M. E. HAGEN.

RAIL ANCHOR.

APPLICATION FILED FEB. 26, 1912.

1,041,996. Patented Oct. 22, 1912.

Fig. 1.

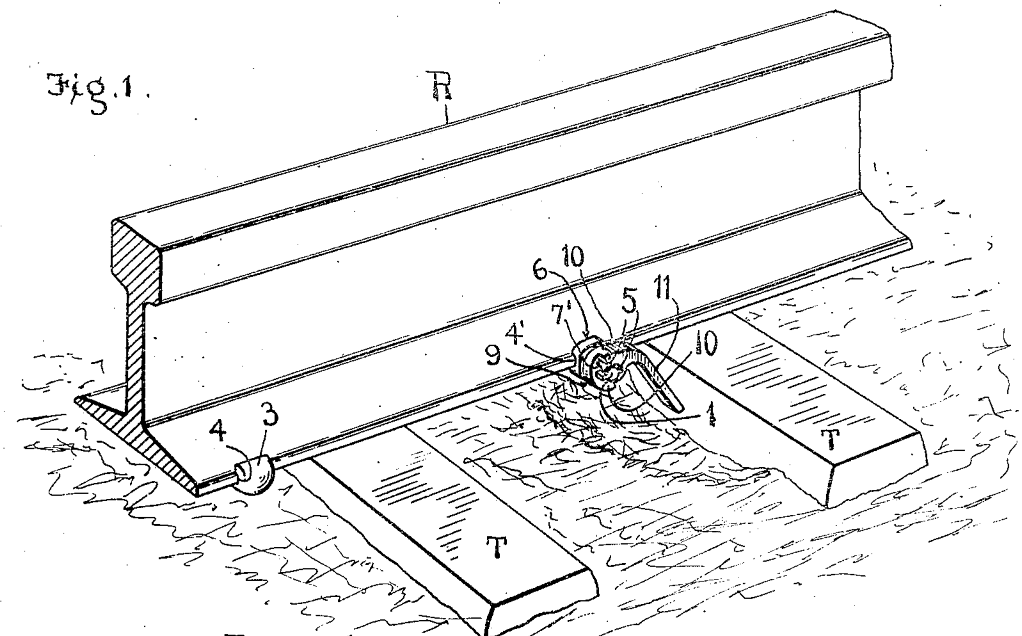


Fig. 3.

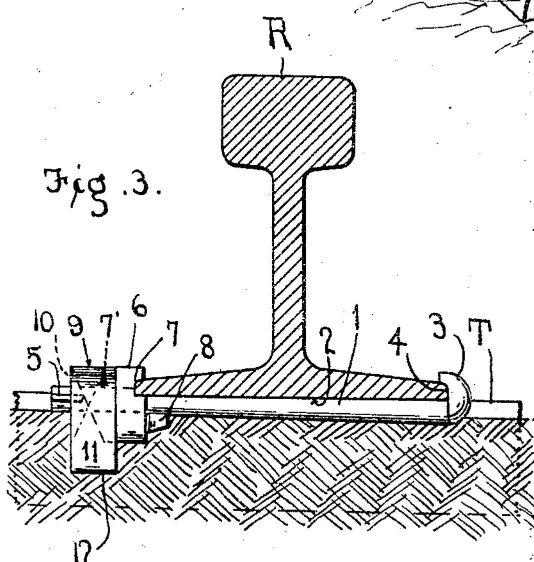


Fig. 2.

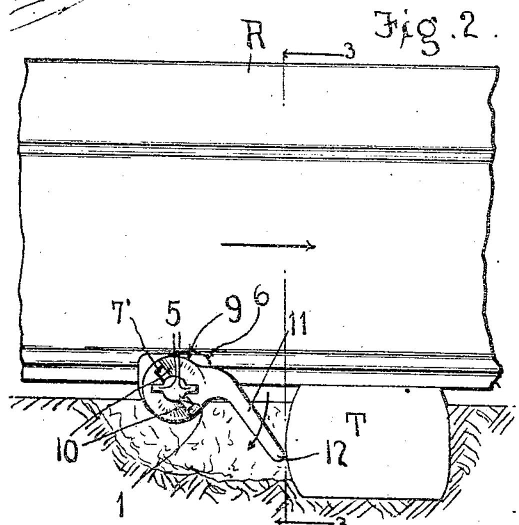


Fig. 4.

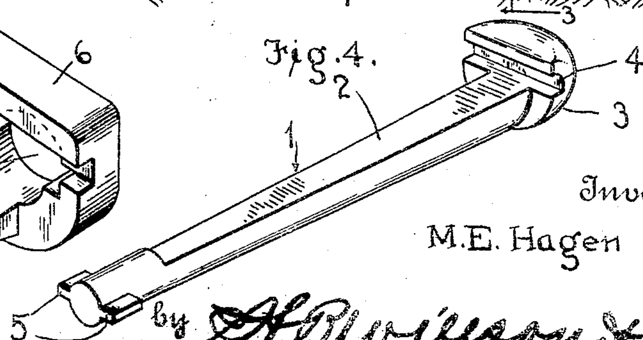
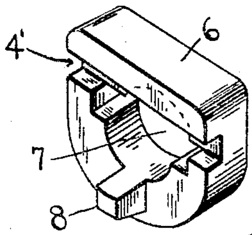


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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RAIL-ANCHOR.

1,041,996. Specification of Letters Patent. Patented Oct. 22, 1912.

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To all whom it may concern:

Be it known that I, MICHAEL E. HAGEN, a citizen of the United States, residing at Paul Smiths, in the county of Franklin and State of New York, have invented certain new and useful Improvements in Rail-Anchors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railways, and more especially to rail anchors such as are adapted for application to the base of a rail to prevent it from creeping; and the object of the same is to improve the construction of a device of this character so that no nut need be employed. This object is accomplished by giving the parts the relative shapes hereinafter more fully described and claimed, and as shown in the drawings wherein—

Figure 1 is a perspective view showing a portion of a rail mounted on two ties, and my improved rail anchor applied to the former and resting against one of the ties. Fig. 2 is an enlarged side elevation of the rail, and an end elevation of the anchor and one tie. Fig. 3 is a cross section taken about on the line 3—3 of Fig. 2. Figs. 4 and 5 are perspective details respectively of the shank with its fixed jaw, and of the movable member or jaw.

In the drawings the letter R designates an ordinary rail and the letter T a tie. This anchor is intended to be clamped beneath the base of a rail between two ties and adjacent one of them in the direction which the rail is apt to creep; that is, adjacent that face of a tie which is nearer one end of the rail than its center because in the normal expansion of a rail it usually remains stationary at or near its center and slips a little over the ties toward its extremities.

My improved anchor comprises a shank 1 preferably flattened on its upper face as at 2 and having cast integral with one extremity a fixed jaw 3 provided with a groove 4, while its other extremity is formed into a T-head which is produced by casting upon its sides two rather thin lugs 5 which are opposite each other and stand in a horizontal plane parallel with that of the groove 4.

The numeral 6 designates a washer member (best seen in Fig. 5) which has through its body an opening 7 of a shape and size to permit passage through it of the extremity of the shank 1 and both its lugs 5, and across the inner face of this washer is cut a groove 4′ corresponding with that numbered 4 in the fixed jaw 3. Below the opening this washer, which might be called the "movable member," is formed with an integral spur 8 projecting inward and adapted to underlie the shank 1 as seen.

The third member of this improved anchor is made up of a cam-head 9 having formed through it an opening 7′ corresponding in shape with that numbered 7 in the movable jaw, and having formed on its outer face two cams 10 as best seen in Fig. 1. From one side of this head there projects radially a lever 11, whose body is preferably bent a little as shown and whose outer extremity is rounded as at 12.

The three parts making up this improved anchor are by preference made of malleable casting or soft steel of the desired proportions about as shown in the drawings.

In use, the shank is passed beneath the base of the rail and the groove 4 of the fixed jaw 3 is engaged with the inner flange thereof. The opening 7 in the movable jaw 6 is then passed over the other end of the shank, and the groove 4′ thereof brought up against the outer flange of the rail. The opening 7′ in the head 9 of the third member is then passed over the outer end of the shank, with the flat side of said head next the movable jaw and the cam faces thereof outermost. Finally the handle is manipulated so as to turn this third member in the direction of the arrow, and the cam faces engage behind the lug 5 so that the head 9 is borne against the movable jaw 6 and the latter forced into close engagement with the outer flange of the rail base, the same as the fixed jaw is forced into close engagement with the inner flange. The shank 1 now serves as a means for connecting the two jaws, and the spur 8 slides inward along its under face so as to prevent canting of the outer or movable jaw 6 under the strain which takes place. The lever 11 is depressed farther and farther to tighten the anchor upon the rail, and finally its extremity is engaged behind a tie T as shown, the whole then being possibly covered with the ballast which forms part of the roadbed, although this is not necessary. If now the tie should begin to creep

in the direction of the arrow in the drawings, it is obvious that the extremity of the lever 11 will be pressed more firmly against the tie T and its head 9 will be turned in a direction to force the higher part of the cams 10 behind the lugs 5, so that the only result would be to tighten up the device with a yet firmer grip upon the rail base and prevent it from slipping as the rail moves over the ties.

Devices of this kind have heretofore been made wherein a nut was engaged with threads on the extremity of a bolt, and other devices have been employed wherein the movable jaw was pivoted to the shank. My present invention avoids the objections which might be urged against both of these constructions—the one requiring a nut lock or else the nut becomes loose, and the other requiring protection from rust or its pivoted member may not work. In the present invention, if the rail should creep ever so little the contact of the outer end of the lever with the tie must cause the cam head to turn somewhat on the shank, and even though the parts have become rusted together the rust will be broken under the strain set up.

What is claimed as new is:

The herein described rail anchor comprising a shank having a fixed jaw at one extremity and oppositely disposed lugs at its other extremity; a movable jaw having an opening shaped to be passed over the last-named extremity of the shank and its lugs; and a third member consisting of a cam head having a similarly-shaped opening through its body and on its outer face a pair of cams adapted to engage behind said lugs, and a lever projecting radially from said head, bent in its body, and rounded at its outer extremity.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MICHAEL E. HAGEN.

Witnesses:
WM. B. DAVIDSON,
FRED LAMORA.