

F. A. PRESTON.
 ANTICREEPER FOR RAILS.
 APPLICATION FILED SEPT. 19, 1912.

1,058,015.

Patented Apr. 1, 1913
 2 SHEETS—SHEET 1.

Fig. 1.

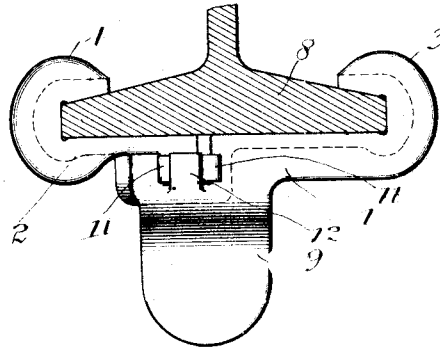


Fig. 2.

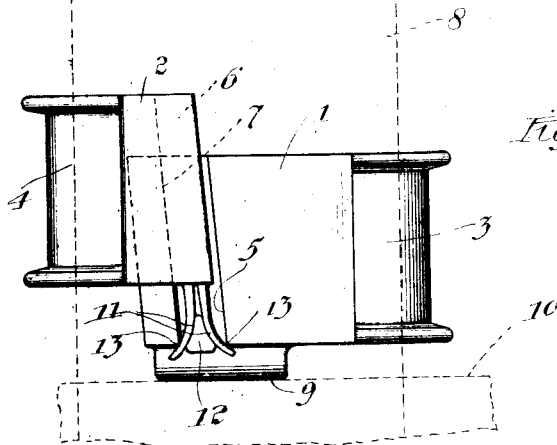


Fig. 3.

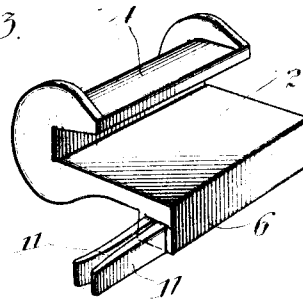


Fig. 4.

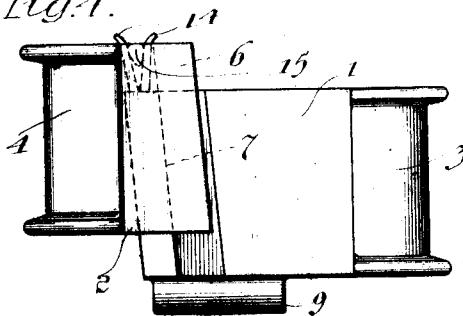


Fig. 5.

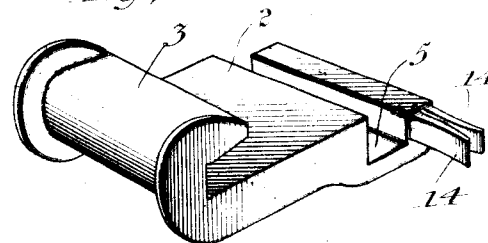
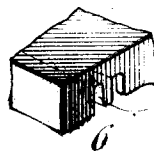


Fig. 6.



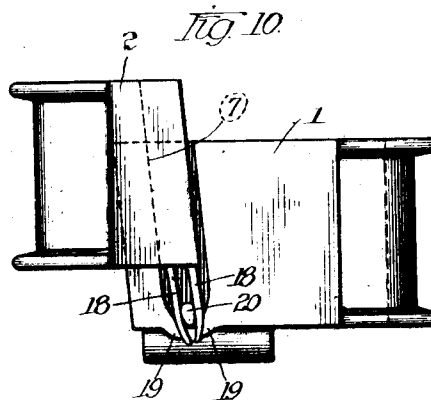
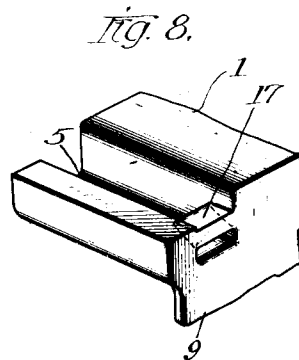
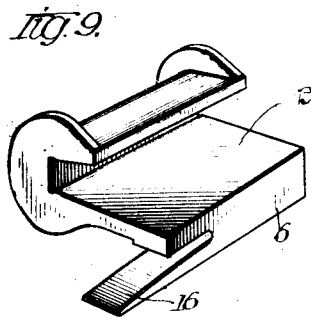
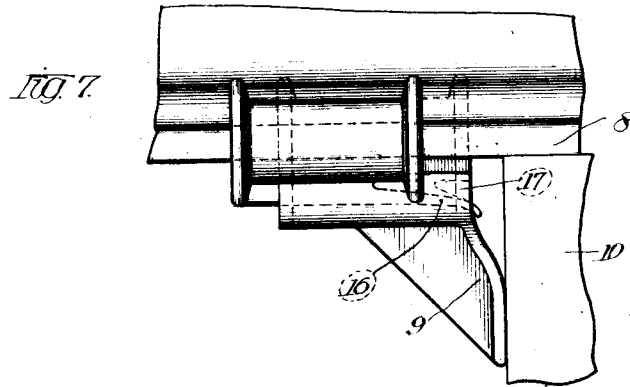
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 2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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ANTICREEPER FOR RAILS.

1,058,015.

Specification of Letters Patent.

Patented Apr. 1, 1913.

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To all whom it may concern:

Be it known that I, FREDERICK A. PRESTON, a citizen of the United States, and a resident of Highland Park, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Anticreepers for Rails, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to anti-creepers for rails.

In the various different forms of anti-creepers now in use, the creeping tendency of the rail is resisted by virtue of the firm frictional hold of the anti-creeper on the rail, the thrust being transmitted directly to a cross-tie by some portion of the anti-creeper which bears against said tie. As long as the pressure of the anti-creeper against the tie continues, the anti-creeper maintains an effective hold on the rail. When the pressure is relieved due to reaction of the rail from contraction or from creeping tendency in the opposite direction, the anti-creeper may loosen, due to vibration of passing trains or to ballast which may be packed or frozen tightly around the bearing face of anti-creeper and prevent its free movement with the backward movement of rail. This vibration or ballast interference may not only loosen the anti-creeper but may completely disengage it from the rail. To prevent this objectionable loosening of the grip of the anti-creeper on the rail, various devices have been provided heretofore for locking the anti-creeper in its most effective position of adjustment. Said devices in many cases had to be applied manually after the anti-creeper was applied to the rail or they required the additional operation of bending some element or of making some adjustment. In other cases, the locking devices were not equally effective for different adjustments of the anti-creeper or else they permitted an appreciable readjustment thereof before becoming effective.

The object of my invention is to provide improved means for locking the anti-creeper in whatever position of effective adjustment it may have assumed, the said locking occurring automatically when the anti-creeper is being driven to the desired position on the rail.

In the accompanying drawings, I have illustrated several embodiments of the invention, which latter may, of course, be embodied in other forms.

The following views are shown in the drawings:

Figure 1 is an elevation of one form of anti-creeper in assembled position on the rail, which latter is shown in partial sectional elevation. Fig. 2 is a top plan view thereof with the rail shown in dotted outline. Fig. 3 is a perspective view of one of the two parts of the anti-creeper shown in the preceding figures. Fig. 4 is a top plan view of a second form of anti-creeper in which the automatic lock is arranged at the rear end thereof instead of at the forward end as in the first form. Fig. 5 is a perspective view of one of the two parts of which the anti-creeper shown in Fig. 4 is composed. Fig. 6 is a perspective view of a detail. Fig. 7 is a side elevation of a third form of anti-creeper, the same being shown in assembled position on the rail. Fig. 8 is a perspective view of a detail thereof. Fig. 9 is a perspective view of one of the members of this form of anti-creeper. Fig. 10 is a top plan view of a fourth form of anti-creeper.

In the preferred design the anti-creeper is made up of two relatively movable parts, the larger of which in each of the views of the drawings may be called the clip 1, the smaller being known as the mate 2. The clip is provided with a rail engaging jaw 3 and the mate is provided with a similar rail engaging jaw 4. The clip is provided with a recess or groove 5 which receives loosely the projection or rib 6 on the mate. One of the vertical walls of said rib engages the adjacent vertical wall of the groove, said walls having sliding engagement with each other in a plane somewhat diagonal with respect to the longitudinal axis of the rail as indicated at 7 in the various views. It will be seen that a relative movement of the clip and the mate longitudinally with respect to the rail will cause the jaws 3 and 4 to be drawn closer together, thereby firmly gripping the base 8 of the rail between them, as in Fig. 1 for example.

When applying the rail anchor to the rail, the clip 1 is first driven on to the rail base with its downwardly extending flange 9 abutting against the side of a tie 10, as shown in Fig. 2 of the drawings. The mate

is then driven on to the opposite side of the rail base at some distance from the tie and is then driven toward the tie until the rib 6 is received within the groove 5 and the adjacent vertical walls are brought into engagement with each other, as previously explained. The driving of the mate toward the tie is continued until the parts have assumed about the relative positions shown in Figs. 2, 4, 7 and 10, at which point the mate can be driven no farther, as the rail base at this point is gripped most effectively by the jaws 3 and 4. When in this position it will be seen that when the rail tends to creep, both the clip and the mate tend to move therewith. The forward movement of the clip is resisted by the tie, however, through the abutting flange 9. Any actual forward movement of the mate 4 will result in the jaws 3 and 4 being drawn closer together, thereby increasing if possible the effectiveness of the grip on the rail base.

It will be seen that a rearward movement of the mate will result in a relaxation of the grip of the jaws on the rail base. As long as the rail tends to creep forward no relaxation can occur. If the rail should move rearwardly due to contraction caused by cold, for example, or reversed traffic, the pressure of the flange 9 on the tie would be relieved and long continued vibration of the rail might loosen to a greater or less extent the hold of the anti-creeper on the rail base. To prevent such a loosening I provide in the first form of device a pair of forwardly projecting tongues 11 on the mate, which tongues are spread apart by a wedge-shaped pin or projection 12 formed at the forward end of the clip, preferably integrally therewith, and projecting from the bottom of the recess 5. Said wedge is so disposed with respect to the forward end of the recess that the tongues 11 when spread apart are extended a distance greater than the width of said slot and are brought preferably into positive engagement with the front vertical wall of the clip, as clearly shown in Fig. 2. In this position it will be seen that a rearward movement of the mate is effectually prevented by the tongues 11, which are bent outwardly over the corners 13. Accordingly the clip and the mate are effectively locked together. The tongues 11 are of such a length that considerable latitude is allowed in the final forward adjustment of the mate with respect to the clip. That is to say, where rails vary somewhat in width and where for other reasons the mate cannot be driven as far forward in one case as in another case, the tongues 11 will nevertheless be spread apart and will engage the corners 13 to prevent a return movement from whatever position the mate may eventually have assumed. Furthermore, if the rail anchor should be carelessly applied, and the

mate not driven sufficiently far, the creeping tendency of the rail will cause a further forward movement of said mate, the latter being locked against return movement both in its first position and in its last position. In other words, the mate is locked in any operative position, whether in the most effective position or not, and is prevented from a return movement although not necessarily prevented from a further forward movement to a more effective position.

As seen in Fig. 2, the tongues 11, which together with the entire mate are preferably made of malleable iron, project somewhat beyond the front wall of the clip. They do not project, however, beyond the vertical plane of the tie abutting flange 9. If the tie should be very irregular in cross-sectional outline, so that the points of the tongues 11 should penetrate the tie somewhat, the lock would not be rendered inoperative thereby.

In the second form of anti-creeper, the locking device is arranged at the rear. The tongues 14 project rearwardly from the clip and the spreader or wedge 15 is formed as a part of the mate. When the mate is driven into the clip, the spreading of the tongues 14 locks the mate against return movement.

In the third form of anti-creeper, the locking means consist of a tongue which is deflected in a vertical plane instead of in a horizontal plane. The locking tongue 16 is formed on the mate and is bent downwardly when driven under the bridge at the forward end of the recess 5. It is obvious that this form of lock may also be arranged at the rear of the anti-creeper.

In the form of device shown in Fig. 10, the tongues 18, instead of being spread apart, are brought together as the mate is being driven into the clip. Said tongues encounter the walls or abutments 19 and are bent toward each other around the post 20, whereby positive engagement with said post is obtained to a sufficient extent to prevent rearward movement of the mate. It is apparent that this form of lock may also be arranged at the rear of the anti-creeper if desired.

In all of the above forms of device, the rail anchor is illustrated as being made of two parts. Of course the invention is adapted to any anti-creeper having a plurality of parts, whether two or more. Furthermore, the invention is not limited to the use of two locking tongues as a greater or less number may be employed. Neither is it limited to the relative arrangement or location of said tongue or tongues with respect to the other parts of the anti-creeper. In general the invention is not limited to the particular forms described and illustrated or to the details thereof. Instead, I desire to cover broadly suitable equivalent means

for accomplishing the desired results whenever such means fall within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. A rail anchor having a plurality of cooperating parts which increase their grip on the rail when moved relatively longitudinally thereof, two of said parts having sliding engagement beneath the rail base and having means which co-act to automatically effect positive engagement at any point during said movement and thereby prevent return movement from any operative relative position of said parts.

2. In an anti-creeper, two members having interfitting portions beneath the rail base and being relatively movable in a direction substantially parallel to the rail, a projection on one of said members, and means on the other of said members for engaging said projection and deflecting it with respect to the line of movement of said members.

3. In an anti-creeper, two members engaging each other beneath the rail base and being relatively movable in a direction substantially parallel to the rail, a projection on one of said members, means on the other of said members for engaging said projection and deflecting it with respect to the line of movement of said members, and additional means arranged so as to be engaged by the deflected projection to prevent a return movement of said members.

4. In an anti-creeper, two relatively movable members, a pair of substantially parallel tongues carried by one of said members, and a pair of inclined walls on the other of said members, said inclined walls being

adapted to engage said tongues during relative movement of said members to vary the angle between said tongues.

5. In an anti-creeper, two relatively movable members, a pair of substantially parallel tongues carried by one of said members, a pair of inclined walls on the other of said members, said inclined walls being adapted to engage said tongues during relative movement of said members to vary the angle between said tongues, and means engaged by said tongues when in deflected position to form a positive lock.

6. An anti-creeper comprising two members each having a jaw adapted to grip one of the edges of a rail base, one of said members having a slot, the other of said members having a rib arranged to fit loosely in said slot, a flexible tongue carried by one of said members, a locking surface on the other of said members, and means for deflecting said tongue against said locking surface when said members are being assembled.

7. An anti-creeper comprising members which are movable substantially parallel to the axis of the rail, said members having interlocking and wedging engagement beneath the rail base, a pair of tongues carried by one of said members, and cooperating inclined walls carried by the other of said members whereby movement of said members relatively will deflect said tongues transversely with respect to the rail.

In witness whereof, I hereunto subscribe my name this 17th day of September, A. D., 1912.

FREDERICK A. PRESTON.

Witnesses:

LESLIE W. FRICKE,
ROBERT F. BRACKE.