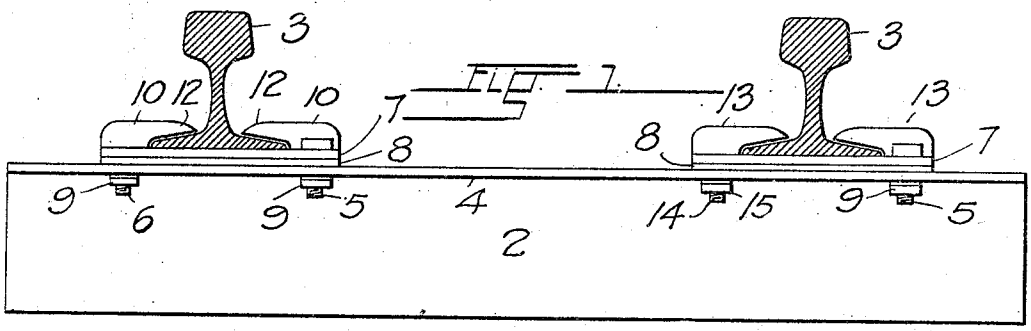
D. C. FUNCHEON & C. E. OLSEN.

RAILWAY TIE.

APPLICATION FILED MAY 4, 1909.

950,322. Patented Feb. 22, 1910.



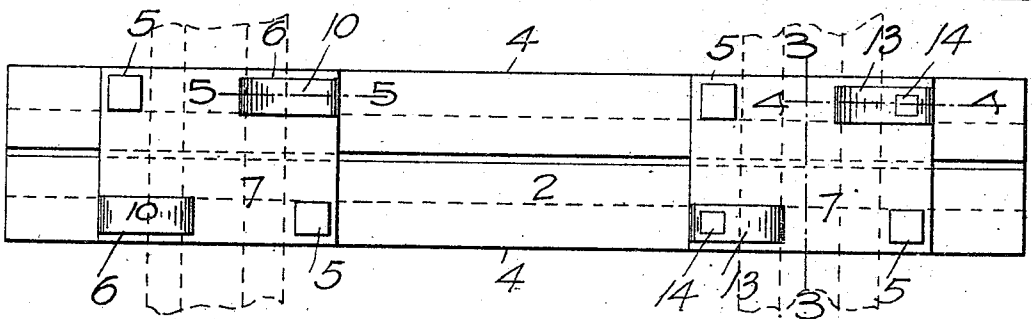


FIG. 2.

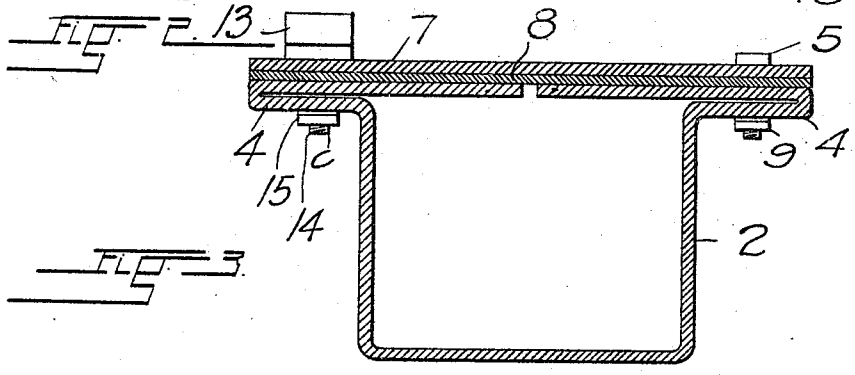


FIG. 3.

FIG. 4.

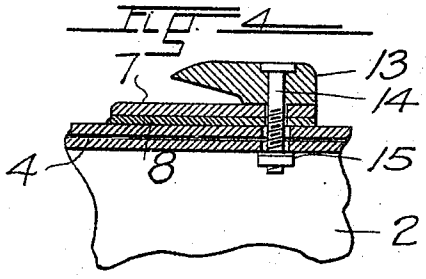
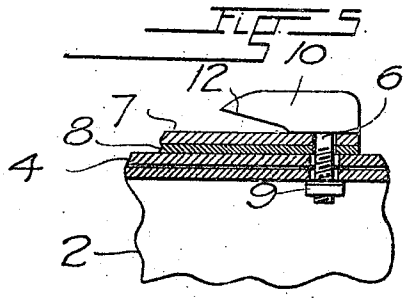


FIG. 5.



WITNESSES:

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RAILWAY-TIE.

950,322. Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed May 4, 1909. Serial No. 493,818.

To all whom it may concern:

Be it known that we, DANIEL C. FUNCHEON and CHARLES E. OLSEN, citizens of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to improvements in railway ties and has for its object to provide a tie which being composed of metal, is more durable than those made of wood; which by its peculiar construction and the provision of a cushion of elastic material will have sufficient resiliency to prevent injury to the rolling stock such as is caused by a nonyielding track; and which includes simple and adequate means to effectively secure the rails of the track against lateral displacement. We attain this object by the means illustrated in the accompanying drawings in the various views of which like parts are similarly designated and in which—

Figure 1, represents an elevation of our improved tie, showing the rails of a railway track in operative position, Fig. 2, a top view of the tie, the rails having been shown in broken lines, Fig. 3, a transverse section along the line 3—3 Fig. 2, drawn to an enlarged scale, Fig. 4, an enlarged fragmentary section along the line 4—4 Fig. 2 and Fig. 5, a similar section taken along the line 5—5 Fig. 2.

Referring to the drawings by numerical reference characters, let the numeral 2 designate our improved tie and 3 the rails supported thereon. The tie 2, as shown in the drawings, is hollow and has longitudinal flanges 4 which, projecting outwardly in a plane with its upper surface, augment its supporting qualities and facilitate the adjustment of the bolts which are part of its construction. The tie is preferably rolled of one piece of sheet-metal whose opposite edges are spaced from each other along a central longitudinal line in its upper surface, a construction which not only imparts a degree of resiliency to the tie, but which also provides an opening through which its interior may be filled with ballast.

Secured upon the upper surface of the tie, by means of bolts 5 and 6; which project through apertures in the flanges 4, are metal plates 7, which, in practice, support the rails 3 of the track and in between these plates and the upper surface of the ties, are disposed slabs 8 of wood or other elastic material which provide cushions to absorb the jars to which the rolling stock is subjected by reason of the rigidity of the metallic ties and the thereon supported rails. The bolts 5 and 6, which as mentioned hereinbefore, project through the flanges 4 of the tie, are secured in place, by means of nuts 9 which engage the under surface of said flanges and the diagonally opposite bolts 6 are formed with enlarged heads 10 having inwardly projecting lips 12 which by engagement with the upper surface of the foot of the rail, secure the same against lateral displacement.

Instead of forming the head 10 integral with the bolt, blocks 13, such as are shown in Figs. 3 and 4, may be employed, which blocks, being shaped in similarity to the heads 10, are secured in position upon the plates 7, by the use of bolts 14 which project through registering openings in the blocks and the flanges 4 and are held in place by means of nuts 15. The heads of the bolts may be countersunk in the upper surface of the block, as shown in the drawings.

The openings in the flanges 4 of the tie through which bolts 14 and 6 project, are preferably elongated as shown in Figs. 4 and 5, to permit a slight lateral movement of the plates 7 and the thereon supported rails whereby a perfect alinement of the adjoining lengths of rails in a railway track, is at all times assured.

While we have shown and described our invention in the best form now known to us, we wish it understood that variations in the arrangement of its parts or in the construction of the body portion of the tie may be resorted to without departing from the principle of the invention.

What we claim and desire to secure by Letters Patent is:—

1. In combination, a railway tie composed of an angularly bent sheet, whose opposite longitudinal edges approach a central longitudinal line in the upper surface of the tie and which is doubled at the longitudinal edges of said surface so as to form outwardly projecting flanges, plates disposed upon said surface and said flanges so as to be engaged by the rails of a track supported on the tie, slabs of elastic substance between said plates and said surface, bolts projecting through said plates, slabs and flanges, and

fastening devices upon said plates whereby the superposed rail is held against lateral displacement.

2. A railway tie comprising a hollow metallic body having longitudinal flanges projecting outwardly from its upper surface, said flanges having elongate openings, plates disposed upon said surface and said flanges, slabs of elastic material between said plates and said surface, bolts projecting through corresponding holes in said plates and said slabs and through the openings in said flanges, and fastening devices associated with said bolts whereby rails disposed upon said plates are held against independent lateral displacement.

In testimony whereof we have affixed our signatures in presence of two witnesses.

DANIEL C. FUNCHEON.
CHARLES E. OLSEN.

Witnesses:
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M. L. GEARY.