

J. A. WIDNER.
METALLIC RAILWAY TIE.
APPLICATION FILED DEC. 2, 1912.

1,058,506.

Patented Apr. 8, 1913.

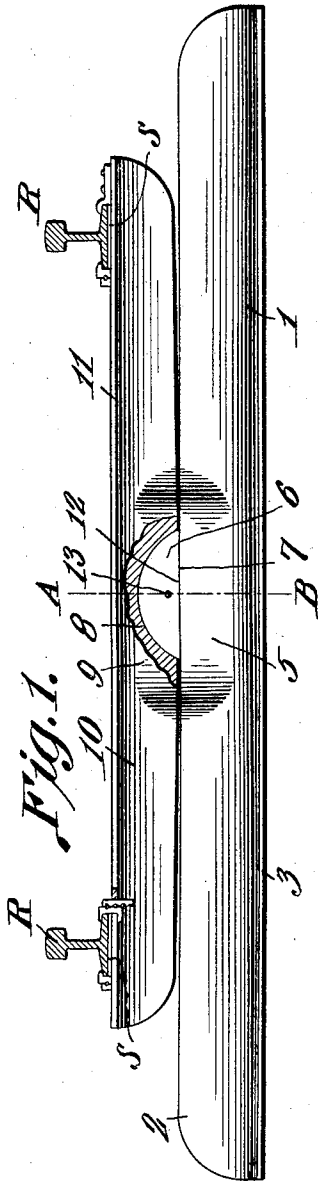


Fig. 3.

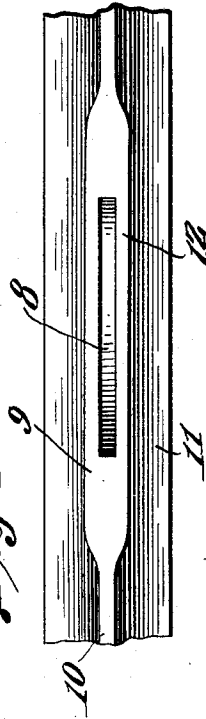
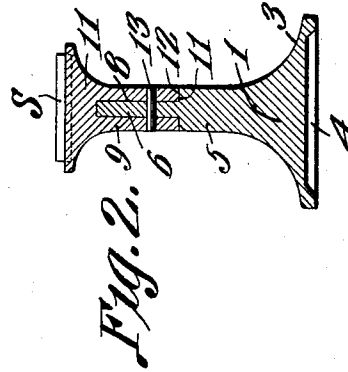
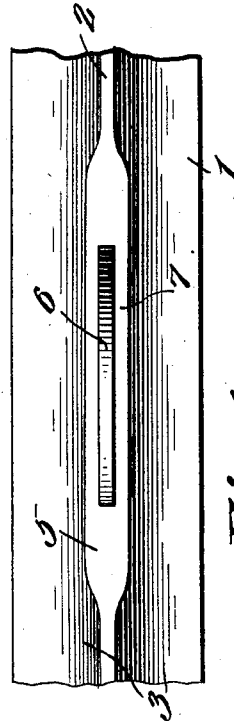


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN A. WIDNER, OF ALPENA, MICHIGAN.

METALLIC RAILWAY-TIE.

1,058,506.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed December 2, 1912. Serial No. 734,603.

To all whom it may concern:

Be it known that I, JOHN A. WIDNER, a citizen of the United States, residing at Alpena, in the county of Alpena and State of Michigan, have invented a new and useful Metallic Railway-Tie, of which the following is a specification.

This invention relates to metallic railway ties and is more particularly designed as an improvement upon the structure disclosed in Patent No. 903,252 issued to me on November 10, 1908.

One of the objects of the invention is to simplify and otherwise improve upon the said patented structure by reducing the amount of metal necessary in the formation of the parts and by providing a connection between said parts which permits a more efficient rolling action of the movable member than has heretofore been possible.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a side elevation of the tie, a portion of the upper member being broken away and the rails in position thereon being shown in section. Fig. 2 is a section on line A—B Fig. 1. Fig. 3 is a bottom plan view of the middle portion of the upper or cushioning member. Fig. 4 is a top plan view of the middle portion of the lower or base member.

Referring to the figures by characters of reference 1 designates a base member preferably substantially T-shaped in cross sectional contour, the web 2 of the section upstanding from the base flanges 3 and there being an elongated recess 4 formed in the lower face of the base and which is adapted to engage the road bed and thus prevent the said base from creeping. The middle portion of the web 2 is preferably thickened, as shown at 5 and extending upwardly from this thickened portion is a segmental tongue 6 which does not extend throughout the width of the thickened portion and which is,

consequently, surrounded by a bearing surface 7. Tongue 6 is adapted to project into a correspondingly shaped recess 8 formed in the central thickened portion 9 of the web 10 which constitutes the lower portion of the upper or cushioning member 11 of the tie. This member 11 is substantially T-shaped in cross sectional contour, the lower edge of the web 10 being extended along lines converging inwardly to a very slight extent so that, when the member 11 is mounted on the member 1 its lower edge will incline outwardly and upwardly to a very slight extent from the middle portions of the two members. As shown in Fig. 3 the thickened portion 9 forms a bearing surface 12 which extends entirely around the recess 8. A pivot pin 13 extends transversely through the thickened portion 9 and through the tongue 6 so as thus to hold the members 1 and 11 assembled. Rails R are adapted to be secured to the end portions of the member 11 in any suitable manner and cushioning devices, such as wooden blocks S may be interposed between these rails and the member 11.

In using the tie the same is to be placed in position in the same manner as an ordinary wooden tie, the ballast being extended upward to or close to the top of the member 11. When the member 11 is subjected to the weight of a car passing along the rails R, said member will spring downwardly at its ends because said ends are spaced slightly from the base member 1 and, at the same time, a minute rocking or rolling movement of the member 11 upon tongue 6 is permitted. Inasmuch as the upper edge of member 1 and the lower edge of member 11 are comparatively narrow it will be apparent that should any ballast be forced therebetween, it would not become permanently lodged in such position but would be promptly displaced during the relative movement of the member 11. By thickening the members at their central or meeting portions, they are reinforced where they are subjected to the greatest strain and the bearing surfaces 7 and 12 cooperate to prevent the member 11 from tilting transversely and thus injuring the tongue 6.

What is claimed is:—

1. A metallic railway tie comprising oppositely disposed substantially T-shaped base and cushioning members, there being an arcuate recess in the middle portion of the

web of one of the members, and an arcuate tongue extending from the web of the other member and filling said recess, the upper member being adapted to tilt longitudinally relative to the lower member.

2. A metallic railway tie comprising oppositely disposed substantially T-shaped base and cushioning members, there being an arcuate recess in the middle portion of the web of one of the members, an arcuate tongue extending from the web of the other member and filling the recess, and a connecting device extending through the recess and the tongue therein, the web of one of the members diverging outwardly from the web of the other member.

3. A metallic railway tie comprising oppositely disposed substantially T-shaped base and cushioning members, the middle portion of the web of each member being

thickened and there being an arcuate recess in the thickened portion of one member, an arcuate tongue extending from the thickened portion of the other member and filling the recess, a pivot device extending through the recess and the tongue therein, the edge of one of the members diverging outwardly from its center relative to the adjoining edge of the opposed member, there being a bearing surface extending around the recess and another bearing surface extending around the tongue.

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

JOHN A. WIDNER.

Witnesses:

JAMES FRANCIS,
LAURA DOYLE.

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