H. K. MYERS.

COMBINED TIE PLATE AND RAIL FASTENING.

APPLICATION FILED APR. 30, 1910.

980,322.

Patented Jan. 3, 1911

2 SHEETS—SHEET 1.

Fig. 1.

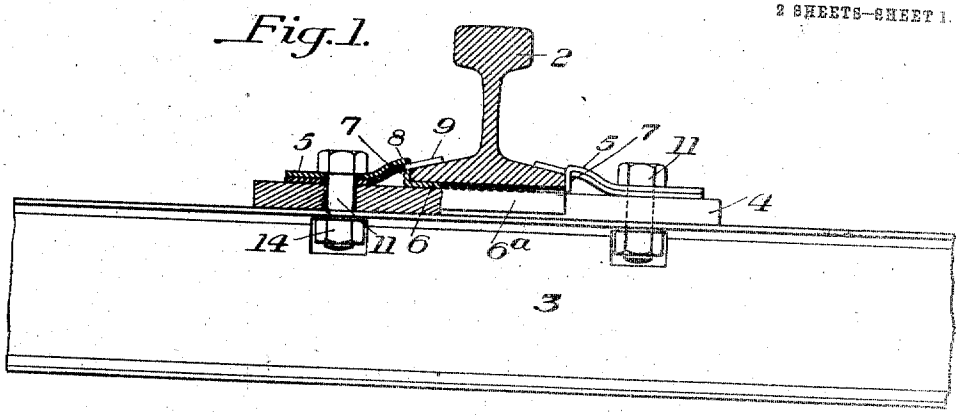


Fig. 2.

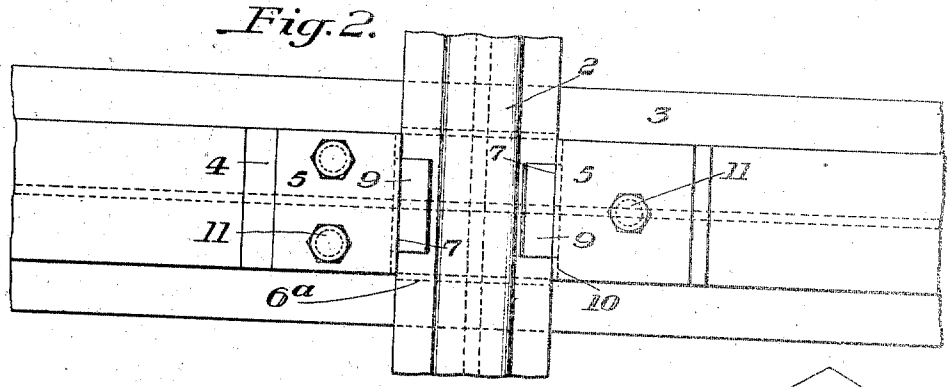


Fig. 3.

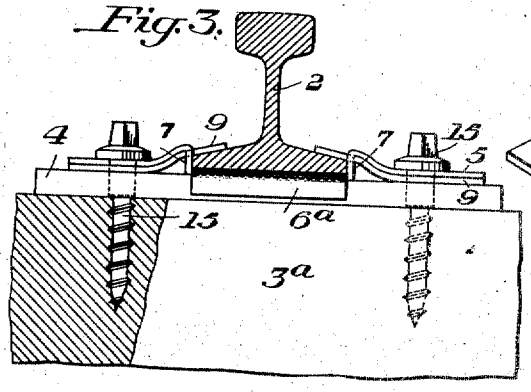


Fig. 4.

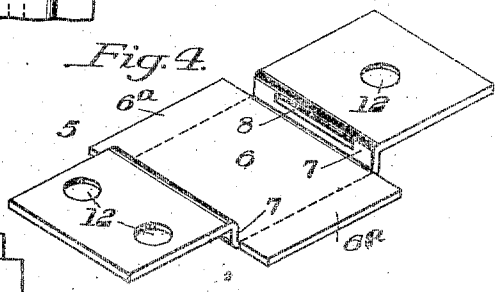
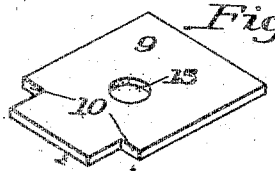


Fig. 5.



WITNESSES

R. A. Balderson

Walter Famariss

INVENTOR

H. K. Myers,

by Bakewell, Byrnes & Parmelee.

his Attys

H. K. MYERS.

COMBINED TIE PLATE AND RAIL FASTENING.

APPLICATION FILED APR. 30, 1910.

980,322.

Patented Jan. 3, 1911.

2 SHEETS—SHEET 2.

Fig. 6.

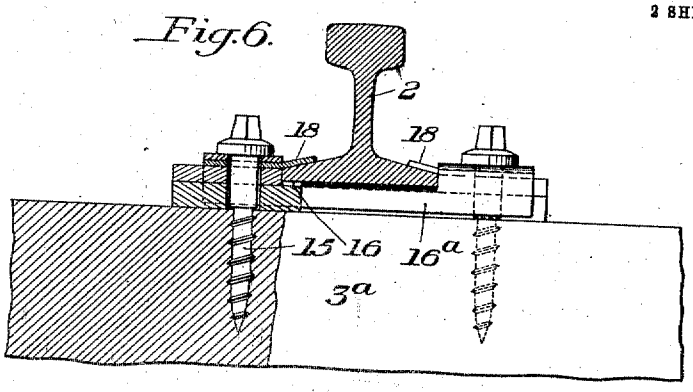


Fig. 7.

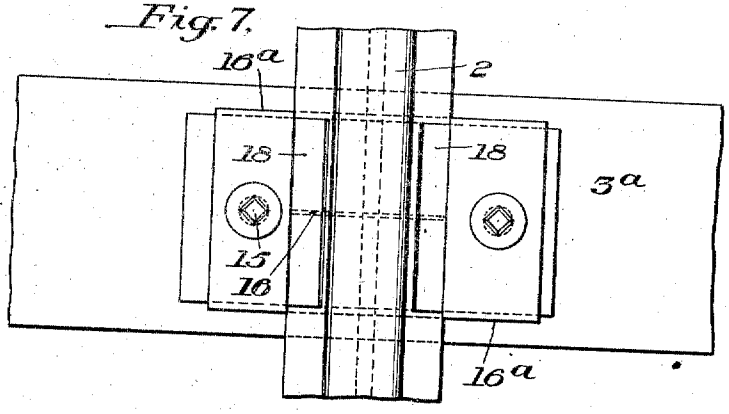
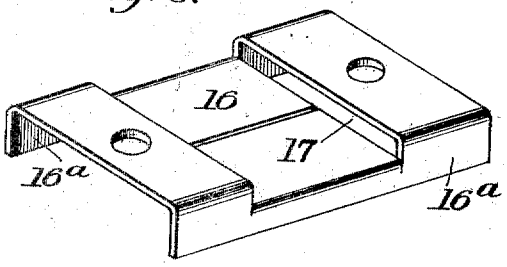


Fig. 8.



WITNESSES

R. A. Balderson

Walter Famariss

INVENTOR

H. K. Myers,

by Bakewell, Byrnes & Parmelee.

his Attys

UNITED STATES PATENT OFFICE.

HENRY K. MYERS, OF WILKINSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE D. BRECK, OF PITTSBURG, PENNSYLVANIA.

COMBINED TIE-PLATE AND RAIL-FASTENING.

980,322. Specification of Letters Patent. Patented Jan. 3, 1911.

Application filed April 30, 1910. Serial No. 558,712.

To all whom it may concern:

Be it known that I, HENRY K. MYERS, of Wilkinsburg, Allegheny county, Pennsylvania, have invented a new and useful Combined Tie-Plate and Rail-Fastening, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view partly in vertical section and partly in end elevation, showing my invention applied to a metal tie; Fig. 2 is a plan view of the same; Fig. 3 is a sectional view showing the invention applied to a wooden tie; Fig. 4 is a perspective view showing one form of the saddle; Fig. 5 is a perspective view of one of the clips; Fig. 6 is a sectional view showing a modification of the invention; Fig. 7 is a plan view of Fig. 6; and Fig. 8 is a perspective view of the saddle shown in Figs. 6 and 7.

My invention has relation to a combined railway tie and rail fastening, and has been more particularly designed as an improvement upon the fastening described and claimed in my Patent No. 899,230, dated September 22nd, 1908. The present invention, while retaining the same general mode of fastening disclosed by the said patent, provides improved forms of the saddle, having rail-seating portions which act as tie plates, and which are so related to the fastenings that in case the fastening at either side of the rail should become defective, the fastening at the other side will prevent spreading of the rail.

By providing the saddles with the rail-seating portions, I obtain a device in which the fastening clips will move vertically with any vertical movement of the rails under passing trains, thereby retaining a secure fastening engagement with the rails in all positions thereof.

Other objects and advantages of my invention will hereinafter appear.

Referring first to that form of my invention which is shown in Figs. 1, 2, 4 and 5, the numeral 2 designates a track rail, 3 a metal tie of the well-known I-beam form, and 4 a member, former of wood or other suitable non-metallic material, which is interposed between the rail 2 and the tie 3, as in my said patent, so as to destroy the effect of vibration as much as possible and to form a cushion for the rail.

5 designates the saddle, which, instead of being cut away at its central portion as in my said patent, has a depressed central portion 6 with vertical shoulders 7 at each side, such depression and shoulders forming a seat for the base of the rail. The shoulders 7 are formed with the slots 8 through which extend the clips 9, which engage the base flange of the rail. These clips are preferably of somewhat resilient material, and are generally the same as those shown in my said patent, with the exception that they are preferably shouldered at 10, with projecting tongue portions extending through the slots 8. The saddle clips and cushion block are secured to the tie 3 by means of the vertical bolts 11, which extend through openings 12 in the end portion of the saddle through corresponding openings 13 in the clips, and through openings in the cushion block 4 and top flange of the tie 3, being secured at their lower ends by means of nuts 14, which may be locked against turning in the manner described in my said patent.

The end portions of the saddle are inclined downwardly from the shoulders 7; and the saddle is preferably of material of sufficient resiliency, or spring, so that when the bolts 11 are inserted and screwed to place, they will spring the end portions of the saddle and of the clip downwardly into substantially horizontal position upon the cushion block 4, as shown in Fig. 1. I also preferably form the depressed portion 6 of the saddle with lateral extensions 6^a, which may be bent downwardly on the dotted lines shown in Fig. 4 over the edges of the cushion block, for the purpose of preventing said block from splitting.

It will be seen that the rail, being seated in the depression 6 and against the vertical shoulders 7, is securely held against any independent spreading movement. The two bolts 11 being connected through the rail-seating portion of the saddle, if one of the bolts should become sheared, or should work out, the other bolt will retain the saddle against any endwise movement on the tie.

Inasmuch as all portions of the saddle will move downwardly substantially the same extent under the vertical movement of the rail, it will be seen that the engaging ends of the clips 9 will also move vertically with vertical movements of the rail, and will

at all times maintain a secure engagement with the rail. The fastening, together with the cushion block, gives a very considerable element of resiliency, which largely overcomes the objections which have hitherto been urged against the use of metal ties.

Fig. 3 shows the application of my invention to a wooden tie 3^a. The only difference between this application and the form shown in Fig. 1, is that instead of bolts 11 I employ screw spikes 15, or other suitable means for fastening the parts to the tie. I also preferably employ a cushion block under the rail, as in the form first described, but this cushion block may be omitted, if desired, both from wooden ties and from metal ties, and the saddle be seated directly upon the tie.

Figs. 6, 7 and 8 show a modified form of saddle, which is somewhat similar to the form shown in my said patent, but which instead of having its central portion entirely cut away, is cut away but slightly at its central portion and the side members are bent downwardly and inwardly to form a rail seat 16 in a horizontal plane below the plane of the top of the saddle, as clearly shown in Fig. 8. The edge portions 16^a of the saddle are preferably bent downwardly to embrace the side edges of the filler block. In this construction the formation of the rail-seating recess in the manner described, provides the opening 17 through which the rail-engaging clips 18 are inserted. While I have shown this form of my invention as applied to a wooden tie only, it may obviously be applied to a metal tie in the same manner as the saddle shown in Fig. 1.

My invention provides an exceedingly simple and secure tie plate and fastening, which can be manufactured and applied to a tie at a comparatively low cost; which can be readily renewed when desired; which protects the tie itself from wear and destruction, and which possesses the other advantages hereinbefore enumerated.

It will be apparent that various other modifications may be made in the details of construction and arrangement of the parts without departing from the spirit and scope of my invention as defined in the appended claims. Thus, the exact form of the saddle may be varied; the manner of securing the saddle to the tie may be changed; and the invention may be used with forms of metal ties other than the I-beam form herein shown.

What I claim is:—

1. The combination with a tie and rail, of a saddle plate having a rail-seating depression at its central or intermediate portion with shoulders at the sides of said depression and slots extending through said shoulders, and clips interposed between the saddle and tie and extending through said slots into securing engagement with the base of the rail; substantially as described.

2. The combination with a tie and rail, of a saddle plate having a rail-seating depression at its central or intermediate portion with shoulders at the sides of said depression and slots extending through said shoulders, and clips interposed between the saddle and tie and extending through said slots into securing engagement with the base of the rail, said clips and saddle being of a resilient metal; substantially as described.

3. The combination with a tie and rail, of a cushion on the tie underneath the rail base, a saddle plate seated on the cushion and engaging the side edges thereof, said saddle having a depressed transverse rail-seating portion, clips interposed between the cushion and saddle and engaging the rail base at opposite sides, and means for securing the saddle, clips and cushion to the tie; substantially as described.

4. In a rail fastening, a saddle member having a depressed rail-seating portion, relatively elevated end-seating portions, and downwardly extending lateral portions; substantially as described.

5. In a rail fastening, a saddle having its central portion depressed into a horizontal plane below the plane of the top of the saddle, to form a rail-seat with vertical shoulders at each side, said shoulders having openings therethrough for securing clips; substantially as described.

6. The combination with a tie and rail, of a saddle plate interposed between the tie and rail, clips interposed between the saddle plate and tie and engaging the rail base, said saddle having a depressed rail-seating portion, and means for securing the clips and saddle plate to the tie; substantially as described.

In testimony whereof, I have hereunto set my hand.

H. K. MYERS.

Witnesses:
GEO. B. BLEMING,
H. M. CORWIN.