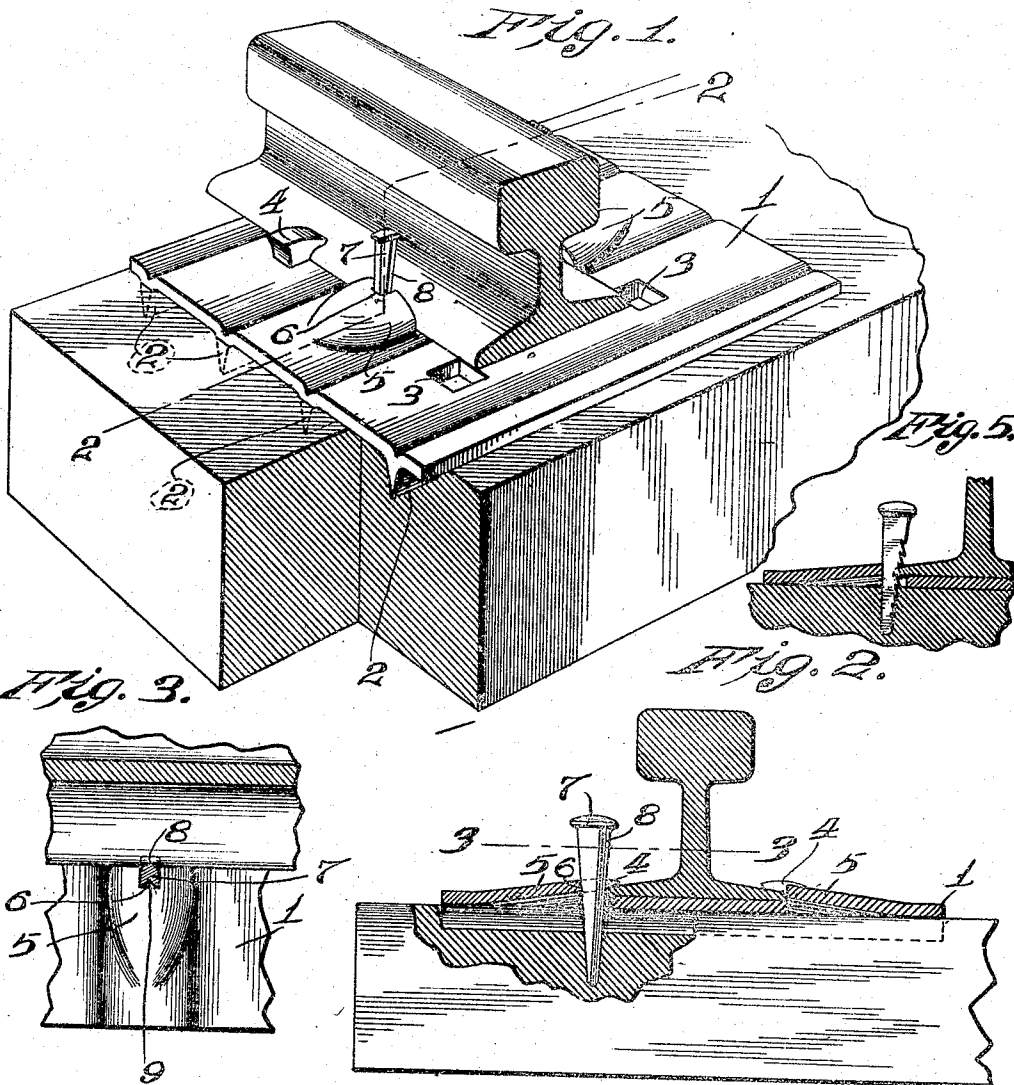


M. S. CLARKE.
 COMBINED TIE PLATE AND RAIL ANTICREEPER.
 APPLICATION FILED OCT. 9, 1908.

942,307.

Patented Dec. 7, 1909.



attest.

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UNITED STATES PATENT OFFICE.

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COMBINED TIE-PLATE AND RAIL-ANTICREEPER.

942,307.

Specification of Letters Patent.

Patented Dec. 7, 1909.

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To all whom it may concern:

Be it known that I, MARCUS S. CLARKE, a citizen of the United States, and resident of Houston, Harris county, Texas, have invented certain new and useful Improvements in Combined Tie-Plates and Rail-Anticreepers, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a combined tie plate and rail anti-creeper, the object of my invention being to construct a simple, inexpensive device which is applied to railway ties beneath the railway rails, and which device is provided with means which very firmly grip one of the base flanges of the rails to prevent undue lengthwise movement or creeping of said rail.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of a device of my improved construction positioned for use upon a tie, and beneath a track rail; Fig. 2 is a cross section taken approximately on the line 2—2 of Fig. 1; Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2; Fig. 4 is a section similar to Fig. 2, and showing a modified form of the tie plate and rail anti-creeper. Fig. 5 is a detailed section showing a modified form of the key or rail gripping member.

Referring by numerals to the accompanying drawings: 1 designates the body of the tie plate, which occupies a position beneath the track rail and on top of the railway tie, and said plate is preferably provided on its under side with a series of sharp ribs 2, which embed themselves in the body of the tie when the plates and rail are spiked to said tie.

Formed through the plate 1 are apertures 3 adapted to receive spikes 4, the heads of which engage over the base flanges of the track rail to rigidly fix the same in position. Formed integral with the top of the plate 1, and at a point midway between the side edges thereof, are lugs 5, which are formed by pressing the metal of the plate upward; or, if the plate be cast, said lugs are formed

integral with the body of the plate; and these lugs are so spaced apart as to readily receive the base flange of the rail. Formed through the edge of one lug and through the body of the plate 1, immediately adjacent the edge of said lug, is an aperture 6.

After the tie plate has been properly positioned on the tie and the rail is spiked in position on said tie plate, a wedge shaped key 7, provided on one side with a binding edge 8 is driven through the aperture 6 and into the tie in such a manner as that said binding edge 8 cuts into the edge of the corresponding base flange of the track rail, and thus said track rail is very rigidly and firmly keyed to the tie plate 1 and is held against longitudinal movement or creeping thereon.

If desired, the edge of the key 7, opposite the binding edge 8, may be provided with a vertically disposed V-shaped groove 9, thus forming a pair of sharp binding edges on this side of said key, which pair of edges tend to embed themselves in the edge of the lug in which the aperture 6 is formed when the key is driven into position; and this arrangement tends to firmly hold said key against withdrawal from the aperture 6.

In Fig. 4 I have shown a modified form of the device wherein the plate 1 is perfectly flat, without the ribs 2 and lugs 5; and rigidly fixed in any suitable manner to one side of this form of plate is a metal brace 10, which engages against one side of the track rail, and the key 7 passes through an aperture 11 formed through the plate 1, opposite the brace 10.

In Fig. 5 I have shown the key or gripping member, as being provided on one edge with a series of teeth, and when said key is driven into the tie, these teeth cut into the edge of the base flange of the track rail, thus forming a pair of shoulders at the sides of the key or gripping member, which effectually prevents the rail from a creeping movement in either direction.

The key 7 is made wedge-shaped or tapers gradually from top to bottom, in order that when driven into the tie it will exert a wedging action between the lug 5 and the edge of the base flange of the rail, and will therefore effectually engage and lock the rail to the tie plate.

A tie plate and rail anti-creeper of my improved construction is very simple, in-

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expensive, is adapted for all forms of track rails, and provides simple means for maintenance of rails in proper position on the ties; and very effectually prevents said rails from longitudinal movement or creeping.

I claim:—

1. A device of the class described comprising a plate adapted to be positioned on a tie beneath a railway rail, ribs integral with the underside of said plate, lugs formed on the top of the plate, the edges of which lugs engage the edges of the base flanges of the rail there being an aperture formed through the plate at the end of one of the lugs, a key adapted to be driven through said aperture, which key tapers gradually throughout its length from top to bottom and one of the sides of which key is provided with vertically disposed sharp teeth.

2. A combined tie plate and rail anti-creeper, comprising a base plate formed of a single piece of metal, an integral rib formed on the under side of said base plate, an outer and inner lug formed on the top of the plate, which lugs are formed by being struck and pressed upward from the body of the plate, the interior edge of the outer lug being adapted to engage the outer edge of the base flange of the rail for limiting the outer movement of the rail, the inner one of said lugs being provided with a recess formed in its top wall, coinciding with

the opening formed in the plate from which said lug is struck, and a key adapted to be driven through said recess and the opening in the plate formed beneath it, said key having its opposing edges gradually tapered from the head to the point.

3. A combined tie plate and rail anti-creeper, comprising a base plate formed of a single piece of metal, an integral rib formed on the under side of said base plate, an outer and inner lug formed on the top of the plate, which lugs are formed by being struck and pressed upward from the body of the plate, the interior edge of the outer lug being adapted to engage the outer edge of the base flange of the rail for limiting the outer movement of the rail, the inner one of said lugs being provided with a recess formed in its top wall, coinciding with the opening formed in the plate from which said lug is struck, and a key adapted to be driven through said recess and the opening in the plate formed beneath it, the opposing edges of said key being uniformly and gradually tapered from the head to the point.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

MARCUS S. CLARKE.

Witnesses:

OTTO VOGT,
O. H. LOOCK.