

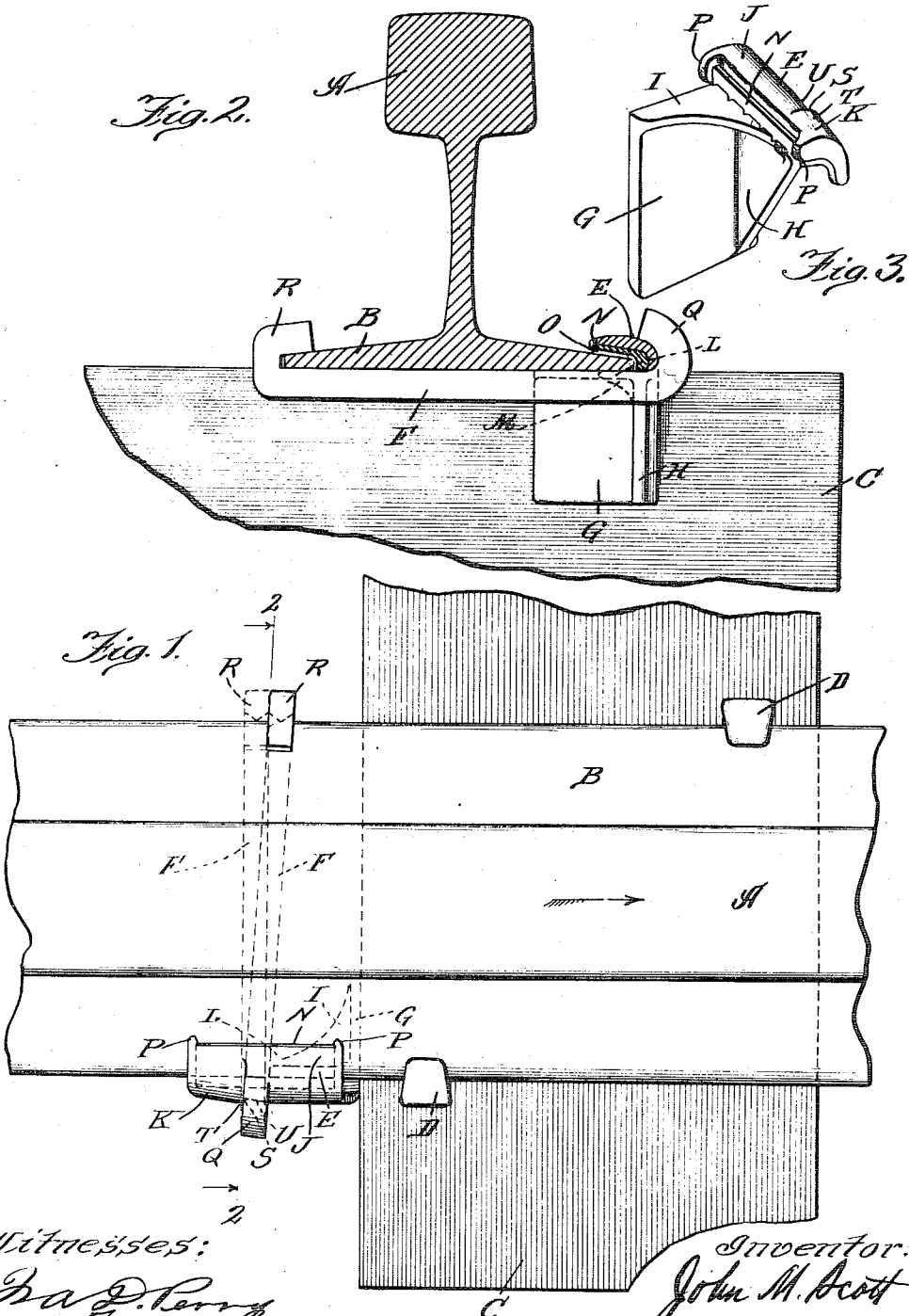
J. M. SCOTT.
RAIL-ANCHOR.

APPLICATION FILED AUG. 19, 1909.

995,488.

Patented June 20, 1911.

2 SHEETS-SHEET 1.



Witnesses:

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Inventor:

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BY *W. B. Dwyer*
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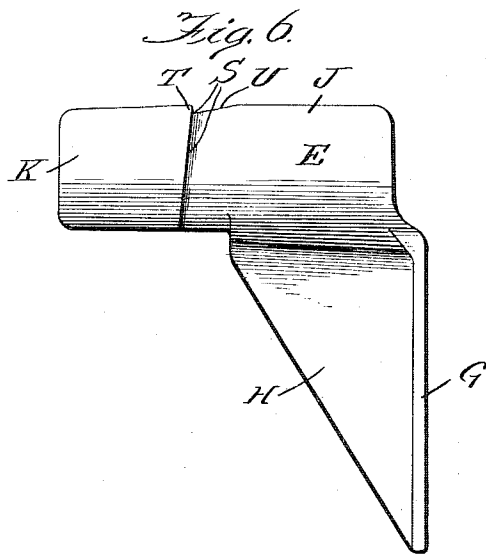
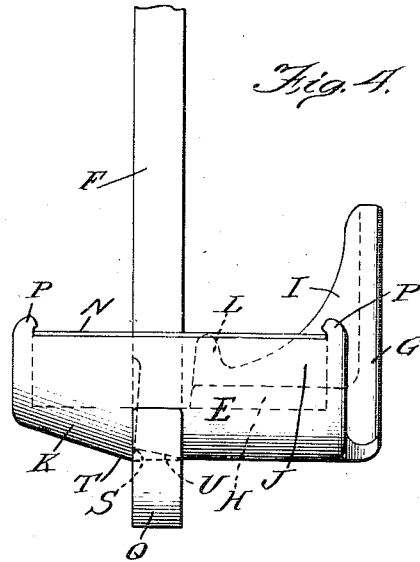
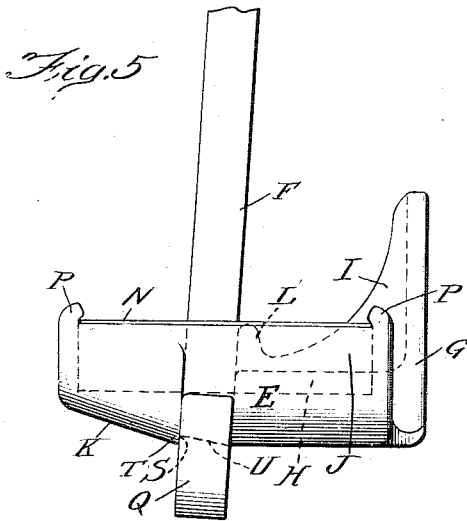
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UNITED STATES PATENT OFFICE.

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RAIL-ANCHOR.

995,488.

Specification of Letters Patent. Patented June 20, 1911.

Application filed August 19, 1909. Serial No. 513,661.

To all whom it may concern:

Be it known that I, JOHN M. SCOTT, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Rail-Anchors, of which the following is a specification.

My invention relates to a device for preventing the longitudinal creep of railroad rails, devices of this sort being commonly called rail anchors, rail stays or anti-creepers; and the invention has for its object to provide a device of this character of novel construction which will be an improvement in several respects upon the rail anchors now in use.

More specifically the invention has for its object to provide a form of rail anchor which will dispense with all nuts, bolts, wedges or other parts of that sort which are likely to become loosened or displaced; thereby providing a rail holding device which will be positive in its action.

The invention is illustrated in a preferred embodiment in the accompanying drawings, wherein—

Figure 1 is a plan view of a portion of a rail and of the tie on which it rests, showing the rail anchor of my invention in place upon the rail. Fig. 2 is a sectional view taken on line 2—2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a view in perspective of the jaw member of the device. Fig. 4 is a fragmentary plan view of the device illustrating the way in which the device is put upon the rail. Fig. 5 a similar view with the parts adjusted to their rail gripping position. Fig. 6 is a side elevation of the jaw member.

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

Referring to the drawings, A represents a rail having a base or flange B; C a tie supporting the rail to which the rail is secured by the usual spikes D, D.

The rail anchor consists of a jaw member E and a strap F, the jaw member being

formed with the depending tie abutment G, preferably reinforced by the web H. The jaw is formed by the horizontal web I and the overhanging web J, the rearwardly extending end of which is tapered as shown at K. The horizontal web I is preferably formed with the projection L, reinforced by the strengthening web M. The jaw member is preferably made of malleable iron and I preferably set into its jaw the hard steel block N having the teeth O which bite into the top and edge of the rail base. The overhanging web J may be formed with the ears P which can be hammered down upon the in-set block N to keep the latter from falling out of the jaw and getting lost before the device is put upon the rail.

The jaw member E is clamped against the rail base by means of the strap F which is preferably made of heavy spring steel and which is preferably an integral device formed with a hook Q at one end which extends around the jaw member and with a hook R at the other end which engages the opposite edge of the rail base, this latter hook constituting a jaw opposed to that of the jaw member. Obviously the means whereby the jaw member E is clamped to the rail might consist of more than the one part shown. I believe, however, that the simple integral strap F together with the jaw member of the construction shown is sufficient to the effective operation of the device.

The strap, it will be seen, stands away from the tie C. If, therefore, the device is adjusted on the rail base so as to take a considerable hold thereon, the creep of the rail in the direction indicated by the arrow in Fig. 1 will cause the end of the strap F which is in contact with the rail base to travel therewith; that is, it will cause the strap to be turned or rocked with the point of its engagement with the jaw member E as a pivotal point. If the surface engaged by the hook Q of the strap member were smooth, this turning of the strap member would tend to cause a slip between the hook Q and the jaw member and so defeat the

purpose of the device. To prevent this the jaw member is formed with a notch S which is preferably oblique relative to the edge of the rail base, this notch constituting a shoulder T against which the hook Q will squarely abut when the strap F is turned to the proper angle, (Fig. 5). When this is done it will be seen that the strap is fulcrumed at a definite point on the jaw member, so that it cannot be disengaged from the jaw member by a further rocking movement caused by the creeping of the rail. The tendency of the rail to creep is, therefore, checked, since a forward movement of the hook R increases the lateral grip between it and the opposed jaw of the jaw member. The notch S constitutes a surface U with which the hook Q engages and which prevents the hook Q from movement toward the tie.

In applying the device, the jaw member is placed against one side of the rail base with the web G abutting against the tie. The hook R is then hooked over the opposite side of the rail base and the hooked end Q of the strap F is swung over the tapered end K of the jaw member. In this position the hooked end R of the strap is preferably at a point opposite to the notch S on the jaw member, so that the hooked end Q of the strap may be swung toward the web G, the bearing of the hook R against the rail serving as the pivotal point. In the preferred embodiment of my invention the inner face of the hook Q is preferably tapered so as to facilitate forcing the hook Q over the shoulder T. By properly proportioning the parts the device may be applied in this manner even when the strap is made of malleable iron or similar material, but when the strap is made of spring steel the parts may be fitted together more closely, so that when the end Q is driven over the shoulder T the end Q will spring slightly as it passes the shoulder T. When the end Q has reached this position the end R is then driven toward the tie, the bearing of the hook Q upon the jaw member serving as the pivotal point, and this swinging of the strap F to a position diagonal of the rail as shown in Figs. 1 and 5, brings the hook Q to a position where it squarely abuts against the shoulder T and is seated in the notch S. To further facilitate the application of the device as well as to increase its grip upon the rail, the inner face of the hook R is toothed as shown (Fig. 1), so that the hook R may be more readily forced lengthwise of the rail toward the tie and yet will more effectively engage the rail flange so as to resist any tendency of the rail to slip through hook R, with the result that any tendency of the rail to creep will carry the hook R farther toward the tie, thereby in-

creasing the grip of the device upon the rail. If desired, the jaw member E may be so constructed as to have a smooth surface engaging the rail flange, so as to facilitate this action.

In removing the device from the rail the hook R is driven away from the tie, causing the hook Q to pivot on its edge nearest the tie, when the preferred embodiment of my invention is used, so that the edge of hook Q farthest away from the tie will assume a position in which it tends to ride over the shoulder T. When this position is reached the hook Q may be readily driven over the shoulder T and the device removed.

I do not limit myself to the particular devices, constructions and arrangements shown and described as modifications might be devised which would come within my invention as defined by the claims.

I claim:

1. A rail anchor comprising a jaw provided with means for engaging a stationary abutment, and provided with a shoulder, of a strap provided with jaws at opposite ends thereof, said strap being so proportioned that one jaw thereof may be hooked over said first named jaw and sprung over the shoulder thereof when the jaw on the opposite end of said strap is hooked over the opposite edge of the rail base, whereby one end of said strap will be held snugly in engagement with said shoulder on said first named jaw.

2. A rail stay comprising a jaw adapted to engage one edge of a rail and provided with means to engage a stationary abutment, and provided also with a substantially transverse shoulder, and a strap provided with hooks at opposite ends thereof, all so arranged that when said jaw is applied to a rail and one end of said strap is applied to the opposite edge of the rail, the other end of said strap may be hooked over said jaw and sprung past said shoulder so as to be held in operative engagement with the rail.

3. A rail stay comprising a jaw provided with means for engaging a stationary abutment, and with a substantially transverse shoulder, of a strap provided with hooks at opposite ends thereof, all so arranged and proportioned that when said jaw is applied to one edge of a rail and one end of said strap is hooked over the other end of the rail, with the strap arranged at right angles to the length of the rail, said strap may be moved lengthwise of the rail until the other end thereof is hooked over said first named jaw and past the shoulder thereon, whereupon the movement of said strap to a position diagonally of the rail will bring one end of the strap into en-

gement with said shoulder which will prevent the disengagement of said strap from said shoulder.

4. A rail stay comprising in combination
5 a jaw provided with means at one end for engaging a stationary abutment, said jaw being tapered inwardly at the other end and being provided with a substantially transverse shoulder, of a strap provided
10 with jaws at opposite ends thereof, one of which is adapted to engage a rail at the side opposite to that engaged by said jaw, the other end of said strap being adapted to be moved over the tapered end of said jaw and past said shoulder, all so arranged that
15 when applied to a rail, with one end of said strap in engagement with said shoulder, and with the other end of said strap moved diagonally of the rail toward the abutment
20 engaging means on said jaw, the device will be tightly clamped to the rail.

5. In a rail stay, the combination with a jaw adapted to engage one side of a rail and provided with abutment engaging means and
25 with a shoulder from which the surface of said jaw is tapered toward said abutment engaging means, of a strap formed with hooks at opposite ends thereof and adapted, when the device is applied to a rail, to be
30 moved lengthwise of the rail toward said abutment engaging means so as to ride over said shoulder, and the end of said strap opposite said jaw is then moved diagonally of the rail toward said abutment engaging
35 means to squarely engage said shoulder so as to prevent disengagement of said strap from said jaw.

6. A rail stay comprising the combination of a jaw provided with means for engaging
40 a stationary abutment and provided with a shoulder, of a strap at opposite ends thereof and so proportioned and arranged that when said jaw is applied to one edge of a rail flange, and one end of said strap is
45 hooked over the opposite edge of the rail flange, the strap may be moved lengthwise of the rail toward said abutment engaging means until the other hook of said strap passes beyond said shoulder on said jaw,
50 whereupon the device may be tightly clamped to the rail by then driving the end of said strap farthest away from said jaw toward said abutment engaging means until said strap assumes a position diagonally of
55 the rail.

7. A rail stay comprising the combination of a jaw provided with abutment engaging means and with a transverse shoulder, of a strap hooked at each end thereof and arranged so that when one end of the strap
60 is hooked over said jaw between said shoulder and the abutment engaging means, and the opposite end of said strap is hooked over the opposite edge of a rail flange, the

device may be tightly clamped to the rail by
65 driving the end of said strap farthest away from said jaw to a position diagonally of the rail.

8. A rail stay comprising the combination of a jaw adapted to engage one side of a
70 rail, and provided with means for engaging a stationary abutment and with a substantially transverse notch, of a strap provided with hooks at opposite ends thereof, one of which is adapted to be seated in said
75 notch and the other of which is adapted to engage the opposite edge of the rail flange, all arranged to be tightly clamped to the rail when the end of said strap opposite to said jaw is driven toward said abutment en-
80 gaging means until said strap assumes a position diagonally of said rail.

9. A rail stay comprising the combination of a jaw adapted to engage one side of a rail, and provided with means for engaging
85 a stationary abutment, and with a substantially transverse notch, of a strap provided with hooks at opposite ends thereof, one of which is adapted to be seated in said notch and the other of which is adapted to engage
90 the opposite edge of the rail flange, all so arranged that when the end of said strap farthest away from said jaw is driven toward said abutment engaging means to a position diagonally of the rail, the device
95 will be tightly clamped to the rail with one end of said strap seated against a wall of said slot, but when said strap is driven in the opposite direction to a position diagonally of said rail, the end of said strap in
100 engagement with said jaw will assume a position from which, when driven, it will ride over the wall of said slot with which it was previously in engagement.

10. A rail anchor comprising a tie abut-
105 ment, a rail gripping jaw having an inwardly tapered nose and formed with a substantially transverse notch, and a strap, one end of which engages the opposite edge of the rail base, and the other end of which is
110 adapted to be driven over said tapered nose into engagement with said notch.

11. A rail anchor comprising a tie abutment, a rail gripping jaw having an inwardly tapered nose, and formed with a
115 substantially transverse notch, and a strap, one end of which is adapted to engage the opposite edge of the rail base, and the other end of which is adapted to be driven over said tapered nose and into said notch, said
120 notch being slightly oblique with respect to the jaw, for the purpose described.

12. A rail anchor comprising a jaw for engaging one edge of the rail, said jaw being provided with a tie abutment, with a
125 substantially transverse notch which is slightly oblique with respect to said jaw, and with a nose which tapers from the nar-

row end of said jaw upwardly to said notch,
and a strap, one end of which is adapted to
engage the opposite edge of the rail base,
and the other end of which is adapted to be
5 driven over said nose until seated in said
notch, all so arranged that when the end
of said strap farthest away from said jaw
is driven forwardly to a position diagonally

of the rail, the end of said strap in engage-
ment with said jaw will be squarely seated 10
against a wall of said notch.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
