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PATENTED APR. 21, 1903.

J. A. BOUGHTON.
METALLIC TIE AND RAIL FASTENER.

APPLICATION FILED JUNE 12, 1902. RENEWED FEB. 24, 1903.

NO MODEL.

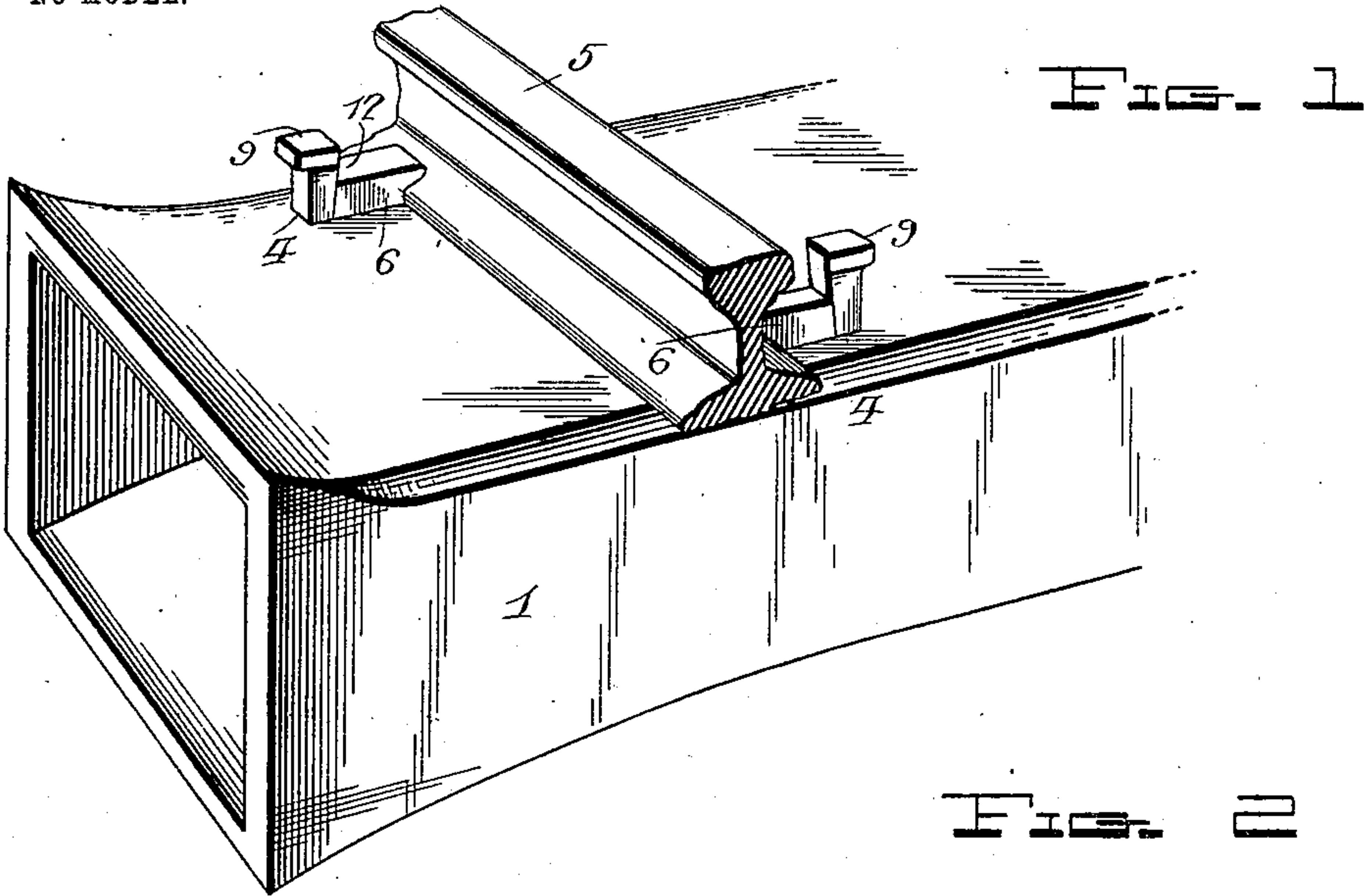


Fig. 2

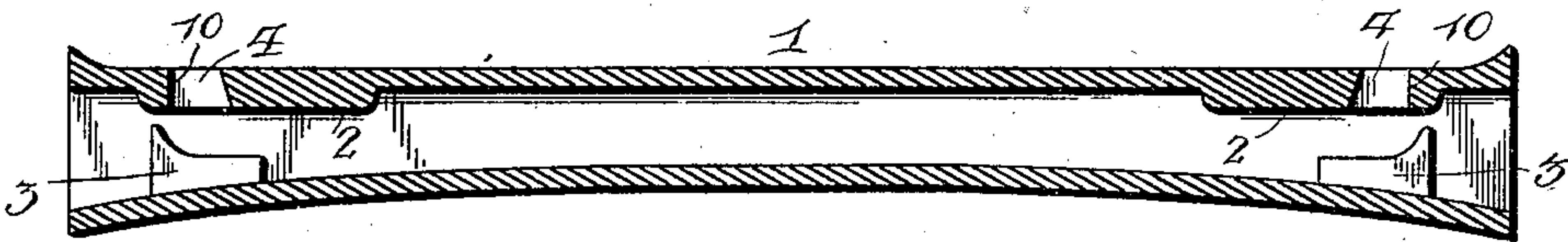
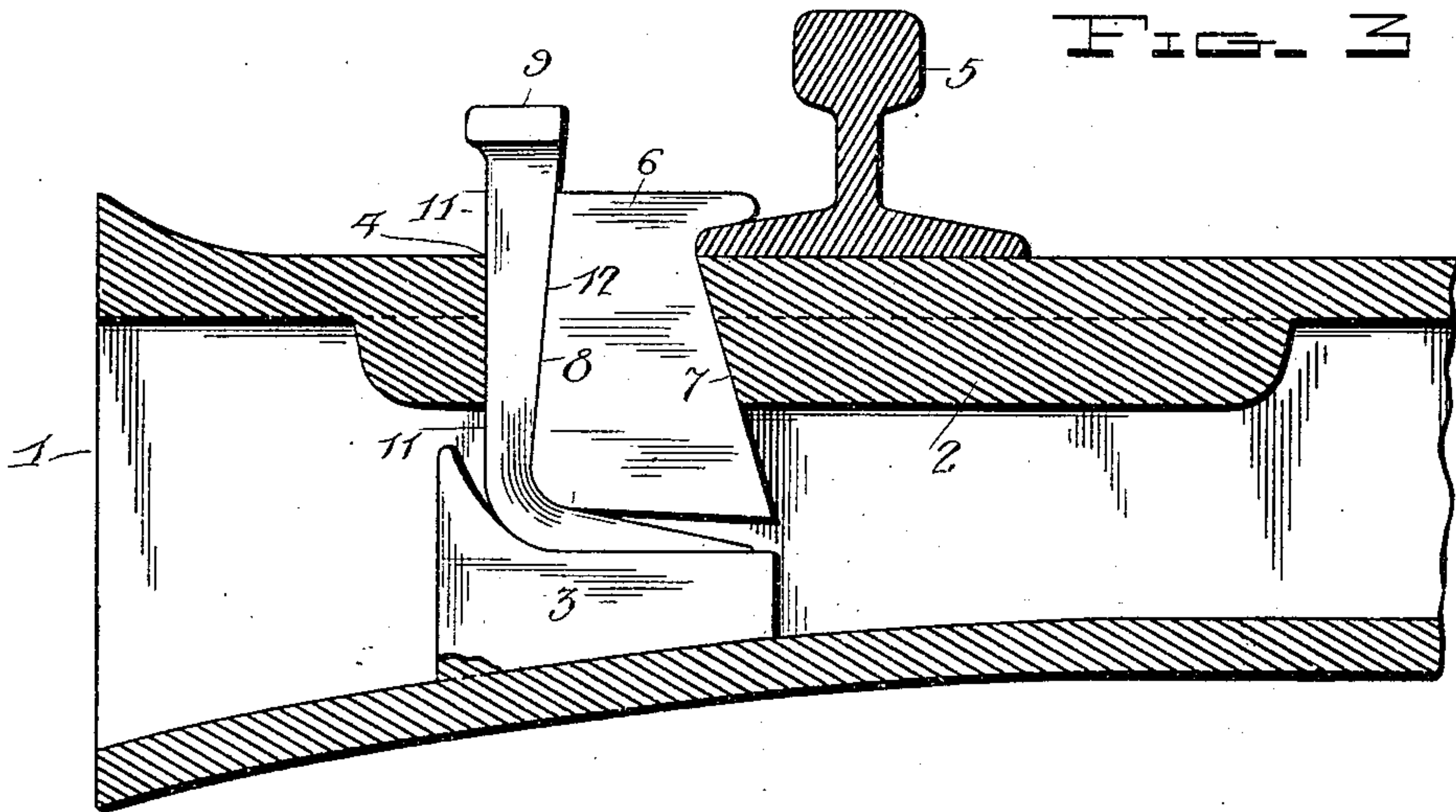


Fig. 3



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UNITED STATES PATENT OFFICE.

JOHN A. BOUGHTON, OF EVERETT, OHIO.

METALLIC TIE AND RAIL FASTENER.

SPECIFICATION forming part of Letters Patent No. 725,665, dated April 21, 1903.

Application filed June 12, 1902. Renewed February 24, 1903. Serial No. 144,825. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BOUGHTON, a citizen of the United States, residing at Everett, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Metallic Tie and Rail Fasteners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to a metallic tie and rail fastener.

The object of the invention is to provide a tie which shall be simple of construction, durable in use, comparatively inexpensive of production, and which will not creep or shift longitudinally its length, and which will to some extent prevent the train from jumping the rail and leaving the ties and running off to one side, special provision being made whereby the rails are securely attached to said tie.

With this object in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved tie and rail fastener, showing my invention applied. Fig. 2 is a longitudinal sectional view through the tie, and Fig. 3 is a vertical sectional view through a fragment of the tie and fastener.

Referring to the drawings, 1 denotes a hollow metallic tie curved on its lower side from end to end, thereby keeping the track better in line, also to insure better drainage, thereby keeping the dirt drier and better holding the same under the tie, the same favoring the prevention of low joints. The tie has its upper surface at its ends inclined slightly upwardly, so as to reduce to a minimum the liability of the train leaving the tie should it jump the rail. The tie may be, if desired, braced by longitudinal ribs 2, formed on the inner walls of the tie, and is provided on the upper side of its base with clenching-blocks 3, having curved upper faces, for a purpose hereinafter to appear.

4 denotes holes, preferably rectangular in outline, formed in the upper face of the tie immediately above the clenching-blocks 3, and 5 denotes the rails to be secured to said tie.

6 denotes a wedge-shaped key, the sides 7 and 8 of which are beveled, the former side to engage the beveled end of the wall of the hole 4 and the upper end of which is adapted to project over and engage the base of the rail. 9 denotes a beveled key which is adapted to be driven into said aperture between the side 8 of the wedge and the straight wall 10 of the aperture and has a straight vertical side 11 and a beveled side 12, the former to engage the straight end 10 of the aperture and the latter to engage the beveled side 8 of the wedge. In driving this key home the lower end strikes the clenching-block and is caused to bend under and engage the lower end of the wedge. When in this position, the parts are securely locked. The wedge is locked in place by the key and securely holds the rail to the tie, while the key cannot be withdrawn by reason of the fact that its lower end is locked by the wedge. In other words, the wedge locks the rail and key and the key locks the wedge. It will thus be seen that I produce a positive self-locking device, self-locking in that in the act of driving the key in position its end strikes the clenching-block and is deflected or bent under the edge of the wedge.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring an extended explanation.

While I have illustrated and described what I consider to be the best means known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact form and construction shown, as many slight changes therein or variations therefrom might suggest themselves to the mechanic, all of which would be clearly included within the limit and scope of the invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A hollow railroad-tie curved on its lower surface in the direction of its length from end

to end whereby endwise movement of the tie when in place is reduced, said tie on its upper surface at its ends being contiguous to the points where the rails seat, said ties being inclined outwardly whereby should the wheels of the train jump the track the inclined portions will act as guards to prevent the wheels from leaving the ties, substantially as set forth.

10 2. The combination with a tie having an aperture and a clenching-block located below the aperture, of a wedge having a lip or head to engage the base of a rail, and a key driven into said aperture and having its lower end bent or clenched under the wedge by the clenching-block, substantially as set forth.

15 3. The combination with a hollow tie having a hole in its upper surface and a clench-

ing-block located within the tie under said hole and provided with a curved upper face 20 or side, of a wedge inserted in said hole and having a head or flange to engage the base of a rail, and a key driven into said aperture between one end wall thereof and one of the sides or edges of the wedge and having its 25 lower end clenched or bent under the wedge by the clenching-block, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 30

JOHN A. BOUGHTON.

Witnesses:

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