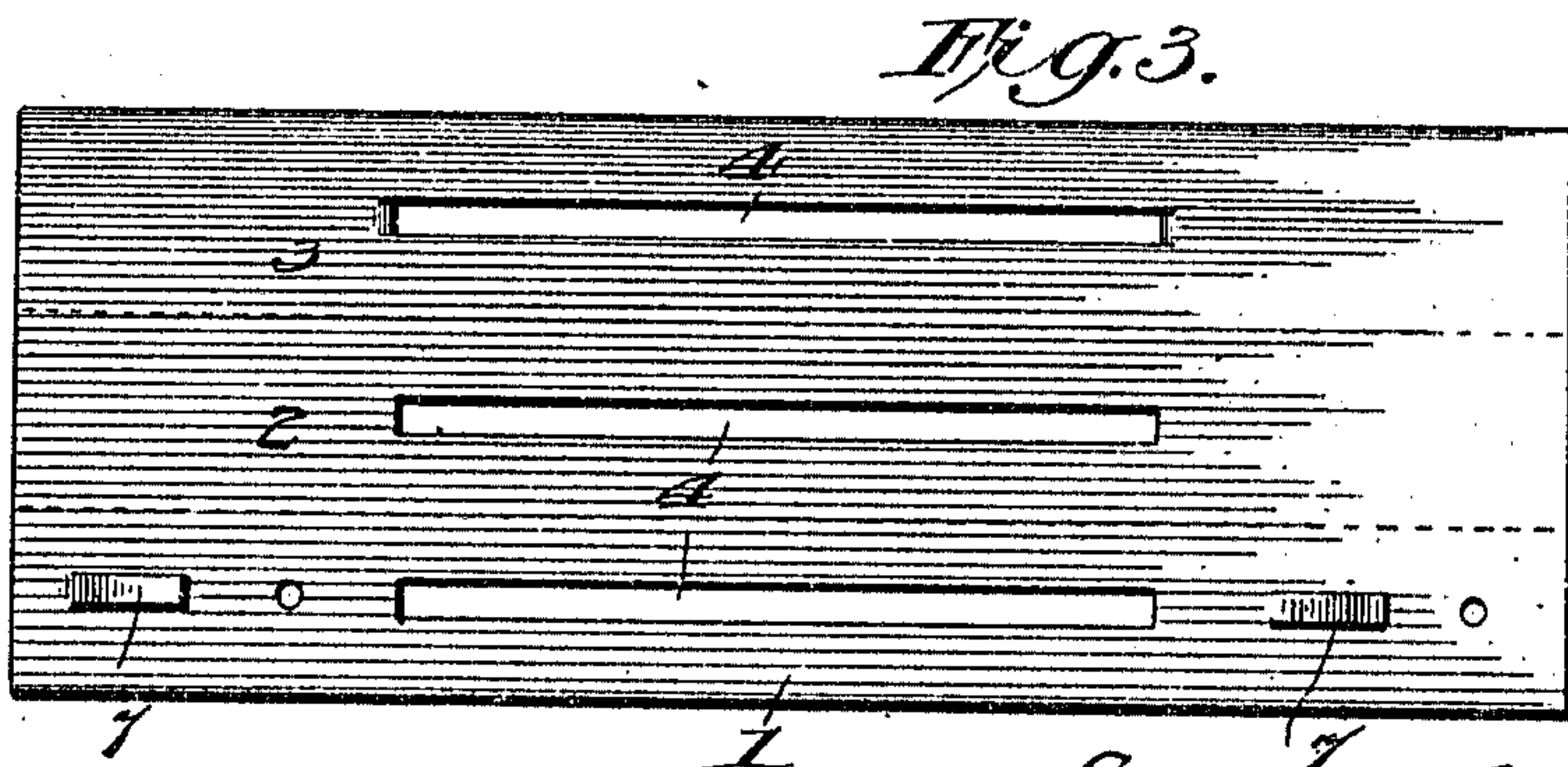
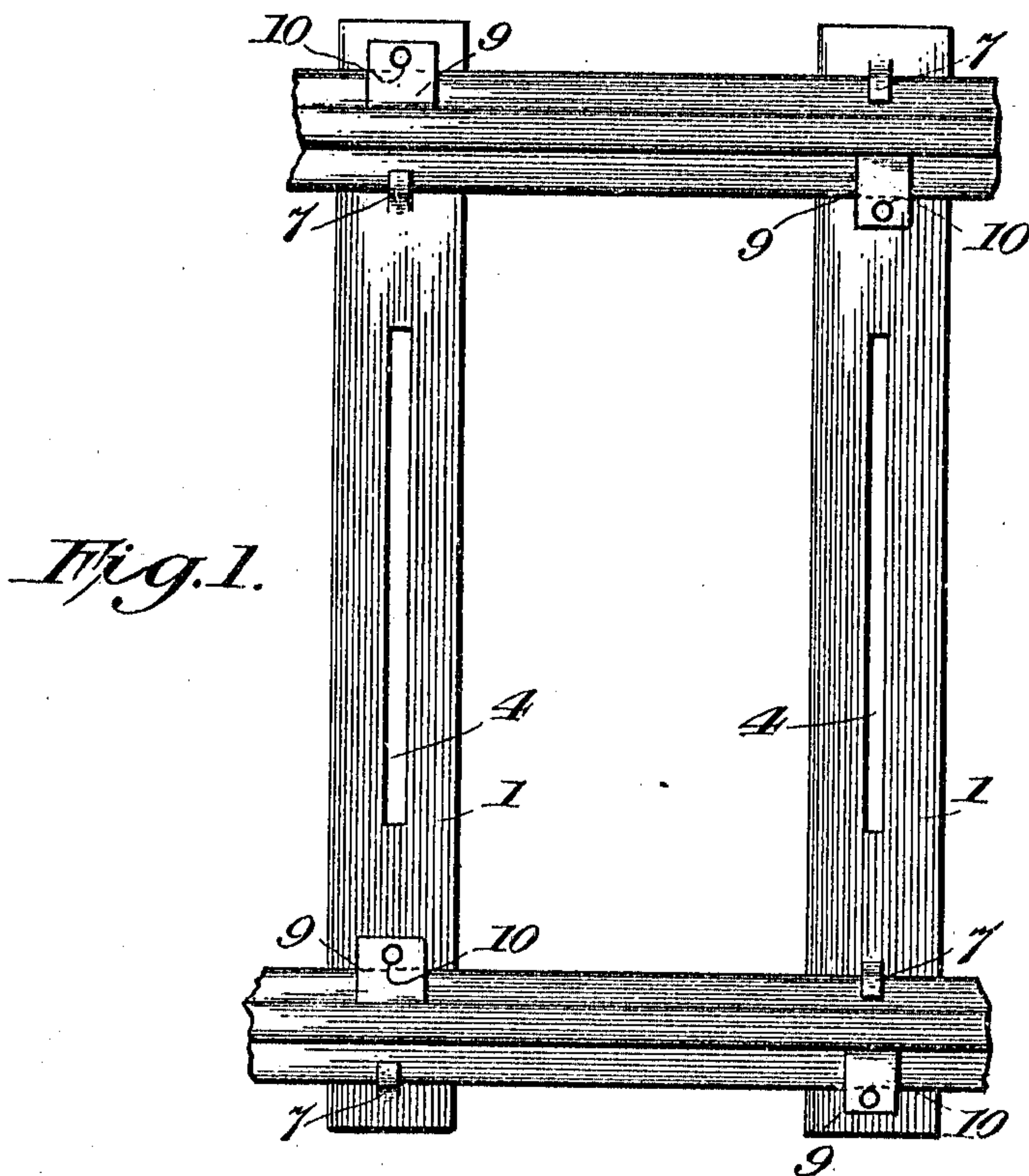


F. N. BROOKER & B. H. DAVIDSON.
METAL RAILWAY TIE.

APPLICATION FILED JULY 10, 1909.

952,976.

Patented Mar. 22, 1910.



Witnesses
J. L. Ourand
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UNITED STATES PATENT OFFICE.

FRANK N. BROOKER AND BENJAMIN H. DAVIDSON, OF COLUMBUS, OHIO.

METAL RAILWAY-TIE.

952,976.

Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed July 10, 1909. Serial No. 506,911.

To all whom it may concern:

Be it known that we, FRANK N. BROOKER and BENJAMIN H. DAVIDSON, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Metal Railway-Ties, of which the following is a specification.

Our invention relates to an improvement in railway ties, and the object is to provide a comparatively light and resilient tie of such construction that it will retain its position on the roadbed and form a secure support and fastening for the rails.

A further object is to provide a tie which may be easily rolled from a solid plate of steel or other sheet metal, thus reducing the difficulty of manufacture as well as the initial cost.

With these objects in view our invention consists in a Z-shaped tie cut and struck up from sheet metal, suitably slotted to assist in maintaining its position in the ballast of the roadbed, and provided with integral lugs to prevent endwise movement of the tie and also hold the rails in place thereon.

In the accompanying drawings: Figure 1 is a plan view representing two or more of these ties in position with portions of the rails secured thereon; Fig. 2 is an end view; and Fig. 3 is a transverse section through the tie.

The numerals 1, 2 and 3 represent the three folds of the tie in the form of the letter Z in section, the tie preferably being cut and bent from sheet steel. Elongated slots 4, 4 are cut through the center to receive and take hold of the ballast, and from the metal forming the slot in the base the downwardly extending lugs 6, 6 are formed, which enter the ballast and prevent endwise movement of the tie.

Clips 7, 7 are bent up from the upper plate to engage the base flanges of the rails and a fish plate or lug 9 is secured opposite by means of bolts 10.

These ties are alternately placed, that is to say, the lugs of one tie extending in one direction and the next one in the opposite direction as illustrated in Fig. 1. In this way a tie is produced which may be made of one solid plate of steel or other suitable material pressed or fashioned into the desired shape so as to allow sufficient spring to admit of the required vibration.

It is evident that more or less slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of our invention, and hence we do not wish to limit ourselves to the exact construction herein set forth, but:

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. A sheet metal tie bent from the blank, having three parallel, elongated, approximately equidistantly located slots, the blank folded between the slots to form three members in zig-zag relation to one another, whereby when the tie is completed, said slots are located approximately in vertical alinement with one another.

2. A sheet metal tie bent from the blank, having three parallel elongated approximately equidistantly located slots, the blank folded between the slots to form three members in zig-zag relation to one another, whereby when the tie is completed, said slots are located approximately in vertical alinement with one another, the metal from the lowermost slot severed in the middle and bent downwardly from the two ends of the slots, and adapted to enter the ballast and prevent end-wise movement of the tie.

3. A sheet metal tie bent from the blank, having three parallel elongated approximately equidistantly located slots, the blank folded between the slots to form three members in zig-zag relation to one another, whereby when the tie is completed, said slots are located approximately in vertical alinement with one another, the metal from the lowermost slot severed in the middle and bent downwardly from the two ends of the slots, and adapted to enter the ballast and prevent end-wise movement of the tie, and clips bent upwardly and in the same direction from the top member of the tie to engage the base flange of the rail.

In testimony whereof we affix our signatures, in the presence of two witnesses.

FRANK N. BROOKER.
BENJAMIN H. DAVIDSON.

Witnesses:

MABEL M. CARPENTER,
THOS. M. SHERMAN.