

No. 858,534.

PATENTED JULY 2, 1907.

A. S. PETRIE.  
RAILWAY TIE.

APPLICATION FILED NOV. 27, 1905. RENEWED DEC. 1, 1906.

Fig. 1.

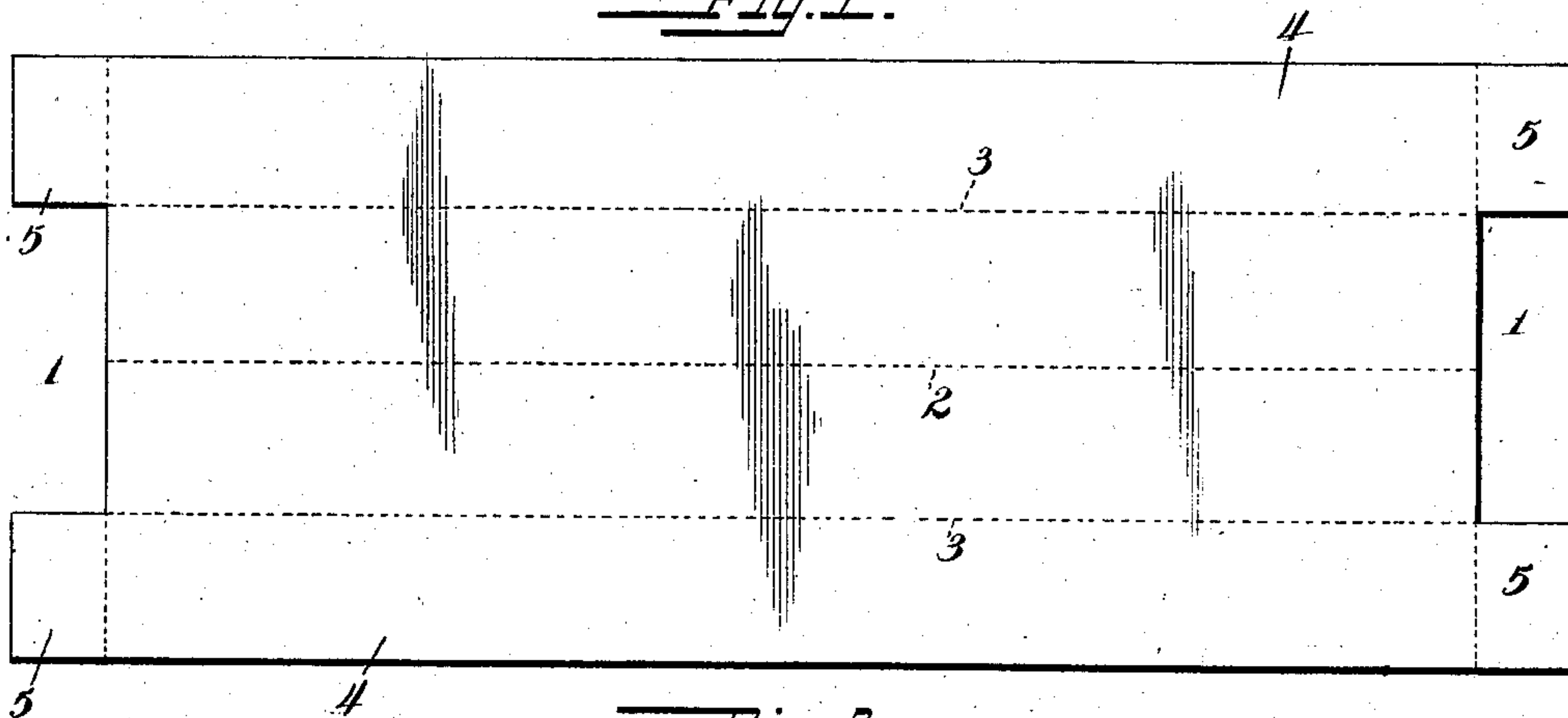


Fig. 2.

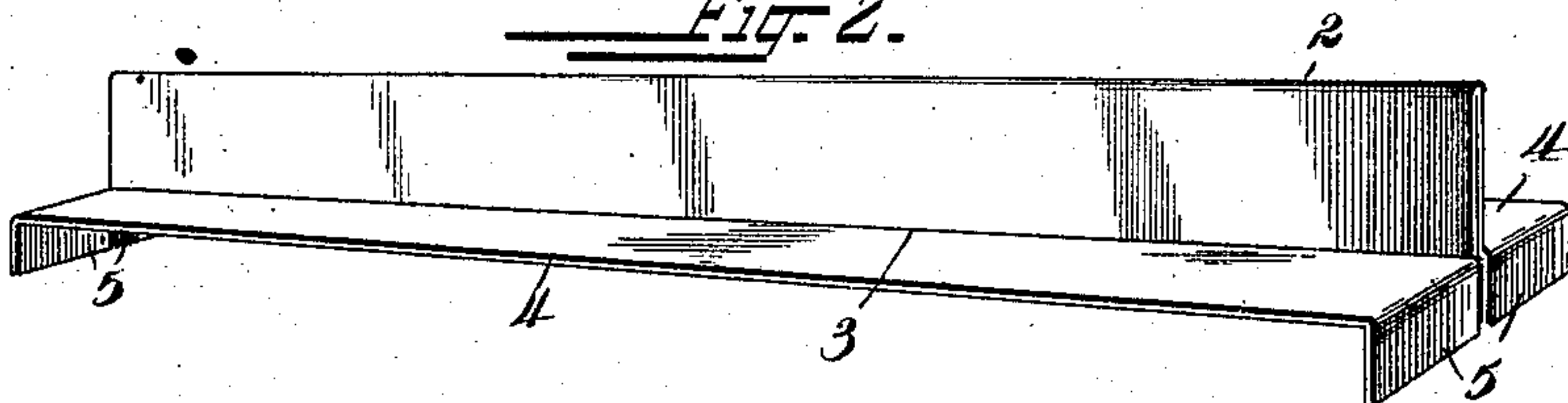


Fig. 3.

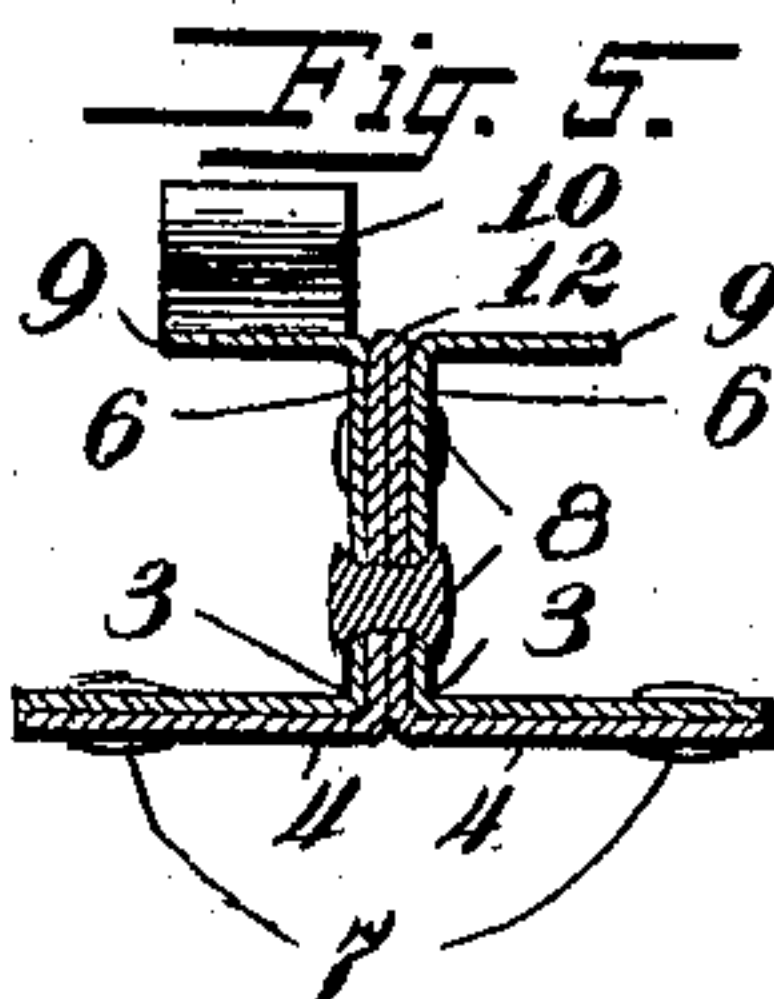
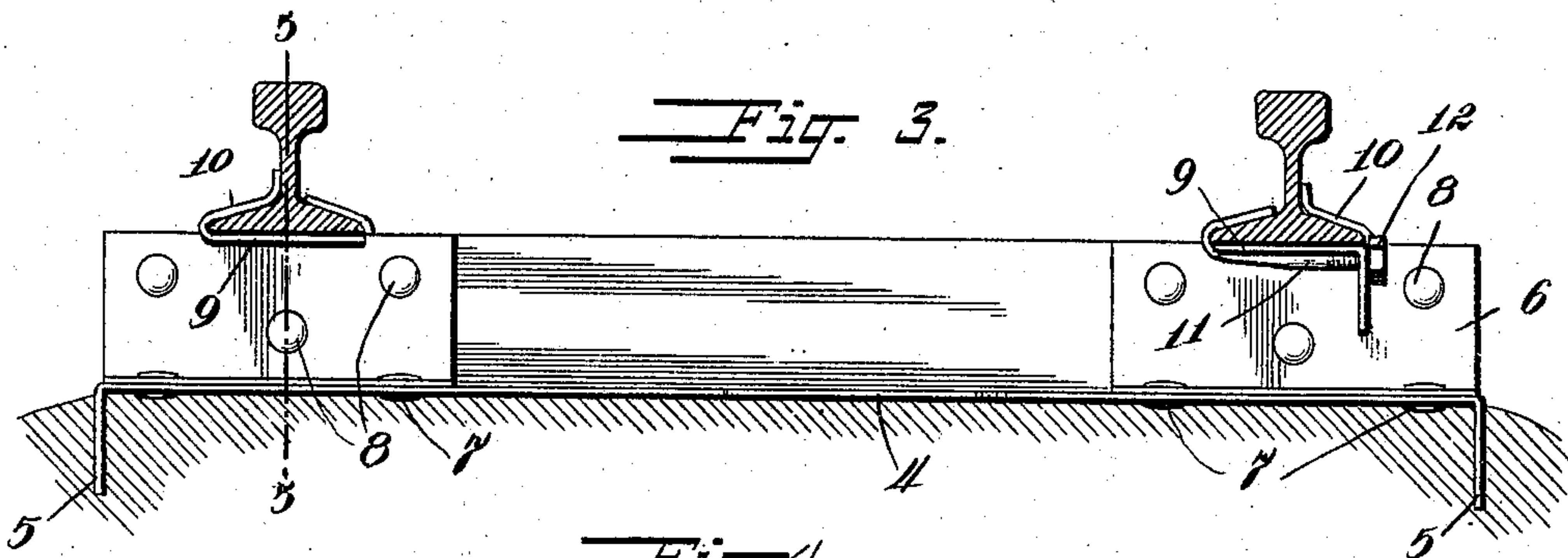
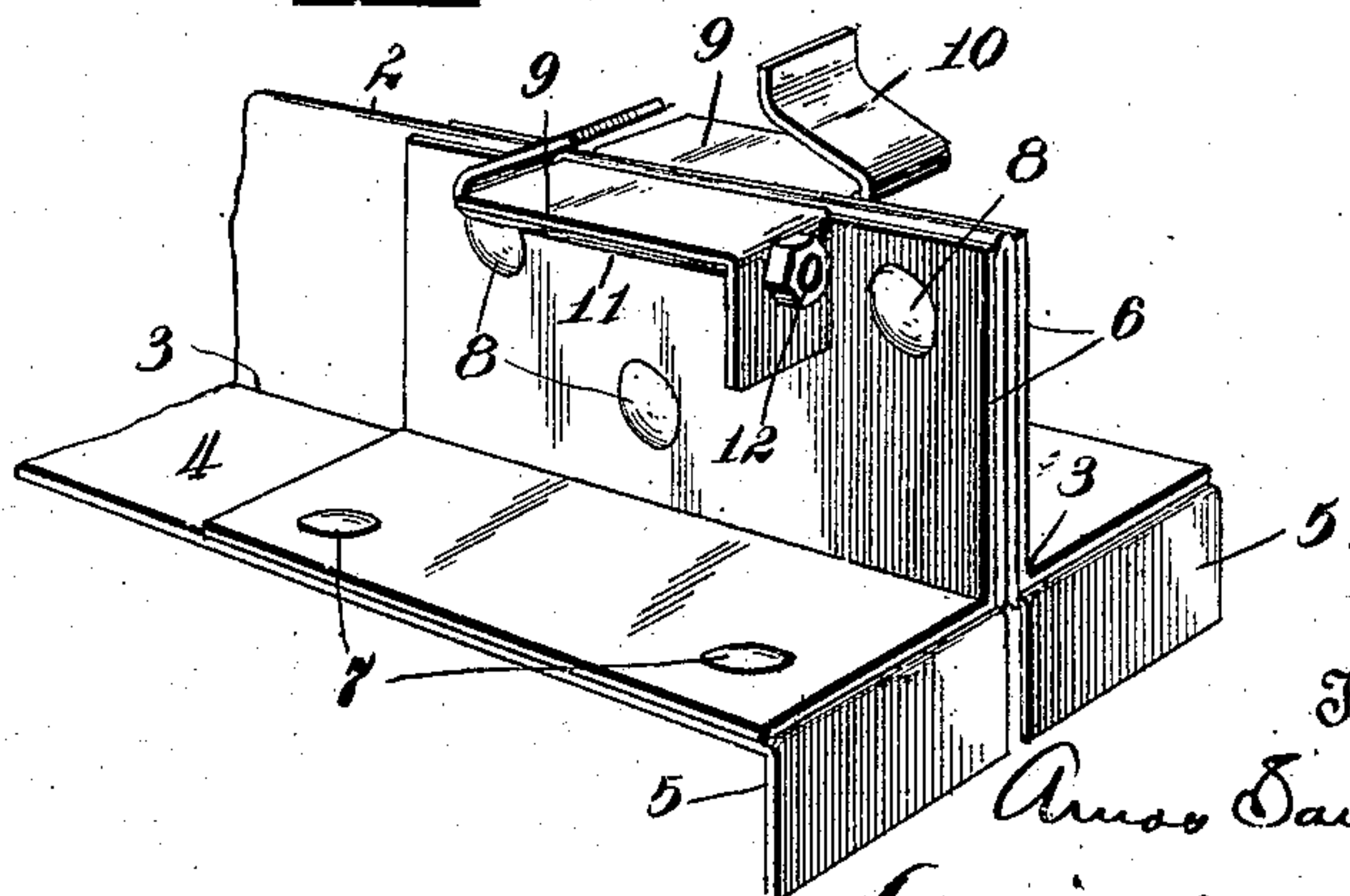


Fig. 4.



Witnesses  
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by Addison G. Davis  
his Attorney



# UNITED STATES PATENT OFFICE.

AMOS SAWYER PETRIE, OF PITTSBURG, PENNSYLVANIA.

## RAILWAY-TIE.

No. 858,534.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed November 27, 1905. Renewed December 1, 1906. Serial No. 345,938.

*To all whom it may concern:*

Be it known that I, AMOS SAWYER PETRIE, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to an improvement in railway ties, and the object is to provide a metal tie which may be struck up from sheet metal and very cheaply constructed, while at the same time providing a substantial and effectual construction for the purpose for which it is intended.

With these objects in view, my invention consists in a tie bent and fashioned from a strip of sheet metal in connection with means for fastening the rails thereto, and in other novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the blank from which my improved tie is formed, Fig. 2 is a view of the same after it is struck up into shape, Fig. 3 is a view in side elevation of one of the ties complete, showing the rails in place thereon, Fig. 4 is a detailed perspective, and Fig. 5 is a section on the line 5, 5 of Fig. 3.

The blank shown in Fig. 1 is supposed to represent a strip of sheet metal having parallel sides, and notches or cut-out portions 1, 1 at the ends. The tie is struck up by bending the blank along the dotted lines, the center one, 2, forming the ridge of the tie upon which the rails rest, and the outer parallel dotted lines 3, 3 the inner angles. When thus bent, the up-right portion of the tie is double, or composed of a double fold of metal, and the flanges 4, 4 extend outwardly and form the base which rests upon the road bed. The extreme ends 5, 5 left by the cut-out portions 1, 1, are bent downwardly to enter the ballast of the road bed to anchor the tie and prevent creeping or lateral movement.

Angle iron plates 6, 6 are secured at each end of the ties by rivets 7 and 8, they having the effect of reinforcing and bracing the ties and holding them secure in upright position. These angle iron plates have outwardly extending flanges 9, 9, flush with the ridge of the tie, forming seats with the ridge of the tie, for the rails. One flange at each end of a tie is bent over upwardly to form a clip 10 which receives the base of the rail, and then these are placed a uniform distance apart. It is thus unnecessary to use a gage to determine the distance of the rails. The rails are bolted in position by the bolts 11, 11 which engage the inner edges of the bases of the rails and the nuts 12, 12 screwed thereon, draw them up tight against the rail bases and in this simple

manner, the rails are secured in position upon the seats of the ties over the reinforced portions at the ends thereof. Thus a simple tie is formed, easy and inexpensive to manufacture, requiring a minimum amount of material in its construction, easy to manufacture and effectual in the performance of its functions.

Ties can be shaped of any length, and the reinforce plates can be placed and fastened at any point on the tie in such manner as to secure the rail at any angle in the construction of switches or turnouts from the main line.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth, but,

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

1. A railway tie composed of sheet metal bent into vertical and horizontal flanges so that the vertical portion of the tie is two-ply, and angle iron plates secured to the vertical and horizontal portions whereby to reinforce the tie, the upper edges of said angle iron plates having outwardly extending flanges which form seats for the rails.

2. A railroad tie composed of sheet metal folded together through the center and having edges bent outwardly to form flanges and the ends of the edges bent downwardly to penetrate and anchor the tie in the road bed, and means extending through the folded portion to hold the tie in shape.

3. A railroad tie composed of sheet metal folded together through the center and having edges bent outwardly to form flanges and the ends of the edges bent downwardly to penetrate and anchor the tie in the road bed, and reinforced means secured to the ends of the ties and means extending through the reinforced portions and through the folded portion of the tie.

4. A railroad tie composed of a folded strip of sheet metal outwardly flanged at the edges, angle iron plates secured thereto, said plates having flanges at their upper edges flush with the ridge of the tie, clips on certain of these flanges which receive the outer edges of the rail bases and means for bolting the opposite edges of the rail bases to the ties.

5. The combination with a tie composed of a strip of sheet metal folded through the center and flanged at the edges, of angle iron plates riveted to the flanges and through the folded portion, said plates having outwardly extending flanges at their upper edges, clips for embracing the outer edges of the rail bases and bolts for embracing the opposite edges and nuts adapted to screw on the threaded ends of the bolts and force the rails securely against the clips.

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

AMOS SAWYER PETRIE.

Witnesses:

JAMES McLAREN,  
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