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PATENTED MAR. 27, 1906.

F. McCUNE.

SHEET STEEL RAILROAD TIE AND RAIL BRACE.

APPLICATION FILED DEC. 7, 1905.

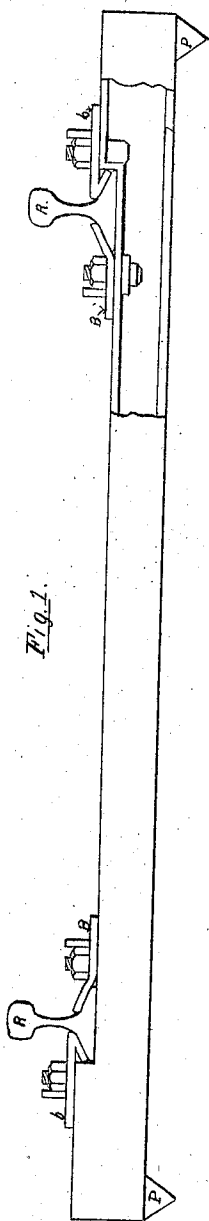


Fig. 1.



Fig. 2.

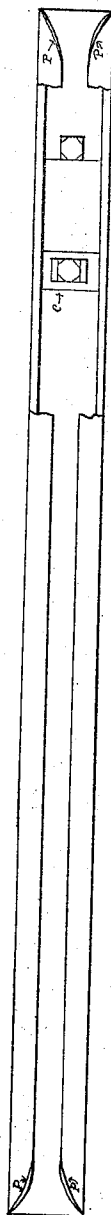


Fig. 3.

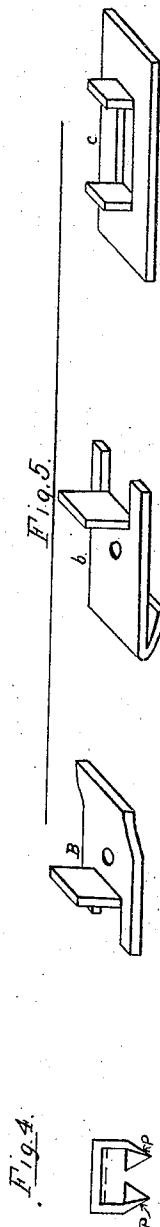


Fig. 4.

Fig. 5.

WITNESSES:

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SHEET-STEEL RAILROAD TIE AND RAIL BRACE.

No. 815,972.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed December 7, 1905. Serial No. 290,813.

To all whom it may concern:

Be it known that I, FRANK McCUNE, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful sheet-steel railroad tie and rail brace in combination, together with clamps and washers for fastening the rails to the tie, which resembles in general construction my sheet-steel railroad tie and rail brace for which Letters Patent were granted August 8, 1905, Serial No. 229,313, but which I have improved as hereinafter set forth, of which the following is a specification.

My invention consists of a sheet-steel railroad tie and rail brace in combination with suitable clamps and washers for fastening the rails to the tie, the clamps and washers being so constructed as to act as locks to prevent the bolts and nuts from turning.

Following is a description of the drawings of my railroad-tie, together with the clamps referred to.

Figure 1 is a side view of the tie and clamps and end view of the rails. Fig. 2 is a top view of the tie. Fig. 3 is a bottom view. Fig. 4 is an end view showing cross-section of the tie. Fig. 5 is a perspective view of the clamps and washers.

The construction of this tie is as follows: The tie is pressed into rectangular shape, the dimensions for standard-gage track being preferably seven feet long by eight inches wide by four inches deep. Extending along the top face of the tie two feet eight and one-fourth inches, more or less, from the center each way is a depressed surface one inch in depth. On this depressed surface and at the extreme ends thereof the rails are fastened, as hereinafter set forth, so that the higher surface at each end forms a brace which prevents the rail from spreading or being moved out of gage. The rails are fastened to the tie by clamps B b, which are bolted to the tie and project over the flanges of the rail, as shown in the drawings, Figs. 1 and 2. On the bottom surface of the tie the two corners P P, Figs. 1, 3, and 4, at each end are turned down about three inches, forming projections, the object of which is to afford resistance to any end thrust of the tie and so preserve the alinement of the track.

Fig. 1 shows the manner of applying the clamps B b and the washers c, a portion of the

side of the tie being broken away, showing end view of washer c, which fits neatly between the sides of the tie, the ends being square, so that it cannot turn, and has a rectangular hole punched through at the center to allow the bolt to pass through, the width of the hole being slightly more than the diameter of the bolt and the length of the hole slightly more than the width of the head of the bolt, so that when the hole is punched two lugs are formed which engage the head of the bolt and prevent it from turning. This washer is only used under the inside clamps, as the offset formed by the depression in the top face of the tie prevents the bolt from turning at that point. The washers also act as stiffeners to the top of the tie. A perspective view of the washer c is also shown under Fig. 5.

To prevent the nuts from turning, I use the clamps B B and b b, which have two parallel slots extending from their outer edge, as shown in Fig. 2, so that the section of the clamps between these slots may be turned up against the nut, thus preventing it from turning, as shown in Figs. 1 and 5.

I claim as my invention and desire to secure by Letters Patent—

1. A sheet-steel railroad tie and rail brace in combination with nut-locks formed by making two parallel slots extending from the outer end of the clamps or rail-fasteners, so that the section of the clamps between these slots may be turned up against the nut, thus preventing it from turning; substantially as set forth.

2. A sheet-steel railroad tie and rail brace, together with suitable clamps, in combination with washers having a rectangular hole punched through the center, the process of punching forming two lugs on each washer, extending at right angles to the surface of the tie, forming a lock for the head of the bolt, and a stiffener for the top of the tie, substantially as set forth.

In testimony whereof I have signed my name to this specification, at Pittsburgh, Pennsylvania, November 28, 1905, in the presence of two subscribing witnesses.

FRANK McCUNE.

Witnesses:

H. W. WATTS,

OLIVER G. FERGUSON.