C. L. INMAN.

RAILROAD TIE AND CLAMP.

APPLICATION FILED NOV. 24, 1911.

1,030,407. Patented June 25, 1912.

Fig. 1.

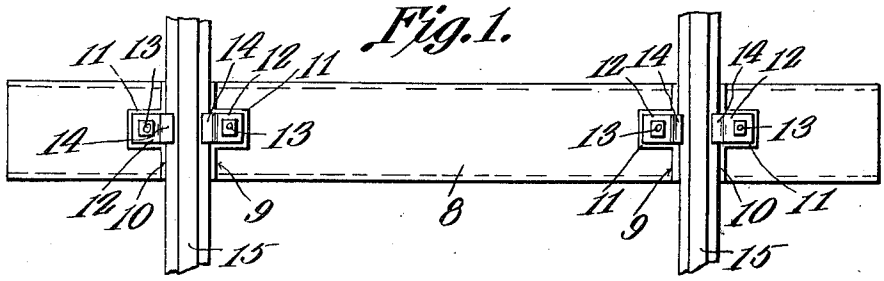


Fig. 2.

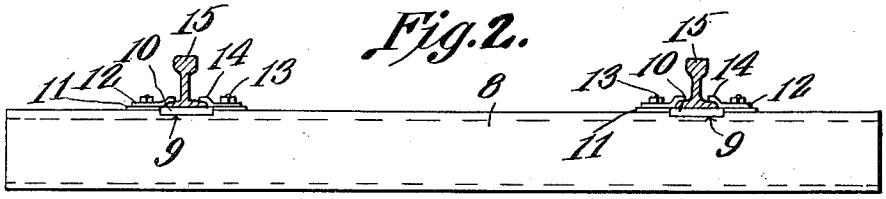


Fig. 6.

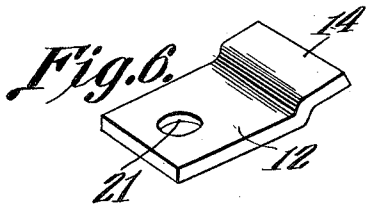


Fig. 4.

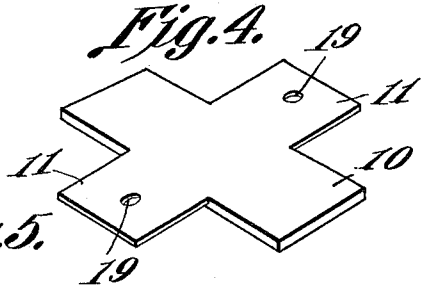


Fig. 5.

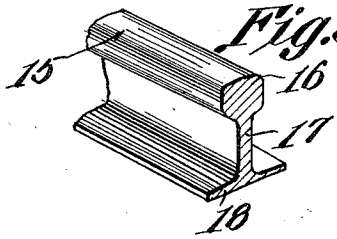
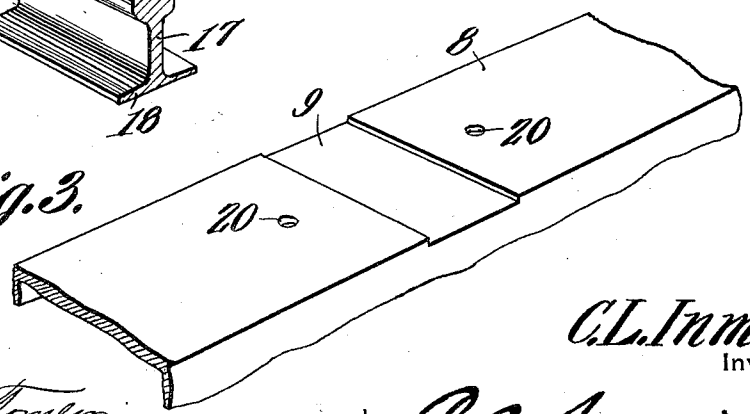


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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RAILROAD-TIE AND CLAMP.

1,030,407. Specification of Letters Patent. Patented June 25, 1912.

Application filed November 24, 1911. Serial No. 662,231.

To all whom it may concern:

Be it known that I, CLAIR LEROY INMAN, a citizen of the United States, residing at Seneca, in the county of Thomas and State of Nebraska, have invented a new and useful Railroad-Tie and Clamp, of which the following is a specification.

This invention relates to metallic rail ties.

The use of metallic ties has been looked upon as impractical and has met with objection due to the rigidity of such ties which would tend to eliminate the cushioning of the rails as is at present provided in the use of common wooden ties. Other objections to metallic ties are the tendency of the ties to break or become fractured or be distorted by strains due to the locomotive passing over the rails. These objections have been partially overcome by cushioning the rail itself, but it is the object of the present invention not only to cushion the rails but to cushion the rail clamps also, the cushioning being attained in a novel manner by the construction and arrangement of parts hereinafter described and claimed.

This invention by the provision of the novel cushioning means contemplates the elimination of the objections to existing metallic ties and to provide an efficient and serviceable, as well as a simple, durable and inexpensive construction.

The invention is illustrated in the accompanying drawing, wherein similar reference characters indicate similar parts, and wherein:—

Figure 1 is a plan view of a tie and fragmental portion of the rails passing thereover embodying the present invention. Fig. 2 is a side elevation thereof. Fig. 3 is a fragmental view in perspective of the tie. Fig. 4 is a perspective view of the cushion. Fig. 5 is a fragmental view in perspective of one of the rails. Fig. 6 is a perspective view of one of the clamps for engaging the base flanges of the rails.

Referring in detail to the drawing, the tie is designated by the numeral 8, the same being hollow and constructed of pressed steel, and in the upper face thereof is provided with shallow channels 9 across its face. A cruciform cushion is disposed on the face of the tie at each end thereof, having the thickened portion 10 fitting in the channel 9 and the other portions 11 projecting over the face of the tie at the sides of the channel, the upper surfaces of the said portions being flush. The rails which have been designated by the numeral 15 and which consist of the usual tread 16, web 17, and a base flange 18, rest upon and pass over the thickened portions 10 of the cushions, and the clamps 12 are arranged on the thinner portions 11 of the cushions at each side of the channels 9, the said clamps having their inner ends raised to form lips 14 for engaging the base flanges of the rails. Bolts 13 are passed through the apertures 20 at the respective sides of the channels 9 and through the apertures 19 in the portions 11 of the cushions and the apertures 21 in the clamps 12 to secure the clamps in position. The cruciform cushions are formed of pressed and tarred straw board and the edges of the cushions are extended beyond the edges of the rails and the clamps, the channels 9 being wider than the base flange 18 of the rails.

In the employment of the combination and construction of parts above described the rails will be cushioned whereby the same may yield upon the locomotive passing thereover to relieve the tie of unnecessary strain and upon the rails returning to normal position the clamps 12 being arranged on the thinner portions 11 of the cruciform cushions permit the rail or rails to yield slightly thus preventing strain upon the tie upon the rails returning to normal position as is customary in constructions of this character wherein the clamps are secured rigidly to the tie. The thickened portions 10 of the cushions fitting into the channels 9 or being inset into the tie give the rail a greater yielding power than the clamp which is desirable, and this construction will also tend to retain the cushion in position. In this manner the rails are cushioned in a convenient manner and the clamps yieldably retain the rails upon the tie in an effective manner, thus relieving the tie of undue strain.

This device is not only efficient in its use, but is also extremely simple in construction rendering it inexpensive, and is both convenient and durable in use.

What is claimed as new is:—

1. In combination, a tie, a cruciform cushion having a thickened portion embedded in the tie, a rail passing over the thickened portion of the cushion, and rail clamps arranged on the other portions of the cushion.

2. In combination, a tie having a channel across its face, a cruciform cushion having a thickened portion fitting in the said channel and the other portions projecting over the face of the tie at the sides of the channel, a rail resting on and passing over the said thickened portion, and clamps arranged on the portions of the cushion projecting over the face of the tie and engaging the base flange of the rail.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CLAIR LEROY INMAN.

Witnesses:
ALFRED W. FRANKS,
GEORGE MCCAWLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."