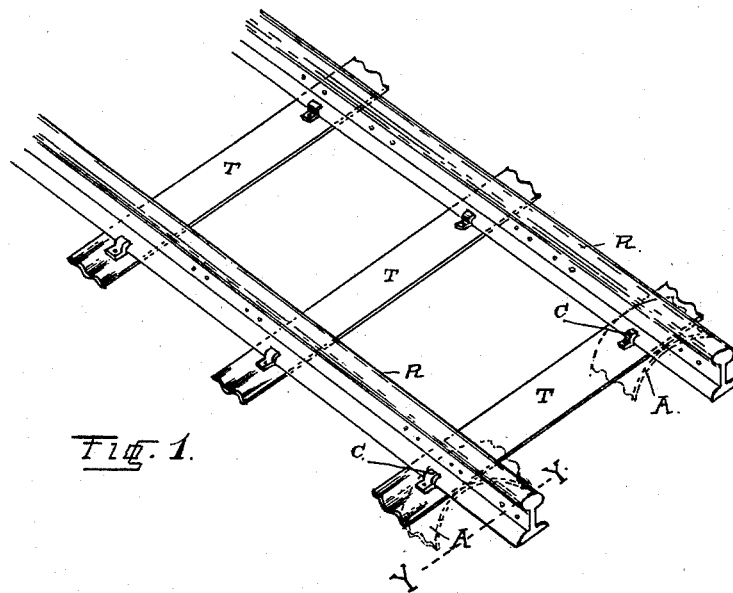
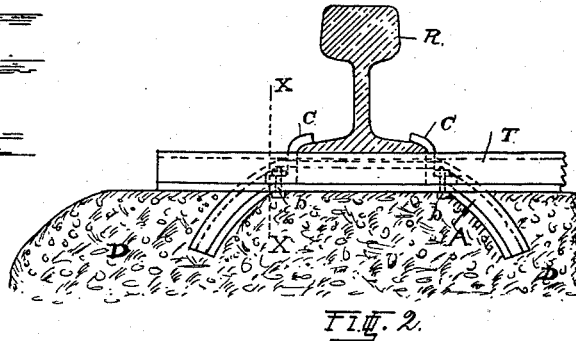
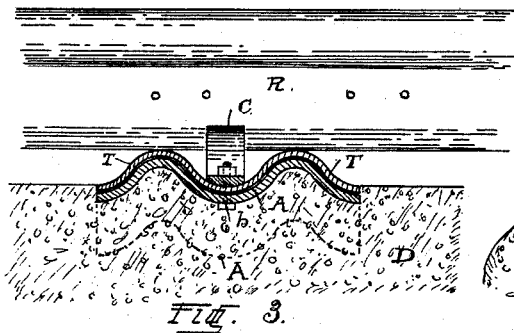


(No Model.)

R. E. DANIELS.
METAL RAILROAD TIE ANCHOR.

No. 522,974.

Patented July 17, 1894.



Witnesses:

E. R. Chapman,
David Murdoch

Inventor:

Robert E. Daniels

Per S. D. Woodward

Attorney

UNITED STATES PATENT OFFICE.

ROBERT E. DANIELS, OF YOUNGSTOWN, OHIO, ASSIGNOR TO THE DANIELS
STEEL RAILROAD TIE COMPANY, OF SAME PLACE.

METAL-RAILROAD-TIE ANCHOR.

SPECIFICATION forming part of Letters Patent No. 522,974, dated July 17, 1894.

Application filed April 19, 1894. Serial No. 508,099. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. DANIELS, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Metal-Railroad-Tie Anchors; and I do hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

The object of my invention is a metal railroad tie anchor, applicable to any corrugated metal railroad tie, but especially designed for use with the tie patented to me by Letters Patent of the United States numbered 482,997, dated September 20, 1892, which anchor presents a means for securing such ties against lateral movement in the road bed, that is new and highly useful in the art of railroad construction and maintenance, particularly on curves where the tendency to such movement is greatest. I accomplish this object by the device hereinafter described, and illustrated in the drawings, in which—

Figure 1 represents a section of railroad track in which my anchor A is employed with the corrugated tie T, the anchor being shown by dotted lines applied to one tie. Fig. 2 is a vertical cross sectional view of a portion of track and road bed in the line Y Y of Fig. 1, showing in cross section the rail R, and side views of the anchor A, a portion of the tie T, and, partially in dotted lines, the clamps C C held by the bolts *b b*; and Fig. 3 is a vertical cross sectional view of the same on the line X X of Fig. 2.

Similar letters refer to similar parts in all views.

As will be seen by inspection of the drawings my tie anchor A is formed of a section of suitable length of a corrugated metal tie, similar to that to which it supplies an anchor, bent downward at both ends, so that, when in place, the grooves or channels on its upper surface supply bed snugly to the nether surface to the corresponding portions of the tie

T, the two being held together by the bolts *b b*, which, passing through apertures in both, also pass through the horizontal portions of the clamps C C that in place within the channel of the tie hold the rail R thereto by parts clasping over the rail flange as seen at Figs. 1 and 2.

I make the downward bend of the ends of my anchor A preferably upon curved lines at the point of deflection because of the greater elasticity given by curves than by angles, and, if desired, the bend may occur at one end only. The anchor A represented in the drawings is applicable to the tie patented to me, as stated, and consequently on its transverse lines it is everywhere on a curve less than a half circle. It may, however, be made for use with any form of corrugated steel railway ties, as stated by presenting the same corrugations as the tie with which used.

The tie T and anchor A are of equal breadth while the length of the latter is eight inches in the horizontal and bent portions each, the angle of inclination of the latter being forty-five degrees. The lengths and angles of inclinations are, however, variable.

It will be seen that, with my device attached to the tie in the manner stated, the point of attachment being immediately below the rail, and with its curved or bent portions impacted in the road bed material, a very secure anchorage of the tie is obtained, this being a matter of great importance in railroad construction where metal ties are used.

What I claim is—

The corrugated metal railway tie anchor A consisting of a suitable length of corrugated metal corresponding in the form of its corrugations with the tie with which used, having one or both of its ends bent downward, and presenting centrally two apertures, substantially as described and for the purpose expressed.

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

ROBERT E. DANIELS.

Witnesses:

E. R. CHAPMAN,
JOHN LEE PASTE.