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This technical drawing illustrates a mechanical device, possibly a pump or a valve, through several views and detailed components. The main assembly is shown in a perspective view at the top, with a cross-section labeled 'A-A' on the left and a longitudinal section labeled 'B-B' on the right. The device consists of a main body (1) with a central shaft (2) and a piston (3) at the bottom. The piston is connected to a lever (4) which is pivoted on a support (5). The lever has a curved end (6) and a handle (7). The main body has a flange (8) and a base (9). The cross-section 'A-A' shows the internal components, including a piston (10) and a valve (11). The longitudinal section 'B-B' shows the side view of the device, including the handle (12) and the base (13). Below the main assembly, there are three detailed views of individual components. The first is a cross-section of a piston or valve (14) with a central shaft (15) and a flange (16). The second is a cross-section of a lever (17) with a handle (18) and a curved end (19). The third is a cross-section of a handle (20) with a flange (21) and a base (22). The drawing is labeled with various numbers (1-22) and letters (A, B) to identify the different parts and sections.

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UNITED STATES PATENT OFFICE.

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RAIL-ANCHOR.

970,306.

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To all whom it may concern:

Be it known that I, CHARLES F. CLAWSON, a citizen of the United States, residing at Mount Pleasant, in the county of Henry and State of Iowa, 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 rail anchors and particularly to that type of anchors which is adapted to prevent the rail from creeping longitudinally with respect to the ties.

The object of the invention is the provision of a device of this character which is adapted to be applied to the rails in engagement with the ties without the use of attaching bolts or of any fastening devices.

A further object of the invention is the provision of a device of this character which when applied to the rail and forced into frictional engagement therewith, will have a twisting grip upon the rail, so as to prevent its disengagement therefrom.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved anchor in position upon a rail; Fig. 2 is a transverse sectional view through the rail, and showing the rail anchor in front elevation; Fig. 3 is a sectional view on the line 3-3 of Fig. 2; Fig. 4 is a top plan view of one of the members, and Fig. 5 is a perspective view of said member.

Referring more especially to the drawings, 1 represents the rail and 2 the tie to which it is secured by spikes 3 or any other suitable means. These spikes or other rail securing means ordinarily employed while preventing any lateral movement of the rail, do not prevent the rail from creeping longitudinally over the ties and it is the object of the attachment which will now be described to accomplish this result.

4 indicates the body of the attachment which comprises a flat plate of any suitable metal, but preferably formed of a hardened material such as open hearth or Bessemer steel. At one end of the body, there is

formed a flange engaging clip 5 which overhangs the flange 6 of the rail and is provided with reinforcing ribs 7. At the opposite end of the body, there is formed a diagonal groove 8, from the bottom of which projects a central longitudinal rib 9. On the opposite side of the body 4 of the attachment adjacent the groove 8 is provided the rail 10 having its upper face notched or serrated as shown. At one side of the body and arranged immediately below the groove is a downwardly projecting foot 11 which has its lower end 12 vertically offset from the edge of the body so that the body will be spaced a suitable distance from the tie with the lower end 12 of the foot 11 engaging the tie whereby when the body is forced toward the tie, the clip 5 will turn on the rail base 6 and cause a twisting grip to be formed.

13 indicates the sliding clip which is provided with the base flange 14 formed with reinforcing beads 15. The lower face of the clip is provided with a cylindrical projection 16, which enters the groove 8 and is adapted to travel therein. This projection is grooved, as at 17, to receive the rib 9 and intermediate the projection and the base flange, the clip is formed with a notched channel way 18 which is adapted to receive the notched rail 10. The notches of the rail 10 and the channel way 18 form intermeshing teeth which have perpendicular faces upon one side but inclined faces upon the other, so that the clip will ride easily over them in one direction of movement and will be prevented from movement in the opposite direction.

In the application of the device, the body 4 is placed upon the under side of the rail with the flange 5 overhanging one edge of the base. The clip 13 is then placed in position loosely and the whole device is then pushed up until the lower end of the foot engages the tie. The clip 13 is then driven into place by tapping the same with a hammer, thus causing the teeth to interlock and to secure the flange 5 upon the rail. The diagonal arrangement of the groove 8 causes the clip 13 to tighten upon the base of the rail and the twisting of the flange 5 thereon holds the device securely in position and prevents any creeping of the rail with respect to the tie.

From the foregoing description, taken in connection with the accompanying drawings,

the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

10 Having thus described my invention, what I claim is:

1. A rail anchor comprising a body having a rail engaging flange, a depending foot carried by the body vertically offset therefrom and adapted, when forced into engagement with the tie, to cause the flange to twist upon the rail, said body having a longitudinally disposed groove therein, a central rib arranged in said groove and a clip slidably mounted upon the body for securing the same upon the rail, said clip

having a projection adapted to enter said groove and a groove in said projection adapted to receive the rib of said body to hold the clip in position.

2. A rail anchor comprising a body having a rail base engaging flange, and a diagonal groove, a rib projecting upwardly from the bottom of the groove, a notched rail running parallel with the rib, a clip having a projection to enter the groove in the body and a groove to receive the rib, and a toothed way to coact with the notched rail for holding the clip in adjusted position on the body.

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

CHARLES F. CLAWSON.

Witnesses:

J. W. BURNOP,
GEO. T. KEELER.