E. LAAS.

ANTICREEPER.

APPLICATION FILED APR. 22, 1916.

1,214,689.

Patented Feb. 6, 1917.

2 SHEETS—SHEET 1.

FIG. 1

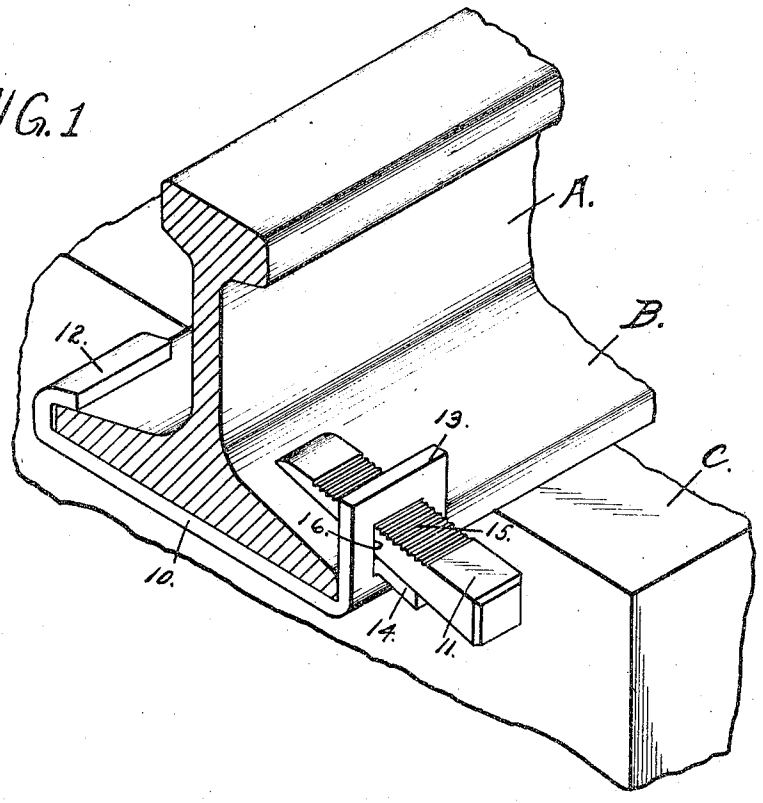


FIG. 2.

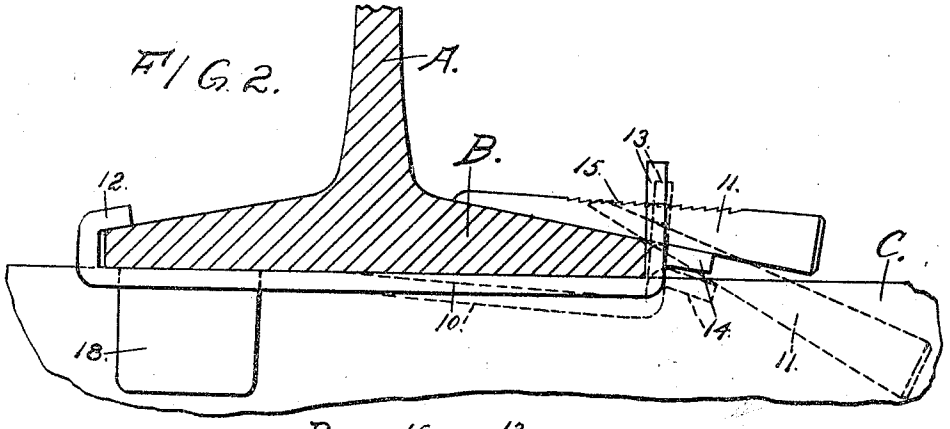
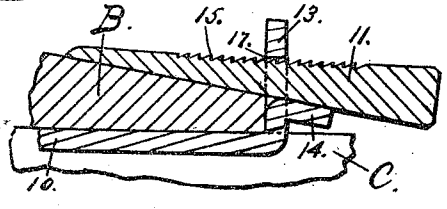


FIG. 3.



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2 SHEETS—SHEET 2.

FIG. 4.

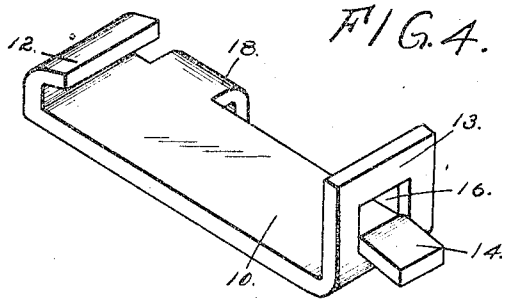


FIG. 5.

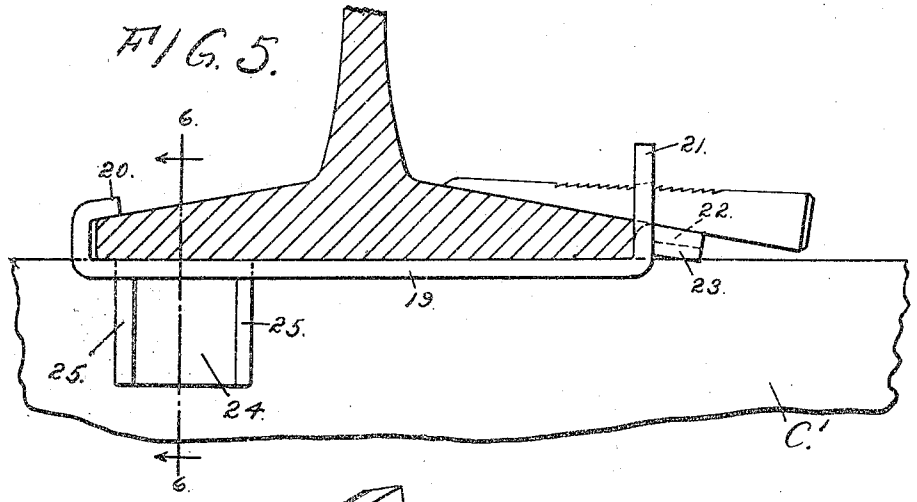


FIG. 7.

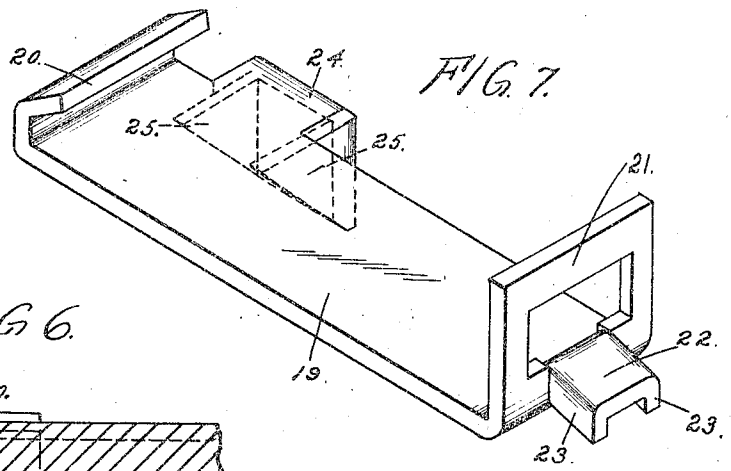
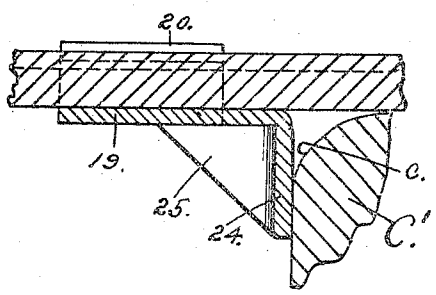


FIG 6.



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UNITED STATES PATENT OFFICE.

EDWARD LAAS, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO OTTO R. BARNETT, OF CHICAGO, ILLINOIS.

ANTICREEPER.

1,214,689. Specification of Letters Patent. Patented Feb. 6, 1917.

Application filed April 22, 1916. Serial No. 92,949.

To all whom it may concern:

Be it known that I, EDWARD LAAS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Anticreepers, of which the following is a specification.

My invention relates to an anti-creeper for railroads, and one of the principal objects of the invention is to provide a novel and improved device for preventing the longitudinal creep of railroad rails which will be light in weight, inexpensive to manufacture, strong enough to withstand the stresses to which devices of this class are subjected, and which will take a firm and reliable hold on the rail as against the various influences, such as the vibration of the rail and the contraction and expansion thereof tending to loosen the frictional grip of the device on the rail base and thereby make it ineffective to resist the creep of the rail. In this connection my invention employs a spring member extending under the rail which is drawn up against the rail and thereby bent by means of a locking wedge, the bending of the spring causing it to exert a constant stress which aids in maintaining the grip of the device upon the rail base.

The invention consists in the constructions and arrangements, to be hereinafter described and claimed, for carrying out the above stated objects and such subsidiary objects is will appear from the following specification.

The invention is illustrated, in certain preferred embodiments, in the accompanying drawings wherein—

Figure 1 is a view, in perspective, of one form of the invention, the device being shown as applied to a rail. Fig. 2 is a side elevation of the device illustrating the manner in which it is applied to the rail. Fig. 3 is a fragmentary cross sectional view through the wedge end of the device and adjacent portion of the base flange of the rail. Fig. 4 is a view, in perspective, of the yoke member of the device. Fig. 5 is a view, similar to Fig. 2, illustrating a modified construction. Fig. 6 is a fragmentary sectional view taken on line 6—6 of Fig. 5, and Fig. 7 is a view, in perspective, of the yoke member in the modified form of the invention.

Like characters of reference designate like parts in the several figures of the drawings.

Referring first to Figs. 1 to 4 inclusive, A designates a railroad rail having a base flange B, and C is one of the ties on which the rail is supported. The device of my invention is shown as bearing against the tie C and the portion of the same which lies against the tie is referred to as the tie abutting member. It will be realized, however, that the device might abut against any other fixed element of the roadbed.

The device shown in the first three figures of the drawings consists of a yoke member 10 and a wedge 11. The yoke member consists, as shown, of a flat bar of steel having a certain amount of resiliency which is formed at one end with a hook or jar 12 and at the other end with an upstanding projection 13. A portion of the projection 13 is severed and bent out to form a supporting plate 14 for the wedge 11. The wedge is preferably formed on its upper surface with a plurality of serrations 15. The yoke is given a bend or permanent set so that when the jaw 12 engages the edge of the base flange B the other end of the device stands a trifle below the opposite edge of the base flange, as indicated in the dotted lines in Fig. 2. The wedge 11 is driven into the opening 16 in the projection 13 and bears upon the supporting plate 14 and the upper inclined surface of the base flange. By driving the wedge in, the end of the yoke member is drawn up against the bottom of the base flange so that it exerts a constant spring pressure against the wedge. This draws the corner 17 of the projection 13 down upon the serrations 15 on the top of the wedge effectually preventing the backing out of the wedge which might otherwise be caused by the vibration of the rail or other disturbing influences. The wedge may be driven in as far as necessary in order to give the device a firm and reliable hold on the rail. It will be seen that this device may be applied to rails which differ a trifle in their dimensions. Railroad rails supposedly the same size frequently differ slightly because of the wear on the rolls by which they are produced. The initial hold of the device on the rail is increased in case the rail starts to creep. This is accomplished by providing one end of the yoke, preferably the end adjacent jaw 12, with a tie abutting flange

18. The other end of the device, the wedge end, stands out of contact with the tie so that the tendency of the rail to creep gives the device a diagonal set by which such tendency is immediately checked. However, it is essential, in order that this clamping action should take place, that the initial frictional hold of the device on the rail base should be sufficient to prevent the rail from slipping through the device. In this connection my invention provides for a clamping hold of the device on the rail which is at once positive and elastic. That is, the yoke member is held in rigid relation with the rail by the wedge. Because the yoke is resilient and strained by application to the rail, any tendency to loosenss due to vibration, difference in expansion and contraction as between the metal parts involved, or other causes, is checked so that the initial hold essential to successful operation is maintained under all conditions.

The modifications shown in Figs. 5, 6 and 7 are along the line of giving the device additional strength. The yoke member 19 is formed, in the same general way, of a flat piece of steel bent up at one end to form a jaw 20 and at the other end to form an upstanding projection 21. The supporting plate 22 for the wedge is formed with depending flanges 23 so that it is channel-shaped. The flanges bear against the body portion of the yoke. By this arrangement the support for the wedge is considerably strengthened. Similarly the tie abutting member 24 is formed with wings or flanges 25 which extend under and bear against the lower side of the body portion of the yoke. It often happens that the edge of the tie is rounded off, as indicated at *c* in Fig. 6, C′ designating the tie. With the face of the tie so shaped the thrust of the anti-creeper is against the lower portion of the tie abutting member. The wings 25 are to prevent the tie abutting member from bending, under such circumstances as these.

While I have described my invention in certain preferred embodiments, it will be realized that modifications might be made as to details of construction without departure from the principles of the invention. Therefore I do not wish to be understood as limiting the invention to the precise constructions, arrangements and devices shown and described except so far as such limitations are expressed in the claims.

I claim:

1. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, and a wedge engaging the base of the rail and adapted to bend the other end of said member and bind the same in clamped relation with said rail.

2. An anti-creeper comprising a spring member to extend under the base of a rail, formed on one end with a jaw adapted to engage one edge of the rail base, and a wedge engaging the base of the rail and adapted to bend the other end of said member and bind the same in clamped relation with said rail.

3. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, the other end of said member having a set downwardly away from the rail base, and a wedge adapted to bend said member up against the rail and bind the same in clamped relation therewith.

4. An anti-creeper comprising a spring member to extend under the base of a rail, formed at one end with a jaw adapted to extend around one edge of the base of the rail, the other end of said member having a set downwardly away from the rail base, and a wedge adapted to bend said member up against the rail and bind the same in clamped relation therewith.

5. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, and a wedge engaging the base of the rail and adapted to bend the other end of said member and bind the same in clamped relation with said rail, said wedge and member having a locked relation when in engagement which prevents a retrograde movement of the wedge.

6. An anti-creeper comprising a spring member to extend under the base of a rail provided with means at one end for engaging the rail, the other end of said member having a set downwardly away from the rail base, and a wedge adapted to bend said member up against the rail and bind the same in clamped relation therewith, said wedge and member having a locked relation when in engagement which prevents a retrograde movement of the wedge.

7. An anti-creeper comprising a member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto.

8. An anti-creeper comprising a member to extend under the base of a rail, formed at one end with a jaw to engage one edge of the rail base and at the other with an upstanding apertured projection, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto.

9. An anti-creeper comprising a member to extend under the base of a rail provided at one end with rail engaging means and at

the other end with an upstanding apertured projection, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto, said wedge and member having a locked relation when in engagement.

10. An anti-creeper comprising a member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto, said wedge being formed with locking teeth adapted to be engaged by said projection.

11. An anti-creeper comprising a member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto, said projection being formed with a laterally extending support for the wedge.

12. An anti-creeper comprising a spring member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, this end of the device having a permanent set downwardly away from the rail base, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto.

13. An anti-creeper comprising a spring member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, this end of the device having a permanent set downwardly away from the rail base, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto, said wedge being formed with locking teeth to prevent retrograde movement thereof.

14. An anti-creeper comprising a spring member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, this end of the device having a permanent set downwardly away from the rail base, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto, said wedge and member having a locked relation when in engagement which prevents the wedge from backing out of its operative position.

15. An anti-creeper comprising a spring member to extend under the base of a rail provided at one end with rail engaging means and at the other end with an upstanding apertured projection, this end of the device having a permanent set downwardly away from the rail base, and a wedge which is adapted to extend through said projection and to bear on the upper surface of the rail base binding said member thereto, said projection being formed with a laterally extending support for the wedge.

16. An anti-creeper comprising a member to extend under the base flange of a rail provided at one end with rail engaging means and at the other with an upstanding projection, the middle portion of which is severed and bent out laterally to provide a support for a wedge, and a wedge which extends through the aperture in said projection and bears upon said support and the upper surface of the rail base.

17. An anti-creeper comprising a member to extend under the base flange of a rail provided at one end with an integral jaw adapted to engage the edge of the rail base and at the other with an integral upstanding projection, the middle portion of which is severed and bent out laterally to provide a support for a wedge, and a wedge which extends through the aperture in said projection and bears upon said support and the upper surface of the rail base.

18. An anti-creeper comprising a flat bar of steel, one end of which is bent to form a rail engaging jaw and the other end bent up to provide an upstanding projection, said projection formed with an aperture and said bar with an angular projection providing a tie abutting member, and a wedge adapted to be driven through said upstanding projection to bear upon the upper surface of the base flange.

19. An anti-creeper comprising a flat bar of steel, one end of which is bent to form a rail engaging jaw and the other end bent up to provide an upstanding projection, said projection formed with an aperture and said bar with an angular projection providing a tie abutting member having wings which extend under and bear against the lower surface of the bar, and a wedge adapted to be driven through said upstanding projection to bear upon the upper surface of the base flange.

20. An anti-creeper comprising a flat bar of steel, one end of which is bent to form a rail engaging jaw and the other end bent up to provide an upstanding projection, the center portion of which is severed and bent out laterally providing a wedge support, said bar being formed with an integral angular tie abutting member having wings which extend under and bear against the lower surface of the bar, and a wedge

formed with serrations on its upper surface adapted to be driven through the aperture of said upstanding projection to bind said bar against the rail.

21. An anti-creeper comprising two elements which together form engaging means for engaging the rail, one of such members consisting of a wedge bearing against the rail and the other being elastic and strained so as to hold the wedge in locked position.

22. An anti-creeper comprising a wedge adapted to bear on the upper surface of the base flange of a rail, and a spring yoke extending around the rail base which exerts spring pressure against the wedge to hold the same in locked position.

23. An anti-creeper comprising a member to extend under the base of a rail, provided at one end with rail engaging means and at the other end with an upstanding apertured projection and a wedge which is adapted to extend through said projection and bear on the upper surface of the rail base binding said member thereto, said projection being formed with a laterally extending support for the wedge provided with downwardly bent wings which bear against the lower portion of said upstanding projection.

24. An anti-creeper comprising a flat bar of steel, one end of which is bent to form a rail-engaging bar, and the other end bent up to form an upstanding projection, the center portion of which is severed and bent out laterally providing a wedge support having downwardly bent wings which bear against the upstanding projection, said bar being formed with an integral angular tie abutting member having wings which extend under and bear against the lower surface of the bar, and a wedge adapted to be driven through the aperture of said upstanding projection to bind said bar against the rail.

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