

W. W. WILLARD.

TIE PLATE.

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1,053,336.

Patented Feb. 18, 1913.

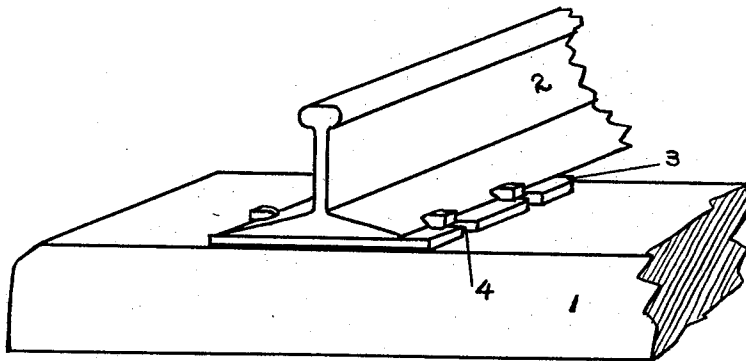


FIG. 1

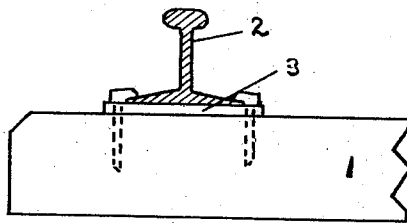


FIG. 3

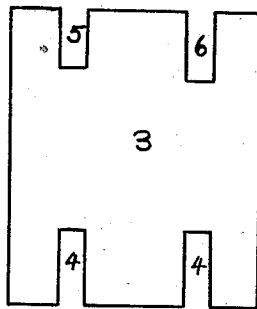


FIG. 2

WITNESSES:

Christine A. Braidel.

Roy Wallis.

Will. W. Willard INVENTOR

BY

Geo. B. Willard ATTORNEY

UNITED STATES PATENT OFFICE.

WILL W. WILLARD, OF SAGINAW, MICHIGAN.

TIE-PLATE.

1,053,336.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILL W. WILLARD, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in 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 railway tie plates and pertains more particularly to an article of manufacture, consisting in a tie plate made of wood and adapted to suit rails having various widths of flanges.

The objects of my invention are to provide a tie plate of simple construction and inexpensive to manufacture, that will not wear or cut into the face of the tie, thereby avoiding one of the serious objections to the use of metal tie plates.

Another object is to provide a tie plate that may be easily applied and quickly removed, and that is capable of producing a proper degree of cushioning effect between the top face of the tie and the under face of the rail flange.

With these and certain other objects in view which will appear later in the specification, my invention consists in the devices described and claimed and the equivalents thereof.

In the drawings, Figure 1 is a perspective detail showing the end of a tie with a tie plate and rail in place; Fig. 2 is a top plan view of the tie plate; and Fig. 3 is a sectional detail showing the tie plate in side elevation.

As is clearly shown in the drawings, the tie plate consists in a flat board, preferably of hard wood, and usually one-half inch thick or thicker, depending upon the load to be supported and the amount of traffic.

1 represents the tie, 2 the rail, and 3 the wooden tie plate. The plate 3 is provided at one edge with two longitudinal slits 4, 4, extending equal distances into the body of

the plate, so that their inner ends lie in the same straight line. The opposite edge of the tie plate is similarly formed with two slits 5, 6. One of these slits, as 5, is preferably shorter than the other.

The plate is applied as follows: It is first laid upon the flat upper face of the tie and underneath the flange of the rail, so that the outer edge of the rail flange coincides with the inner edges of the slits 4, 4. The lengths of slits 5 and 6 are such that the inner edge of one of them will coincide with the corresponding edge of the rail flange. Spikes are then driven into the tie as usual, two spikes being used on the outside of the rail in the slits 4, 4, and one on the inside of the rail in one of the slits 5 or 6, depending upon the width of the rail flange. Slit 5 is adapted to a rail flange having a wider face, and slit 6 to a flange having a narrower face.

It will be observed that this tie plate is adapted for use with new ties having approximately flat upper faces, and the purpose of the tie plate is to form a cushion and to relieve the upper face of the tie from the wear and abrasion that would otherwise come upon it. A new tie is thus protected, the tie plate taking all of the wear. When the tie plate is badly worn, it may be renewed, the upper surface of the tie being still unimpaired. It will also be noted that in practice the upper surface of a new tie is rarely perfectly flat, so that there is always a small clearance area between the tie and the tie plate, the plate being out of contact with the tie throughout its entire surface. A springy or yielding action is thus provided between the tie and the plate that acts as a cushion for the rail and reduces the damage to the tie that would otherwise be caused by the shock of passing trains.

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

A tie plate adapted to be placed between the top of a new tie and the underside of

the rail flange, said plate comprising a relatively thick wooden plate, one edge of which is provided with two spike-receiving slits of equal length, the opposite end being
5 provided with a plurality of spike-receiving slits of various lengths to suit various widths of rail flanges.

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

WILL W. WILLARD.

Witnesses:

CHRISTINE A. BRAIDEL,
ROY WALLIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
