

No. 814,840.

PATENTED MAR. 13, 1906.

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

Fig. 1.

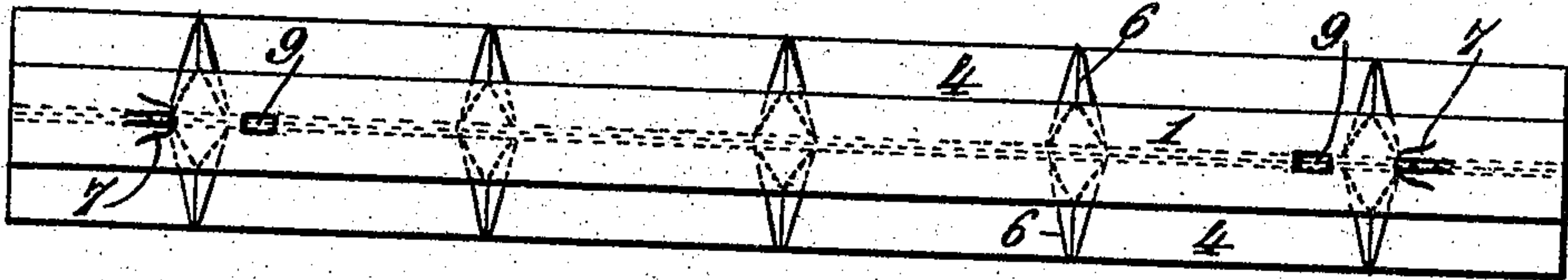


Fig. 2.

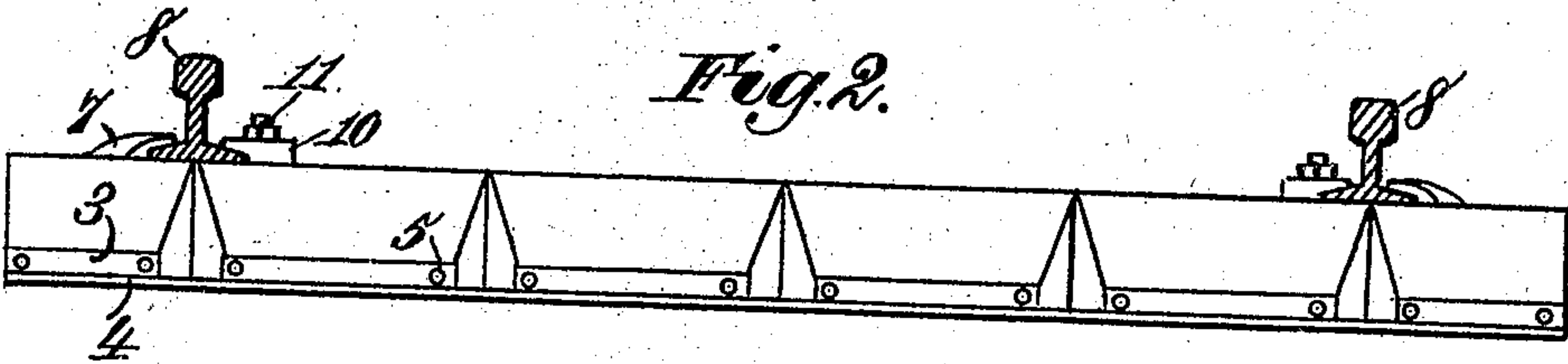


Fig. 3.

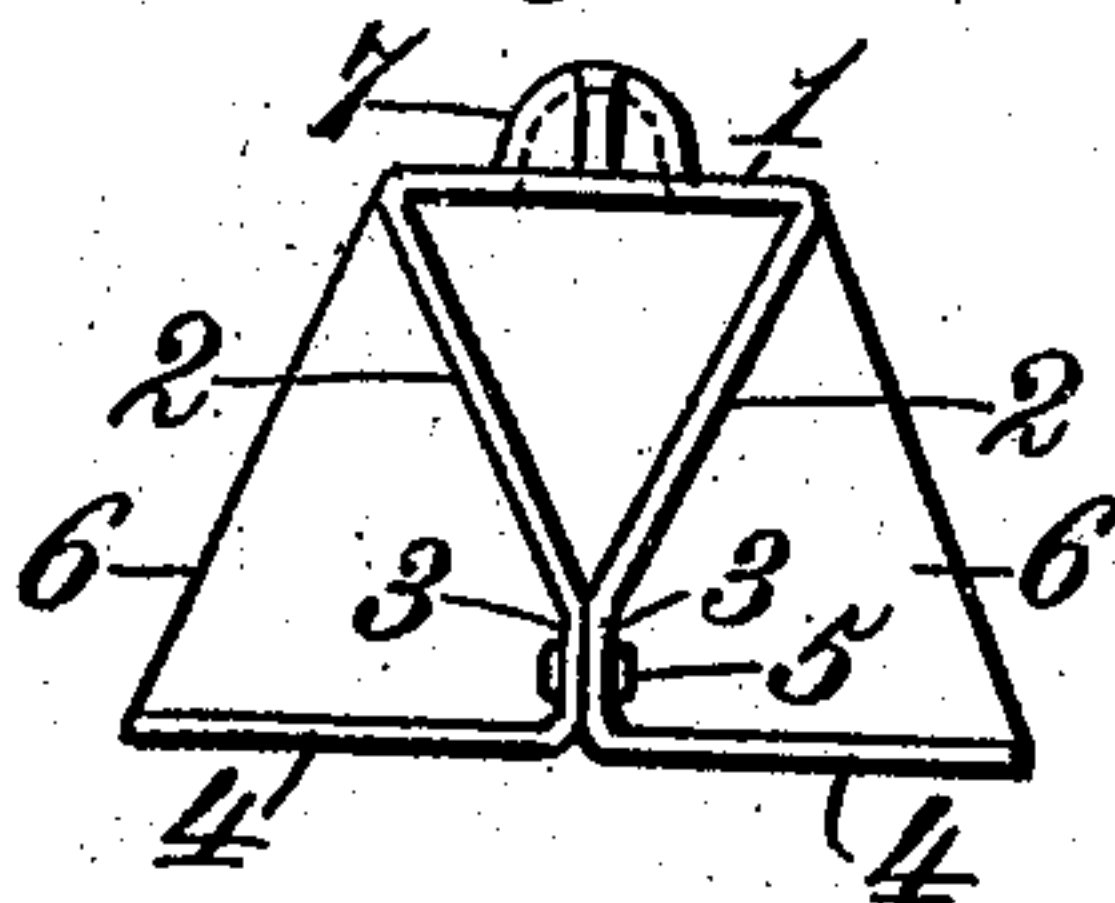


Fig. 4.



Fig. 5.

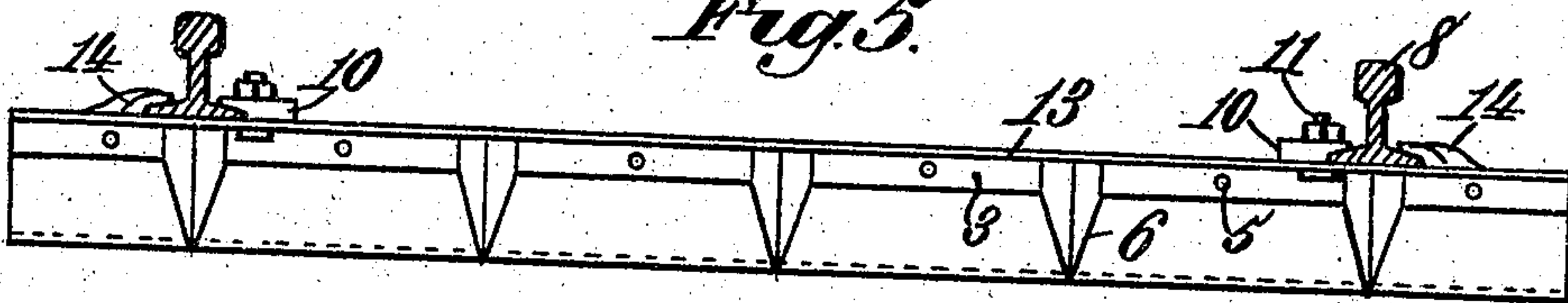
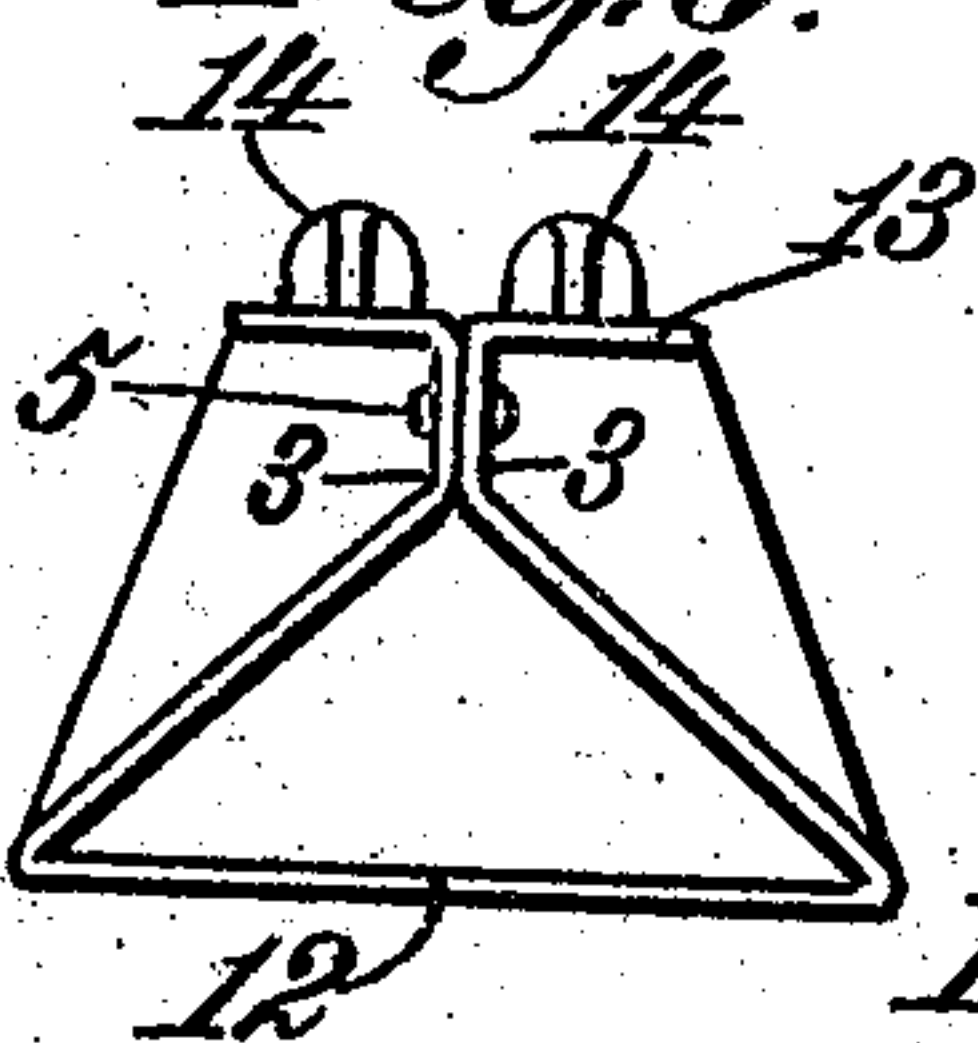


Fig. 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILHELM GRIESSER, OF JOPLIN, MISSOURI.

METALLIC RAILWAY-TIE.

No. 814,840.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed October 23, 1905. Serial No. 284,043.

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 a view in end elevation of the cross-tie. Fig. 4 is a top plan view illustrating a modification. Fig. 5 is a view in side elevation of Fig. 4, but showing the rails secured thereon; and Fig. 6 is a view in end elevation of the construction shown in Fig. 4.

Referring now to Figs. 1, 2, and 3 of the drawings, the cross-tie is shown to be constructed from a single plate or strip of sheet-steel, which is bent upon itself on opposite sides of its median line to form a top or head 1, the side members 2 converging toward their lower ends. From the point of convergence of the side members they are continued in right lines to form webs 3, which are in contact throughout their length, and at the outer ends of these webs the plate is then bent outward in opposite directions at right angles to said web to form base members 4. The two members of the cross-tie are securely united by means of bolts 5, extending through the webs 3 and located at suitable intervals throughout the length of the tie. In the operation of pressing the tie from the plate there are formed at the outer side of each of the side members and at suitable intervals through the length of the tie flanged projections 6, which integrally unite the side members 2 and base members 4 and assist in making the tie as a whole a rigid structure, or, in other words, brace the tie against bending either vertically or transversely. The flanges 6, as shown, are substantially triangular in cross-section, the base of the triangle being connected to the

flanged base members 4, and thus said base members are braced at a great number of points against bending upward. The apex of each triangular projection or brace 6 converges into the outer edges of the opposite sides of the top or head 1. Said top or head is cut through near opposite ends on substantially circular lines to form tongues 7, which are pressed outwardly from the top to form flange-engaging members for the rails 8. Opposite each tongue 7 a rectangular bolt-hole 9 is provided in the head 1, and, as clearly shown, each rail is secured in position by having one of its flanges extended under the tongue 7 and its opposite flange engaged by a clamping-plate 10, which is held to the cross-tie by means of a bolt 11, located in the hole 9.

The modified construction illustrated in Figs. 4, 5, and 6 presents substantially the reverse arrangement of parts to that just described, in that the base portion of the preferred construction is used as the top or head of the modified construction, as will more clearly be seen from Fig. 6, in which 12 indicates the base corresponding to the top 1 of Fig. 3, only slightly wider, while 13 indicates the top or head formed in the same way as the base 4 of Fig. 3, only slightly narrower in width. In the modified construction each of the flange members 13 is provided with tongues 14 for gripping the flanges of the rails and opposite each tongue with a bolt-hole 15.

It will be seen that with both constructions the flat portion 1 or 12 forms with the side members 2 a perfect triangle, and this shape of hollow cross-tie presents a very strong construction, each side bracing the other, as will be clearly perceived.

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

1. A metallic railway-tie having a hollow portion, triangular in cross-section, and provided adjacent to the apex of said triangular portion with flanged supporting members extending outwardly at right angles to a line drawn perpendicular to the base.

2. A hollow metallic railway-tie having a triangular cross-section and provided adjacent to the apex of said triangular portion with flanged extensions, and braces formed integral with said triangular portion and said flanged extensions.

3. A hollow metallic railway-tie formed of a single sheet of metal and having a triangu-

lar body portion, flanged extensions located adjacent to the apex of said triangular portion and extending outwardly parallel with the base thereof, said cross-tie having near opposite ends a projecting tongue formed from the body of the tie, and opposite each tongue a bolt-hole.

4. A hollow metallic railway-tie formed from a single sheet of metal and comprising as an integral structure a triangular body portion, flanged extensions located adjacent to the apex of said triangular portion and extending parallel with its base, brace members located at intervals throughout the length of said tie connecting said body portion with said flanged extensions, and a rail-engaging member projecting from the base of said triangular portion.

5. A hollow metallic railway-tie formed from a single sheet of metal and comprising as an integral structure a triangular body portion, flanged extensions located adjacent to the apex of said triangular portion and extending parallel with its base, triangular base members located at intervals throughout the length of said tie and connecting said body portion with said flanged extensions, and a rail-engaging member projecting from the base of said triangular portion.

6. A metallic railway-tie formed from a single sheet of metal bent upon itself to form a flat top portion and converging side members, said side members being extended in

right lines from their point of convergence to form web members and being bent to extend outwardly at right angles to said web members to form a base parallel with said top portion, said tie being provided on opposite sides with integral brace members connecting said base with the converging side members, said web members being connected together, and means for securing rails to one of the parallel sides of said cross-tie and near opposite ends of the latter, respectively.

7. A metallic railway-tie formed from a single sheet of metal bent upon itself to form a flat top portion and converging side members, said side members being extended in right lines from their point of convergence to form web members and being bent to extend outwardly at right angles to said web members to form a base parallel with said top portion, said tie being provided on opposite sides with integral brace members connecting said base with the converging side members, bolts connecting said web members, said top portion being provided near opposite ends of the tie with a projecting tongue, and opposite each tongue with a bolt-hole.

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

WILHELM GRIESSER.

Witnesses:

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