

APPLICATION FILED AUG. 23, 1909.

2 SHEETS—SHEET 1.

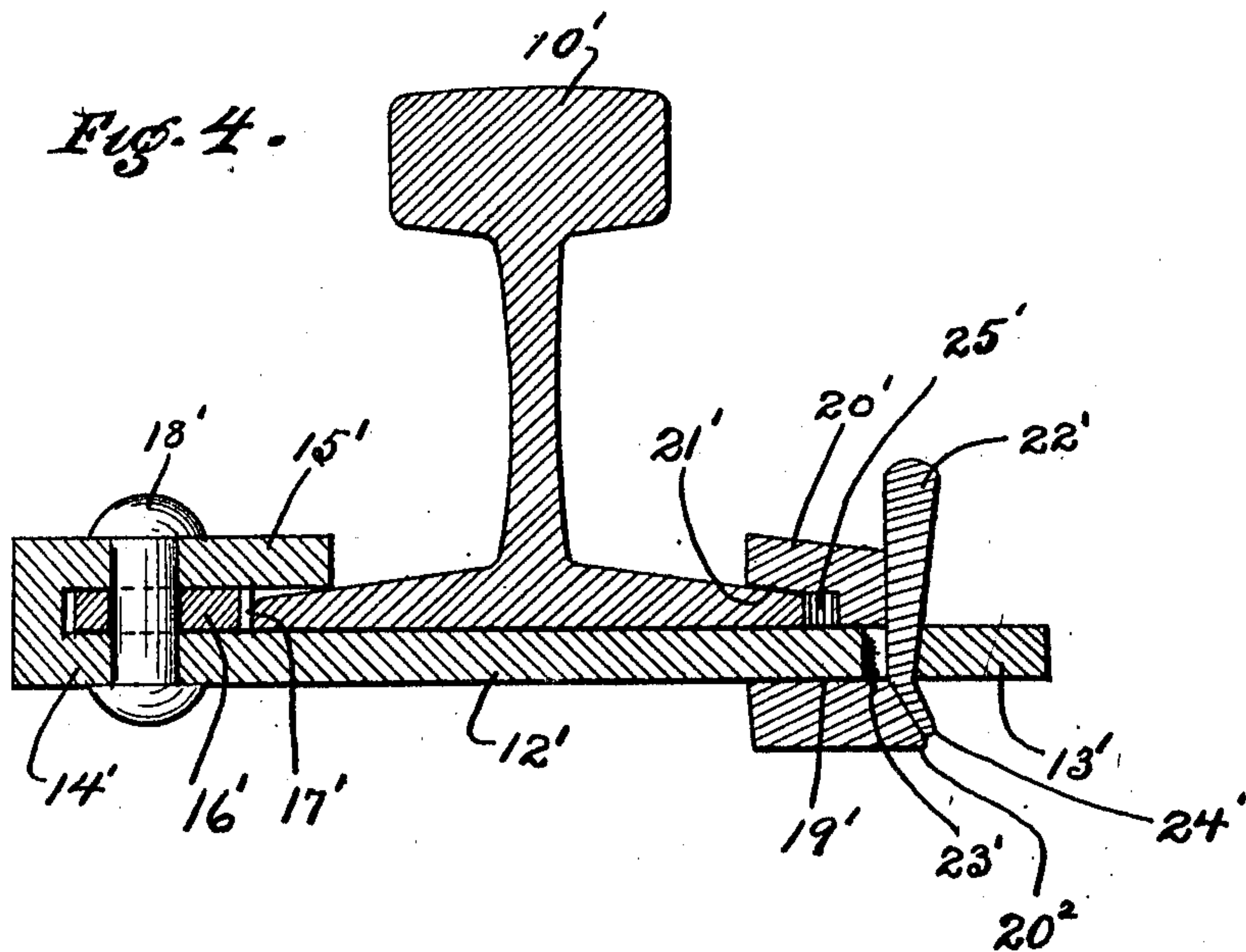
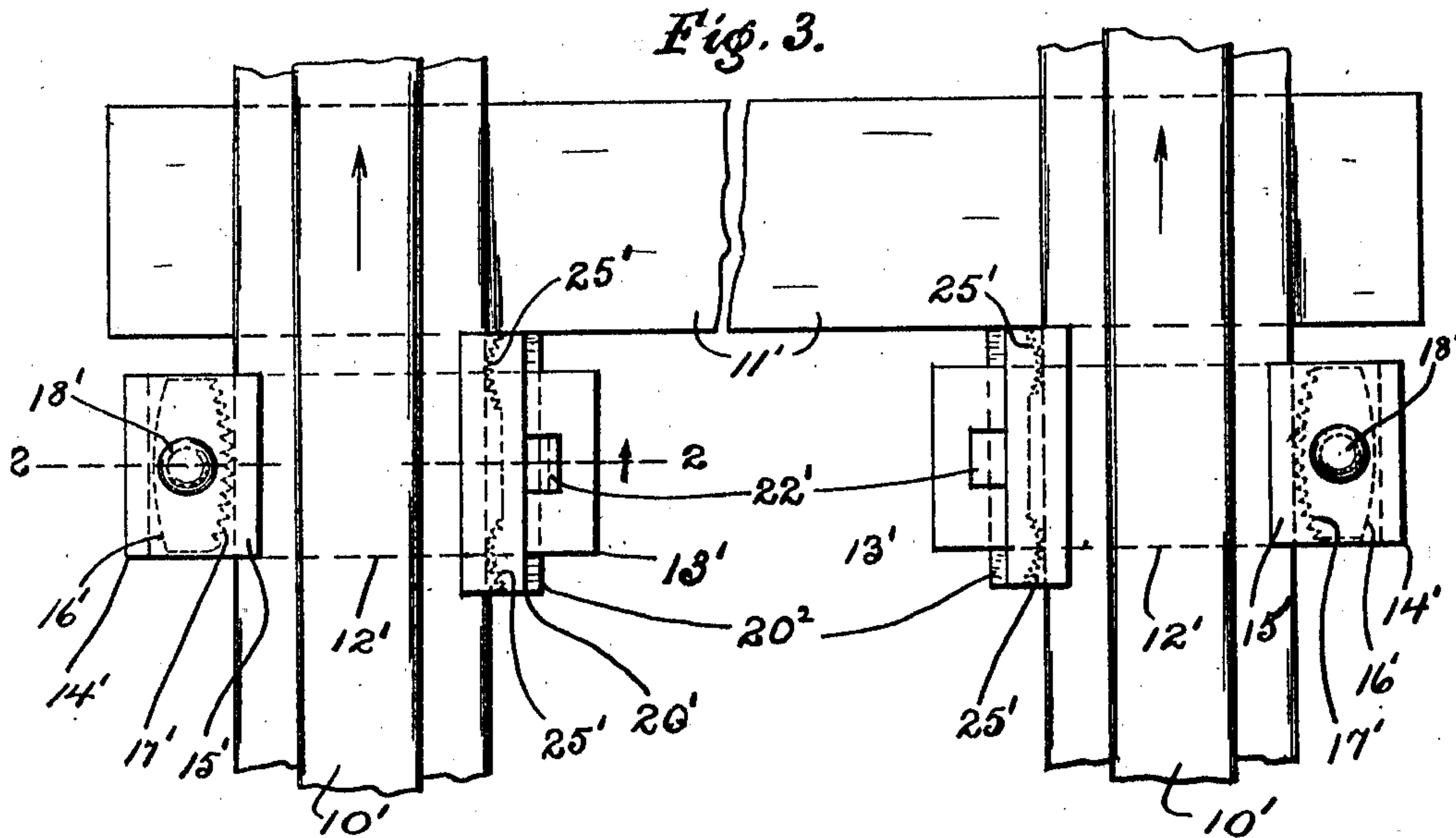
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ANTI-RAIL-CREEPING DEVICE.
APPLICATION FILED AUG. 23, 1909.

991,924.

Patented May 9, 1911.

2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN WOLFE, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO THOMAS J. McMANUS, OF CLEVELAND, OHIO, AND ONE-HALF TO U. S. METAL & MANUFACTURING CO., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

ANTI-RAIL-CREEPING DEVICE.

991,924.

Specification of Letters Patent.

Patented May 9, 1911.

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To all whom it may concern:

Be it known that I, JOHN WOLFE, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Anti-Rail-Creeping Devices; and I hereby 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 pertains to make and use the same.

This invention relates to anti-rail-creeping devices of the type which are designed to prevent the creeping of the rails in the direction of their length due to the action of the wheels of passing trains.

The object of this invention is the provision of an anti-rail-creeping device which is simple and cheap in construction but effective in operation, which can be very easily attached to the rail or removed therefrom, and which will not be loosened by vibration.

The invention contemplates the use of a member which when the device is in place is underneath the rail and is held from movement with the rail by one of the ties and is provided with toothed members which grip or engage the rail flanges in a manner such that any creeping tendency of the rail will cause said members to grip the rail all the more tightly.

In the preferred embodiment of my invention the member to which the links are pivoted has a portion which extends beneath the flange of the rail longitudinally thereof and a portion which is curved and extends outwardly beyond the rail and at substantially right-angles thereto. This outwardly or laterally extending end of the member passes through a block which is held from movement with the rail by engagement with one of the ties and which is provided with a slot adapted to receive the flange of the rail, the rear wall of the slot having teeth which tightly grip the rail. One of the links which are connected to this member is pivoted to the end of the member and extends outwardly in one direction, and the other link is pivoted to the member intermediate its ends or at a distance from the pivoted connection of the first mentioned link and extends outwardly in the opposite direction, said links having at their outer

ends toothed camming members which are pivoted to the links and are caused to tightly grip the opposite edges of the rail flanges when said block is clamped against the flanges of the rail by a wedge or spike.

The invention may be further briefly summarized as consisting in certain novel details of construction and combination and arrangements of parts which will be described in the specification and set forth in the appended claims.

For an understanding of my invention reference is had to the accompanying sheet of drawings wherein—

Figure 1 shows a plan view of portions of a tie and rail, the latter being equipped with one of my improved anti-rail-creeping devices. Fig. 2 is an enlarged transverse section substantially along the line 2—2 of Fig. 1 looking in the direction indicated by the arrow. Fig. 3 shows a plan view of portions of a tie and rail equipped with a modified form of my device. Fig. 4 is an enlarged transverse section substantially along the line 2—2 of Fig. 3 looking in the direction indicated by the arrow.

Referring now to Figs. 1 and 2 of the drawings 10 represents one of the rails of a track and 11 a portion of one of the ties, the rail being designed to be secured to the tie in the usual or in any desired manner. My improved anticreeping device is designed for the purpose of preventing the creeping of the rail due to the action of the wheels of a passing train, and in this case prevents the creeping or lengthwise movement of the rail in the direction indicated by the arrow in the upper portion of Fig. 1. The anticreeping device includes an arm or member 12 which, as shown in the drawings, is underneath the flange 10^a of the rail and has a portion which extends longitudinally of the rail and at one end is curved outwardly or laterally beyond the rail and at right angles thereto as shown at 13. The laterally projecting portion 13 of the arm 12 passes through an opening in a block 14 which is provided with a slot 15 adapted to receive the flange of the rail and is designed to be clamped tightly against the latter by a wedge-shaped member 16 adapted to be driven tightly into an aperture near the outer end of the portion 13 of the arm 12. The lower portion 14^a of the block 14

is inclined, as shown, so that the lower end 16^a of the wedge 16 is bent and its accidental removal prevented or rendered improbable. The rear wall of the slotted portion of the block is provided with a series of teeth 17 which grip the flange of the rail when said block is clamped against the latter. Piv-
 5 otally secured to the arm 12, in this case, by rivets 18, are two links or arms 19 and 20 which extend outwardly from said arm 12 in opposite directions and are designed to engage opposite sides or edges of the rail flange, as will be explained. The link or arm 20 is in this case secured to the arm 12
 10 near the center thereof or some distance from the point of attachment of the link 19. The inner ends of the links 19 and 20 are secured to the upper face of the arm 12 so that they will lie against the bottom or lower
 15 face of the rail flange, the upper heads of the rivets 18 being received in countersunk holes in the links. The links 19 and 20 extend outwardly or laterally beyond the edges of the rail flange for a suitable distance and
 20 are bent or doubled inwardly over the rail flange as shown at 21 and 22 in the drawings, the upper doubled portions of the links being substantially parallel to the lower main portions thereof. Each of these piv-
 25 otated links is provided at its outer or free end between the parallel faces formed by doubling the outer end inward, with a toothed camming member 23 which is substan-
 30 tially semi-circular, its inner edge, however, being slightly curved or rounded and having a series of teeth 24 which are adapted to grip or bite the edges of the rail flange. These toothed camming members 23 are held
 35 in position by rivets 25 which pass entirely through the outer ends of these links. In order that the camming members 23 may be readily removed or placed in position in
 40 the links, they are provided with open slots which receive the shanks of the rivets and which permit these members to be slipped
 45 out of place or placed in position when the anti-rail-creeping device is not attached to the rail.

It will be seen from the construction above
 50 described that when the device is first placed in position to be secured to the rail, the toothed camming members 23 will not tightly bite the rail flange, but when the outer end 13 of the arm 12 is drawn through the
 55 opening in the block 14 the toothed portions of these camming members will be caused to engage the edges of the rail flange and when the block 14 is clamped against the rail by driving in the wedge 16, the piv-
 60 otated point of each of the links is drawn away from the edge or flange of the rail which is adapted to be engaged by the corresponding toothed camming members 23, so that when the device is being clamped in position
 65 this arm 12 acts somewhat as a lever to draw

the inner or pivoted ends of the two links simultaneously in opposite directions until the parts assume the position shown in Fig. 1. When the wedge 16 is driven in place the teeth of the camming members 23 and
 70 the block 14 will tightly grip the edges of the rail flange. If now the rail should tend to creep in the direction indicated by the arrow, the block 14 and the arm 12 cannot move with the rail inasmuch as the block 14
 75 engages the tie 11. Any creeping tendency, however, will tend to cause the links to swing on their pivotal centers and to cause the outer ends of the links and the toothed camming members 23 to move with the rail in-
 80 asmuch as the teeth are in firm engagement therewith. This would cause the camming members to rock slightly and would increase the gripping action of the camming members upon the rail. Consequently in view of this
 85 camming and gripping action of the members 23 there will be practically no lengthwise movement of the rail.

In Figs. 3 and 4 I have shown a modified form of my construction in which 10' repre-
 90 sents the rails of a track, and 11' a portion of one of the ties, the rails being fastened to the ties in the usual manner. My modified device consists of a plate 12' which passes under the rail and transversely thereof so as
 95 to extend laterally on each side, as at 13' and 14'. The end of the portion 14' is turned or folded upwardly and over, as shown at 15'. Pivotally secured between the laterally extending portion 14' and the por-
 100 tion 15' is a camming member 16'. The inner face of said camming member 16' is provided with a series of teeth 17' which are adapted to grip the edge of the rail flange. The camming member 16' is held in position
 105 by a rivet 18' which passes entirely through the plate 12'. The laterally extending portion 13' of the plate 12' passes through an opening 19' in a block 20' which is provided with a slot 21' adapted to receive the flange
 110 of the rail and is designed to be clamped tightly against the latter by a wedge-shaped member 22' which is driven tightly into an aperture 23' near the outer edge of the laterally extending portion 13' of the plate 12'.
 115 The lower portion 20² of the block 20' is inclined so that the lower end 24' of the wedge 22' will be bent and its accidental removal prevented. The rear wall of the slotted por-
 120 tion of the block 20' is provided with a series of teeth 25' which grip the flange of the rail when the said block is clamped against the latter. When the device is assembled on the rail it is arranged so one end of the block 20' will bear against the side of the tie. It will
 125 therefore be seen from the above described construction that when the device is tightly clamped in position any tendency of the rail to creep would cause the camming member to rock slightly thus causing the device to
 130

grip the rail all the more tightly and prevent any such creeping.

What I claim is,—

1. In combination with a rail, a device for preventing the creeping of the rail, said device comprising an arm beneath the rail flange and held from movement in the direction of the length of the rail, a pair of links pivoted to said arm at points spaced from one another lengthwise of the arm, said links extending laterally of said arm and engaging opposite sides of the rail flange, the outer portions of said links having pivoted thereto members provided with teeth which engage or grip opposite edges of the rail flange.

2. In combination with a rail, a device for preventing the creeping thereof, said device comprising an arm, a block engaged by said arm and clamped to said rail, said block and arm being held from movement in the direction of the length of the rail, and a pair of links pivoted to said arm and extending outwardly or laterally therefrom in opposite directions, said links having at their outer portions toothed means engaging respectively the opposite edges of the rail flange.

3. In combination with a rail and a tie, a device for preventing the creeping of the rail, said device comprising an arm, a block having an opening through which said arm passes, said block engaging the tie and frictionally engaging the flange of the rail, and a pair of links pivoted to said arm at points spaced from one another lengthwise of the arm, said links extending laterally from said arm in opposite directions and carrying at their outer ends toothed members which engage respectively the opposite edges of the rail flange.

4. In combination with a rail and a tie, a device for preventing the creeping of the rail, said device comprising an arm beneath the rail flange, a block engaging the tie and having an opening through which said arm extends, said block having a slot which re-

ceives the rail flange and being provided with teeth adapted to engage the latter, means for clamping the toothed portion of the block against the rail flange, a pair of links pivoted to said arm at points spaced lengthwise of the arm, said links extending laterally from said arm in opposite directions and having their outer ends doubled inwardly over the rail flange, and toothed camming members pivoted in the outer doubled portions of said links, said toothed members engaging respectively the opposite edges of the rail flange.

5. In combination with a rail and a tie, a device for preventing the creeping of the rail, said device comprising a member beneath the rail flange, a block in engagement with the tie and having an opening through which one end of said member extends and having a slot adapted to receive the rail flange, the rear wall of said slot being toothed or serrated, means passing through said member for securely clamping said block against the rail flange and a pair of links pivoted to said member at points spaced lengthwise thereof, said links extending outwardly from said member in opposite directions and having their outer ends doubled or folded inwardly over the rail flange, toothed camming members carried by the outer doubled portions of the links, said camming members engaging respectively the opposite edges of the rail flange and being provided with open slots and means passing through said outer doubled portions of the links and through the slots of said camming members for pivotally securing the latter to the links.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

JOHN WOLFE.

Witnesses:

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N. L. McDONNELL.