

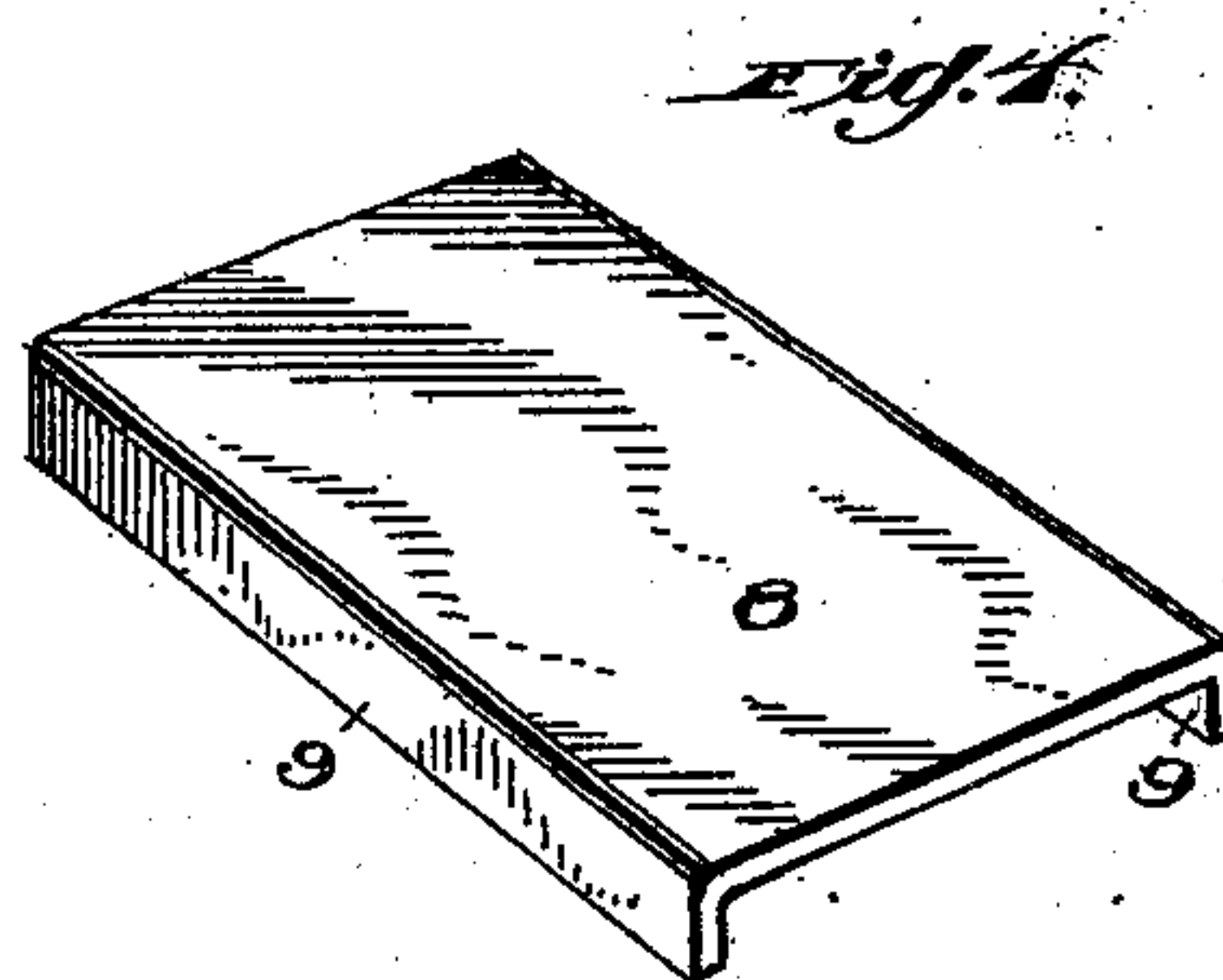
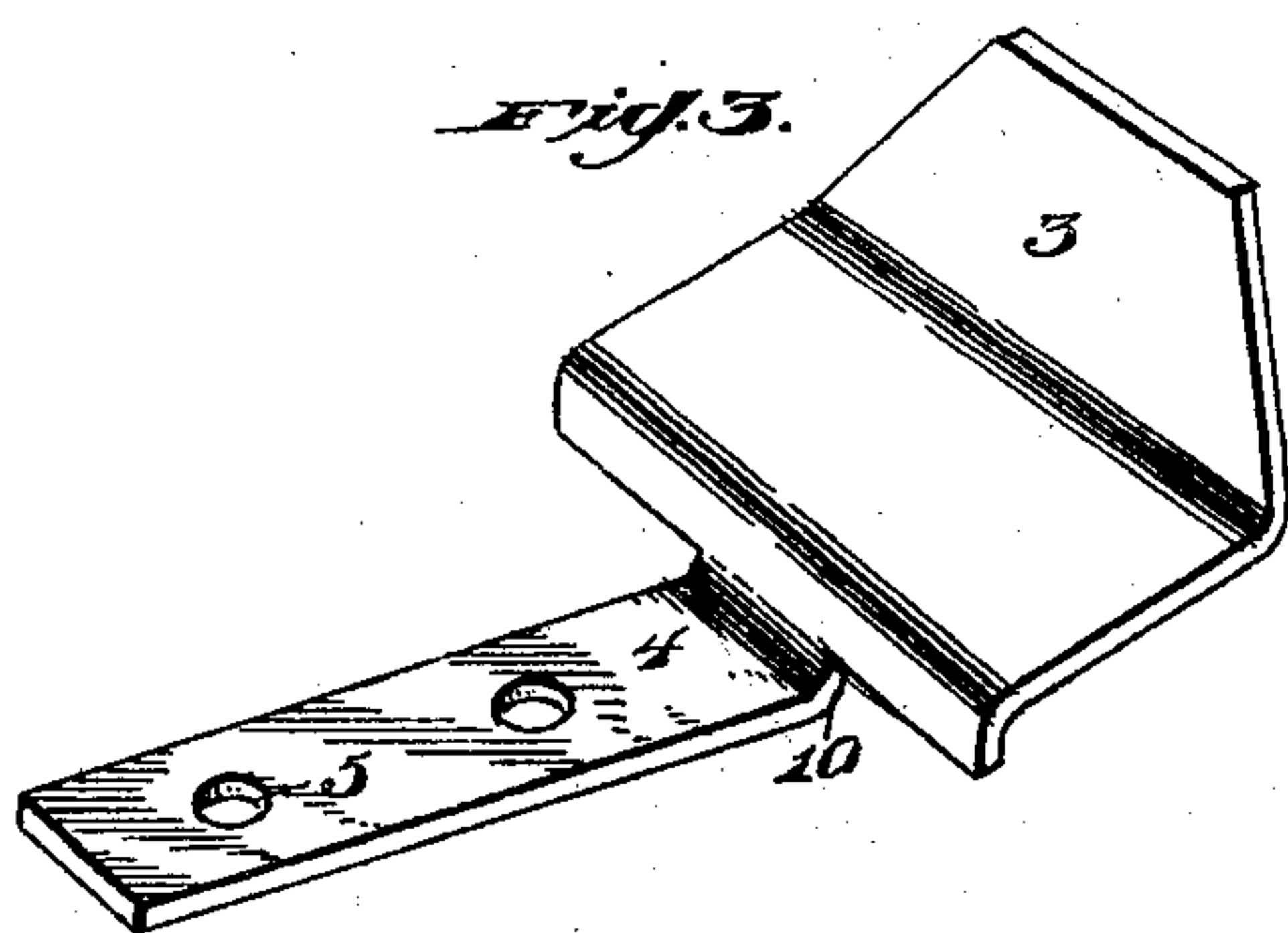
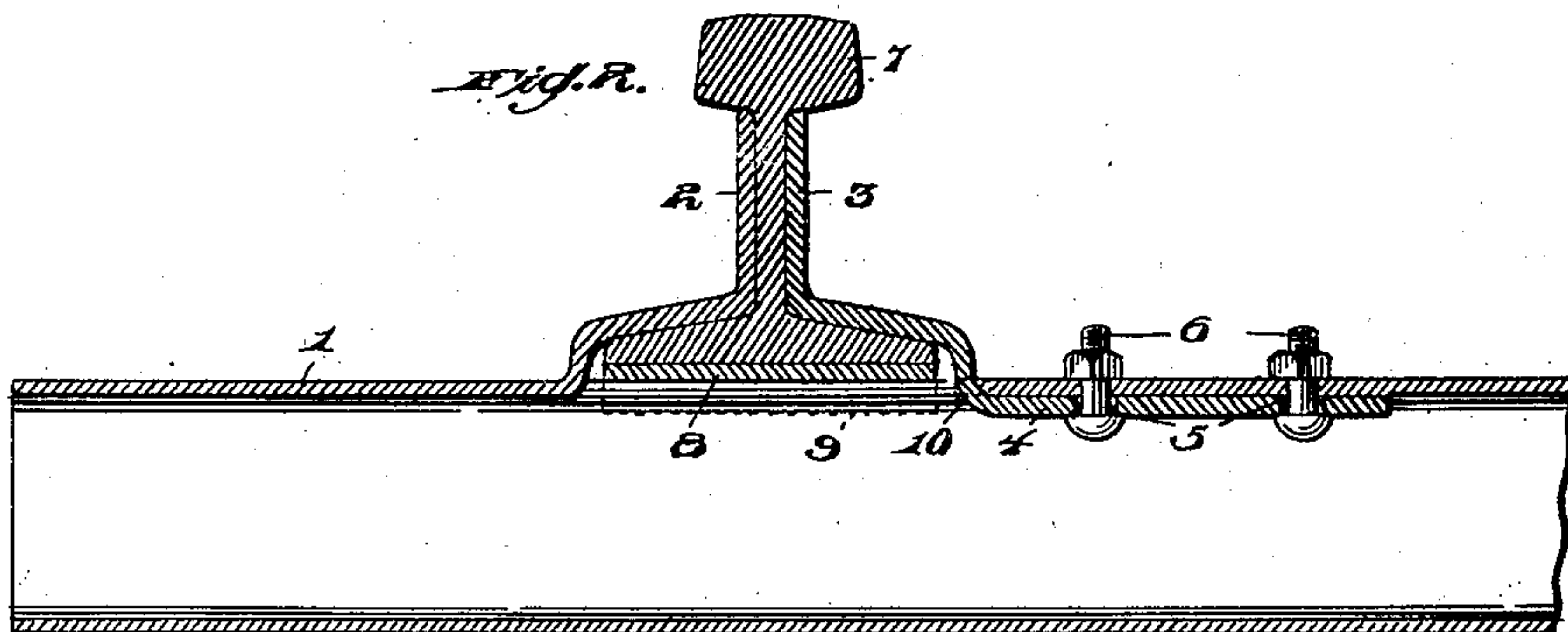
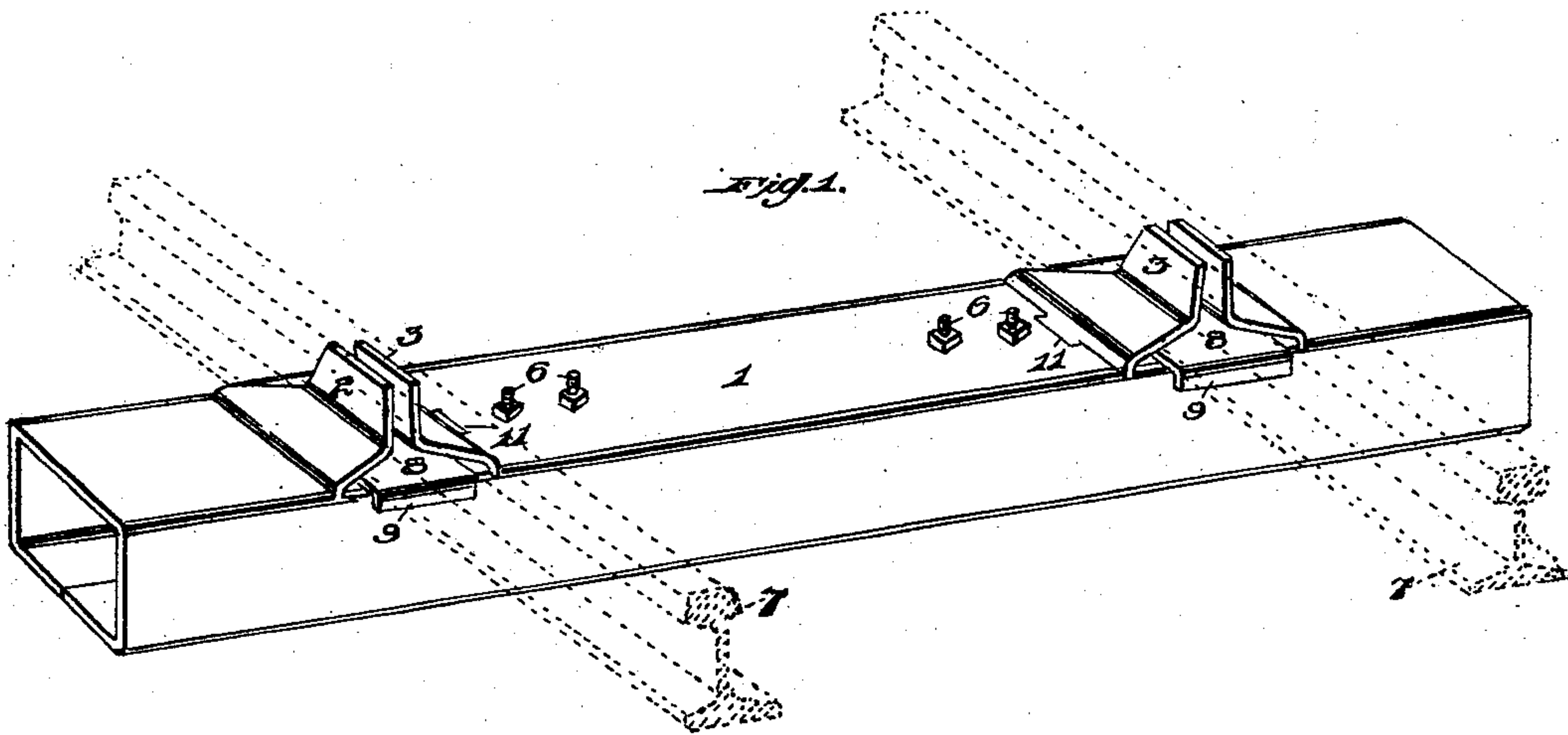
No. 690,705.

Patented Jan. 7, 1902.

I. DINGER.  
STEEL TIE FOR RAILWAYS.

(Application filed Oct. 15, 1901.)

(No Model.)



Witnesses:

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# UNITED STATES PATENT OFFICE.

ISAAC DINGER, OF McKEES ROCKS, PENNSYLVANIA.

## STEEL TIE FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 690,705, dated January 7, 1902.

Application filed October 15, 1901. Serial No. 78,682. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC DINGER, a citizen of the United States of America, residing at McKees Rocks, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Steel Ties for Railways, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in metallic ties, and has for its object to provide a hollow metallic tie to which the rails may be easily and quickly fastened in position.

15 Briefly described, my invention comprises a hollow cross-tie which is cut and has the material struck up to form one of the fish-plates, the other fish-plate being detachable and being secured to the cross-tie after the rail or  
20 rails have been placed in position. A saddle-plate is placed in position on the tie at the places where the latter is cut, this plate receiving the rail or rails in order that the latter may have a greater bearing-surface.

25 The specific construction will be hereinafter more fully described and then specifically pointed out in the claims, and in describing the invention in detail reference is had to the accompanying drawings, forming a part of  
30 this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a detail perspective view of my improved metallic tie, showing the rails in  
35 dotted lines in position therein. Fig. 2 is a longitudinal sectional view of a part of the tie, showing the rail in cross-section. Fig. 3 is a detail perspective view of the removable fish-plate or clamp. Fig. 4 is a like view of  
40 the saddle-plate upon which the rails rest.

My improved tie is constructed of a single piece of material substantially rectangular in cross-section, the edges of the piece of material or plate from which the tie is constructed  
45 being brought together at the central longitudinal line of the underneath face of the tie. On the upper face of the tie, adjacent to the end thereof where the rails rest, the tie is cut away, and the material lying within the line  
50 of the cut is struck up to form a clamping-plate 2. The opposite or inner fish-plate or clamping-plate 3 is detachable from the tie and is formed with an extending tongue 4,

provided with openings 5, adapted to register with openings in the tie to receive the secur- 55 ing-bolts 6, which are held by suitable nuts engaging the upper face of the tie. The rails 7 rest upon a saddle-plate 8, the ends 9 of which are turned downwardly over the sides of the tie in order to prevent longitudinal 60 movement of the plates. The tongue 4 of the clamping-plate 2 lies a slight distance below the lower edge of the plate 3, so as to engage the underneath face of the upper plate of the tie, as shown in Fig. 2, and a shoulder 10, 65 formed by the bending of this tongue, fits within the recess 11, cut in the upper face of the tie. The rails 7 are placed in position on the saddle against the fish or clamping plate 2, and the fish-plate or clamping-plate 3 is 70 then placed in position against the inner faces of the rails and secured firmly in position by bolts 6, which may be easily inserted by reaching in from the end of the tie.

Having fully described my invention, what 75 I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a hollow metallic tie, having an integral clamping-plate struck up from its upper face and engaging the base 80 and web of the rail, of a removable clamping-plate engaging the opposite side of the rail web and base and provided with a tongue which lies against the underneath face of the upper plate of the hollow tie, said tongue hav- 85 ing a shoulder that fits in a recess provided therefor in the upper plate of the tie, and bolts for securing said removable clamping-plate in position.

2. In combination with a hollow metallic 90 tie rectangular in cross-section and having an integral clamping-plate struck up from its upper face, of a removable clamping-plate having a tongue, bolts passing through said tongue and through the upper face of the tie 95 for securing the removable clamping-plate in position, and a saddle-plate underneath the clamping-plate upon which the rails rest, substantially as described.

In testimony whereof I affix my signature 100 in the presence of two witnesses.

ISAAC DINGER.

Witnesses:

JOHN NOLAND,  
E. E. POTTER.