

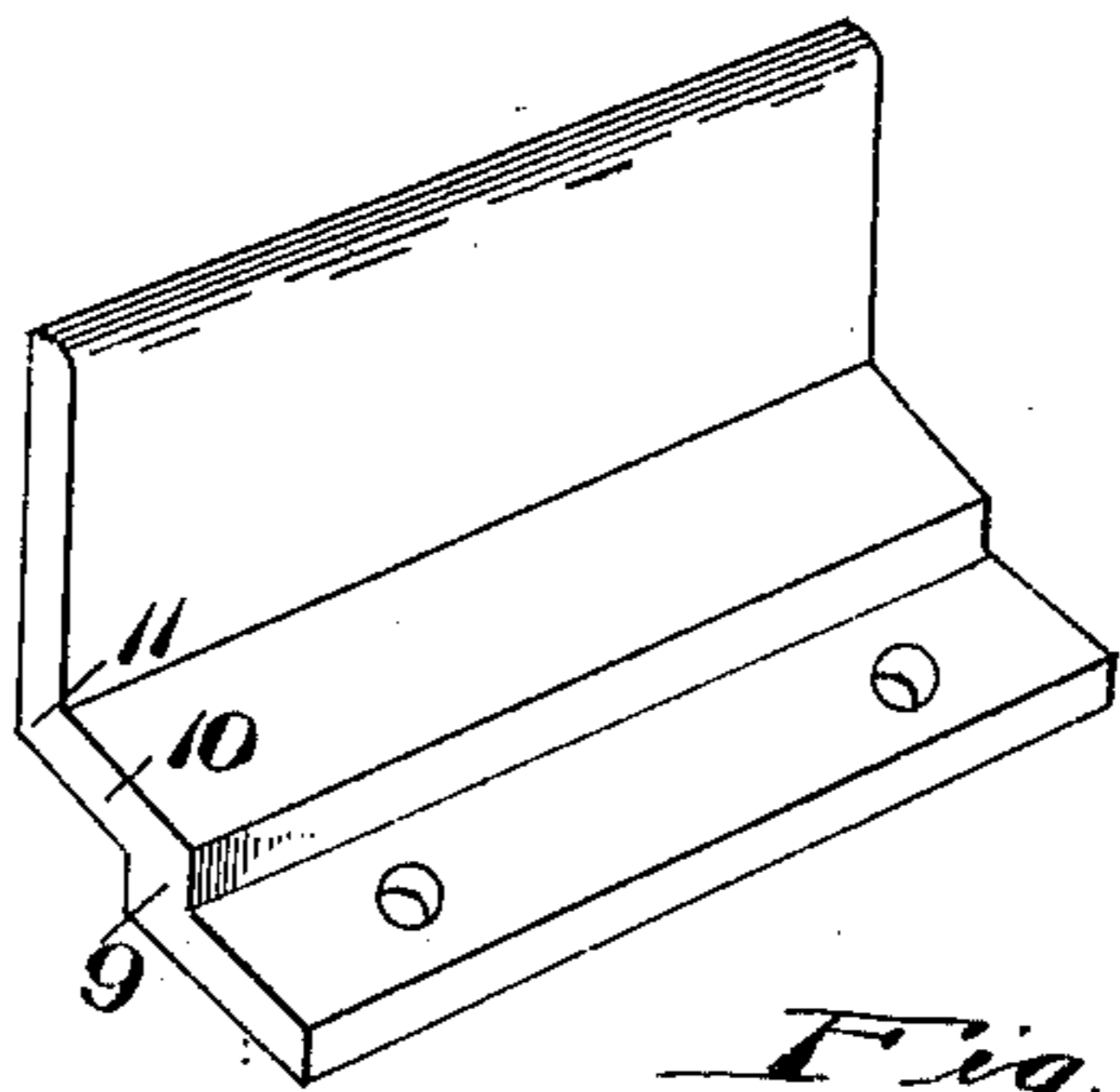
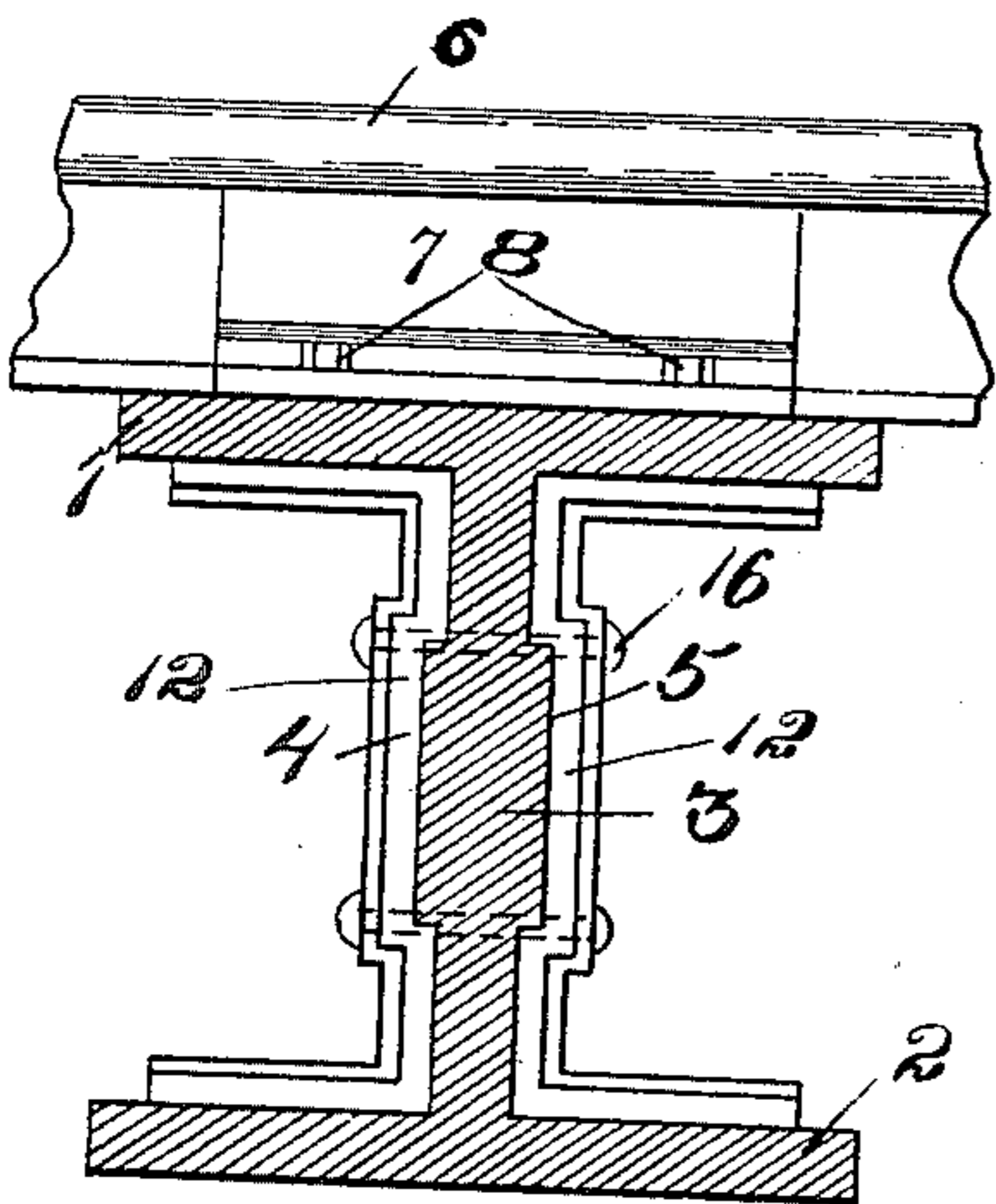
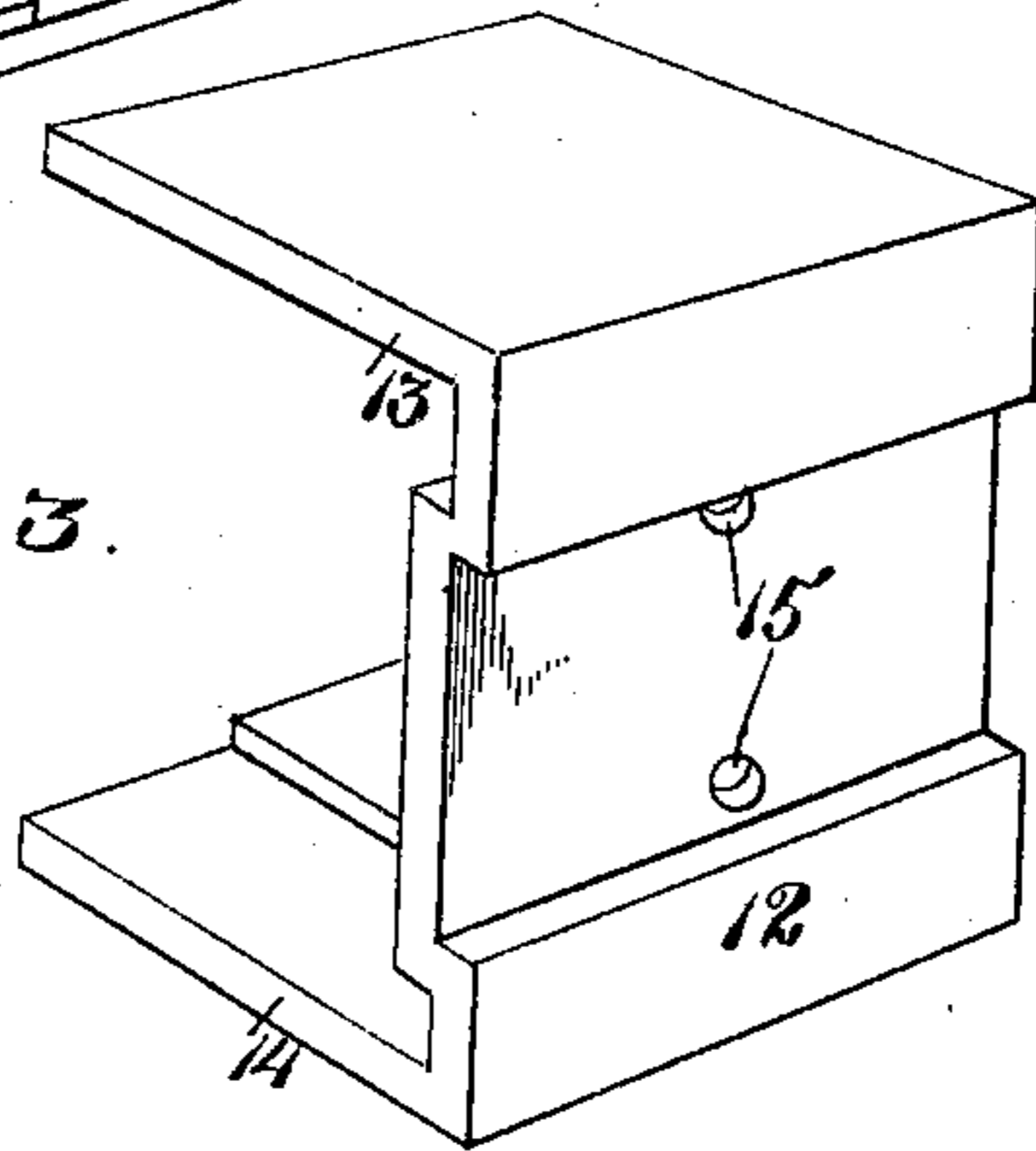
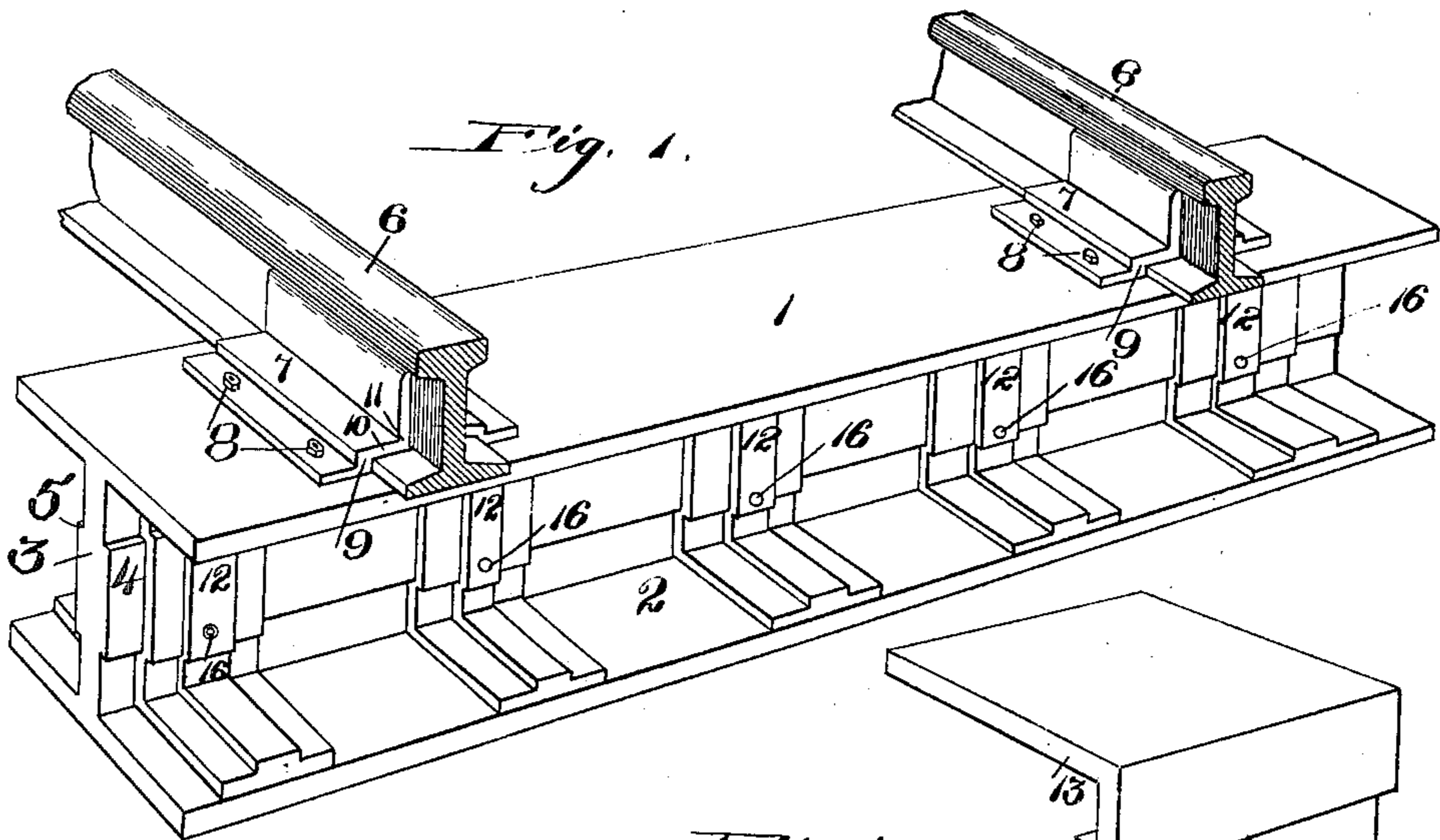
No. 630,156.

R. E. WILSON.
RAILROAD TIE.

Patented Aug. 1, 1899.

(No Model.)

(Application filed Jan. 4, 1899.)



WITNESSES:

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ROBERT E. WILSON, OF IRWIN, PENNSYLVANIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 630,156, dated August 1, 1899.

Application filed January 4, 1899. Serial No. 701,112. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. WILSON, a citizen of the United States of America, residing at Irwin, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in metallic cross-ties.

The object of my invention is to improve the construction of metallic cross-ties and to provide a simple, inexpensive, and efficient one which will be practically indestructible and which will provide a support for the rails as elastic as the ordinary cross-tie.

A further object of my invention is to provide my improved metallic tie with a series of strengthening-plates secured to both sides of the web thereof, these strengthening-plates being bent to support the top plate of the tie.

A further object of my invention is to provide a series of fish-plates for securing the rail in position to the top plate of the tie.

The invention further consists in the novel combination and arrangement of parts hereinafter more fully described, and particularly pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views thereof, and in which—

Figure 1 is a perspective view of my improved cross-tie, showing a pair of rails in position thereon, as well as the strengthening-plates for the cross-tie secured thereto. Fig. 2 is a cross-sectional view thereof. Fig. 3 is an inverted perspective view of one of the strengthening-plates. Fig. 4 is a perspective view of one of the fish-plates for securing the rails in position.

My improved tie comprises a horizontal top plate 1, a horizontal bottom plate 2, and a vertical plate or web 3, these three parts forming a tie substantially in the shape of an I-beam. The vertical plate or web 3 has the top plate 1 formed integral therewith and also the bottom plate 2. The vertical plate or web 3 has outwardly-extending portions

formed integral with the sides thereof, as shown at 4 5. I may term the top plate 1 the "supporting-plate" for the rails 6, the bottom plate 2 the "base-plate" of a tie, and the vertical plate or web 3 the "supporting-plate" for the top plate 1.

The rails 6 are secured in position to the top plate 1 by means of the fish-plates 7. These fish-plates are secured to the top plate 1 by any suitable means and as shown by screws, as at 8. The fish-plate 7 is bent to conform to the base of the rail, as well as the web thereof—that is, bent upwardly at right angles, as at 9, then horizontally to conform to the base of the rail, as at 10, and then at right angles to conform to the web of the rail, as at 11. The end of the rail is adapted to be slid between the fish-plates, which secures the same in the desired position.

Secured on both sides of the vertical plate 3 are the strengthening-plates 12. These plates are bent horizontally at their top and bottom, as at 13 14, the portion 13 forming a support for the top plate 1 and the portion 14 resting on the upper face of the bottom plate 2. These plates 12 are also bent so the same will fit neatly over the extending portions 4 5, formed on the sides of the vertical plate or web 3, as shown. The plates 12 are each provided with a series of apertures 15 for securing the same to the vertical plate or web 3 by means of the bolts 16.

It is thought from the foregoing description, taken in connection with the accompanying drawings, that the setting up of my improved metallic tie can be readily understood.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

1. A metallic tie comprising in its construction an I-beam having the web thereof centrally enlarged at each side, combined with a series of strengthening-plates adapted to engage said enlarged portion of the web, each of said strengthening-plates having the ends thereof bent at right angles to respectively engage the underneath face of the top plate and the top face of the bottom plate of the

I-beam, substantially as herein shown and described.

2. In a device of the character described a top plate, a bottom plate, a vertical plate or web having extending portions formed centrally on each side thereof, the top and bottom plates formed integral with the ends of the said vertical plate or web, a series of strengthening-plates bent horizontally at their top and bottom and engaging said extending portions on the vertical plate or web, with the top portion supporting the top plate and the bottom portion resting upon the upper face of the bottom plate, substantially as set forth.

3. A metallic tie formed of an I-beam with a web having an integral rib or extension arranged centrally on each side thereof and extending longitudinally throughout the length of said web, substantially as described.

4. In combination a top plate, a bottom plate, and a vertical plate or web forming a metallic tie, said vertical plate or web having extending portions formed on each side thereof, a

series of strengthening-plates bent to fit neatly over said extending portions formed on the sides of the vertical plate or web and suitably secured to the said plate or web, combined with fish-plates secured to the upper face of the said top plate adapted to secure the rail in the desired position, substantially as set forth.

5. In a metallic tie a series of strengthening-plates secured thereto having a portion thereof bent horizontally at the top to form a support for the top of the tie and having a portion of the bottom thereof bent horizontally and resting upon the upper face of the base of the tie, and a series of fish-plates for securing the rail in the desired position secured to the upper face of the said tie, substantially as set forth.

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

ROBERT E. WILSON.

Witnesses:

JOHN NOLAND,
H. H. PATTERSON.