

No. 814,841.

PATENTED MAR. 13, 1906.

W. GRIESSER.
METALLIC RAILWAY TIE.
APPLICATION FILED OCT. 23, 1905.

Fig. 1.

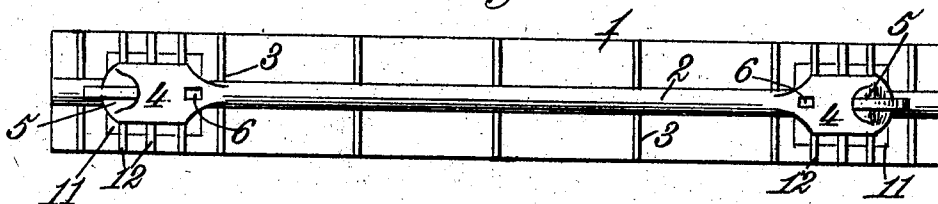


Fig. 2.

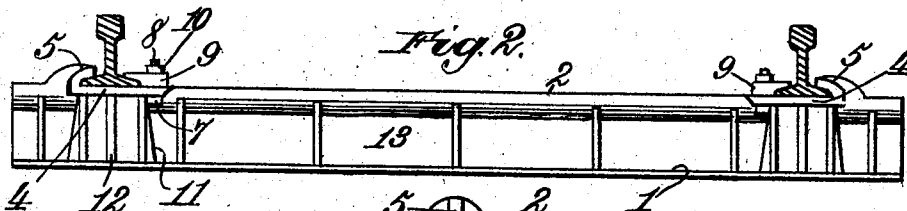


Fig. 3.

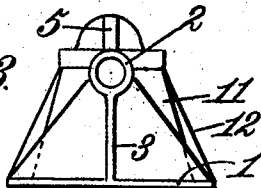


Fig. 4.

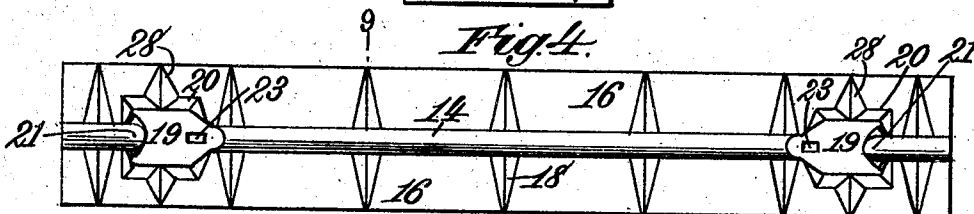


Fig. 5.

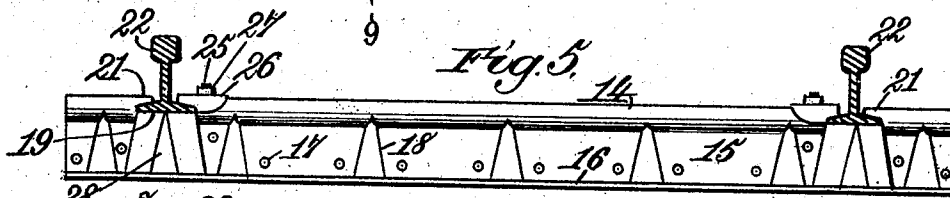


Fig. 6.

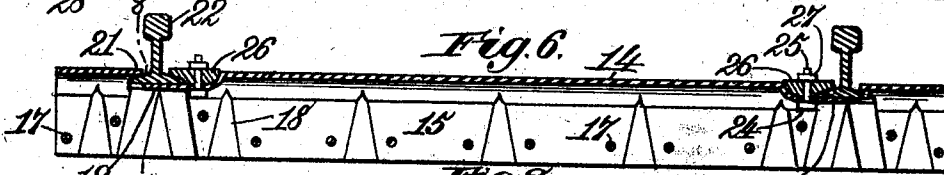
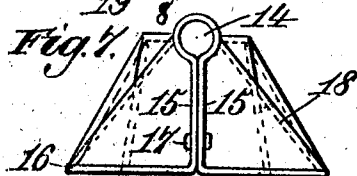


Fig. 7.



Witnesses:
Robert Grant,
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Fig. 8.

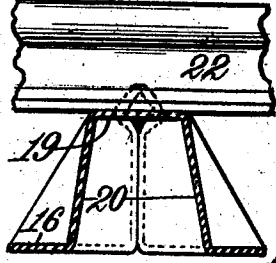
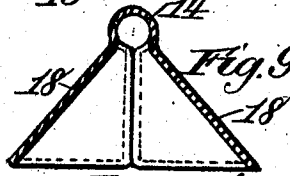


Fig. 9.



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att'y.

UNITED STATES PATENT OFFICE.

WILHELM GRIESSER, OF JOPLIN, MISSOURI.

METALLIC RAILWAY-TIE.

No. 814,841.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed October 23, 1905. Serial No. 284,044.

To all whom it may concern:

Be it known that I, WILHELM GRIESSER, a citizen of the United States, residing at Joplin, in the county of Jasper and State of Missouri, have invented new and useful Improvements in Metallic Railway-Ties, of which the following is a specification.

This invention relates to certain new and useful improvements in metallic cross-ties for railroads, and has for its object to produce a cross-tie which shall be simple in construction and strong and durable in operation, and by the use of which the rails may be readily and firmly secured in position and when so secured will be prevented from spreading.

In order that the invention may be clearly understood, I have illustrated the same in the accompanying drawings, in which—

Figure 1 is a top plan view of my improved cross-tie. Fig. 2 is a view in side elevation, showing the rails secured thereon. Fig. 3 is an enlarged view, in end elevation, of the cross-tie. Fig. 4 is a top plan view illustrating a modified construction of tie. Fig. 5 is a view in side elevation of Fig. 4, but showing the rails secured on the tie. Fig. 6 is a longitudinal sectional view of the modified tie with the rails secured thereon. Fig. 7 is an enlarged view, in end elevation, of the modified cross-tie. Fig. 8 is an enlarged sectional view on the line 8 8 of Fig. 6, and Fig. 9 is a similar view on the line 9 9 of Fig. 4.

Referring now to Figs. 1, 2, and 3, the cross-tie is shown as an integral structure and is cast from metal, either iron or steel, and comprises a flat base 1 and a hollow cylindrical head 2, which is braced from the base at suitable intervals throughout the length of the tie by means of webs 3. Near opposite ends of the tie are provided flat seats 4, each of which has a braced overhang or tongue 5 for engaging one side of the base of each rail. Each of said seats is also provided opposite the tongue 5 with an oblong aperture 6, through each of which a similarly-shaped head 7 of a bolt 8 may be inserted and turned to engage the under side of the seat 4, whereby a clamping-plate 9 may be secured in contact with the other side of the base of the rail to that engaged by the tongue 5 through the medium of a nut 10, screwed on said bolt. The side and a portion of the ends of each of the seats 4 extend down to the base 1, as indicated by the rectangular portion 11 of Fig. 1, and said seats are further braced by means of lateral webs or flanges 12. The cylindrical head

2 extends beyond each seat to the outer ends of the tie, as clearly shown in Figs. 1 and 2, and serves materially to strengthen the construction of the tie and prevent it from bending either transversely or vertically. 13 indicates a web extending throughout the length of the tie except at the seat portions, which web connects the cylindrical head 2 and base 1. All the parts thus described, with the exception of the clamping-plates and bolts, are formed as an integral structure, the tie as a whole being made in a single casting.

Referring now to Figs. 4 to 9, I have shown a tie comprising similar features of construction to the cross-tie above described, except that these figures illustrate a tie which is pressed from sheet metal. In forming this modified construction of tie a sheet of metal is bent or pressed to form a circular head 14, from which extend in contact with each other web members 15, and the metal is bent at right angles to these web members, at the base thereof, to form flanged extensions 16, which form the base of the cross-tie as a whole. The web members 15 are secured together by bolts or rivets 17. Extending from opposite sides of the circular head 14 to the outer sides of the base member 16 are triangular-shaped braces 18, located at suitable intervals throughout the length of the cross-tie. Near opposite ends of the cross-tie the circular construction 14 of the head is discontinued and the metal is pressed out to form flat seats 19, having walls continuing down to the base member 16, as indicated by 20 in Fig. 8. Said seat 19 is located in a plane below that of the top of the circular head 14, as clearly indicated in Figs. 6 and 7, and a portion of said circular head on the outer side of said seat is undercut to provide an overhang or tongue 21 to engage one side of the base of a rail 22, mounted on the seat 19. Opposite each of the tongues 21 the seat 19 is provided with an oblong aperture 23, into which a similarly-shaped head 24 of a bolt 25 may be inserted and turned to engage the under side of the seat 19 at each end of the cross-tie, whereby a curved clamping-plate 26 may be held into engagement with the opposite side of the base of the rail to that engaged by the tongue 21 through the medium of a nut 27, screwed on the bolt 25. Each of the seats 19 in addition to the walls 20 is braced by means of webs or braces 28, extending from the said walls to the outer edges of the base member 16.

Both constructions above described are in essential respects the same, the differences being substantially such as are necessitated by the fact that one of the ties is cast and the other pressed from a sheet of metal. In both constructions, however, the circular head 2 or 14 appears as a salient feature of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A metallic cross-tie comprising a flat base and a head or top circular in cross-section and provided near opposite ends with seats for the rails.

2. A metallic cross-tie comprising a flat base and a head or top circular in cross-section and provided near opposite ends with a seat and an integral rail-engaging member.

3. A metallic railway-tie having a flat base and a circular head or top connected to said base by a central web member, said tie being provided near opposite ends of its top with seats for the rails and with integral rail-engaging members.

4. A metallic railway-tie comprising a flat

base and a circular head or top connected thereto by a longitudinal web member, a seat for the rail formed near each end of said tie, an integral tongue overhanging each of said seats, and a bolt-hole formed in each seat opposite said tongue.

5. A metallic railway-tie made of a single sheet of metal bent upon itself to form a circular top portion, web members extending in right lines from said top portion, and flanged extensions projecting at right angles to said web members to form a base, said tie having a portion of its top near each end of the tie depressed and flattened to form rail-seats, and having its circular head cut away at the outer end of each of said seats to provide a rail-engaging member, and each of said seats being provided with a bolt-hole.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILHELM GRIESSER.

Witnesses:

R. B. PETTY, Jr.,
E. A. MORROW.