

No. 868,865.

PATENTED OCT. 22, 1907.

W. R. KAUFMAN.
RAILROAD TIE.
APPLICATION FILED JUNE 8, 1906.

Fig. 1.

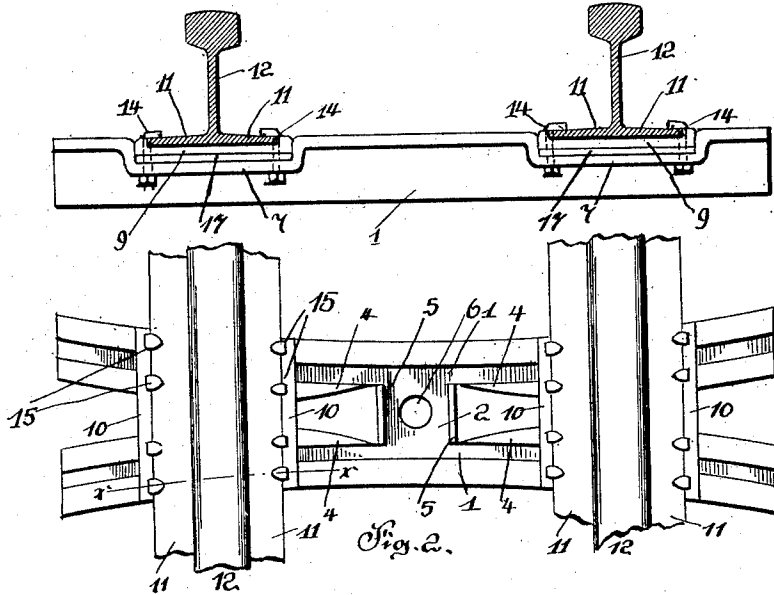


Fig. 2.

Fig. 3.

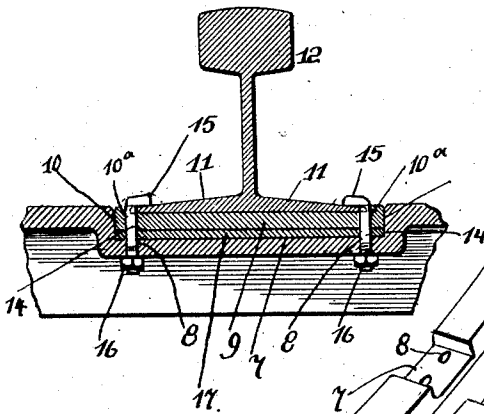
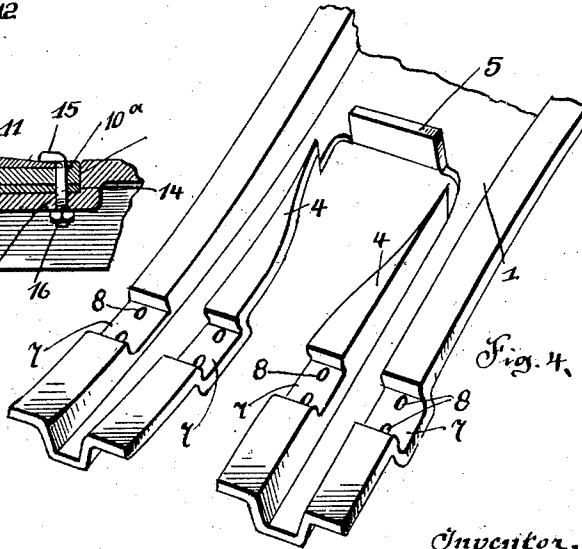


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM REED KAUFMAN, OF MCKEES ROCKS, PENNSYLVANIA.

RAILROAD-TIE.

No. 868,865.

Specification of Letters Patent.

Patented Oct. 22, 1907.

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To all whom it may concern:

Be it known that I, WILLIAM REED KAUFMAN, a citizen of the United States of America, residing at McKees Rocks, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in metallic ties and rail fasteners, and the invention has for its principal object to provide a strong and durable tie for rails and positive and reliable means for securing the rails upon said tie.

Another object of this invention is to provide a tie that can be sustained to an advantage upon ballast and easily tamped in position.

A further object of this invention is to provide a tie having a double rail-bearing surface at each end thereof.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts to be presently described, illustrated and claimed.

Referring to the drawing forming part of this specification, Figure 1 is a side elevation of my improved tie, Fig. 2 is a plan of the same, Fig. 3 is a fragmentary sectional view of the tie taken on the line $x-x$ of Fig. 2, and Fig. 4 is a perspective view of a part of the tie.

To put my invention into practice, I construct my improved tie of light and durable metal, which is pressed and stamped to form two channel-shaped flanged curved members 1 having an integral transverse web 2 intermediate their ends. The innermost flanges 3 of the members 1 are cut away, as at 4, and gradually taper towards the web 2, which is provided with vertical flanges 5 and with a central drain opening 6.

The members 1 adjacent to their ends are formed with alining seats 7; the flanges forming the bases of said seats being provided with apertures 8, the object of which will hereinafter appear. In the seats 7 at each end of the tie is mounted a rail-plate 9 having side flanges 10 adapted to embrace the base flanges 11 of flanges 12, mounted upon said plates. The rail-plates 9 are provided with vertically disposed openings 10^a adapted to register with the apertures 8 of the seats 7, these openings accommodating bolts 14 employed for retaining the rails 12 upon my improved tie. The bolts 14 are formed with angular heads 15 adapted to overlie the base flanges 11 of the rails 12, said bolts

being retained in the tie by nuts 16 mounted upon the threaded ends of the bolts beneath the seats 7.

The channel-shaped members 1 of the tie are embedded in the ballast of a road bed, the flanges of said members resting upon the ballast and supporting the tie therein. The ballast of a road lies between the members 1 and assists in supporting the rail-plates 9 arranged between the ends of the members 1. The flanges 5 of the web 2 prevent ballast from entering the channel-shaped members 1, and the central opening 6 of said web is adapted to drain the members of any water that might accumulate in the members.

In connection with the tie, plates of wood 17 or a similar material, can be used in the seats 7, to cushion the rails 12.

From the foregoing, it will be observed that I have devised a strong and durable tie having a double rail-bearing surface at each end thereof, which will prevent rails mounted thereon from being displaced, and the curvature of the members 1 of the tie, together with the flanges 5 thereof, will prevent the tie from sliding or moving in the ballast of the road bed.

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

1. A metallic tie consisting of two curved channel-shaped members, a flanged web joining said members intermediate their ends, said web having an opening formed therein, said members having alining seats adjacent to their ends, flanged plates supported within said seats and adapted to support rails, and means engaging said seats to hold said plates and said rails upon said tie, substantially as described.

2. A metallic tie consisting of two curved channel-shaped members, a flanged web connecting said members, said members having seats adjacent to their ends, rail plates mounted in said seats and adapted to support rails, and means engaging in said seats to lock said plates and said rails upon said tie, substantially as described.

3. A metallic tie comprising two integral channel-shaped members having seats adjacent to their ends, rail plates mounted in said seats and adapted to support rails, and means to secure said plates and said rails to said tie, substantially as described.

4. A metallic tie comprising a bar slotted at its ends to form substantially two integral channel-like bars, flanges at the inner ends of the slots, said bars having seats in the upper face thereof, and rail-plates in said seats, having side-flanges, substantially as described.

5. A metallic railway tie having duplex rail supports at each end and integrally connected at the center.

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

WILLIAM REED KAUFMAN.

Witnesses:

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