

J. H. COX.
METALLIC RAILWAY TIE.
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1,062,891.

Patented May 27, 1913.

Fig. 1.

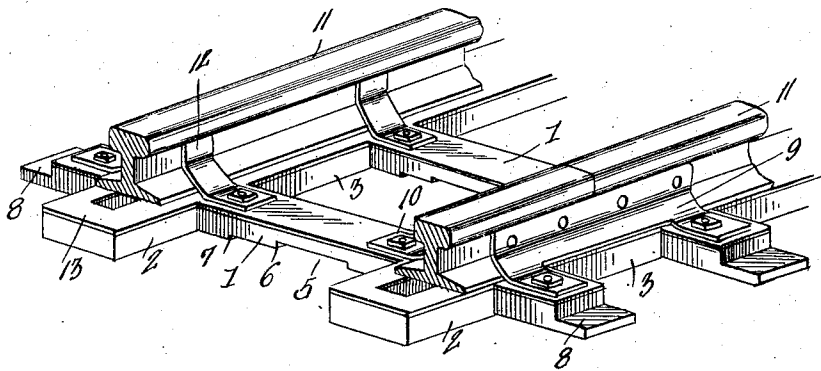


Fig. 2.

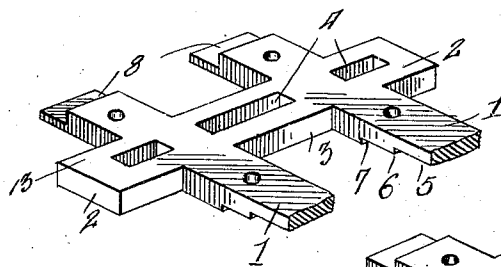
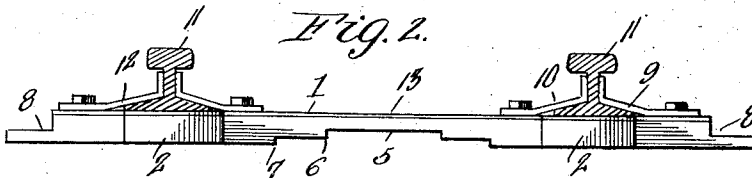


Fig. 3.

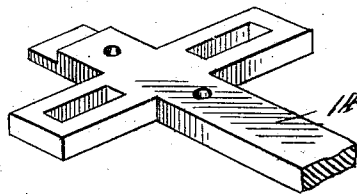


Fig. 4.

WITNESSES
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JOHN H. COX, OF HOT SPRINGS, ARKANSAS.

METALLIC RAILWAY-TIE.

1,062,891.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. COX, a citizen of the United States, residing at Hot Springs, in the county of Garland and State of Arkansas, have invented new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

My invention relates to the class of railway ties and more particularly to the class of metallic ties, the construction, use, and advantages of which will be hereinafter fully described.

An object of my invention is to provide a tie having a continuous rail-bearing surface and one that requires a minimum quantity of metal while maintaining proper strength and durability.

Another object of my invention is to provide a double cross tie, formed in a single piece of metal and adapted to keep the rails, when bolted thereto, from spreading or creeping and also to prevent the rail joints from sagging or dropping as is often the case where wooden ties are used.

A further object of my invention is to provide a tie having a layer of rubber or other insulating material on the top rail-bearing surface thereof, which cushions the rail thereby giving it elasticity and also forms an easy adhesive bed.

A still further object of my invention is to provide a specially constructed rail clamp for adjustably gaging the distance between the rails and so constructed as to overlap and connect the meeting ends of the rails.

With the foregoing and other objects in view my invention consists in such details of construction and arrangement of parts as will be hereinafter more fully described and pointed out in the appended claims.

In describing my invention in detail reference will be had to the accompanying drawings where like characters denote like or corresponding parts throughout the several views, and in which—

Figure 1 is a perspective view of my improved tie showing a double and single clamp. Fig. 2 is an elevation of a tie. Fig. 3 is a perspective view partly broken away showing a double tie. Fig. 4 is a similar view of a single tie or modification.

In the drawings the numeral 1 designates cross tie members having flanges 2 projecting from one side thereof, said flanges being long enough to lie against the next

tie to form a continuous rail-bearing surface. The ties are connected on the double tie by a rail-bearing cross piece 3 of the same width, in alinement with, and for the same purpose as the flanges 2. Each of the flanges 2 and the cross piece 3 has a cut out or hole 4 for reducing the weight and the amount of metal of which the tie is made.

The lower or under side of each cross tie 1 is cut away at 5 to form the shoulders 6 and 7 which act as a guard against high centers and also prevents the tie from lateral or side movement.

Projecting members as shown are provided beyond the rail-bearing portions 2 and 3 in continuation of the tie members, and at 8 are cut away for the purpose of reducing the weight and cost of material. To the projecting members just described, are adapted to be clamped outside and inside rail clamps respectively designated 9 and 10.

On a curve a track has to be from $\frac{1}{4}$ to $\frac{1}{2}$ an inch wider than on a straight line and to provide for this difference I make the outside rail clamp 9, $\frac{1}{4}$ of an inch larger than the inside clamp 10, so that when it becomes necessary to widen the track, all that has to be done is to exchange the clamps, putting the outer or longer clamp on the inside and the inner or shorter clamp on the outside. This simple change brings the rails 11 to the desired gage. The double clamp is used where two rail ends meet while the single clamp is for intermediate points.

Along the top rail-bearing surface of my tie, I provide a rubber strip which acts not only as a cushion for the rails but also gives them elasticity and forms an adhesive bed.

It will be seen that this design of a rail tie is a remedy for such well known accidents as broken rails, spreading rails, and creeping rails, and that the clamp forms an adjustable gage for widening the track when desired or occasion demands. This tie will also prevent the rails from sagging or going down as is often the case where the old wooden ties are used, for the reason that the meeting ends of the rail being flush and resting on a solid foundation, they cannot drop one below the other; hence the protection to joints.

It will be found upon practicable application of the tie that it will not be too

heavy, and that the rail-bearing surface of one double tie is equal to that of four wooden ties.

Referring to the modification shown in Fig. 4, I have provided a single cross tie 14 which may be used as well as a double tie without departing from the spirit of the invention.

I desire it to be understood that I might make slight changes in the combination and arrangement of the parts, provided such changes fall within the scope of the subjoined claims.

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

1. In a railway tie device, a plurality of tie members, projections on said device in line with said tie members, rail-bearing means intermediate the tie members, in combination with rails having their junction intermediate said tie members, and a clamp member securing said rails together, and means to secure said clamp member to each of said projections.

2. In a railway tie device, a plurality of

tie members, said ties connected adjacent one end by a rail-bearing cross piece consisting of a single piece of metal, in combination with railway rails having their junction intermediate the ties, and a clamp member at said junction, said device having projections beyond said cross piece and in line with the tie members, and said clamp member connected to each projection.

3. A rail tie device comprising a plurality of distanced tie members, rail-bearing means intermediate the tie members, rail-bearing means in continuation of said rail-bearing means on opposite sides of said tie members to abut rail-bearing means of adjacent tie members to provide a continuous rail-bearing surface, projecting means on said device beyond the rail-bearing means, in combination with means to fasten a rail bearing on said rail-bearing means to said projecting means.

JOHN H. COX.

Witnesses:

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A. HOLLAND.