

J. W. DOSTER.
RAILWAY TIE PLATE.
APPLICATION FILED APR. 5, 1910.

986,698.

Patented Mar. 14, 1911.

Fig. 1.

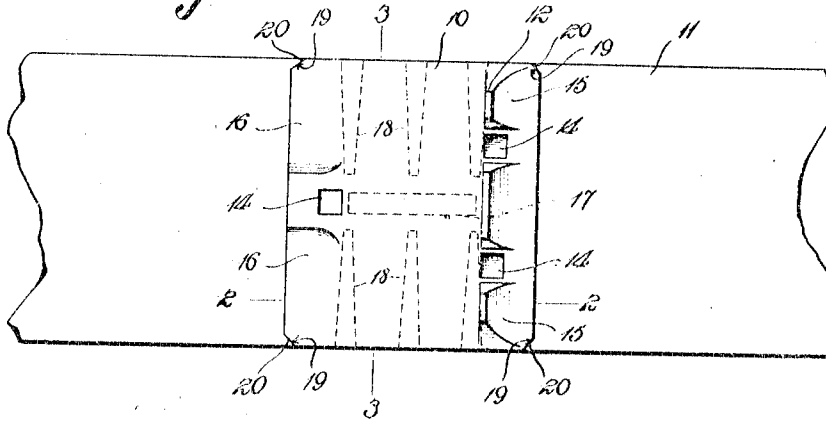


Fig. 2.

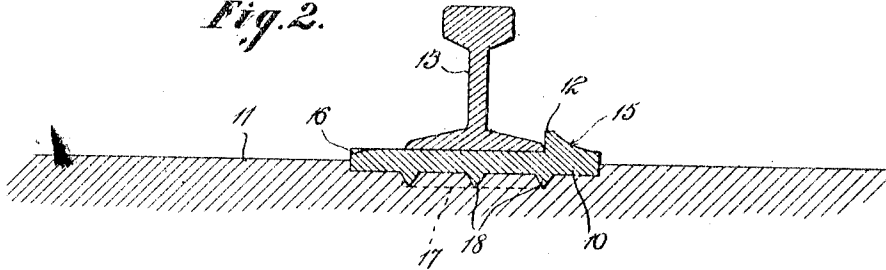


Fig. 4.

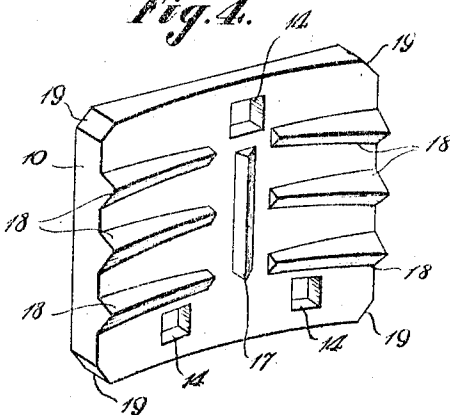
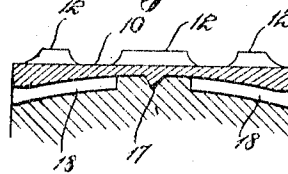


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN W. DOSTER, OF KINGSLAND, ARKANSAS.

RAILWAY-TIE PLATE.

986,698.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed April 5, 1910. Serial No. 553,503.

To all whom it may concern:

Be it known that I, JOHN W. DOSTER, a citizen of the United States, residing at Kingsland, in the county of Cleveland, State of Arkansas, have invented certain new and useful Improvements in Railway-Tie Plates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in railway tie plates, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a tie plate which will effectually prevent the "creeping" of the plates upon the ties, either transversely or longitudinally, or the spreading of the rails.

Another object of the invention is to provide a tie plate which will effectually shed water, and thus preserve the ties and the plate from decay.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims.

The severe strains to which railway ties are subjected under the impact imparted by the passing trains has a tendency to wear the ties, and to prevent this wear metal plates are employed between the rails and the tie, and these plates as ordinarily constructed are liable to "creep" both transversely and longitudinally of the tie, and also permit water to accumulate between the plate and the tie and thus rot the ties, and to obviate these objections is the principal object of the present invention which consists primarily of a tie plate so constructed and applied as to hold the plate from movement upon the tie in either direction, and in the drawings employed to illustrate the device, Figure 1 is a plan view of a portion of a tie with the improvement applied, Fig. 2 is a section on the line 2—2 of Fig. 1, Fig. 3 is a section on the line 3—3 of Fig. 1, Fig. 4 is a perspective view from beneath of the improved tie plate, detached.

The improved plate is represented as a whole at 10 and is formed of cast metal, preferably steel and corresponds in length to the width of the tie, represented at 11,

and is provided upon its upper face near one edge with a rib 12 against which one edge of the tie flange of the rail bears, the rail being represented at 13. The plate 10 is also provided with suitable spike apertures represented at 14, by means of which the rail and the plate are secured to the tie. Any required number of the spike holes may be employed, but for the purpose of illustration three are shown. The upper face of the plate externally of the rib 12 is inclined as shown at 15 to cause the water to flow freely therefrom, while the upper face of the plate at its opposite edge is likewise inclined as shown at 16 for the same purpose. By this means the water will not accumulate upon the upper face of the plate. The lower face of the plate is formed slightly concaved transversely of the tie as shown in Figs. 3 and 4, and the upper face of the tie is correspondingly curved to fit the underface of the plate. The curvature of the tie may be produced by the pressure of the plate as it wears a seat for itself, or the tie may be rounded when the plate is applied.

Depending from the curved face of the plate and centrally thereof is a V-shaped rib 17, the rib extending longitudinally of the tie, and forming a seat for itself in the tie when the plate is applied and the rails spiked thereto. Depending from the lower curved face of the tie are numerous V-shaped ribs 18, which extend transversely of the tie and are preferably formed largest at their outer ends, so that when these latter ribs are compressed into the tie and form seats for themselves, channels are formed therefor which increase in size outwardly so that any water which may find its way between the tie and the plate will flow freely outwardly, and will not congregate between the tie and the plate. By this means the tie is self-draining and all danger of decay from the accumulation of water between the tie and the plate is obviated. Any required number of the ribs 18 may be employed, but generally six will be used, as shown, three at each side of the central rib 17. The plate 10 is shown with its corners cut off or angular as represented at 19, and the material of the tie remains opposite these corners as shown at 20, and thus supplements the holding force of the central rib 17 to prevent transverse movement of the plate upon the tie.

The improved plate is simple in construction.

tion, can be inexpensively manufactured and applied, and of any required size or weight to adapt it to different sizes of rails and ties. The improved plates also effectually prevent the spreading of the rails, as will be obvious.

What is claimed is:—

1. A railway tie plate having a concaved lower face for bearing upon a tie and with a plurality of ribs spaced apart and depending from the concaved face, for embedding in a tie.

2. A railway tie plate having a concaved lower face for bearing upon a tie and with a plurality of ribs spaced apart and depending from the concaved face near the edges, and a rib depending from the concaved face and at right angles to the spaced ribs, said ribs being adapted to be embedded in a tie.

3. A railway tie plate having a concaved lower face for bearing upon a tie and with the concaved face transversely of the same, a plurality of ribs spaced apart and depending from the concaved face and transversely of the tie and increasing in size toward their outer ends, so that when the ribs are em-

bedded in the tie, means are provided for the shedding of water.

4. A railway tie plate having a concaved lower face for bearing upon a tie with the concaved face transversely of the same, a plurality of ribs spaced apart and depending from the concaved face and transversely of the tie and increasing in size toward their outer ends, so that when the ribs are embedded in the tie, means are provided for the shedding of water, and another rib depending from the curved face of the plate and extending longitudinally thereof.

5. A railway tie plate having a concaved lower face and a stop rib upon its upper face, and a plurality of ribs spaced apart and depending from the curved face and adapted to be embedded in the upper face of a tie.

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

JOHN W. DOSTER.

Witnesses:

LEE P. HAMILTON,
J. E. JONES.