F. E. FITZPATRICK.

TIE PLATE

APPLICATION FILED OCT. 20, 1919.

1,338,431. **Patented Apr. 27, 1920.**

FIG. 1.

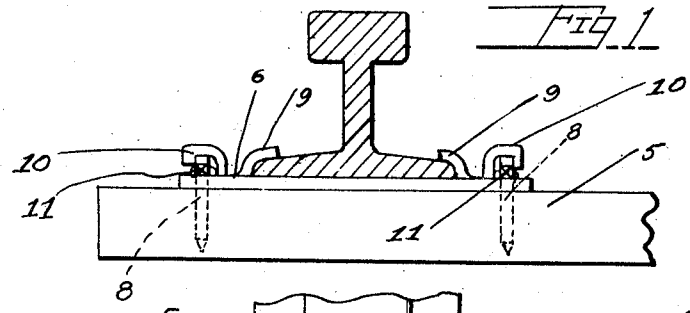


FIG. 2.

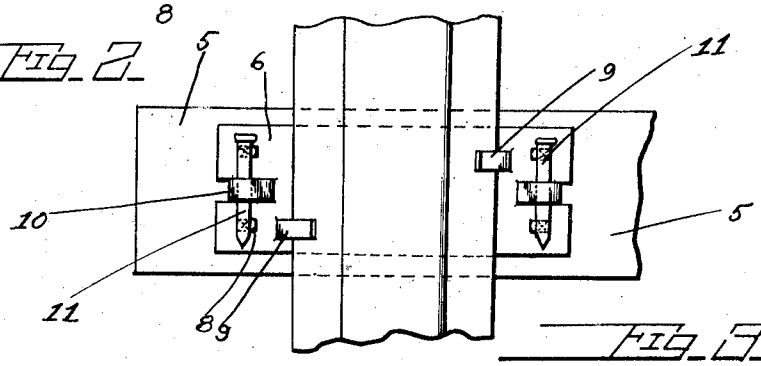


FIG. 3.

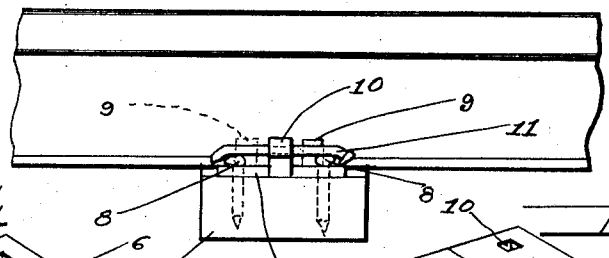


FIG. 4.

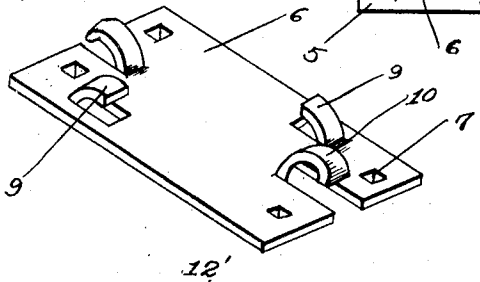


FIG. 5.

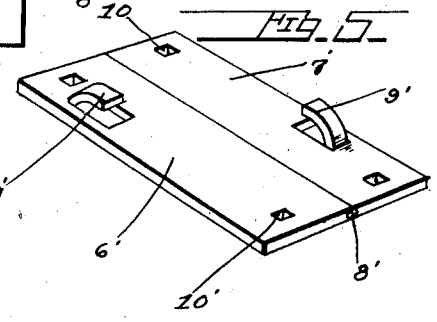
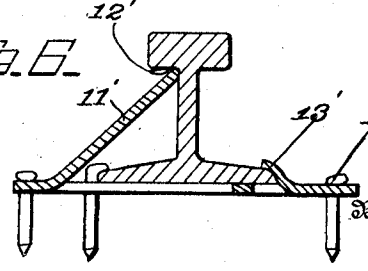


FIG. 6.



Witness

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TIE-PLATE.

1,338,431. Specification of Letters Patent. Patented Apr. 27, 1920.

Application filed October 20, 1919. Serial No. 331,909.

To all whom it may concern:

Be it known that I, FRANK E. FITZPATRICK, a citizen of the United States, residing at Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented a new and useful Tie-Plate, of which the following is a specification.

This invention relates to railway track construction, and more particularly to tie plates, employed for supporting the rails on the ties, to eliminate wear on the ties, to the end that the life of a tie is greatly increased.

The primary object of the invention is to provide a tie plate having means for locking the securing spikes, ordinarily used in securing the rail to the ties, to prevent the same from working out of the ties in which the spikes are positioned.

A further object of the invention is to provide a tie plate having integral means extending upwardly and contacting with the under side of the tread of the rail, for securing the rail against lateral displacement.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawing:—

Figure 1 illustrates a side elevational view of a tie, with the tie plate secured thereto, the rail being shown as positioned on the tie plate;

Fig. 2 illustrates a fragmental plan view of a tie showing a rail secured thereon;

Fig. 3 illustrates an end elevational view of a tie with the invention supported thereon;

Fig. 4 illustrates a perspective view of the tie plate;

Fig. 5 illustrates a perspective view of a modified form of a tie plate; and

Fig. 6 illustrates a sectional view of a tie plate showing the rail supported thereon, this form of tie plate embodying a modified form of the invention.

Referring to the drawing in detail, the reference character 5 designates a tie, to which the tie plate 6, forming the subject matter of the invention, is secured.

This tie plate 6, is provided with the openings 7, disposed adjacent the ends thereof, which openings are constructed to receive the securing spikes 8, which are employed in securing the tie plate to the tie 5.

The tie plate, is formed of malleable iron, steel, or any suitable material, and is provided with the upwardly extending lugs 9, stamped from the body of the tie plate, the lugs 9 being shown as curved in opposite directions, the same being disposed adjacent opposite edges of the tie plate, and in a position to embrace opposite edges of the rail, supported thereby.

Disposed substantially intermediate the width of the tie plate, and formed adjacent opposite ends thereof, are the tongues 10, stamped from the body, and being curved downwardly, to provide means for engaging transversely extending spikes 11, which spikes 11 contact with the heads of the spikes 8, the spikes 11 being driven, or otherwise positioned under the tongues 10, after the spikes 8 have been properly positioned in the tie.

It will thus be seen that vertical movement of the spikes 8, caused by vibrations of trains running over the rails, supported thereon, is restricted, and the spikes prevented from displacement.

In the modified form of the invention as illustrated by Fig. 5 of the drawing, the tie plate includes the sections 6′ and 7′, the adjacent edges thereof being provided with the coöperating tongues 8′, whereby the sections 6′ and 7′, are secured together.

It will thus be seen that in this form of the invention, the lugs 9′, forming a part of the respective sections, may be driven to properly embrace the flange of the rail, by inserting one end of each of the sections under the rail, and driving the same until the lugs 9′ contact with the rail.

Suitable securing spikes are then positioned in the openings 10′, formed adjacent the corners of the tie plate, whereby the tie plate is secured to the tie.

In the modified form as illustrated by Fig. 6 of the drawing, the tie plate is constructed in substantially the same manner as the tie plate disclosed by Fig. 1 of the drawing, except that a relatively long arm 11′, is stamped from the central portion of

the tie plate, the same being bent upwardly to a position so that the same will engage the under side of the tread of the rail, as at 12′, thus preventing overturning of the rail, with relation to the tie plate.

The lugs 13′ are also stamped from the tie plate, and are disposed in such position that the same will embrace the lower portion, or flange of the rail, to secure the same thereto. The usual securing spikes 14′, extend through suitable openings in the tie plate, and secure the tie plate to the tie.

On positioning a tie plate constructed in accordance with the present invention, the tie plate is moved to an angle so that the lugs 9, stamped therefrom, may pass the outer edges of the flange of the rail, whereupon the tie plate is moved so that the side edges thereof lie in planes parallel to the side edges of the tie 5. Thus the lugs 11, are brought to a position overlying the flanges of the rail.

Having thus described the invention what I claim is:—

1. In a tie plate, a base, lugs stamped from the base and extending upwardly therefrom, tongues stamped from the body of the plate, substantially intermediate the width thereof, said tongues extending toward the outer ends of the plate, said body having openings disposed adjacent the ends of the plate, said lugs adapted to embrace a portion of a rail, and said tongues adapted to embrace spikes, which spikes are adapted to overlie the openings.

2. In a tie plate, a base, lugs stamped from the plate, and extending in opposite directions, tongues stamped from the plate, said tongues being disposed adjacent the ends thereof, and being curved downwardly, said plate having spike receiving openings, and said tongues adapted to receive securing means, which securing means is adapted to engage spikes positioned within the spike receiving openings.

3. In a tie plate, a base, lugs stamped from the base, and extending in opposite directions, tongues stamped from the base, adjacent the ends thereof, said tongues extending toward the ends of the base, said base having spike receiving openings formed on opposite sides of the tongues, and means embraced by the tongues, and overlying the spike receiving openings for contacting with spikes positioned in the openings for preventing displacement thereof.

4. In a tie plate, a base, lugs stamped from the base and extending in opposite directions, said lugs adapted to embrace the base of a rail, tongues formed on the plate adjacent the ends thereof, and intermediate the width of the base, said plate having spike receiving openings on opposite sides of the tongues, metallic members embraced by the tongues and overlying the spike receiving openings, said metallic members adapted to engage spikes positioned within the spike receiving openings, and said metallic members having their ends extending downwardly.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK E. FITZPATRICK.

Witnesses:
E. J. SHAW,
H. R. POTTER.