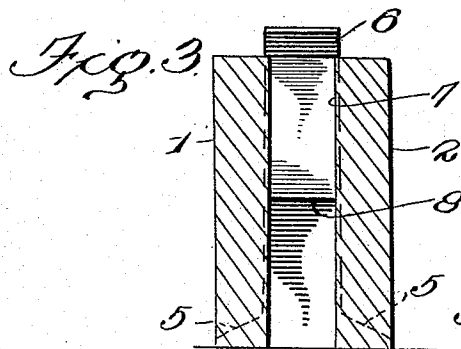
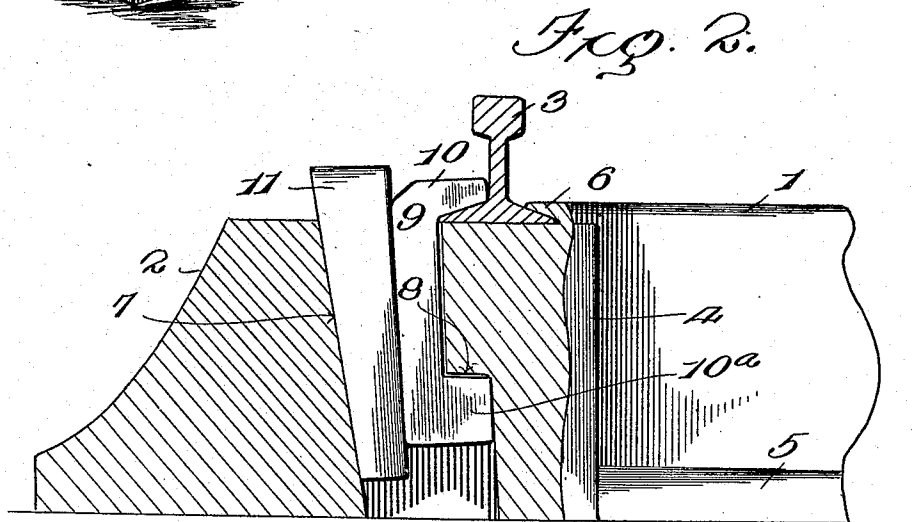


937,054.

Fig. 1.



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Witnesses
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UNITED STATES PATENT OFFICE.

JAMES M. DAVIDSON, OF ROXABELL, OHIO.

RAILWAY-TIE.

937,054.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed November 27, 1908. Serial No. 464,556.

To all whom it may concern:

Be it known that I, JAMES M. DAVIDSON, citizen of the United States, residing at Roxabell, in the county of Ross and State of Ohio, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention comprehends certain new and useful improvements in railway appliances, relating more particularly to an improved metallic tie, and the invention has for its object a simple, durable and efficient construction of device of this character which embodies peculiar means whereby it is held effectually against any accidental displacement in the ballast, and which is equipped with novel fastening means through the instrumentality of which the rails may be secured to the tie so as to be susceptible of having sufficient play to prevent the parts from wearing out because of excessive vibration and undue rigidity of the structure, as is the case with the ordinary metallic ties in general use.

With this and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe, and then point out the novel features thereof in the appended claim.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of a railway tie constructed in accordance with my invention; Fig. 2 is a longitudinal section thereof; and, Fig. 3 is a transverse section.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing, the numeral 1 designates a metallic tie, the intermediate portion of which is substantially inverted T-shape in cross-section, while the ends are preferably thickened, as indicated at 2 to constitute relatively wide bearing surfaces for the rails 3 that are supported thereon. In addition to the function just mentioned, the thickened end portions also serve to provide opposing shoulders 4 which act in conjunction with the upwardly facing shoulders

5 of the intermediate portion to hold the tie against any lateral or vertical displacement in the ballast. This tie is formed in its upper face with oppositely disposed hooked lips 6 that engage the inner base flanges of the rails 3 to hold the same the desired distance apart and thus maintain the proper gage of the track. In proximity to and extending beyond the outer base flanges of the rails, the thickened end portions 2 are formed with longitudinally extending openings 7 passing vertically therethrough and having their inner walls recessed at the lower ends of the openings to provide interior downwardly facing shoulders 8. These openings 7 are designed to accommodate, respectively, metallic clamps 9 which are recessed intermediate of their ends as shown, in order to provide opposing hooked portions 10 and 10^a, the hooked portions 10 projecting upwardly above the upper face of the tie and taking over the outer base flanges of the rails to prevent the same from spreading apart and to hold the rails in engagement with the hooked lips 6, so that the clamps will act in conjunction therewith to effectually secure the rails to the tie. Wedges 11 are driven into the openings 7 between the outer ends of the same and the clamps 9, and hold the clamps against the inner walls of the openings to engage the other hooked portions 10^a with the interior downwardly facing shoulders 8, and thus prevent the clamps from being removed from the tie when the wedges are in position, the said wedges being preferably formed of wood to afford sufficient play of the parts during vibration, as when a train is passing along the track, to eliminate the undue rigidity of structure that is so detrimental in the ordinary metallic ties in general use.

From the foregoing description, in connection with the accompanying drawing, it will be apparent that I have provided an improved metallic tie which may be readily laid during the construction of the track, and is held against possible displacement in the ballast; which embodies improved fastening means by which the rails may be quickly secured to the tie or detached therefrom when necessary; which embodies to a marked degree the characteristics of simplicity, durability and efficiency in construction, and which consists of comparatively few parts that may be easily and cheaply manufactured and readily assembled.

Having thus described the invention, what I claim is:

The combination of a railway tie having an intermediate portion of inverted T-shape in cross-section and provided on opposite sides with upwardly facing shoulders, the end portions of the tie being designed to have the rails rest thereon and being relatively wider than the intermediate portion to provide opposing shoulders cooperating with the upwardly facing shoulders for the purpose specified, the end portions being formed with openings extending vertically therethrough and having their walls recessed

to constitute downwardly facing interior shoulders, clamps mounted in the respective openings and having opposing hooked portions, one of which is arranged to engage the interior shoulders and the other to take over the base flange of the rail, and wedges driven into the openings to hold the clamps in an operative position.

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

JAMES M. DAVIDSON. [L. S.]

Witnesses:

VIRGIL HENRY,
WALTER HEAD.