

D. F. & D. L. VAUGHAN.
 ANTICREEPER FOR RAILROAD RAILS.
 APPLICATION FILED JUNE 27, 1910.

1,021,387.

Patented Mar. 26, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

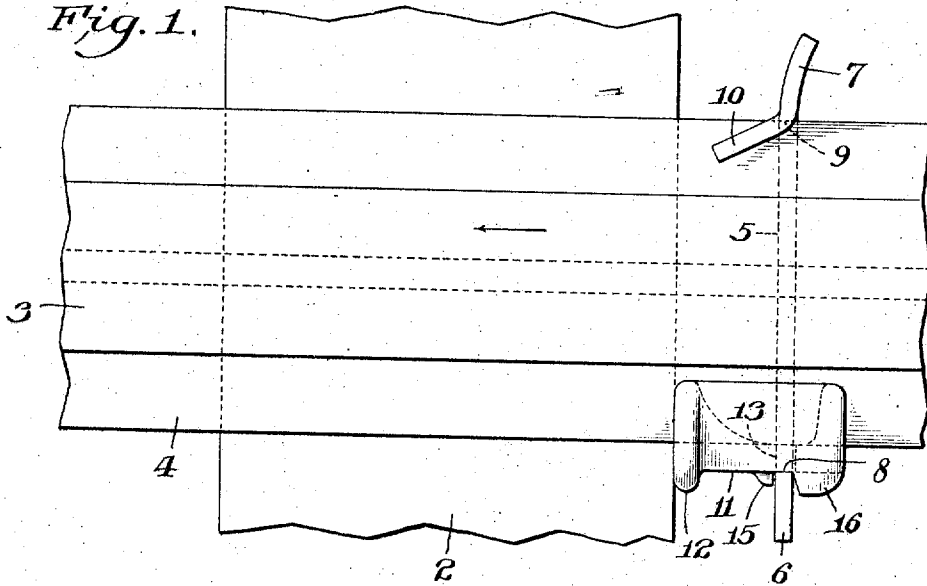


Fig. 3.

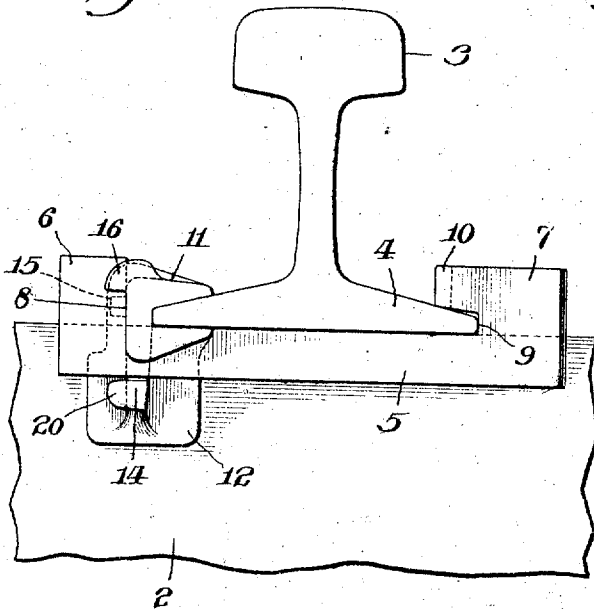
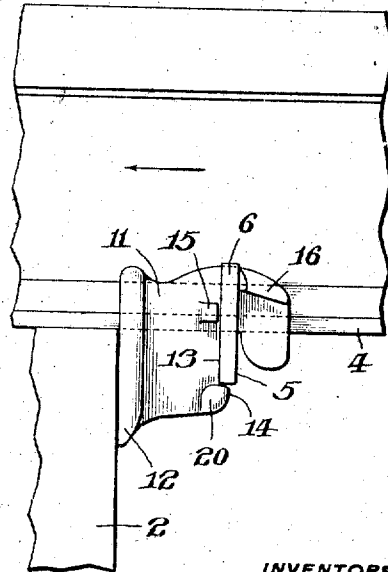


Fig. 2.



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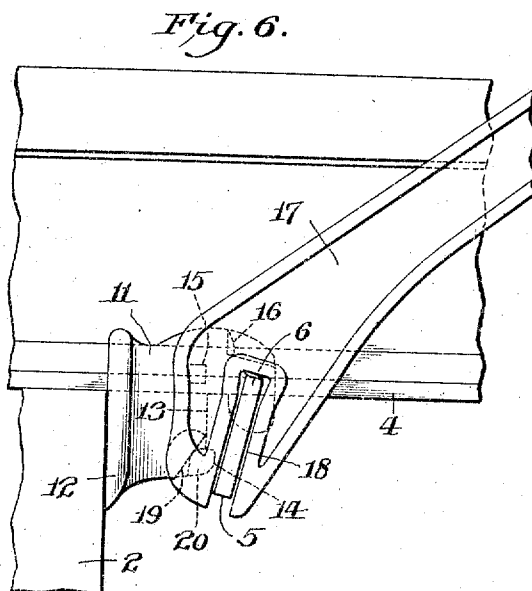
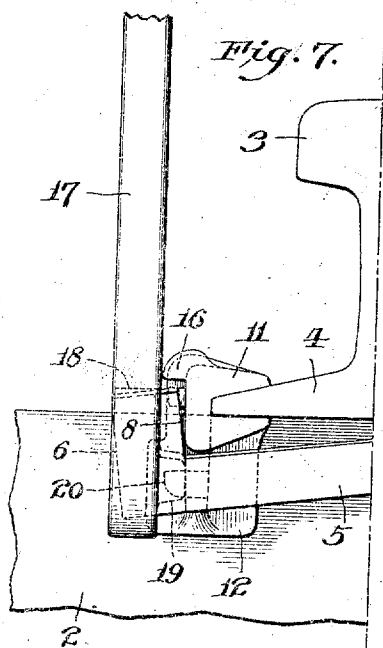
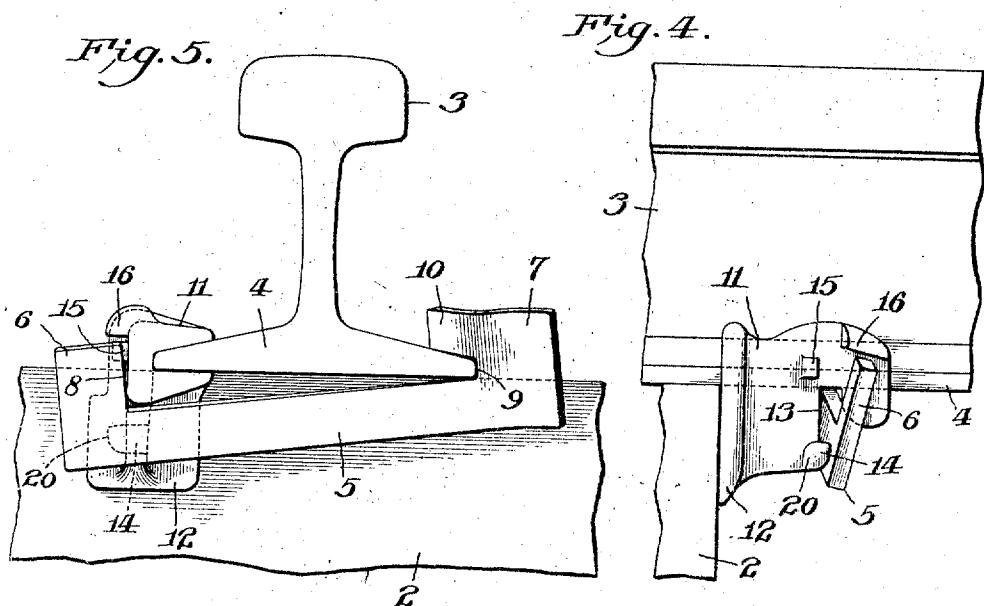
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UNITED STATES PATENT OFFICE.

DAVID F. VAUGHAN AND DAVID L. VAUGHAN, OF HADDONFIELD, NEW JERSEY.

ANTICREEPER FOR RAILROAD-RAILS.

1,021,387.

Specification of Letters Patent.

Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that we, DAVID F. VAUGHAN and DAVID L. VAUGHAN, citizens of the United States, residing at Haddonfield, Camden county, State of New Jersey, have invented certain new and useful Improvements in Anticreepers for Railroad-Rails, of which the following is a specification.

Our invention relates to anticreepers for railroad rails; and the object of our invention is to provide an anticreeper of novel, simple and efficient construction whereby increased strength is provided for a given quantity of material in the parts of the anticreeper, whereby the parts of the anticreeper may be readily applied to and removed from the railroad rail, and whereby the parts of the anticreeper when applied to the railroad rail will be firmly held in position thereon in constant readiness for action under all conditions.

To this end the invention consists in the novel construction and combinations of parts hereinafter fully described and particularly claimed.

In the drawings:—Figure 1 is a plan view of a portion of a cross-tie and a railroad rail thereon having our improved anticreeper applied thereto. Fig. 2 is a side elevation of our improved anticreeper and the adjacent parts of the cross-tie and railroad rail. Fig. 3 is an elevation of the parts shown in Fig. 2 as seen at right angles thereto. Fig. 4 is a view similar to Fig. 2 showing one position of the parts of the anticreeper in applying them to the rail. Fig. 5 is a view similar to Fig. 3, showing the parts of the anticreeper in the position shown in Fig. 4. Figs. 6 and 7 are views similar to Figs. 4 and 5 respectively, showing the removable wrench applied to one of the parts of the anticreeper.

2 designates a portion of a railroad cross-tie and 3 a railroad rail supported thereon, the railroad rail 3 being of well known construction including the usual base flange 4.

Supported upon the base flange 4 adjacent the cross tie 2 and in engagement with the latter, is our improved anticreeper, which is of the following construction:—Extending beneath the base flange 4 transversely thereof is a flat bar 5 having flat, upwardly extending end portions 6 and 7 which are provided with inner edges 8 and 9, respectively, facing the side edges of the base flange 4. The upper edge of the body

portion of the bar 5 is adjacent the bottom of the base flange 4 and the end portions 6 and 7 of the bar 5 extend upwardly from the body portion of the bar, one on one side and one on the other side of the base flange 4, and the side faces of the bar 5 and its end portions 6 and 7 are arranged substantially in vertical position, for a purpose hereinafter explained. The bar 5 and its end portions 6 and 7 are formed from a flat blank of sheet steel; and the end portion 7 is provided with a lateral strengthening bend, as clearly shown in Fig. 1, for a purpose hereinafter explained, and the end portion 7 is also provided with a part 10 extending inwardly over the base flange 4 and bent to extend laterally of the bar 5, as clearly shown in Fig. 1, the lower edge of the free end of the part 10 being in engagement with the upper face of the base flange 4 for the purpose of supporting one end of the bar 5 and for another purpose hereinafter appearing. Embracing one side of the base flange 4 is a shoe 11 which extends between the rail 3 and the inner edge 8 of the end portion 6 of the bar 5, and which also extends forwardly of the bar 5 and is provided with an abutment 12 engaging the side of the adjacent cross-tie 2. The general construction of this shoe 11, is clearly shown in the drawings, and the shoe is adapted to be slipped on one side of the base flange 4 and is held thereon by the inner edge 8 of the end portion 6 engaging the outer face of the shoe.

The anticreeper, as shown in the drawings, is arranged to prevent the rail 3 from creeping forwardly or in the direction of the arrows shown in Figs. 1 and 2; and when herein we speak of forwardly, we mean in the direction of the arrows, and when we speak of rearwardly, we mean in the reverse direction.

The shoe 11 is provided with a rearward face 13, which engages the forward face or side of the bar 5, and the shoe 11 is also provided with a projection 14, which extends rearwardly from the face 13 below the bar 5 and supports the end of the bar adjacent the shoe 11 from being displaced downwardly from engagement with the shoe, when the parts are in the positions shown. The shoe 11 is provided with an outwardly extending projection 15 adjacent the forward face of the end portion 6 and above the rearward face 13 of the shoe 11; and the shoe 11 is also

provided with an outwardly extending projection 16 adjacent the rearward face of the end portion 6 and above the projection 15.

The bar 5 is formed of spring steel, and when the parts are in the positions shown in Figs. 1, 2 and 3, the spring action of the bar 5, in tending to assume a position from which it was sprung by a torsional or twisting action upon the bar, is exerting a forward and downward pressure upon the end portion 7 and the part 10, pressing the part 10 against the base flange 4, and a reverse or rearward pressure upon the end portion 6 pressing the rearward face of the end portion 6 against the projection 16, and the forward face of the bar 5 against the rearward face 13 of the shoe 11, thus causing the parts of the anticreeper to firmly grip the base flange 4. The bar 5 is formed with a twist therein so that in the normal condition of the bar, as shown in Figs. 4, 5, 6 and 7, the end portion 6 is inclined rearwardly and the end portion 7 is inclined forwardly.

In assembling the parts of the anticreeper upon the base flange 4, the shoe 11 is first applied to one side of the base flange 4 in the position shown. The end portion 7 of the bar 5 with its projection 10, is then hooked over the other side of the base flange 4 in the position shown in Figs. 4 and 5. In this position of the bar 5, its upper portion is tilted rearwardly, its end portion 6 is outwardly of the body of the shoe 11 and below the projection 16 and the free end of the part or projection 10 is in engagement with the top of the base flange 4. It will therefore be understood that if the upper end of the end portion 6 be moved forwardly against the torsional spring action of the bar 5, the part 10 will be pressed firmly upon the base flange 4, permitting the end portion 6 to be moved into vertical position against the spring action of the bar and passed up between the projections 15 and 16, and, at the same time permitting the forward face of the bar to spring into position against the rearward face 13 of the shoe 11 and above the projection 14, as shown in Figs. 1, 2 and 3; whereupon the end portion 6 may be released and the bar 5, in tending to assume the normal condition from which it was sprung, will press its forward face against the rearward face 13 of the shoe 11, the rearward face of its end portion 6 against the projection 16 and its part 10 against the top of the base flange 4.

The purpose of the projection 15 is to limit the forward movement of the end portion 6 of the bar 5 in springing it into the position shown in Figs. 1, 2 and 3, thereby preventing the bar 5 from being sprung too far in assembling the parts, it being understood that should the bar be sprung too far, it would be bent and robbed of some or all of the spring action provided for holding

the parts of the anticreeper together and upon the base flange 4.

When the parts of the anticreeper are assembled upon the base flange 4 of the rail 3 with the abutment 12 of the shoe 11 engaging the cross-tie 2, as shown in Figs. 1, 2 and 3, the end of the bar 5 opposite to the shoe 11, is maintained in spaced relation to the cross-tie 2 by the shoe 11. Should the rail 3 attempt to creep forwardly or in the direction of the arrows shown in Figs. 1 and 2, forward movement of the shoe 11 will be prevented by the cross-tie 2, and the rail in creeping forwardly will carry with it the end of the bar 5 opposite to the shoe 11; and immediately upon the initial creeping movement of the rail 3, the bar 5 will tend to assume a diagonal position beneath the base flange 4, thereby forcing the inner edge 9 of the end portion 7 firmly into engagement with one side edge of the base flange 4; and at the same time forcing the inner edge 8 of the end portion 6 against the outer face of the body of the shoe 11, and consequently forcing the shoe 11 against the other side edge of the base flange 4, thus firmly gripping the rail and preventing it from creeping.

It will be readily understood that in employing the flat bar 5 with its end portions 6 and 7 arranged with their side faces in vertical position, as shown in the drawings, that the strain upon the end portions 6 and 7, as well as the tension on the body of the bar 5, is in the direction of the flat faces of the parts of the bar in preventing the rail 3 from creeping, thus giving us the maximum strength for a given quantity of metal employed in the bar. This forms an important feature of our invention.

The lateral bend in the end portion 7 of the bar 5, hereinbefore mentioned, is provided for the purpose of stiffening that end of the bar.

In order that the parts of the anticreeper may be readily assembled together upon the base flange 4, we provide a suitable wrench 17, as clearly shown in Figs. 6 and 7. This wrench 17 is provided with a slot 18, the walls of which embrace and are removably engaged with the end portion 6 of the bar 5. The wrench 17 is provided with an upwardly extending handle, as shown, and it is also provided on its lower portion with a projection 19 extending between the wrench and the outer face of the body portion of the shoe 11. This projection 19 is engaged by a projection 20 extending outwardly from the lower portion of the shoe 11 and between the face 13 thereof engaged by the bar 5 and the projection 19 of the wrench 17.

It will be readily understood that when the parts of the anticreeper are in the positions shown in Figs. 6 and 7 with the wrench applied thereto, as shown in said

figures, the forward and upward movement of the upwardly extending handle of the wrench 17 will cause the end portion 6 of the bar 5 to be sprung from the position shown in Figs. 6 and 7 to the position shown in Figs. 1, 2 and 3, and a reverse movement of the wrench will disengage the bar 5 and its end portion 6 from the shoe 11. The purpose of providing the projections 19 and 20, is to form a fulcrum for the wrench 17 on the shoe 11, and prevent the wrench from destroying the spring action of the bar 5 by moving the bar 5 rearwardly, while the upper end of the end portion 6 is being moved forwardly.

While we have herein shown and described our invention in a desirable and practicable form, we desire it to be understood that we do not limit ourselves to this particular construction, as the same may be greatly modified without departing from our invention.

We claim:—

1. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, one of said end portions having a part extending over said base flange and supporting one end of said bar, the inner edge of the other end portion extending vertically from the top of the body of the bar to the top of the end portion, and a shoe engaged with the last mentioned inner edge and supporting the adjacent end of the bar and maintaining the other end of the bar in spaced relation to the cross-tie.
2. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, said bar being provided with means for supporting it on the base flange and maintaining its side faces and the side faces of its end portions substantially in vertical position, and means acting on the cross-tie and on one end of the bar and maintaining the other end of the bar in spaced relation to the cross-tie, one of said end portions having a lateral bend therein.
3. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, the side faces of said bar and its end portions being arranged substantially in vertical position, a shoe en-

gaging one side of the base flange and the cross-tie and supporting one end of said bar and maintaining the other end thereof in spaced relation to the cross-tie, the forward face of said bar being engaged with said shoe, and said other end portion being provided with a supporting means engaging the top of the base flange.

4. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, the side faces of said bar and its end portions being arranged substantially in vertical position, a shoe engaging one side of the base flange and the cross-tie and supporting one end of said bar and maintaining the other end thereof in spaced relation to the cross-tie, the inner edge of one of said end portions and the forward face of said bar being engaged with said shoe, and said other end portion being provided with a supporting means engaging the top of the base flange.

5. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer comprising a flat bar extending beneath the base flange and having a flat, upwardly extending end portion provided with an inner edge engaged with one side of the base flange, the side faces of said bar and said end portion being arranged substantially in vertical position, said end portion having a lateral bend therein, means engaging the top of the base flange and supporting said end portion, and a shoe engaging the base flange and the cross-tie and supporting the other end of the bar and maintaining the first named end thereof in spaced relation to the cross-tie, the forward face of said bar being engaged with said shoe.

6. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a flat bar extending beneath the base flange and having a flat, upwardly extending end portion provided with an inner edge engaged with one side of the base flange and provided also with a part bent and extended over the base flange laterally of the bar and having its lower edge engaged with the top of the base flange, the side faces of said bar and said end portion being arranged substantially in vertical position; and a shoe engaging the other side of the base flange and said bar, said bar exerting a downward pressure on said part and a reverse pressure against said shoe, in tending to assume a position from which it was sprung.

7. The combination with a cross-tie and a railroad rail having a base flange, of an

antireepeer engaged with the cross-tie and comprising a flat bar extending beneath the base flange and having a flat, upwardly extending end portion provided with an inner edge engaged with one side of the base flange and provided also with a part bent and extended over the base flange laterally of the bar and having its lower edge engaged with the top of the base flange, the side faces of said bar and said end portion being arranged substantially in vertical position, said end portion having a lateral bend therein, and a shoe engaging the other side of the base flange and said bar, said bar exerting a downward pressure on said part and a reverse pressure against said shoe, in tending to assume a position from which it was sprung.

8. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and a projecting part on the other end thereof outwardly of the other side of said base flange, and a shoe engaging said base flange and said projection and having an outwardly extending projection engaged by said part, said bar exerting pressure against said base flange in one direction and pressing said part against said projection in a reverse direction in tending to assume a position from which it was sprung.

9. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and an upwardly extending part on the other end thereof outwardly of the other side of said base flange, and a shoe engaging said base flange and said part, said shoe having a face engaged by one side of said bar and an outwardly extending projection above said face and engaged by said part, and said bar exerting pressure against said face in one direction and pressing said part against said projection in a reverse direction in tending to assume a position from which it was sprung.

10. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and an upwardly extending part on the other end thereof outwardly of the other side of said base flange, and a shoe engaging said base flange and said part, said shoe having a face engaged by one side of said bar and an outwardly extending projection above said face and engaged by said part,

said bar exerting pressure against said face in one direction and pressing said part against said projection in a reverse direction in tending to assume a position from which it was sprung, and said shoe having a projection extending from said face and beneath said bar.

11. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and an upwardly extending part on the other end thereof outwardly of the other side of said base flange, and a shoe engaging said base flange and said part, said shoe having a face engaged by one side of said bar and an outwardly extending projection above said face on one side of said part and an outwardly extending projection above the first named projection on the other side of said part, and said bar exerting pressure against said face in one direction and pressing said part against the last named projection in a reverse direction in tending to assume a position from which it was sprung.

12. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and an upwardly extending part on the other end thereof outwardly of the other side of said base flange, and a shoe engaging said base flange and said part, said shoe having a face engaged by one side of said bar and an outwardly extending projection above said face on one side of said part and an outwardly extending projection above the first named projection on the other side of said part, said bar exerting pressure against said face in one direction and pressing said part against the last named projection in a reverse direction in tending to assume a position from which it was sprung, and said shoe having a projection extending from said face and beneath said bar.

13. The combination with a cross-tie and a railroad rail having a base flange, of an antireepeer engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and an upwardly extending part on the other end thereof outwardly of the other side of said base flange, a shoe engaging said base flange and said part, said shoe having a face engaged by one side of said bar and an outwardly extending projection above said face on one side of said part and an outwardly extending projection above the first named projection on the other side of said part, said bar exerting pressure

against said face in one direction and pressing said part against the last named projection in a reverse direction in tending to assume a position from which it was sprung, and said shoe having a projection extending from said face and beneath said bar, a wrench removably engaged with the two opposite sides of said part and having an upwardly extending handle, and means removably engaging said wrench with said shoe below the first named projection.

14. The combination with a cross-tie and a railroad rail having a base flange, of an anticreeper engaged with the cross-tie and comprising a bar extending beneath the base flange and having means on one end thereof for engaging one side of said base flange and an upwardly extending part on the other end thereof outwardly of the other side of said base flange, a shoe engaging said base flange and said part, said shoe having a face engaged by one side of said bar and an outwardly extending projection above said face on one side of said part

and an outwardly extending projection above the first named projection on the other side of said part, said bar exerting pressure against said face in one direction and pressing said part against the last named projection in a reverse direction in tending to assume a position from which it was sprung, and said shoe having a projection extending from said face and beneath said bar, and a wrench removably engaged with the two opposite sides of said part and having an upwardly extending handle and a projection on its lower portion extending toward said shoe, said shoe having an outwardly extending projection between said face and the projection on the wrench and engaging the latter.

In testimony whereof we affix our signatures in the presence of two witnesses.

DAVID F. VAUGHAN.
DAVID L. VAUGHAN.

Witnesses:

A. V. GROUPE,
S. I. HARPER.