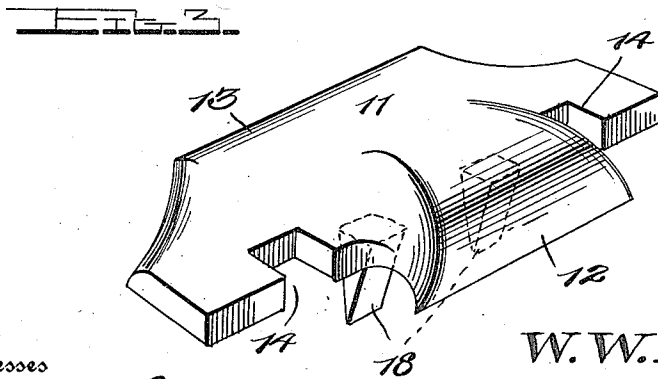
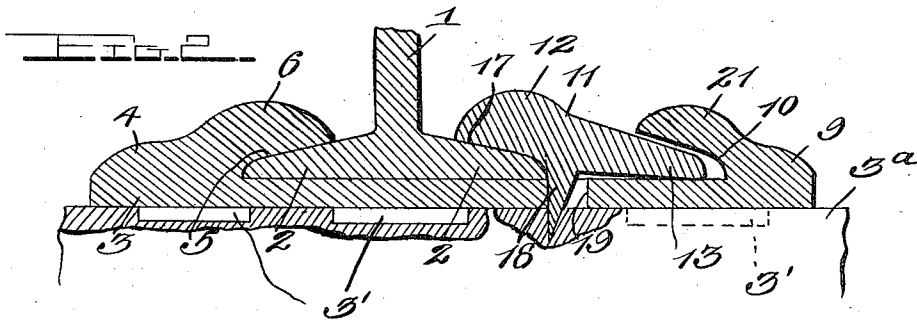
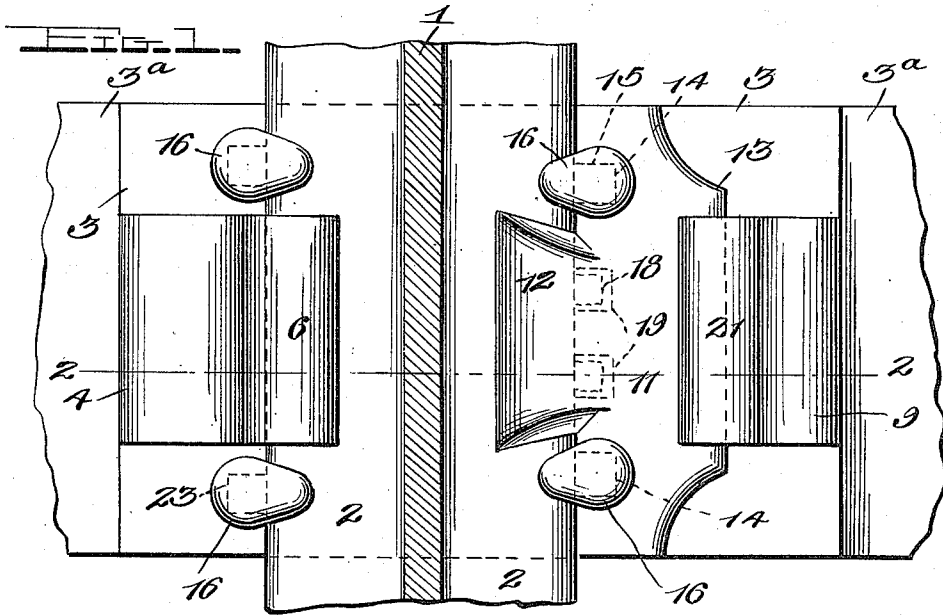


W. W. MEUSER.
RAIL TIE PLATE.
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1,063,372.

Patented June 3, 1913.



Witnesses

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RAIL TIE-PLATE.

1,063,372.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM W. MEUSER, a citizen of the United States, residing at Gallion, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Rail Tie-Plates, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in fastening means and more particularly to tie plates.

15 The principal object of the invention is the provision of a tie plate which, when secured in position to the railroad rails upon the ties on straight or curved pieces of track, will securely and effectively hold the rails from spreading or from becoming otherwise displaced from their normal position.

20 A further object of the invention is the provision of a tie plate which will be cheap and inexpensive to manufacture and of durable and substantial design.

25 A further object of the invention is the provision of a tie plate of the above stated character provided at one end with a rail flange engaging lug and a clamping lug at the other end thereof, and a rail flanged clamping member adapted to be interposed between the clamping lug and the rail flange, the teeth formed on the under side thereof extending down through openings in the tie plate into the tie so as to securely hold the rail base between the lug and clamping member against lateral movement.

35 A still further object of the invention is the provision of a tie plate embodying rail flanged clamping means adapted to hold the parts of the tie plate in fixed relative clamping relation to one another and to secure the tie plate to the tie, the clamping means being further secured to the rail and to the railroad tie through the medium of spikes, which serve to fasten the rails and the tie plate to the ties against relative movement.

40 With these and other objects in view, as will appear as the description proceeds, the invention comprises the various novel features of construction, combination and arrangement of parts as will be more fully described hereinafter and set forth with particularity in the appended claims.

50 Referring to the drawing, Figure 1 is a plan view of my improved tie plate showing it applied to the rail flanges. Fig. 2 is a longitudinal sectional view taken on the line

2—2, Fig. 1; and Fig. 3 is a detail perspective view of the clamping member.

Similar characters of reference are used to denote like parts throughout the accompanying drawings and the annexed specification.

Referring more particularly to the drawings, the reference character 1 designates a railroad rail which may be of any construction and embodies the usual form of rail flanges 2. As shown, the flanges 2 of the rail 1 are arranged transversely of my improved tie plate 3, the latter being in this instance, of substantially rectangular shape and is arranged upon a suitable tie 3^a. Disposed at one end of the tie plate 3 and formed integral therewith is a rail flange engaging lug 4 of a width slightly less than that of the tie plate. The inner edge of the lug 4 is undercut, as shown at 5, for the reception of one of the rail flanges 2. The under surface of the tie plate 3 is preferably provided with a plurality of ribs or cleats 3' which are of V shape form in cross section and are adapted to embed themselves in the upper surface of the rail supporting tie to securely hold the plate thereon against longitudinal or transverse shifting movement.

The opposite end of the tie plate has formed integral therewith a clamping lug 9 which is of a width equal to that of the rail flange engaging lug 4, this latter lug being spaced from the rail flange, as clearly shown in Figs. 1 and 2 of the drawings. The inner edge of this clamping lug 9 is under-cut, as shown at 10, similar to the rail flange engaging lug 4.

Arranged upon the tie plate 3 and interposed between the clamping lug 9 and the rail flange 2 is a clamping member 11, which consists of a clamping jaw 12 adapted to overlap one of the rail flanges 2. This clamping jaw 12, as clearly shown in Figs. 1 and 2 of the drawings, is of a width substantially equal to that of the clamping lug 9 and is thickened or bulged upwardly to add strength and rigidity thereto. The jaw 12 is formed integral with a base plate 13 which extends transversely of the tie plate and is of substantially the same width, the outer end portions of those parts that extend beyond the clamping jaw 12 are provided with square notches 14 that are adapted to register with similar square openings 15 formed in the tie plate 3 adjacent the

edge of the rail flange 2. Suitable spikes 16 are adapted to be passed through the notches 14 and the openings 15 and driven into the railroad tie to securely hold and retain the parts of the device and the rail flange together against relative movement. It will be noted that the head of each of the spikes projects outwardly sufficiently from the shank of the spike so as to overlie and bear upon the base plate 13 and the rail flange 2. It will also be noted that the under face 17 of the jaw 12 bears upon the rail flange 2 and is of substantially the same contour and terminates at the connection of the jaw 12 with the base plate 13.

Formed at the inner edge of the base plate 13 and projecting downwardly therefrom are spaced locking teeth 18. These teeth are substantially V-shaped and are adapted to project downwardly through rectangular openings 19 in the tie plate 3 which are disposed in transverse alinement with the spike receiving openings 15 to be driven down into the tie, as shown, so as to hold the rail securely in position. These openings 19 are slightly elongated or are of a length slightly greater than the width of the teeth 18, whereby the latter may have a slight longitudinal movement therein. The width of the base plate 13 is slightly less than the distance between the rail flange 2 and the outer extremity of the under-cut portion 10 of the clamping lug 9 for a purpose that will presently appear. It will also be manifested that the under-cut portion 10 is disposed slightly above and in spaced relation to the base plate 13, thus providing a space between the overhanging flange 21 and the tie plate 1, sufficiently large to permit the base plate 13, carrying the teeth 18, to be moved outwardly of the rail flange so that the clamping member 11 can be readily and easily swung upwardly to disengage it from the tie plate. While the arrangement described serves to hold the several parts rigidly clamped together, it is to be noted that the spikes 16 serve as an additional means to hold the parts together and to securely attach the tie plate and the rail to the railroad tie. The tie plate is provided on opposite sides of the rail flange engaging lug 4 with spike receiving openings 23 which are adapted to receive similar spikes 16 to more effectively secure the rail flanges to the tie plate and to the railroad tie.

When it is desired to assemble the several parts, the rail 1 is placed upon the tie plate 3 and one of its flanges 2 is moved longitudinally of the plate so as to under-lie the overhanging flange 6 of the lug 4. After the rail has been placed in its position, the base plate 13 of the clamping member 11 is inserted beneath the overlapping flange 21 of the clamping lug 9 sufficiently far to enable the teeth 18 to swing downwardly

past the outer edge of the flange 2 and down through the openings 19 formed in the tie plate 3. After this the clamping member 11 is moved inwardly toward the rail flange, to the position shown in Fig. 1, so that the inner longitudinal edge of the base plate 13 rests firmly against the inner longitudinal edge of the rail flange, in order to brace the rail and to hold the latter in fixed relative relation to the rail engaging lug 4. The clamping member 11 having been moved to its clamping position, the teeth 18 are driven down into the tie to clamp the rail flanges between the lug and the base plate and to secure the tie plate to the tie against movement. The rail 1 having been now securely fastened to the tie plate and the tie, the spikes 16 are then driven through the openings formed in the tie plate 3 to further effectively and securely fasten the tie plate together with the rails of the railroad tie against creeping or spreading.

From the foregoing description taken in connection with the accompanying drawings, the advantages of construction and the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired, as are within the scope of the appended claims. Having thus described this invention, what I claim is:—

1. The combination with a rail and a tie, of a tie plate having formed thereon a rail flange engaging lug at one end and a clamping lug formed thereon at the opposite end, a clamping member, said member including a clamping jaw adapted to overlie one of the rail flanges, and a base plate formed integral with the clamping jaw and projecting beneath the clamping lug on the tie plate, and a depending tooth formed on said clamping member adapted to secure said parts together and to the tie.

2. The combination with a rail and a tie, of a tie plate having a rail flange engaging lug formed integral therewith at one end, and a clamping lug formed integral therewith at the opposite end, said lugs being under-cut to provide overlapping flanges, a clamping member arranged upon the tie plate and disposed between the clamping lug and one of the rail flanges, said member including a clamping jaw adapted to overlie the rail flanges, and a base plate formed integral with the clamping jaw and projecting beneath the overlapping flange of the clamping lug, and means carried by the clamping member adapted to secure said parts together and to the tie, said base

plate and tie being provided with alining openings for the reception of spikes for the purpose set forth.

3. The combination with a rail and a tie, 5 of a tie plate having a rail flange engaging lug formed integral at one end thereof, and a clamping lug formed integral therewith at the opposite end, said lugs being under-cut to provide overlapping flanges, the tie 10 plate being further provided with openings adjacent the rail flanges, a clamping member disposed between the clamping lug and the rail flange upon the tie plate, said member including a clamping jaw adapted to 15 overlie the rail flange, and a base plate extending laterally from the clamping jaw and under-lying the overhanging flange of the clamping lug, teeth depending from the under side of the clamping member and 20 adapted to project through the openings in the tie plate to be driven down into the tie, the length of said openings and the distance between the rail flange and the outer extremity of the under-cut portion of the

clamping lug being sufficient to permit the 25 clamping member to be moved upwardly on the rail flange, substantially as and for the purpose set forth.

4. The combination with a rail and a tie, of a tie plate having a rail flange engaging 30 lug formed integral therewith at one end and a clamping lug formed integral therewith at the opposite end, a clamping member arranged upon the tie and disposed between the clamping lug and one of the rail 35 flanges, said tie plate being formed with an opening adjacent one of the rail flanges, and a depending tooth formed on said clamping member, said tooth being disposed 40 through the opening in said tie plate and engaged with the tie to secure said parts together and to the tie.

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

WILLIAM W. MEUSER.

Witnesses:

LOUIS DE DESILETS,
THEODORE STEWART.

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