

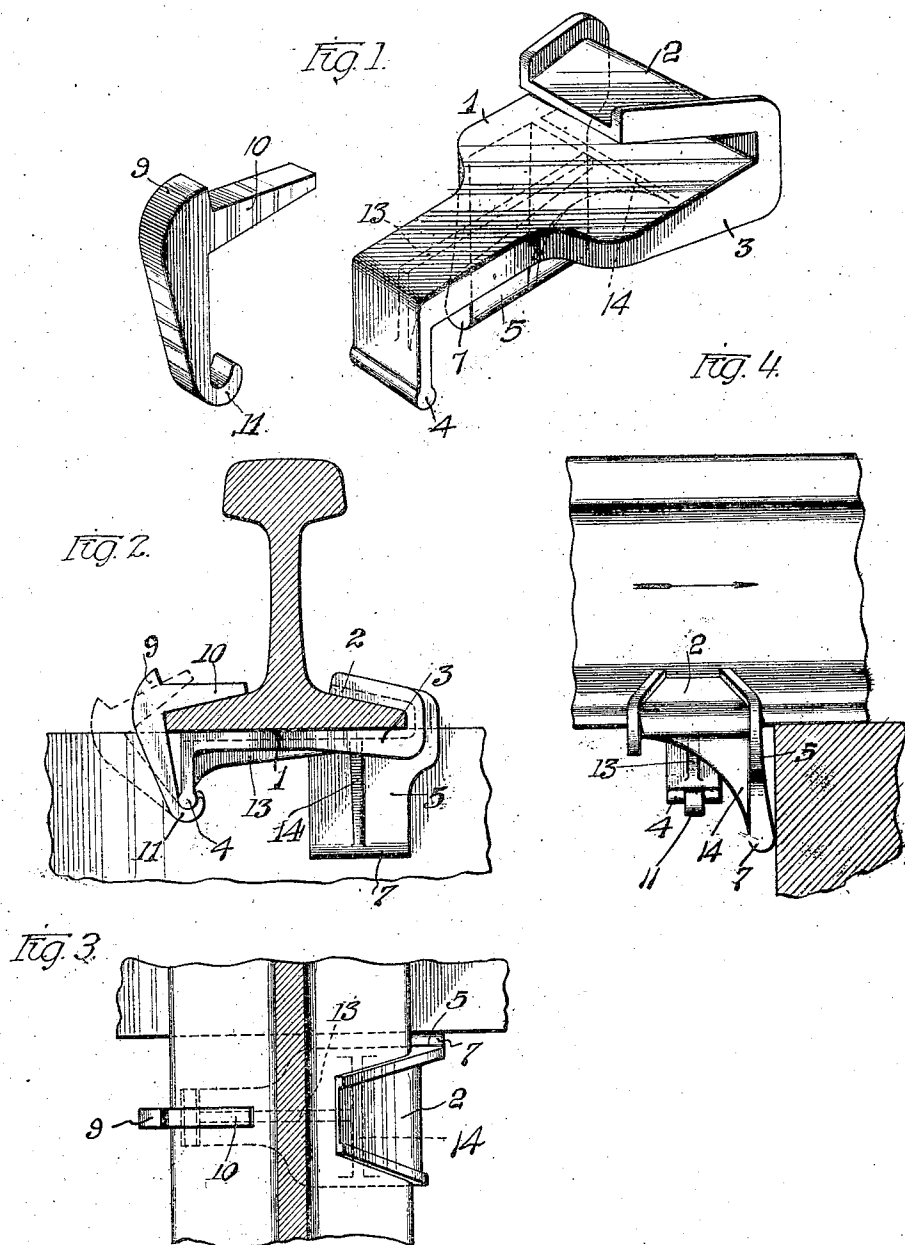
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RAIL ANCHOR

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## UNITED STATES PATENT OFFICE.

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## RAIL ANCHOR.

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This invention relates to a rail anchor. It relates particularly to a vertically tiltable rail anchor having jaws to embrace and grip the rail base and thereby hold the rail from creeping.

An object of the invention is to provide an improved rail anchor that will firmly hold the rail against creepage.

Another object is to provide a rail anchor which is efficient, which may be readily manufactured, and which may be readily applied to and removed from a rail base.

Another object is to provide a rail anchor that will grip the rail at both sides of the rail base.

Another object is to provide a rail anchor that will be securely held in position on the rail base.

Another object is to provide a rail anchor that will not become laterally displaced from the rail base.

Other objects and advantages will hereinafter appear.

In accordance with the invention, the anchor has a base body or cross bar extending transversely beneath the rail base. This body or cross bar has a depending leg or foot to engage the rail tie and cause the body member to tilt as the anchor is carried forward by the rail.

At one side of the body member are located an upper and a lower jaw to receive and grip the rail base to hold the rail against creepage.

The base has at its other side a lock to hold the anchor on the rail and keep it from lateral displacement.

An anchor which is an embodiment of this invention is shown in the accompanying drawing, in which the views are as follows:

Fig. 1 is a perspective view of the anchor and the lock.

Fig. 2 is a side elevation,

Fig. 3 is a plan view, and

Fig. 4 is an end elevation.

The anchor comprises, in general, a body or cross-bar 1 having upper and lower jaws 2 and 3 at one end, a pivot 4 at the other end, and a depending leg 5.

The depending leg 5 has a forwardly extending foot 7 about which the anchor is

vertically tilted when the rail creeps and causes the foot 7 to engage a tie.

When the anchor is in position on the rail, the body 1 thereof engages the bottom of the rail base, the jaws 2 and 3 embrace the rail base at one side thereof, and the depending leg 5 engages the tie, as shown in Figs. 2 and 4.

If the rail tends to creep in the direction of the arrow, as shown in Fig. 4, the foot 7 causes the anchor to tilt vertically and the rear end of the lower jaw 3 and the forward end of the upper jaw 2 to grip the rail base between them and thereby hold the rail from creeping.

The anchor is firmly held in position upon the rail by a lock or clamp 9 which has a jaw 10 and a hook 11.

The jaw 10 bears upon the rail base and the hook 11 embraces the pivot 4.

The pivot 4 and the hook 11 form a pivotal connection between the anchor and the lock to enable the lock to be readily applied. They further hold the anchor and the lock from bodily lateral displacement.

In order to apply the lock, the hook is placed on the pivot 4 and then the jaw is forced inwardly until it bears upon the rail base and holds the anchor firmly in position.

This movement of the lock pulls the jaws 2 and 3 into tight engagement with the rail base.

The anchor base or cross bar is also brought firmly against the rail base by this movement of the lock.

This firm engagement of the anchor base against the bottom of the rail base is due to the hook 11 having its point of engagement with the cross bar arranged forward of the inner end of the jaw. Accordingly, a downward force upon the jaw causes the clamp to tilt forward with this jaw fulcruming at its inner end upon the edge of the rail flange and the outer end of the jaw being urged inwardly to keep the lock in position.

When the lock is in position, the hook 11 pulls upwardly upon the pivot 4 to hold the body of the anchor firmly against the bottom of the rail base.

The lock is kept from turning backward

and becoming displaced by the jaw 10 engaging the rail base flange.

It has been found preferable to make the body of malleable iron and the lock of hardened steel, although, of course, other materials may be used.

When the rail tends to creep, the firm engagement of the anchor with the rail flange carries the anchor with the rail.

The clamp 9, being fulcrumed on the edge of the rail flange, is vertically tilted by this forward movement of the rail.

This causes the jaw 10 to more firmly grip the rail base and also causes the hook 11 to exert a stronger upward pulling action upon the pivot 4.

Therefore the anchor becomes more securely held upon the rail base during creepage of the rail.

Before the creepage of the rail occurs, the weight of the anchor body causes it to fulcrum on the rail base about the forward portion of the upper jaw 2. However, when the anchor is carried forward with the rail, the foot 7 will engage the tie and will tilt the anchor vertically.

The rearward portion of the lower jaw 3 then engages the rail base and acts as a fulcrum for this tilting action.

It will be apparent, therefore, that this tilting action causes the anchor to more firmly grip the rail base about the fulcrum points on the upper and lower jaws.

Although one specific embodiment of the invention has been set forth, it is obvious that there may be various modifications and adaptations within the purview of the claims.

The invention claimed is:

1. A vertically tiltable rail anchor comprising a body to engage a rail base, upper and lower jaws to grip the rail base, and a pivot for applying a lock to said anchor to retain the same in position on the rail base, said jaws being adapted to grip the rail base when said anchor is tilted vertically.

2. A vertically tiltable rail anchor comprising a body to engage a rail base, upper and lower jaws to grip the rail base, a pivot for applying a lock to said anchor to retain the same in position on the rail base, said jaws being adapted to grip the rail base when said anchor is tilted vertically, and means to engage a tie to tilt said anchor vertically.

3. A vertically tiltable rail anchor comprising a body to engage a rail base, upper and lower jaws to grip the rail base, a pivot for applying a lock to said anchor to retain the same in position on the rail base, said jaws being adapted to grip the rail base when said anchor is tilted vertically, and a depending leg having a forwardly disposed foot to engage a tie and to tilt said anchor vertically.

4. A vertically tiltable rail anchor comprising a body to engage a rail base, upper and lower jaws at one end thereof to grip the rail base, a pivot at the other end thereof for pivotally connecting to said anchor a lock to retain the same in position on the rail base, and a depending leg having a forwardly disposed foot to engage a tie and to tilt said anchor vertically.

5. In combination, a rail anchor comprising a body to engage a rail base, the said body having jaws to embrace and grip a rail base, and a lock to retain said anchor in position on the rail base, said lock and anchor being adapted for pivotal connection to each other, said anchor being provided with means to engage a tie and to tilt said anchor vertically to cause said jaws to grip the rail base.

6. In combination, a rail anchor comprising a body to engage a rail base, said body having jaws to embrace and grip a rail base, and a lock to retain said anchor in position on the rail base, said lock and anchor being adapted for pivotal connection to each other, said anchor being provided with a depending leg having a forwardly disposed foot to engage a tie and to tilt said anchor vertically to cause said jaws to grip the rail base.

7. In combination, a vertically tiltable rail anchor provided with jaws to embrace and grip a rail base at one side thereof, a pivot, and a lock provided with a jaw to engage the rail base at the opposite side thereof and a pivotal connection to engage said pivot, said anchor and lock being so formed that when they are applied to the rail base in operative position the radius from the center of the said pivot to the base edge of the rail is greater than a radius from the center of the said pivot to the said jaw inside the base edge of the rail, the said anchor being provided with a depending leg having a forwardly disposed foot to engage a tie and to tilt said anchor vertically to cause said jaws to grip the rail base.

8. A rail anchor comprising a pair of jaws for gripping the base of a rail and having their points of impingement with opposite faces of the rail base flange separated a relatively great distance in the direction of the length of the rail, a depending leg for engaging a cross tie to tilt the jaws about a horizontal axis to cause them to increasingly grip the rail base as the rail tends to creep, a laterally extending substantially inflexible body connected at one end to one of the jaws, and means for engaging the other rail base flange and the free end of the body to hold the anchor against displacement so as to insure positive tilting of the jaws.

9. A rail anchor comprising a pair of jaws for gripping between them a rail base

flange, a depending leg to cause the jaws to increasingly grip the base flange when the leg abuts a tie as the rail tends to creep, a strengthening web extending between the leg and jaws, a laterally extending substantially inflexible body connected at one end to one of the jaws, and a clamp cooperating with the other rail base flange and the body to hold the anchor against displacement so as to cause the positive tilting of the anchor when the leg abuts a tie.

10. A rail anchor comprising a pair of jaws for engaging and increasingly gripping a rail base flange when tilted, a depending leg for abutting a tie to tilt the jaws about a horizontal axis as the rail tends to creep, a laterally extending substantially inflexible body, and a clamp for engaging the body and the other rail base flange to hold the anchor in place so as to insure the positive tilting of the jaws.

11. A rail anchor comprising a pair of jaws for engaging and increasingly gripping a rail base flange, a depending leg for abutting a tie to tilt the jaws as the rail tends to creep, a laterally extending sub-

stantially inflexible body for holding the jaws and leg in position, the free end of the body being provided with a pivot, and a clamp to engage the pivot and the other rail base flange so as to clamp the body rigidly against the rail base and thus hold the anchor in place so as to insure positive tilting of the jaws.

12. A rail anchor comprising a pair of jaws for engaging and increasingly gripping a rail base flange, a depending leg for abutting a tie to tilt the jaws as the rail tends to creep, a laterally extending body for holding the jaws and leg in position, a pivot for the free end of the body, a strengthening web extending between the body and its pivot, and a clamp to engage the pivot and the other rail base flange so as to clamp the body rigidly against the rail base and thus hold the anchor against displacement so as to insure positive tilting of the jaws.

In witness whereof, I have hereunto subscribed my name.

ORLANDO METCALF.