

J. H. JENNINGS.
RAILROAD TIE.

APPLICATION FILED JAN. 28, 1903. RENEWED SEPT. 16, 1903.

NO MODEL.

Fig. 1.

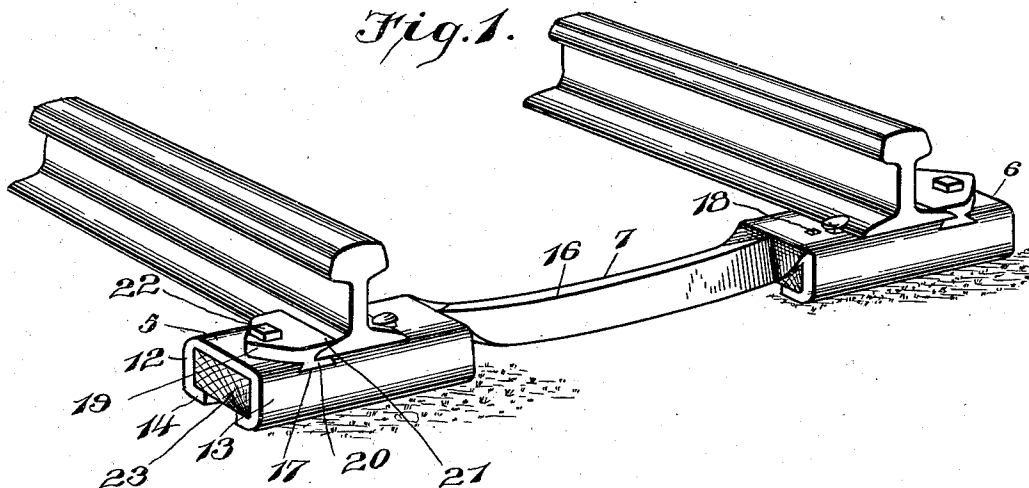


Fig. 2.

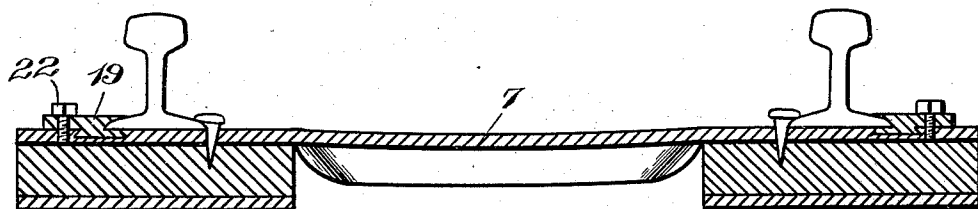


Fig. 3.

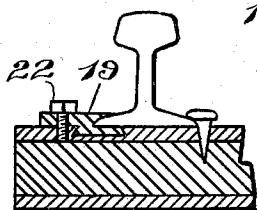
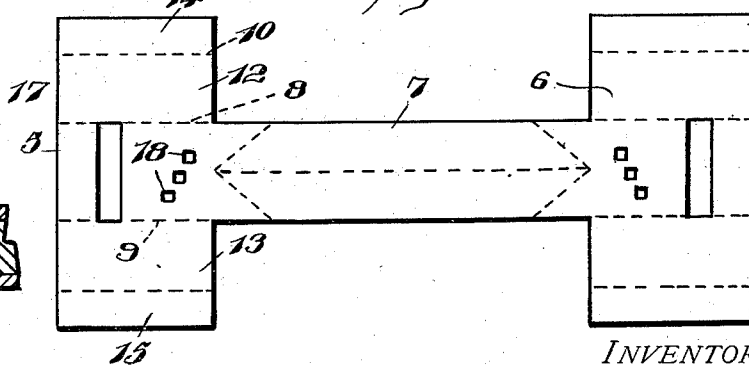


Fig. 4.



WITNESSES:

J. P. Brett

Harry E. Randle

INVENTOR

J. H. Jennings

BY *Charles Charles*
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH HENRY JENNINGS, OF MIDDLEWAY, WEST VIRGINIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 743,084, dated November 3, 1903.

Application filed January 28, 1903. Renewed September 16, 1903. Serial No. 173,496. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HENRY JENNINGS, a citizen of the United States, residing at Middleway, in the county of Jefferson, State of West Virginia, have invented certain new and useful Improvements in Railroad-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railway-ties, and more particularly to the class of metallic ties; and it has for its object to provide a tie which will comprise a minimum of parts, which may be easily and quickly put in place, and which will hold the rails with the utmost security.

A further object of the invention is to provide a tie to which rails of different sizes may be securely attached and upon which the rails may be adjusted toward and away from each other, a further object of the invention being to provide a tie in which the worn parts may be readily replaced.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing a tie embodying the present invention and having rails engaged therewith, the rails being cut off flush with a vertical face of the tie to better illustrate the rail-fastenings. Fig. 2 is a section taken longitudinally through the tie. Fig. 3 is a longitudinal section of one end portion of the tie and showing different fastening means for a rail. Fig. 4 is a plan view, on a reduced scale, showing the blank from which the tie is formed.

Referring now to the drawings, the present tie is formed from a plate of metal, including the broadened end portions 5 and 6 and the central narrowed-neck or connecting-web portion 7. The end portions 5 and 6 are bent downwardly on the lines 8 and 9 and then inwardly on the lines 10 and 11 to form the sides 12 and 13 and the sections 14 and 15 of the bottoms of boxes, which form the end portions of the tie. The central or connecting web 7 is bent downwardly on the central longitudinal line 16, the metal at the ends of the web portions rising gradually to the tops of the boxes.

Transversely through the top of each of the boxes 5 and 6 is formed a dovetailed slot 17, and spaced inwardly from each of these dovetailed slots is a diagonal series of perforations 18 for a purpose to be presently explained. In connection with each of the dovetailed slots is employed a clamping-plate 19, having a depending dovetailed portion or rib 20, which slidably engages the dovetailed groove, a portion of this rib extending laterally beyond the side edge of the plate and lying flush with the upper face of the tie, so that the rail which rests upon the tie between the dovetailed groove and the series of perforations 18 may have its flange at one side resting upon this laterally-projecting portion of the rib 20, the flange of the rail being held against upward displacement from the rib by means of the overhanging flange 21 of the clamping-plate. To hold the clamping-plate against sliding movement from the tie, a set-screw 22 is engaged therewith and with the tie.

In each of the boxes at the ends of the ties is inserted a plug 23, of wood, and to secure the inner edge of the rail-flange a spike is driven through the proper perforation 18 and into the corresponding block of wood, the spike serving not only to hold the rail, but also to prevent displacement of the block. By forming the diagonal series of perforations 18 the spike may be properly positioned to hold rails of various widths.

When the rails are to be adjusted toward each other to compensate for wear, as at curves, or to satisfy other specific conditions, clamping-plates having ribs 20, which project laterally to lesser degrees than shown in Fig. 1 and as shown in Fig. 3, may be used.

With the present construction it will be seen that the rails are held by the clamping-plates positively against separation, while the spikes are used to hold them up against the clamping-plates and to prevent tilting of the rails, and it will be seen that when the wooden blocks require replacing the spikes may be withdrawn and the blocks easily and quickly removed for replacement. Furthermore, it will be seen that as the flange of the rail rests upon the rib 20 it assists the dovetailed groove in holding the plate against upward movement, and it will be understood that in practice modifications of the specific construc-

tion shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

- 5 When the tie is placed in the track, the ballast is filled in until it is practically flush with the tops or upper faces of the end portions and the ridge of the web of the tie, so that the tie is held against movement in all directions as
10 securely as is the ordinary wooden tie, while the shape of the web of the tie insures rapid shedding of all water therefrom.

What is claimed is—

- 15 1. The combination with a tie having a transverse groove in its upper face, of a clamping-plate having a downwardly and laterally projecting rib slidably engaged in the groove and adapted to receive and support a rail in conjunction with the tie, said clamping-plate
20 having also a flange projecting over the laterally-extending portion of the rib, to lie upon the rail-flange, and means for holding the rail against lateral displacement from the clamping-plate.
- 25 2. The combination with a tie having a transverse dovetailed groove in its upper face and a diagonal series of perforations spaced therefrom, of a clamping-plate having a down-

wardly and laterally projecting rib slidably fitted in the groove and adapted to receive
30 and support a rail in conjunction with the tie, said clamping-plate having also a flange projecting over the laterally-extending portion of the rib, to lie upon the rail-flange, and a spike for engagement with the perforations
35 interchangeably to hold the rail against displacement from the clamping-plate.

3. The combination with a hollow tie having a wooden plug therein and a diagonal series of perforations leading to the plug, and
40 adapted to receive a rail-spike interchangeably, of means coöperating with said spike to hold the rail upon the tie.

4. A tie comprising hollow end portions having a connecting-web and openings leading to the end portions, rail-holding devices
45 adjacent to the openings, and fillings for the end portions which are penetratable by spikes.

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

JOSEPH HENRY JENNINGS.

Witnesses:

JOS. H. BLACKWOOD,
GEO. H. CHANDLEE.