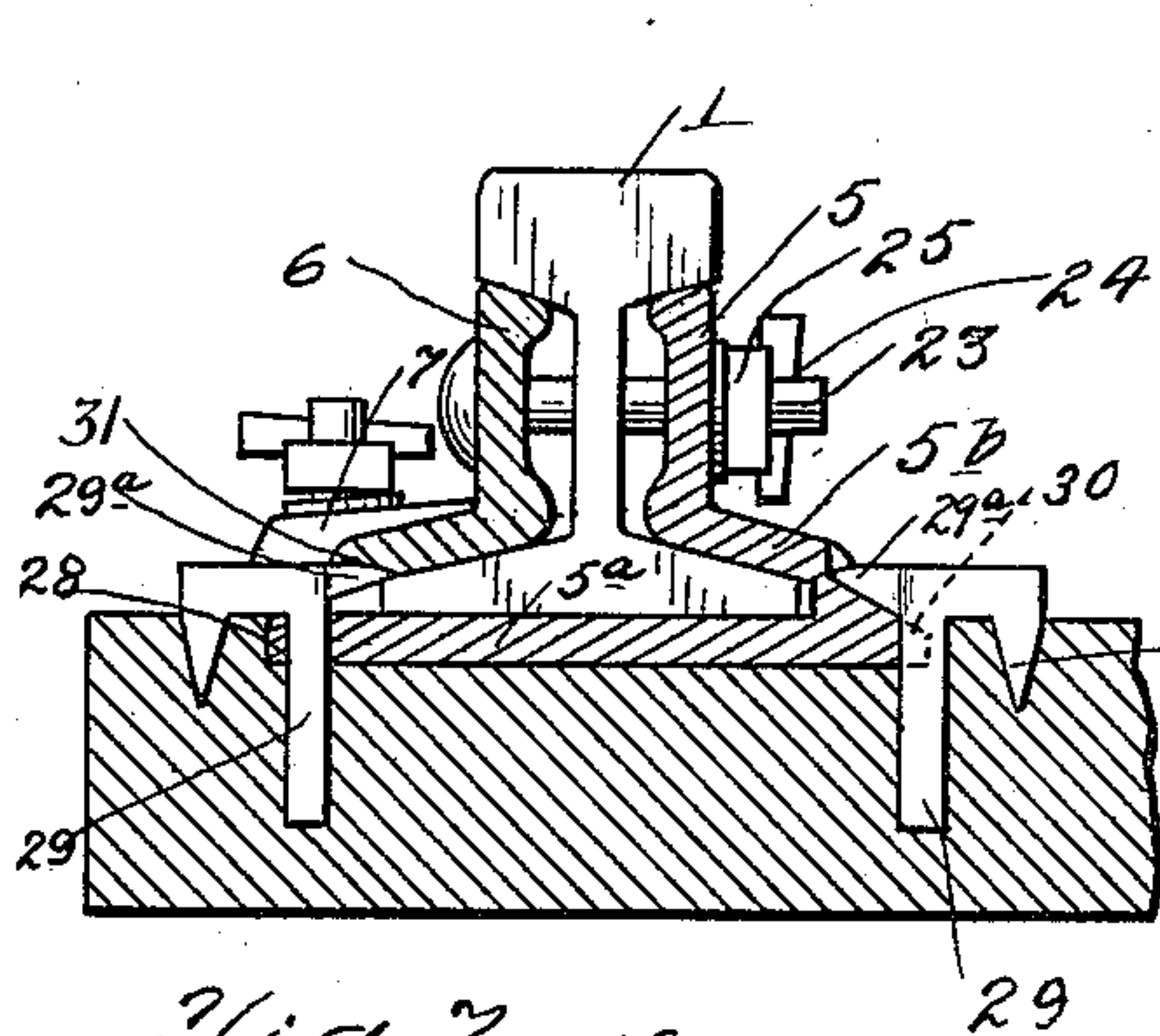
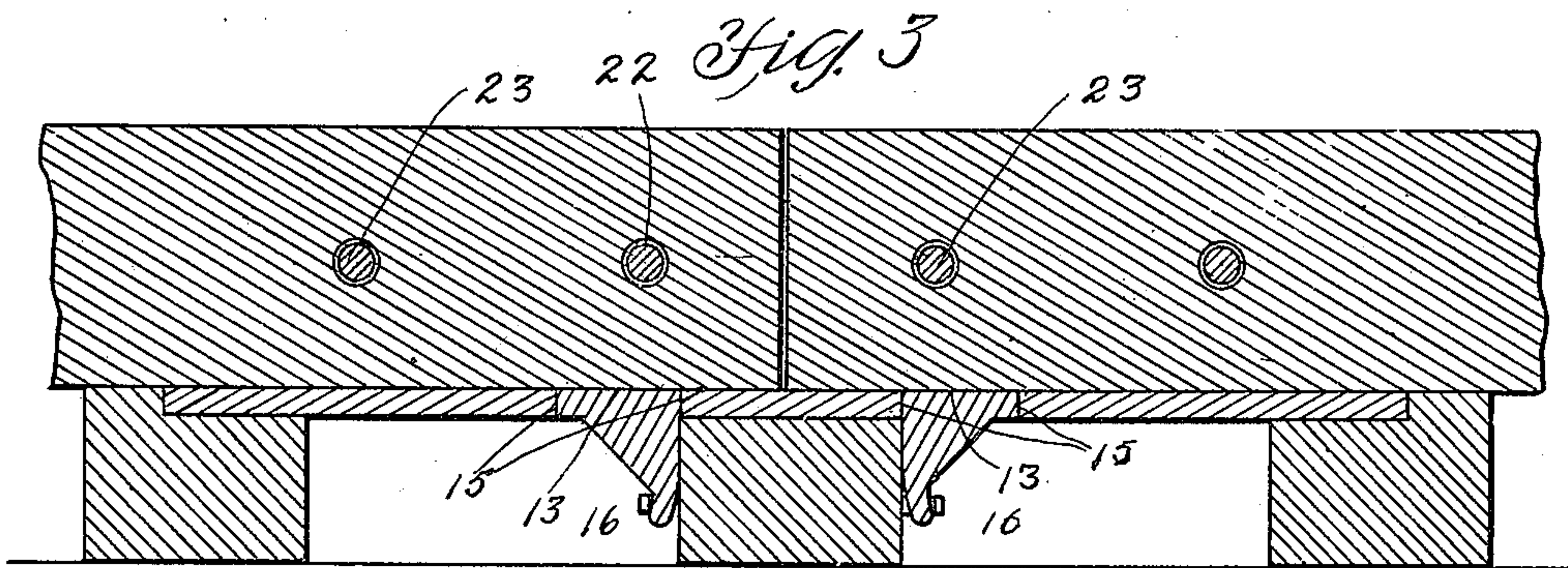
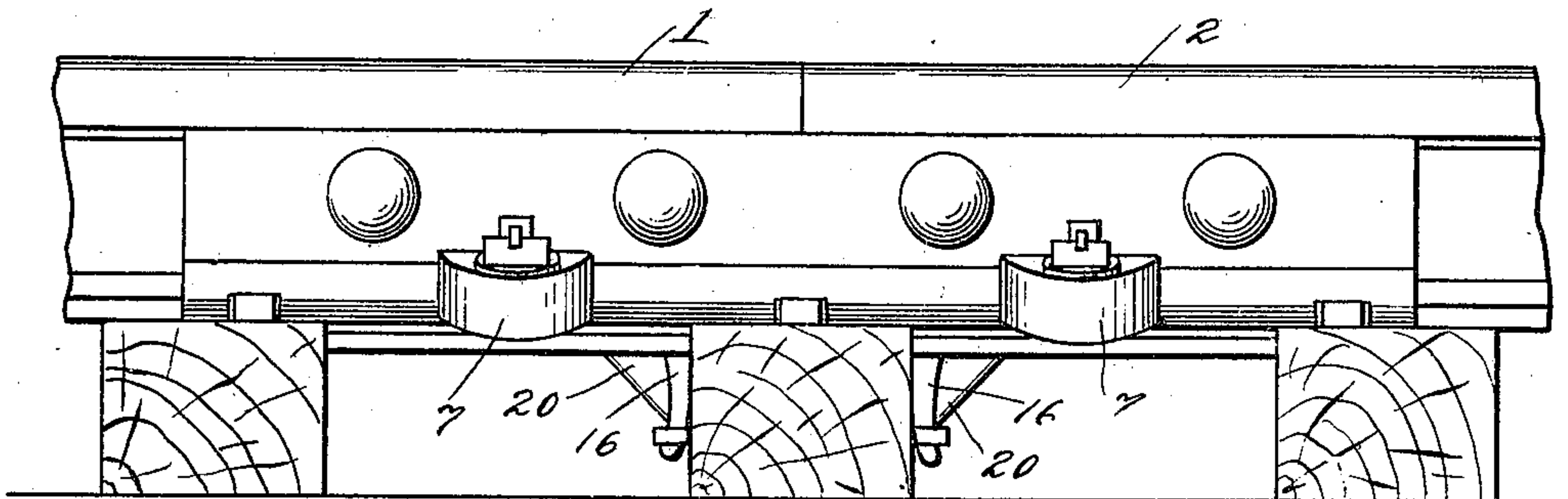


Fig. 4

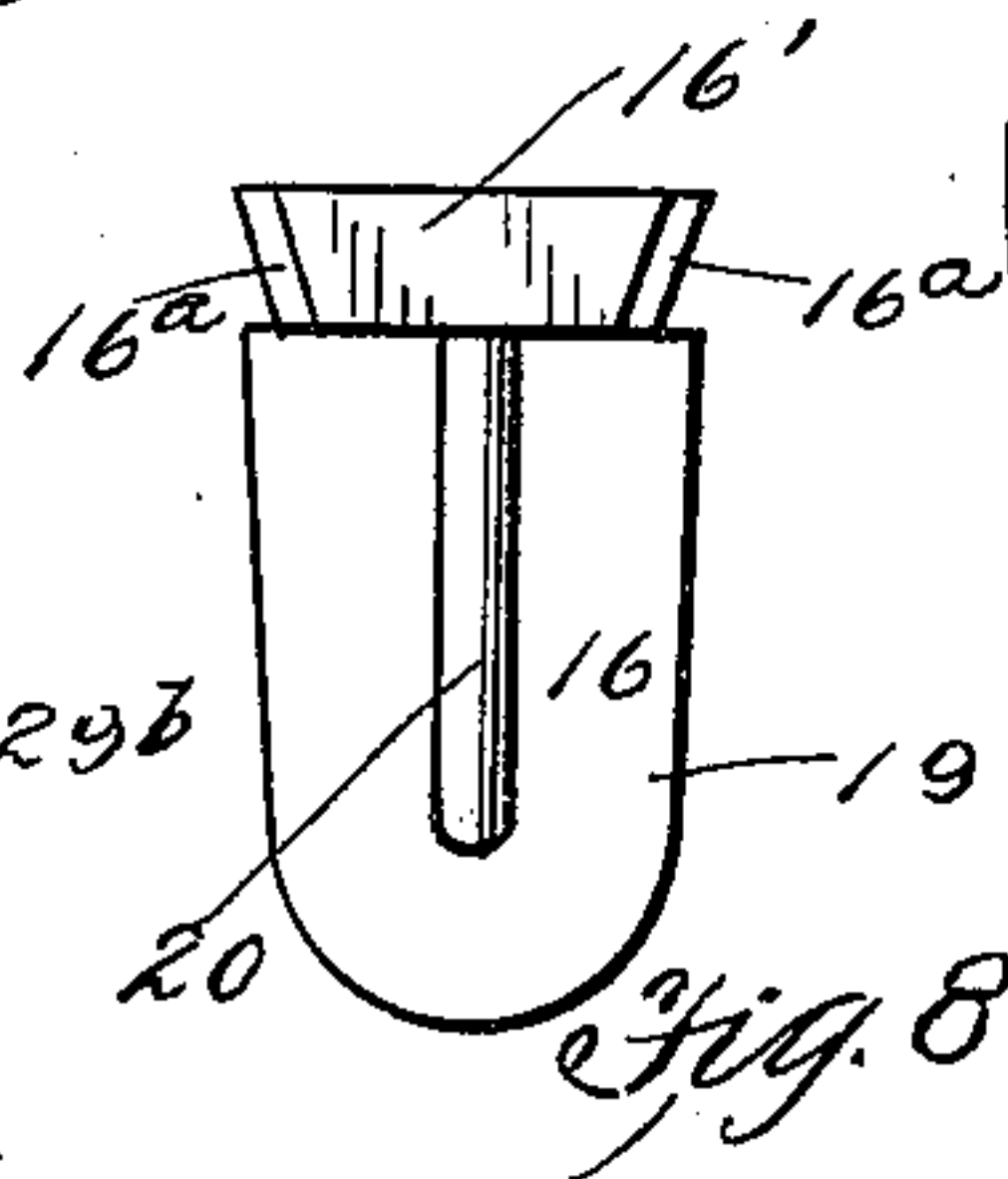


Fig. 8

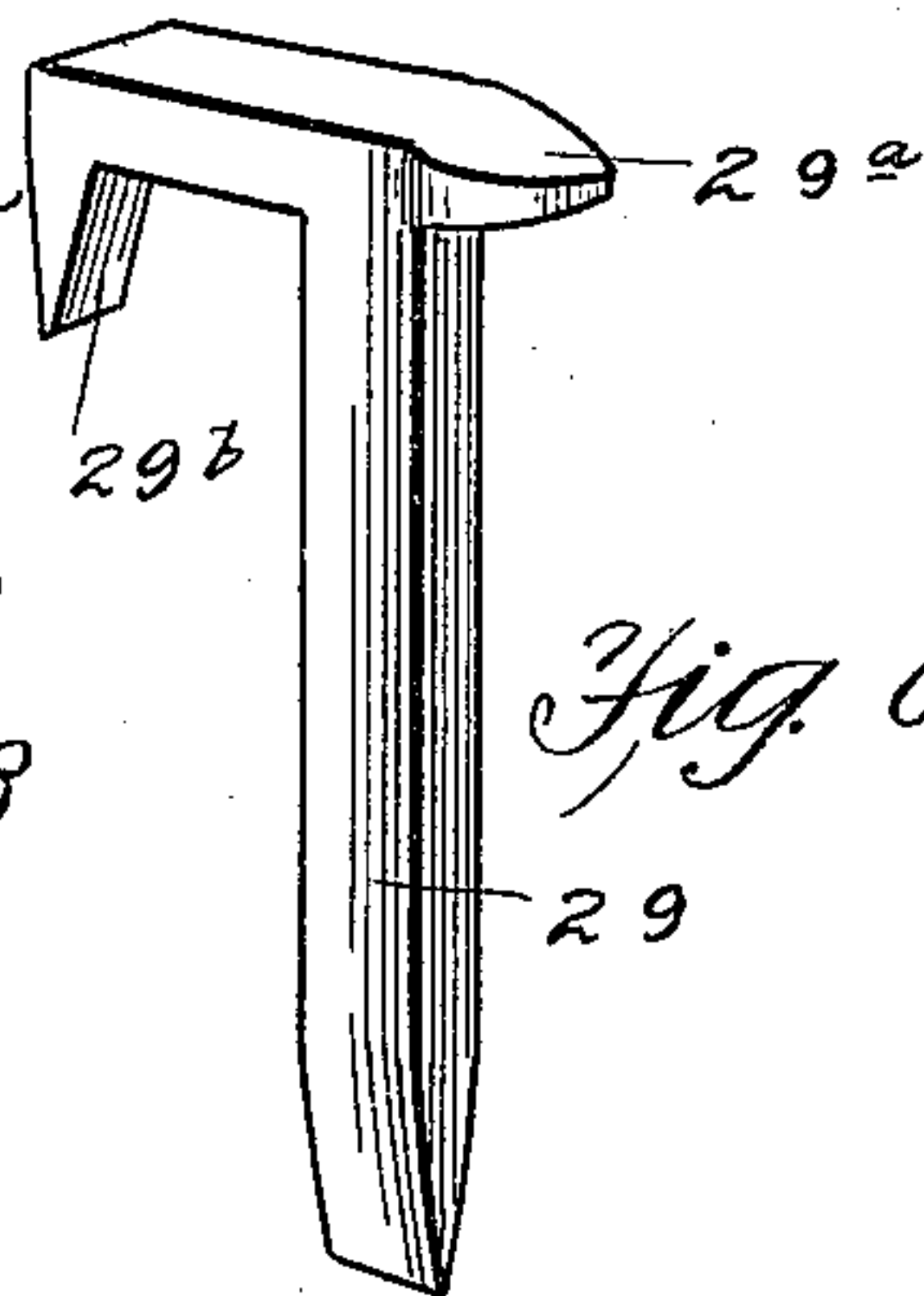


Fig. 6

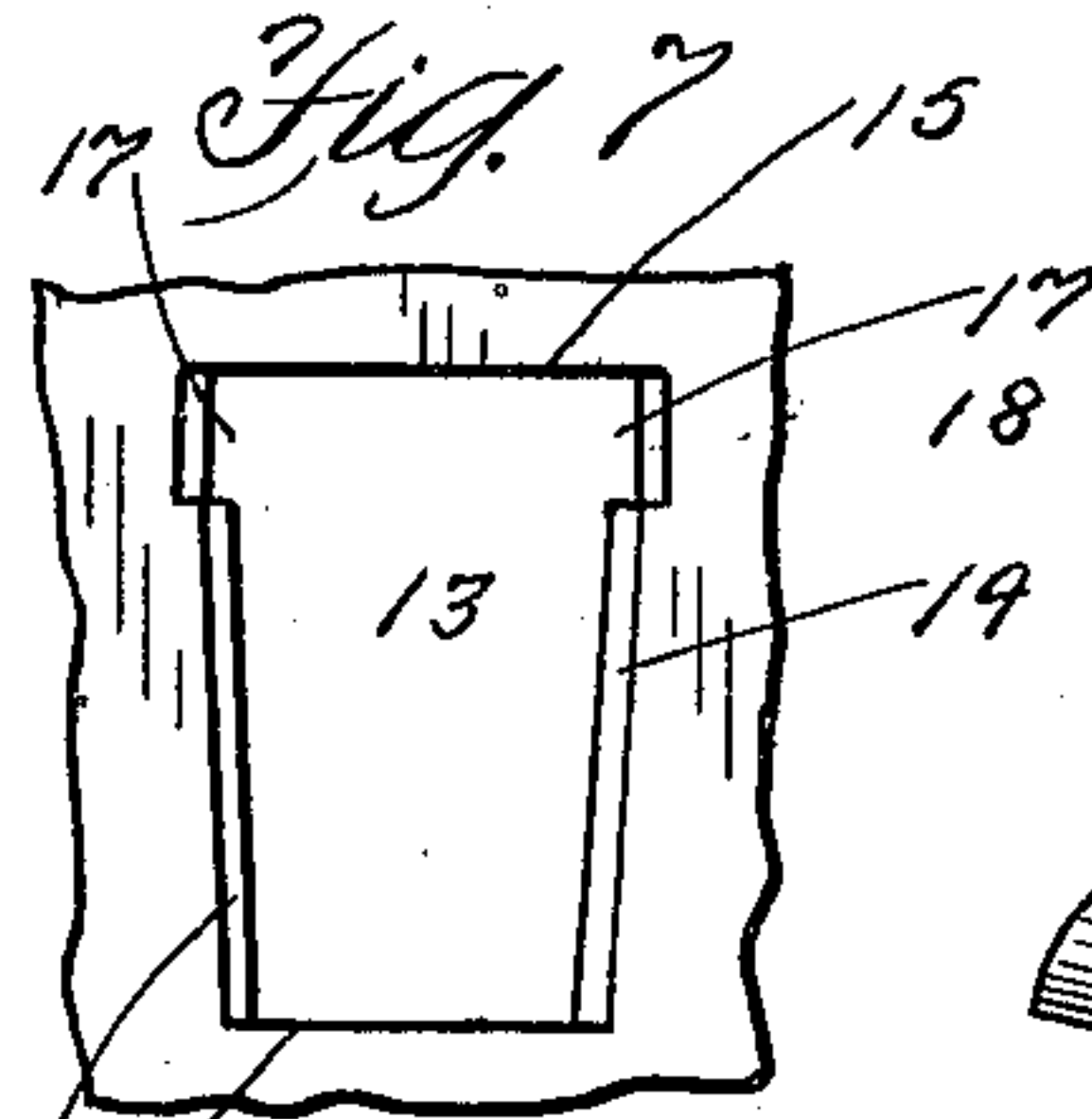


Fig. 7

Fig. 9  
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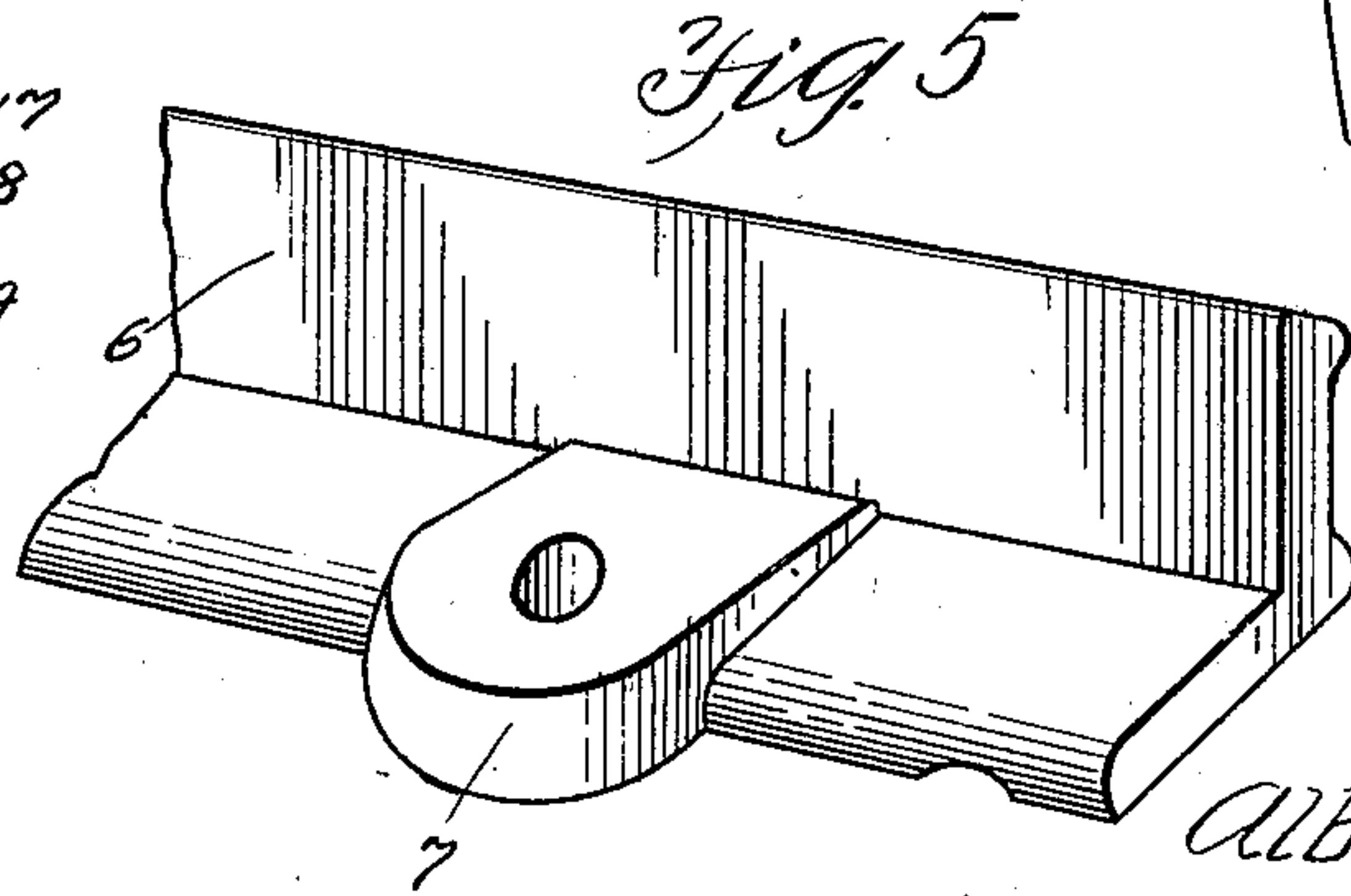


Fig. 5

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# UNITED STATES PATENT OFFICE.

ALBERT L. CASADY, OF FAIRFIELD, IOWA.

## RAIL-JOINT.

974,951.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed April 19, 1910. Serial No. 556,307.

*To all whom it may concern:*

Be it known that I, ALBERT L. CASADY, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention relates to improvements in rail joints, and one object of the invention is to provide a device of this character which is cheap, effective and durable.

Another object is to provide a device of this character which is provided with means for preventing the spreading of the rails.

A further object is to provide such a joint that the rails are prevented from creeping, as often occurs, especially down hill.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a part of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the preferred embodiment of my invention, applied to a joint. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a side elevation of the joint, and immediately adjacent ties showing the anti-creeping device, Fig. 4 is a longitudinal sectional view of Fig. 3, Fig. 5 is a fragmentary perspective of one of the splice bars, and Fig. 6 is a perspective view of a spike used. Fig. 7 is a cross section on the line 7—7 of Fig. 1. Fig. 8 is an end elevation of the anticreeper. Fig. 9 is a fragmentary view showing the opening for the anticreeper.

Referring more particularly to the accompanying drawing, 1 and 2 represent respectively the meeting ends of the rails, and 3 the opposite rail. A two part chair 4 having the splice bar 5 formed integrally with the base plate 5<sup>a</sup> is applied to one side of the joint. The splice bar 5 forms a shoulder 5<sup>b</sup> along its entire length and at points directly above the notches 30 is provided with semi-circular recesses 31, to receive the extension 29<sup>a</sup> of the spikes 29. The splice bar 6 on the opposite side of the rail is independent of the parts 5 and 5<sup>b</sup> and has formed on its lower edge at points equidistant from the joint of the rails, the bosses 7, in the under

faces of which are formed the angular and inclined sockets 8. These sockets are adapted to receive the correspondingly shaped lugs 9 formed on the upper face and near the free end of the base plate 5<sup>a</sup>, which base plate extends a slight distance beyond the edge of the base of the rail. The bosses 7 and the lugs 9, are each formed with vertical apertures 10, for the reception of the securing bolts 11, the heads of which are countersunk into the recess 12 in the lower face of the base plate.

Slots 13 are formed in the transverse center of the base plate 5<sup>a</sup>, and equidistant from the joint. These slots have the converging walls 14 and the parallel walls 15. The walls 14 are downwardly and inwardly beveled to support the correspondingly beveled faces 16<sup>a</sup> of the horizontal member 16' of the anticreeper 16. At one end of the slot 13 are formed the laterally extending recesses 17, having inclined end walls 18, and which are adapted to receive the flange member 19 of the anticreeper. An integral brace 20 is formed on the anticreeper between the vertical member 19, and the horizontal member 16'. There are two of these anticreepers 16 to each joint, which are disposed on either side of the supporting tie and secured thereto by ordinary spikes. The joint is thus practically clamped to the tie and prevented from moving longitudinally in either direction.

Each of the splice bars and the rails is provided with bolt holes 21 and 22, there being four in each plate 5 and 6, and two in the end of each rail 1 and 2. Bolts 23 are passed through these openings. These bolts 23 are transversely slotted at their ends at 24, and receive the nuts 25, which have radial grooves 26 on their outer faces to receive and seat a feather 27 inserted in the slots 24. These feathers after being driven in have their ends bent over or clenched to prevent displacement, and thus serve to prevent the nuts 25 working loose.

In the free edge of the base plate 5<sup>a</sup>, are formed the rectangular openings 28 shown in Fig. 7, and at the opposite edge of the base plate the rectangular notches 30 to receive the spikes 29. In the intermediate point of the opposite rail 3, and at a point directly across from the joint, is clamped the chair 31, similar to the chair 4, but much smaller, and without the bosses 7 and lugs 9. The chair 31 is also provided with



the openings 28, and the notches 30, for the spikes 29. Bolts 23' secure the chair 31 to the rail 3. This, when spiked to the tie, provides an efficient means for preventing the spreading of the rails. The spikes 29, as seen in Fig. 6, have the claw 29<sup>b</sup> for additional gripping means.

In the use of the device, the base plate 5<sup>a</sup> is secured to the ties by the anticreepers 16, and the rails 1 and 2 slipped thereon, when the fish-plate or splice-bar 6 is then applied and bolted to the rails. The bolts 11 are then applied and the spikes 29 driven through the openings and notches into the ties. The shorter chair 31 is then applied to the opposite rail and spiked to the tie.

It will thus be seen that I have provided a rail joint combining a number of essential points needed in the effective and proper construction of a railroad; namely, an efficient device for preventing spreading of rails; means for preventing creeping; and a strong chair which will not easily become loose or any parts be displaced.

What is claimed is:

1. A rail joint comprising a chair, lugs on the chair, a splice bar forming part of said chair, recessed bosses on the splice bar adapted to receive said lugs, said bosses and lugs being formed with vertical registering apertures, and bolts passing through said apertures.

2. A rail joint comprising a chair, a base plate on said chair, a splice bar, means for securing said splice bar to the base plate, said base plate being formed with slots along its longitudinal median line, the side walls of said slots being inclined, and tie engaging elements depending through said slots.

3. A rail joint comprising a chair, a base plate formed on said chair, said base plate having apertures therein, converging side walls bounding said slots, said walls being beveled, and tie engaging elements having beveled edges engaging with said beveled walls.

4. A rail joint comprising a chair, said chair having slots formed therein, the side walls of said slots being beveled, and tie engaging members consisting of a horizontal member, a vertically depending member, and a brace member formed integrally therewith.

5. In a rail joint chair, a base plate having slots formed therein on opposite sides of the joint, the side walls of said slots being inwardly beveled, tie engaging elements each having a horizontal member provided with beveled edges adapted to engage with the beveled walls of the slots, vertically depending members, and brace members, between and integral with the horizontal and vertical members.

6. A rail joint comprising a chair, a base plate on said chair, a splice bar, means for securing said splice bar to the base plate, said base plate having openings along its longitudinal median line, said openings being disposed on either side of a tie, and tie engaging elements depending through said openings and adapted to be secured to a tie on either side thereof.

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

ALBERT L. CASADY.

Witnesses:

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O. T. FRYER.