

No. 803,025.

PATENTED OCT. 31, 1905.

J. STEPHENS.
RAIL JOINT.

APPLICATION FILED MAY 1, 1905.

Fig. 1.

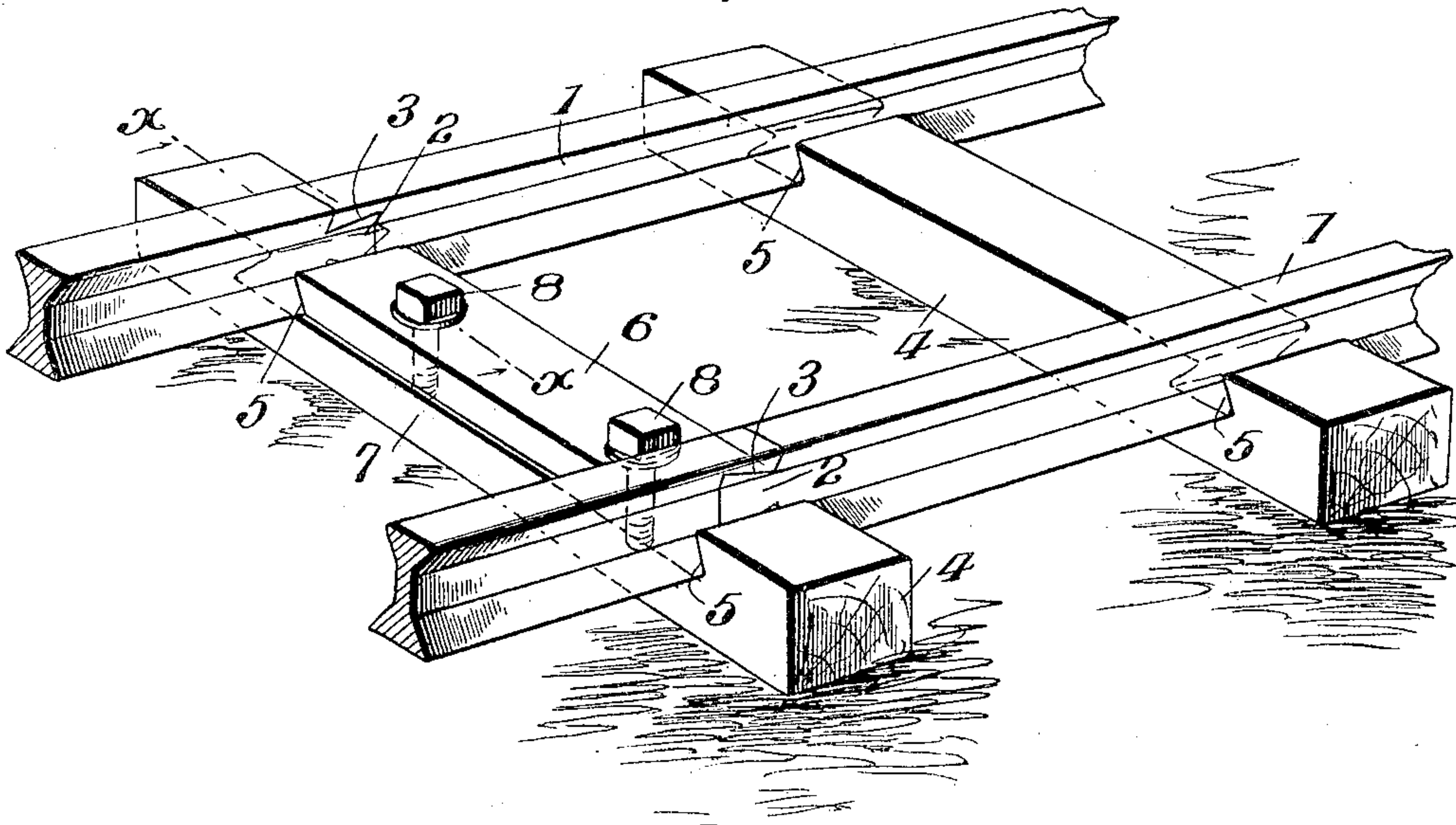


Fig. 2.

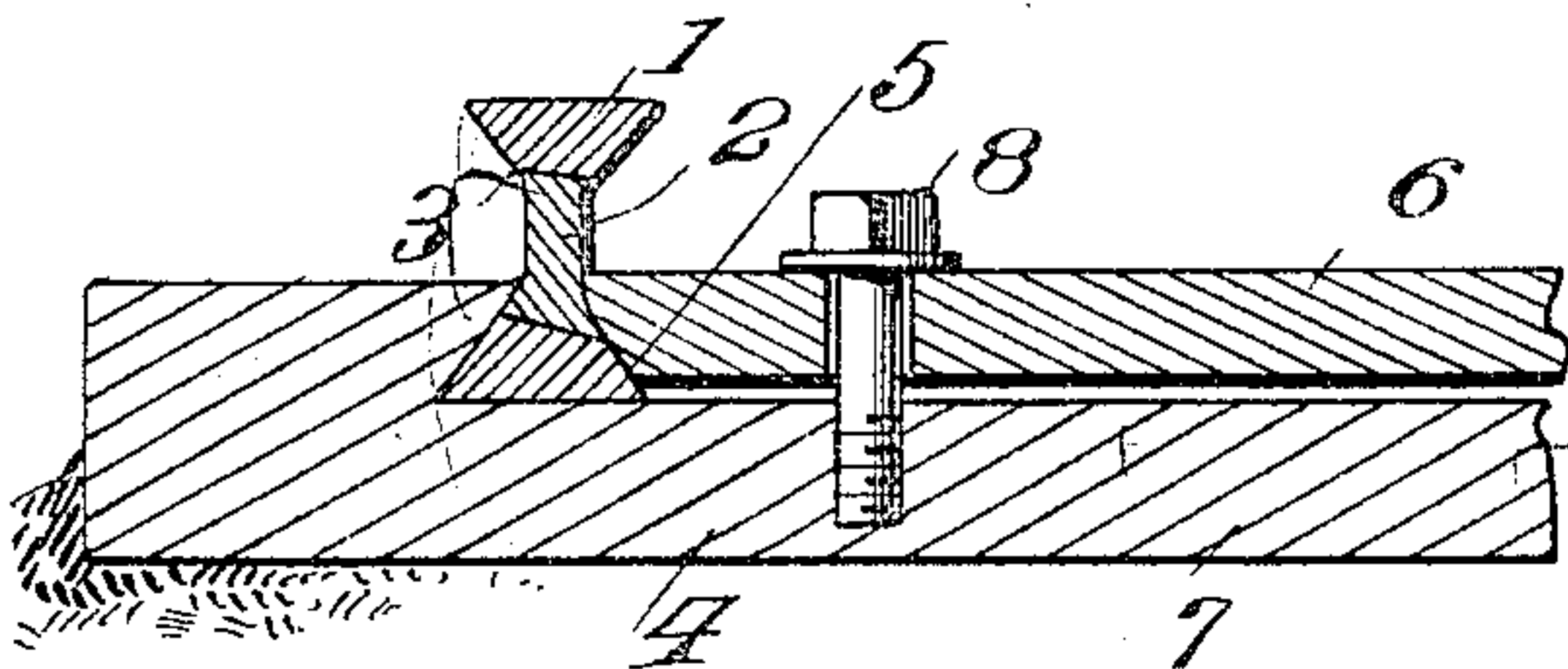


Fig. 3.

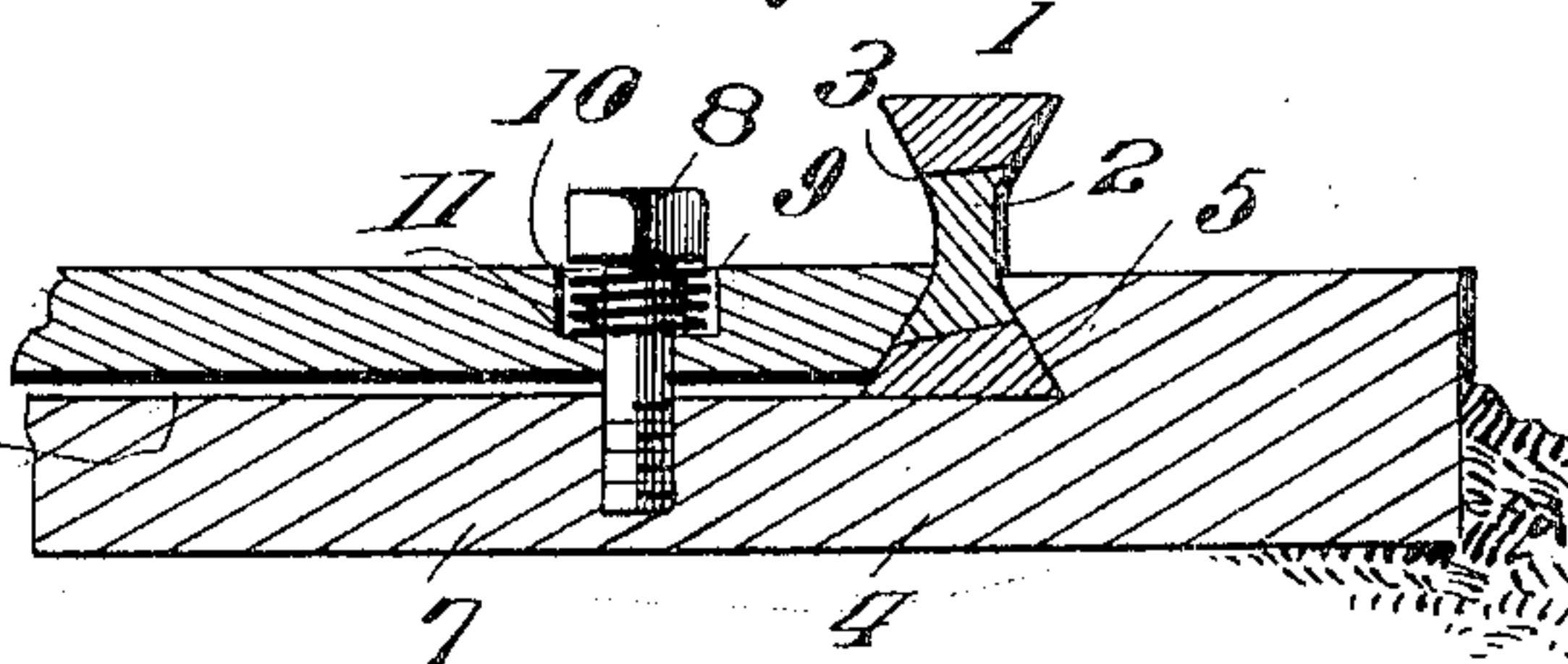
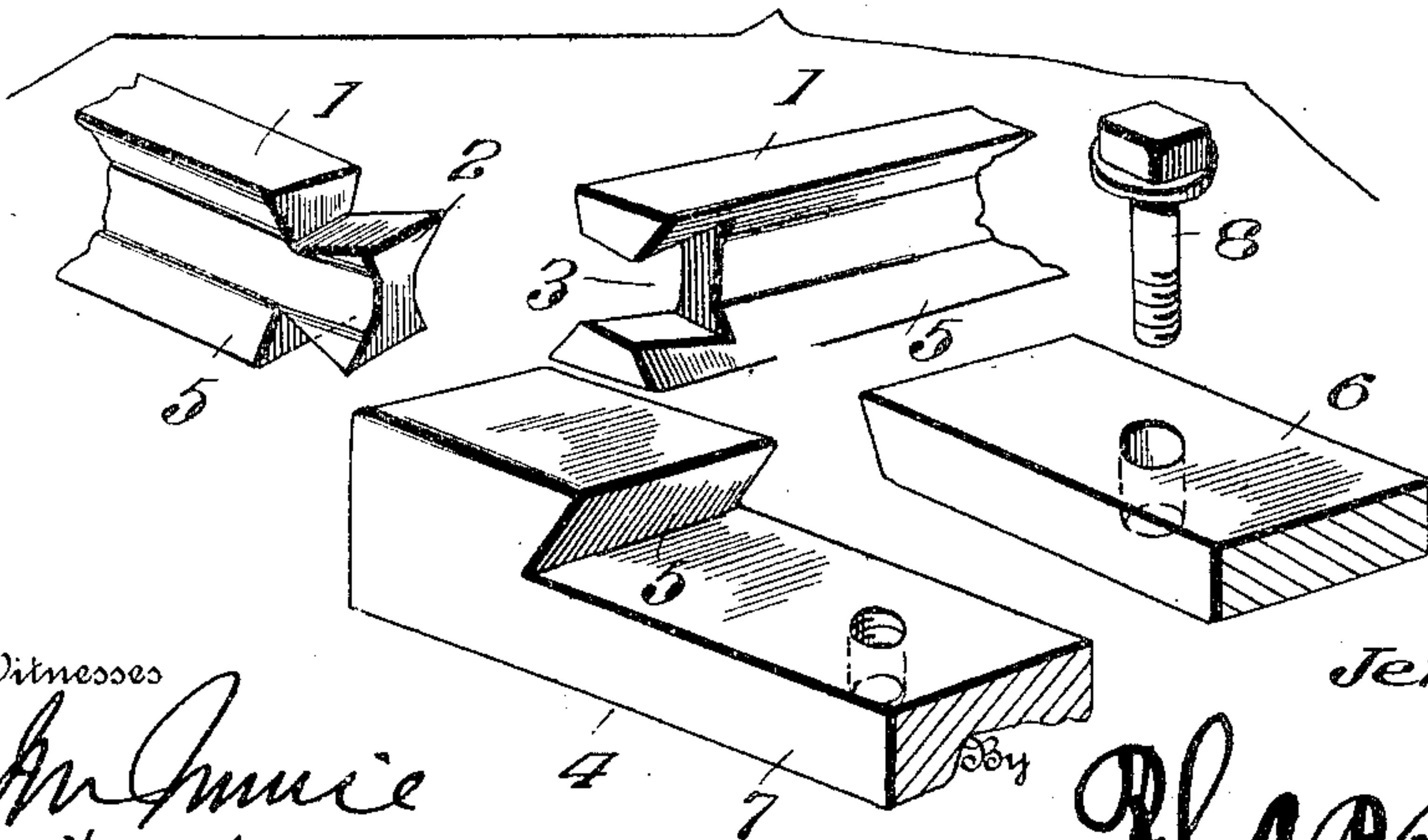


Fig. 4.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

JERRY STEPHENS, OF STUART, INDIAN TERRITORY.

RAIL-JOINT.

No. 803,025.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed May 1, 1905, Serial No. 258,225.

To all whom it may concern:

Be it known that I, JERRY STEPHENS, a citizen of the United States, residing at Stuart, in the Choctaw Nation, Indian Territory, have
5 invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to a combined rail joint and tie, and has for its object to produce
10 a device of the character mentioned which will do away with all nuts and bolts and which will effectively hold the rail ends together and at the same time prevent the rails from spreading apart.

15 Reference is to be had to the accompanying drawings, in which—

Figure 1 is a perspective view of a track embodying my invention. Fig. 2 is a vertical longitudinal sectional view taken through
20 part of a tie embodying my invention. Fig. 3 is a vertical longitudinal sectional view through a part of a tie, showing a modification. Fig. 4 is a combined perspective view of the various parts.

25 Corresponding and like parts are referred to in the following description and indicated in all views of the drawings by the same reference characters.

The numeral 1 indicates the track-rails,
30 which are preferably formed with a cross-section, as shown in the drawings, but which may be of the ordinary construction. As best seen in Fig. 1, the rails are formed with the sides extending inward to form an approximately triangular-shaped recess on each
35 side, thus making the top and base of the rail of the same shape. This has the advantage that when the top of the rail becomes worn by traffic the rail can be reversed and
40 the worn part placed at the bottom. One end of each of the rails is provided with a dovetail tongue 2 and the opposite end with a corresponding dovetail recess 3. When the rails
45 are in position, it is obvious that the joint will effectively prevent their pulling apart.

The ties 4 are provided with recesses 5, (shown in the drawings as dovetail in shape,) the sides of which are adapted to embrace the base of the rail and prevent its being removed except by sliding it out longitudinally. The
50 rails are thus held securely in position and prevented from spreading apart or being lifted out of position. One of these ties is preferably placed so as to form a chair for the afore-described rail-joint. Where so desired, the
55 tie may be made in two sections, as shown in

Figs. 2 and 3. When so constructed, the portion 6 of the tie between the two recesses 5 is made as a separate part and when in position is fastened to the other part 7 of the tie by any
60 suitable means, such as spikes or bolts 8. The parts 6 are preferably formed so as to act like a wedge and a small space left between the parts 6 and 7, so that when the bolt 8 is screwed down the rails 1 are forced into firm engagement with the outer faces of the recesses 5.
65 As shown in Fig. 3, the bolt-opening may be rabbeted around the top and a coil-spring 10 interposed between the shoulder 2 thus formed and the head of the nut. This will serve to
70 automatically hold the parts 6 in close engagement with the rails. This has the advantage of allowing the tie to be easily removed or replaced when necessary and also of allowing free access to the joint should
75 that be desirable. The tie may be constructed of any suitable material—such as wood or metal or a combination of the two—and when constructed of metal will preferably be made
80 hollow for the sake of lightness.

In a track constructed as described above it will be readily understood that the rails are positively held in place against all kinds of movement. While this construction is adapted for use on all parts of a railroad, it will
85 be particularly advantageous on curves, where the lateral thrust of the train has a marked tendency to throw the outer rail away from the inner, and thus cause spreading.

Having thus described the invention, what
90 I claim as new is—

1. A railroad-tie formed with two dovetail slots for the reception of the rails, the portion of the tie between the dovetail slots being removable and shaped so as to act like a wedge
95 and force the rails against the outer faces of the slots, said removable section being normally spaced from the main portion of the tie and secured thereto by suitable fastening means so that it can be tightened in order to
100 take up wear.

2. A railroad-tie having a recess therein, one side of which projects inwardly and engages one side of the base of the rail, and a removable portion fitting into the recess and embracing the opposite side of the base of the rail, said removable portion being provided with a rabbeted bolt-opening through which a bolt is passed to secure it to the main portion of the tie, a spring being interposed between the shoulder of the rabbeted opening and the head of the bolt.
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3. In a combined rail joint and tie, the combination of companion rails having their adjacent ends positively interlocked to prevent longitudinal separation, and ties having dovetail recesses to receive the bases of said rails
5 and prevent lateral separation, the portion of the ties between said dovetail recesses being made removable and so formed that when the two parts of the tie are forced together the
10 removable parts will act like wedges and force the rails into firm engagement with the outer faces of the dovetail recesses, the said remov-

able parts being provided with rabbeted bolt-openings and a spring interposed between the shoulder of the rabbeted opening and the
15 head of the bolt used in fastening the two parts of the tie together.

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

JERRY STEPHENS. [L. s.]

Witnesses:

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J. G. EGWOOD