No. 891,664. PATENTED JUNE 23, 1908.

O. M. BOYLAN.

METALLIC TIE AND RAIL FASTENER.

APPLICATION FILED OCT. 28, 1907.

Fig. 1.

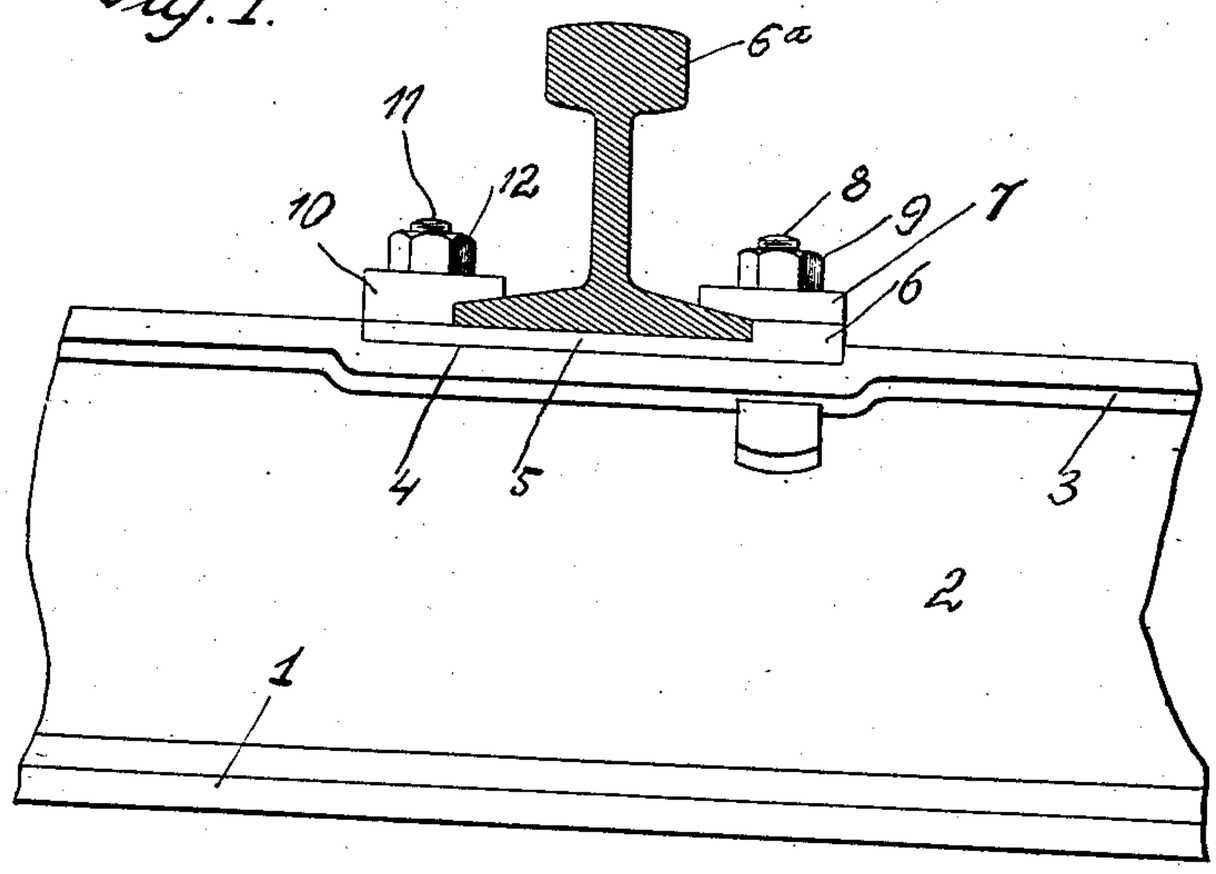


Fig. 2.

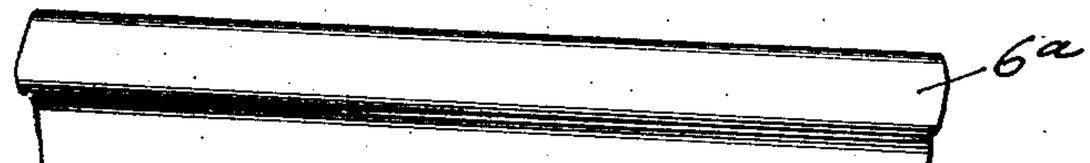


Fig. 4.

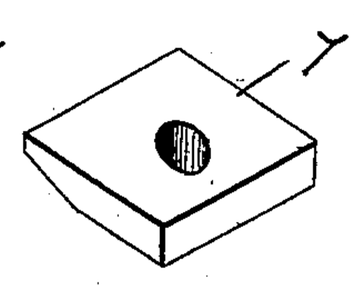
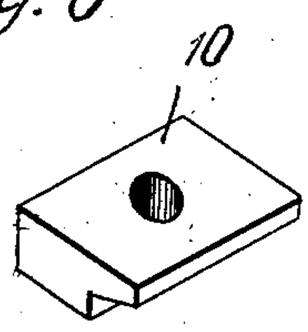


Fig. 6



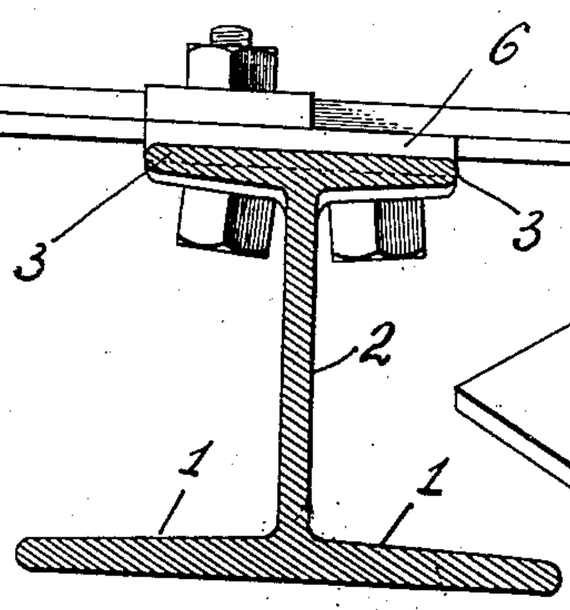


Fig. 5.

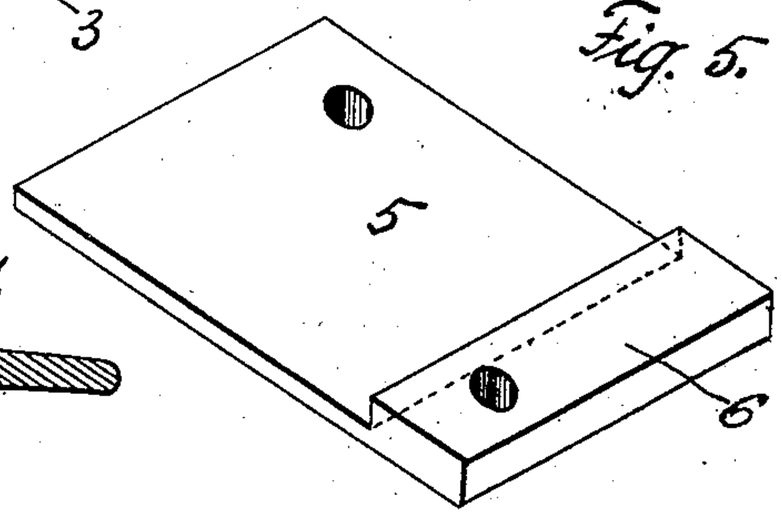
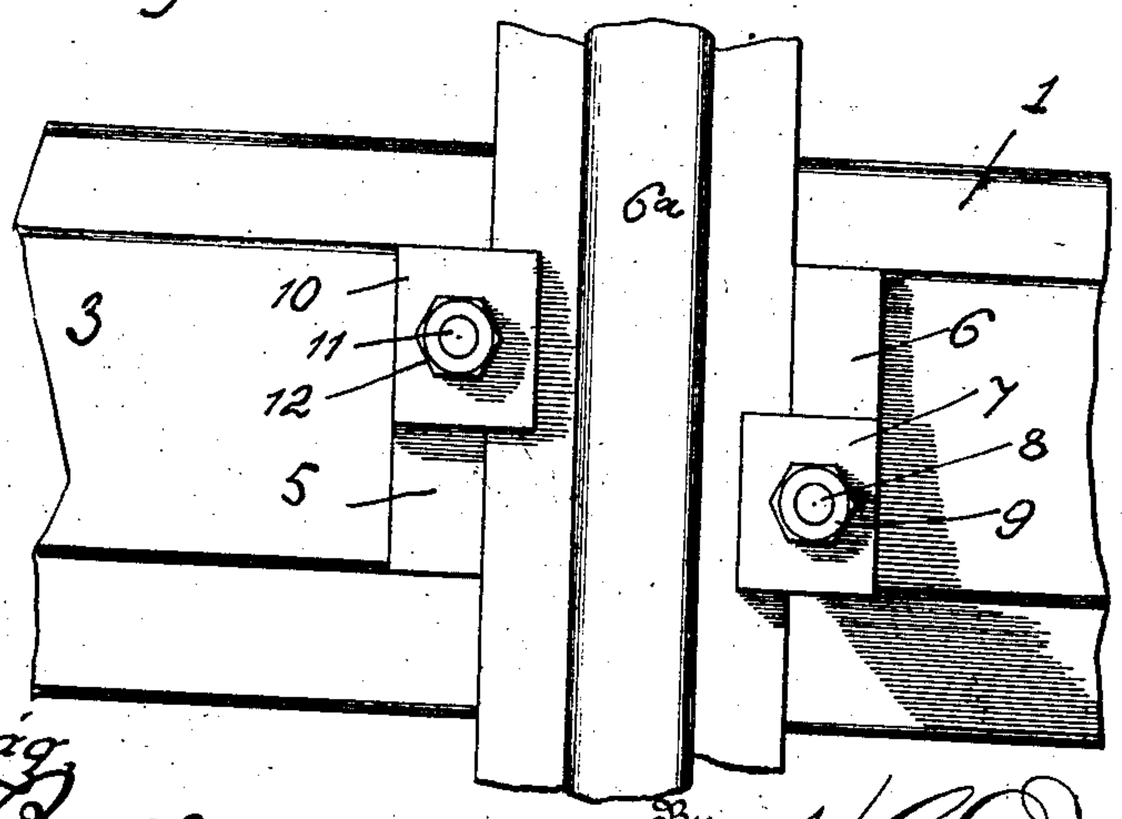


Fig. 3



Witnesses
A. H. Rabsag.
R. S. Butler.

Inventor
Oscar M. Boylan
By H. C. Evert & Co.,
Attorneys

UNITED STATES PATENT OFFICE.

OSCAR M. BOYLAN, OF McKEESPORT, PENNSYLVANIA.

METALLIC TIE AND RAIL-FASTENER.

No. 891,664. Specification of Letters Patent. Patented June 23, 1908.

Application filed October 28, 1907. Serial No. 399,401.

To all whom it may concern:

Be it known that I, OSCAR M. BOYLAN, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a metallic tie and rail fastener, and the invention has for its object to dispense with the use of the ordinary wooden tie and spike commonly employed for supporting and holding a rail.

Another object of this invention is to provide a metallic tie and positive and reliable means for maintaining a rail upon the tie, whereby it cannot be laterally or vertically displaced.

My tie is of the I-beam construction, and as a fastener I employ a base plate and two clips, said clips being securely bolted to the upper flanges of the tie.

The metallic tie and rail fastener will be presently described in detail, and reference will now be had to the drawing, wherein,

Figure 1 is an elevation of a portion of the tie and rail fastener, Fig. 2 is a cross sectional view of the tie having the rail attached thereto, Fig. 3 is a plan of the same, Fig. 4 is a perspective view of one of the clips of the fastener, Fig. 5 is a perspective view of the base plate of the fastener, and Fig. 6 is a perspective view of another clip constituting a portion of the fastener.

In the accompanying drawings, 1 indicates the base flange of the tie of I-beam construction, 2 the web thereof and 3 the upper flanges of the tie, which are of a less width than the base flanges, thereby providing a firm and wide foundation for the tie.

The top or upper flanges 3 of the tie adjacent to the ends of said tie, are provided with depressions 4 which constitutes seats for the base plates 5, upon which rails 6^a are adapted to rest. One edge of the base plate 5 is provided with a rib or enlargement 6 for bracing one side of the rail, and upon this rib or enlargement 6 is secured a clip 7; a bolt 8 and a nut 9 being used for this purpose, said bolt passing through one of the upper flanges 3 of the tie and the rib or enlargement 6. The clip 7 is adapted to overlie one of the base flanges of the rail 6^a, and to secure the other side of the rail, I use a clip 10 which is also secured to the tie and base plate 5 by a bolt 11 and a nut 12. While the clip 7 rests upon the rib or enlargement 6, the other clip rests directly upon the base plate 5, and this clip is diagonally disposed with relation to the clip 7, whereby a clip will be fastened to each one of the upper flanges 3 of the metallic tie. In this manner the stresses and strains upon the tie will be firmly resisted.

I desire to call particular attention to the fact that the rib or enlargement 6 is used upon the outer ends of a tie, whereby the outer sides of the rails will be firmly braced, and lateral and horizontal displacement of the rail entirely prevented. Further, I prevent the shearing of the bolts and nuts by using the countersunk seat or depressed portion of the tie. In lowering the bolts and nuts, the flanges of the wheels of rolling stock are prevented from engaging the same, and accidents due to the shearing of nuts and bolts and the displacement of rails are entirely eliminated.

Such variations in the minor details of construction as are permissible by the appended claims can be resorted to without departing from the spirit and scope of the invention.

Having now described my invention, what I claim as new, is:—

1. A metallic tie and rail fastener comprising a supporting member embodying a web, a base and a head formed of a pair of laterally extending flanges, said flanges projecting in opposite directions with respect to each other, said flanges depressed to provide seats, a base plate mounted upon each of said seats and provided at one end with an enlargement, said base plates adapted to have the rail sections mounted thereon, said sections abutting against said enlargements, a clip seated upon each of said enlargements adapted to overlap one side of the base of the rail sections, a clip mounted upon each of said base plates, of greater thickness than the first-mentioned clip and adapted to overlap the other side of the base of the rail section, and holdfast devices extending through said clips, base plates and flanges for fixedly securing the clips in position whereby the rail sections are connected to the supporting member.

2. A metallic tie and rail fastener comprising a supporting member embodying a web, a base and a head formed of a pair of laterally extending flanges, said flanges projecting in

opposite directions with respect to each other, said flanges depressed to provide seats, a base plate mounted upon each of said seats and provided at one end with an enlargement, said base plates adapted to have the rail sections mounted thereon, said sections abutting against said enlargements, a clip seated upon each of said enlargements adapted to overlap one side of the base of the rail sections, a clip mounted upon each of said base plates, of greater thickness than the first-mentioned clip and adapted to overlap the other side of the base of the rail section, and holdfast devices extending through said clips, base plates and flanges for fixedly securing the clips in position whereby the rail sections are connected to the supporting member, said holdfast devices positioned at the corners of the base plates.

3. A metallic tie and rail fastener comprising a supporting member embodying a base, a web, and a head formed of a pair of laterally extending flanges, said flanges provided with transversely extending depressions to constitute seats, a base plate mounted on each of said seats and prevented from longitudinally shifting by the walls of the depression, said base plates being rectangular in contour, each of said base plates provided at one side with an enlargement, said base plates adapted to support the rail sections, clips mounted upon the base plates and overlapping the base of the rail sections, and holdfast devices extending through the clips, base plates, and flanges for fixedly securing the clips in position whereby the rail sections are connected to the supporting member.

4. A metallic tie and rail fastener comprising a supporting member embodying a base, a web, and a head formed of a pair of laterally extending flanges, said flanges provided with transversely extending depressions to constitute seats, a base plate mounted on each of said seats and prevented from longitudinally shifting by the walls of the depression, said base plates being rectangular in contour, each of said base plates provided at one side with an enlargement, said base plates adapted to support the rail sections, clips mounted upon the base plates and overlapping the base of the rail sections, and holdfast devices extending through the clips, base plates, and flanges for fixedly securing the clips in position whereby the rail sections are connected to the supporting member, said holdfast devices extending through each base plate and arranged at certain corners of the latter.

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

OSCAR M. BOYLAN.

Witnesses:

CYRUS D. MILLER,

THOS. J. LEWIS.