

No. 818,182.

PATENTED APR. 17, 1906.

R. H. LUTZ.
METALLIC RAILWAY TIE.
APPLICATION FILED JAN. 15, 1906.

Fig. 1.

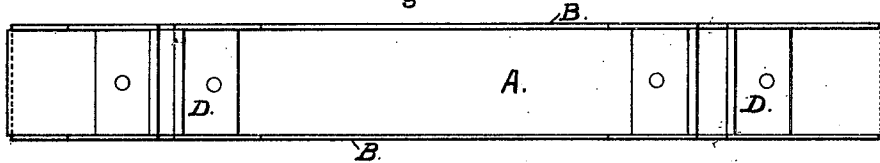


Fig. 2.

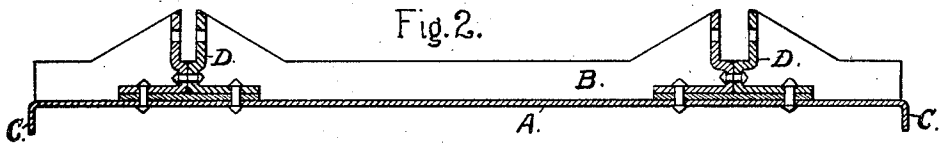


Fig. 3.

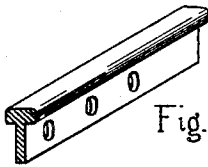


Fig. 4.

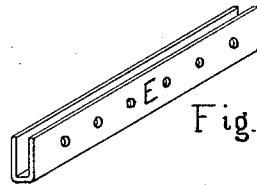


Fig. 5.

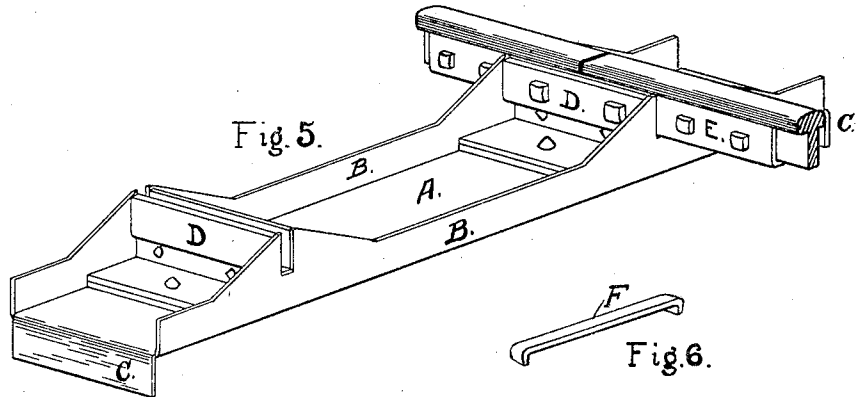


Fig. 6.

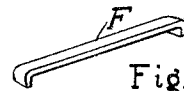
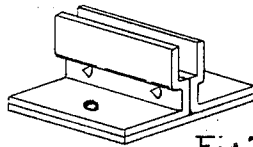


Fig. 7.



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METALLIC RAILWAY-TIE.

No. 818,182.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed January 15, 1906. Serial No. 296,054.

To all whom it may concern:

Be it known that I, ROBERT H. LUTZ, a subject of the King of Great Britain, residing at Rotterdam, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

My invention relates to railway-ties; and the object of my invention is to construct a metallic railway-tie which will be practical and efficient. I attain this object by a railway-tie constructed as shown in the accompanying drawings, in which—

Figure 1 is a plan view of my tie. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a perspective view of a portion of a rail used with my tie. Fig. 4 is a perspective view of the fish-plate used with my tie. Fig. 5 is a perspective view of my railway-tie, showing the method of placing the chair and rail. Fig. 6 is a perspective view of the shim used with my tie. Fig. 7 is a perspective view of my railway-chair.

Similar letters refer to similar parts throughout the several views.

United States Patent No. 803,611 was issued to me November 7, 1905, for a metallic railway-tie. My present invention is designed as an improvement upon my metallic railway-tie disclosed in said patent; and it consists principally of a chair and a shim to be used in conjunction with a modified form of the metallic bed-plate shown in my said former patent.

A represents the bottom of the metallic bed-plate having its sides B turned upward and its ends C turned downward and is substantially in the form of a trough. This bed-piece may be of any desired length for single or double tracks. Where the rail is designed to rest, the sides B are made higher and have notches cut in them of sufficient size for the rail to fit in. The rails used with my metallic tie are not made in the shape ordinarily used, but have no flanges at the bottom, and are constructed as shown in Fig. 3. The holes are made oblong, as shown, so that by loosening the nuts the rail may be raised a limited distance to admit a shim being placed under the rail, as hereinafter described. Where the ends of the rails come together, I construct a fish-plate, as shown in Fig. 4, in the form of a channel, in which the ends of the rails will fit and by which the ends of the rail may be bolted together.

My chair D is made of iron or steel of sufficient length to fit in between the sides B B of the bed-piece A and is bolted upon the bottom of the bed-plate and may be of any desired height to correspond with the notches in the sides B B. The upper part of the chair, which is designed to support the rail, is in the form of a channel. When the tie is designed to support the adjoining ends of the rails, the notches in the sides B B are made wide enough to receive the fish-plate E, and the channel of the chair used for the joint of the rails is also wide enough to hold the fish-plate E, and the ends of the rail are bolted together in the fish-plate and the fish-plate containing the joint is bolted in the channel of the chair.

It is frequently necessary with railway-beds to raise the rails slightly in order to keep them level when by reason of continued use or from frost or other cause they become out of level. For this purpose I use the shim F, which is made of a sufficient length to lie in the channel of the chair D and having each end bent downwardly so as to prevent it from sliding in either direction. These shims may be made of different thicknesses and may be readily inserted under the rails along the road as occasion requires by loosening the nuts holding the rail in the chair, the oblong holes in the rails allowing them to be raised sufficiently for that purpose.

Constructed in this way the rails are sufficiently elevated off of the ground, the ties are substantial and practical and will last an ordinary lifetime, and the rails may be leveled up and readily kept level without danger of injuring the ties or loosening the rails, and the possibility of the rail spreading is avoided and the safety and smoothness of the road are increased.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A metallic railway-tie in the form of a trough, the bottom of the trough forming the bed-piece of the tie, a metallic chair secured to the bottom of the trough and adapted to fit between the sides of the trough forming a channel to support the rail and a metallic shim with the ends turning downward, of suitable size and length, to fit in said channel under the rail, substantially as described and for the purpose set forth.

2. A metallic railway-tie in the form of a trough forming the bed-piece of the tie, a metallic chair secured to the bottom of the trough and adapted to fit between the sides

thereof forming a channel for the rail to lie
in, a rail without a flange on the base adapted
to fit in said channel and with vertically-ob-
long bolt-holes for bolting the rails in the
5 channel and a shim adapted to fit in the
channel under the rail, substantially as de-
scribed.

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

ROBERT H. LUTZ.

Witnesses:

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