

D. L. VAUGHAN.
 ANTICREEPER FOR RAILROAD RAILS.
 APPLICATION FILED AUG. 12, 1911.

1,021,389.

Patented Mar. 26, 1912.

Fig. 4.

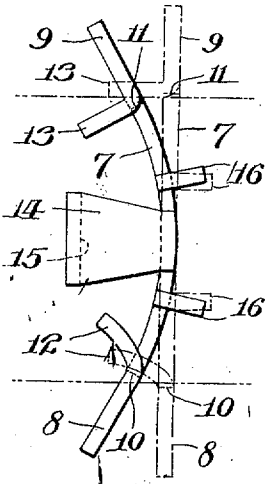


Fig. 5.

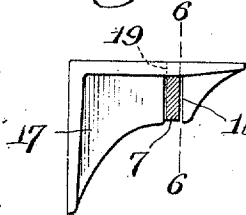


Fig. 6.

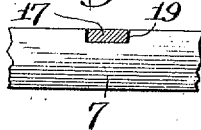


Fig. 1.

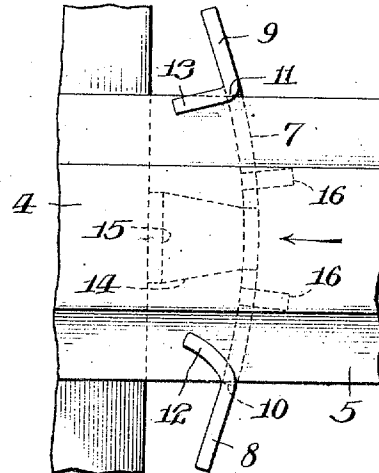


Fig. 3.

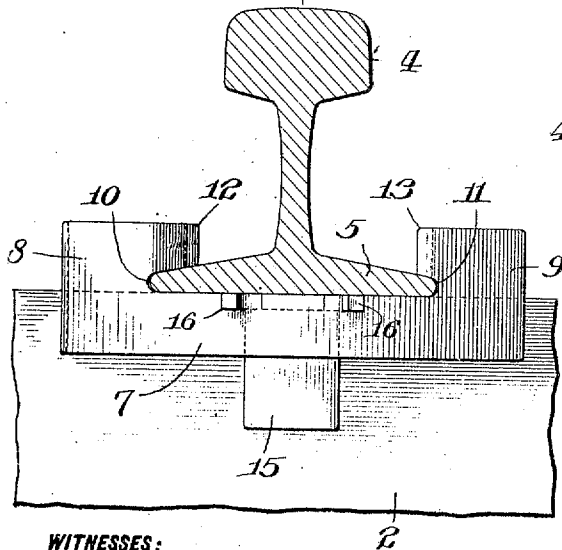
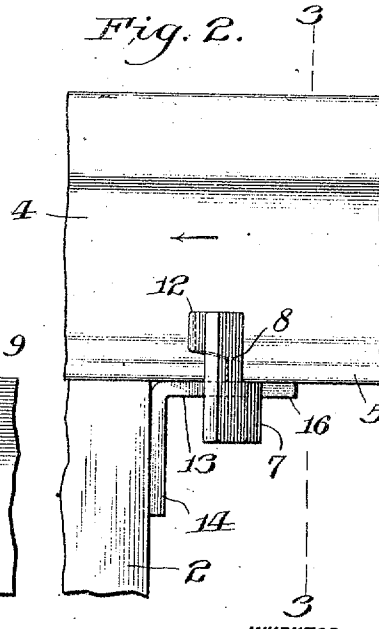


Fig. 2.



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ANTICREEPER FOR RAILROAD-RAILS.

1,021,389.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed August 12, 1911. Serial No. 643,671.

To all whom it may concern:

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

The object of my invention is to provide an anticreeper for railroad rails, of novel, simple and efficient construction in which two rail gripping jaws and a spring bar connecting them may be formed of a single piece of spring metal, the bar exerting pressure in a direction lengthwise of the rail and causing the jaws to grip the rail therebetween, and the anticreeper having a part arranged to engage a cross tie or other stationary part of the road bed.

A further object of the invention is to construct and arrange the parts so that the pressure of the spring bar, forcing the jaws against the rail, will be in the direction against which it is desired to prevent the rail from creeping, whereby the force tending to cause the rail to creep will cause the jaws to increase their gripping action upon the rail.

A further object of the invention is to construct the parts so that the maximum strength may be provided for a given quantity of metal forming the anticreeper.

A further object of the invention is to provide a means to prevent the bar from tilting when in action.

A further object of the invention is to construct the bar and jaws in one piece and arrange the parts so that the jaws may extend over the top of a railroad rail base and that the jaws may be engaged with and disengaged from the edges of a rail base to permit the anticreeper to be applied to or removed from the rail from a position beneath the rail base; and a further object of the invention is to construct the parts so that the entire anticreeper, including the part for engaging the stationary part of the road bed and the part for preventing the bar from tilting may be constructed of a single piece of metal and from a blank bent into the desired form.

The precise nature of the invention and the novel characteristics thereof will be, hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings, illustrating my invention: Figure 1 is a plan view of a portion of a cross-tie and the railroad rail thereon provided with my improved anticreeper. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical section, on line 3—3 of Fig. 2. Fig. 4 is a diagrammatic view, showing by full lines, the condition of the anticreeper when detached from the rail, and showing, by dot-and-dash lines, the position into which the parts of the anticreeper are sprung while being applied to a rail base, the lateral edge of the rail base being indicated by double-dot-and-dash lines. Fig. 5 is a transverse, vertical section through the spring bar, showing a modified construction of the bar and tie engaging part. Fig. 6 is a vertical section, on line 6—6 of Fig. 5.

2 designates a portion of a cross tie and 4 a railroad rail of well known construction including the base 5. The cross tie 2 forms a stationary part of the road bed which supports the rail 4 and over which the rail tends to creep, under the well known conditions.

My improved anticreeper is applied to the rail 4 adjacent the cross tie 2 and is of the following construction. Extending transversely beneath the rail 4 is a spring metal bar 7, the ends of which extend above the plane of the bottom of the rail 4 and form jaws 8 and 9 which embrace the rail base 5. The jaw 8 is provided with an inner face 10 adapted to engage one side of the rail base 5, and the jaw 9 is provided with an inner face 11 adapted to engage the other side of the rail base. The jaw 8 is provided with a projection 12 extending over one side of the rail base 5 and forwardly from a position above the bar 7, and the jaw 9 is provided with a projection 13 extending over the other side of the rail base 5 and forwardly from a position above the bar 7.

When herein I speak of forwardly, I mean in the direction, indicated by the arrows in the drawings, against which it is

desired to prevent the rail from creeping, and when herein I speak of rearwardly, I mean in the reverse direction.

The spring metal bar 7 is bowed or curved, as shown, so that the ends thereof extend forwardly from the central portion thereof; and, in the normal position of the bar 7, when removed from the rail 4 and as shown by full lines in Fig. 4, the distance between the rail-engaging faces 10 and 11 is less than the width of the rail base 5 so that when the faces 9 and 11 are engaged with the sides of the rail, as shown in Fig. 3, the ends of the bar 7 are sprung rearwardly from the normal position, shown in Fig. 4, and, therefore, the tendency of the bar 7 to assume the normal position from which it was sprung will force the jaws 8 and 9 forwardly and toward each other, thereby forcing the faces 10 and 11 against the sides of the rail base 5 and clamp it between the jaws 8 and 9.

In applying the jaws 8 and 9 to the edges of the rail base 5, the ends of the bar 7 are sprung rearwardly until the bar assumes the straight condition, shown by dot-and-dash lines in Fig. 4. In this position of the parts, the distance between the face 10 of the jaw 8 and the inner face of the projection 13 of the jaw 9 is greater than the width of the rail base 5. After the parts have been sprung into the dot-and-dash line position, the jaw 8 is hooked over one edge of the rail base 5 and the bar 7 is raised beneath the rail until the projection 13 of the jaw 9 is above the plane of the top of the adjacent side of the rail base, whereupon the bar 7 is released, and, in tending to assume the normal position, shown by full lines in Fig. 4, it moves the jaws 8 and 9 to the position shown in Fig. 3, forcing the faces 10 and 11 against the sides of the rail base 5 and stopping the return movement of the bar 7 in the position shown in Fig. 3, intermediate the full line and the dot-and-dash line positions shown in Fig. 4. The central portion of the bar 7 is provided with a forwardly extending arm 14 having on its forward end a downwardly extending part or abutment 15 arranged adjacent and adapted to engage the cross tie 2. The bar 7 is also provided with rearwardly extending projections 16 arranged adjacent the bottom of the rail 4 and adapted to engage the same and prevent the bar from rocking rearwardly when the jaws 8 and 9 are engaged with the sides of the rail base.

When the anticreeper is applied to the rail, as shown in Figs. 1, 2 and 3, and as hereinbefore described, the jaws 8 and 9 are maintained in spaced relation to the cross tie 2 by the parts 14 and 15. Should the rail 4 attempt to creep forwardly or in the direction of the arrows, over the cross tie 2, the

forward movement of the central portion of the bar 7 will be prevented by the parts 14 and 15 and stationary cross tie 2, and the rail 4, in creeping forwardly, will carry the jaws 8 and 9 with it; and, immediately, upon the initial creeping movement of the rail 4, the jaws 7 and 8 will tend to move toward each other, thereby firmly gripping the rail and preventing creeping thereof, and increasing the gripping action of the jaws upon the rail with the increased pressure tending to cause the rail to creep.

The entire anticreeper is formed of a single piece of sheet metal from a suitable blank, the part 14 being bent and extended forwardly from the top of the bar 7, the part 15 being bent and extended downwardly from the forward end of the part 14, the parts 16 being bent and extended rearwardly from the top of the bar 7 and the parts 12 and 13 being bent and extended forwardly from positions above the bar 7. The narrow top edge of the bar 7 is arranged directly above the narrow bottom edge thereof, bringing the broad faces of the bar 7 and jaws 8 and 9 into vertical position, or substantially so, so that the strain and tension on the bar and its jaws will be in the directions of the broad faces of the parts, giving me the maximum strength for a given quantity of metal, and also permitting the bar 7 to be bowed or curved transversely of its broad faces and longitudinally of the rail for the purpose hereinbefore described.

In Figs. 5 and 6 I have shown a modification in which the parts for holding the bar 7 spaced from the cross tie are made in a piece separate from the bar. In this modification, a tie engaging element 17 is employed having a vertical slot therein through which the bar 7 extends, the bar 7 having a notch 19 in the top thereof to receive the part of the element 17 over the slot 18. The walls of the slot 18 hold the element 17 and bar 7 in the proper relative positions longitudinally of the rail, and the walls of the notch 19 hold the element 17 and bar 7 in proper relative positions transversely of the rail.

It will be observed that in addition to the advantages hereinbefore described of my improved construction, it has the well recognized additional advantage of pressing the parts of the anticreeper against the rail by the action of a spring part so that the anticreeper may not work loose or shift its position upon the rail due to expansion and contraction of the rail and the parts of the anticreeper and due to the jarring of the rail by the passage of car wheels thereover.

I claim:

1. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and

having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said anticreeper having a part engaging said stationary part.

2. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and a part extending from said bar beneath a position between the sides of the rail and engaging said stationary part.

3. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said anticreeper having a part engaging said stationary part.

4. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and a part extending from said bar beneath a position between the sides of the rail and engaging said stationary part.

5. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and form-

ing jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and said bar having a bent portion extending therefrom in the direction of the length of the rail and engaging said stationary part.

6. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and said bar having a bent portion extending therefrom beneath a position between the sides of the rail and in the direction of the length of the rail and engaging said stationary part.

7. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and said bar having a part bent and extended therefrom beneath a position between the sides of the rail in the direction of the length of the rail and then bent and extended downwardly and engaged with said stationary part.

8. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it

was sprung, and a projection extending from said bar and positioned to engage the bottom of the rail and prevent rocking of the bar, said anticreeper having a part engaging said stationary part.

9. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, a part extending from said bar beneath a position between the sides of the rail and engaging said stationary part, and a projection extending from said bar in a direction opposite to the direction against which it is desired to prevent the rail from creeping and positioned to engage the bottom of the rail and prevent rocking of the bar.

10. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said bar having a bent portion extending from the body thereof and positioned to engage the bottom of the rail and prevent rocking of the bar, said anticreeper having a part engaging said stationary part.

11. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said bar having a bent portion extending from the body thereof in a direction opposite to the direction against which it is de-

sired to prevent the rail from creeping and positioned to engage the bottom of the rail and prevent rocking of the bar, and a part extending from said bar beneath a position between the sides of the rail and engaging said stationary part.

12. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and said bar having a part bent and extended therefrom beneath a position between the sides of the rail and in the direction of the length of the rail and then bent and extended downwardly and engaged with said stationary part, and said bar having a bent portion extending from the body thereof in a direction opposite to the direction against which it is desired to prevent the rail from creeping and positioned to engage the bottom of the rail and prevent rocking of the bar.

13. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws extending over the rail base and engaging the edges thereof, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said anticreeper having a part engaging said stationary part, said jaws permitting the anticreeper to be removed from the rail transversely thereof when said bar is sprung into an abnormal position.

14. The combination with a railroad rail having a base, and a stationary part of a road bed, of an anticreeper comprising, a spring metal bar extending transversely beneath the rail, a jaw on one end of said bar having a face engaging one edge of the rail base and a part extending over the rail base, a jaw on the other end of said bar having a face engaging the other edge of the rail base and a part extending over the rail base, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which

it was sprung, the distance between the said rail engaging face of one jaw and the part extending over the rail base of the other jaw being greater than the distance between the edges of the rail base when said bar is sprung into an abnormal position permitting the anticreeper to be removed from the rail.

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

DAVID L. VAUGHAN.

Witnesses:

WM. HARRISON SMITH,
A. V. GROUPE.