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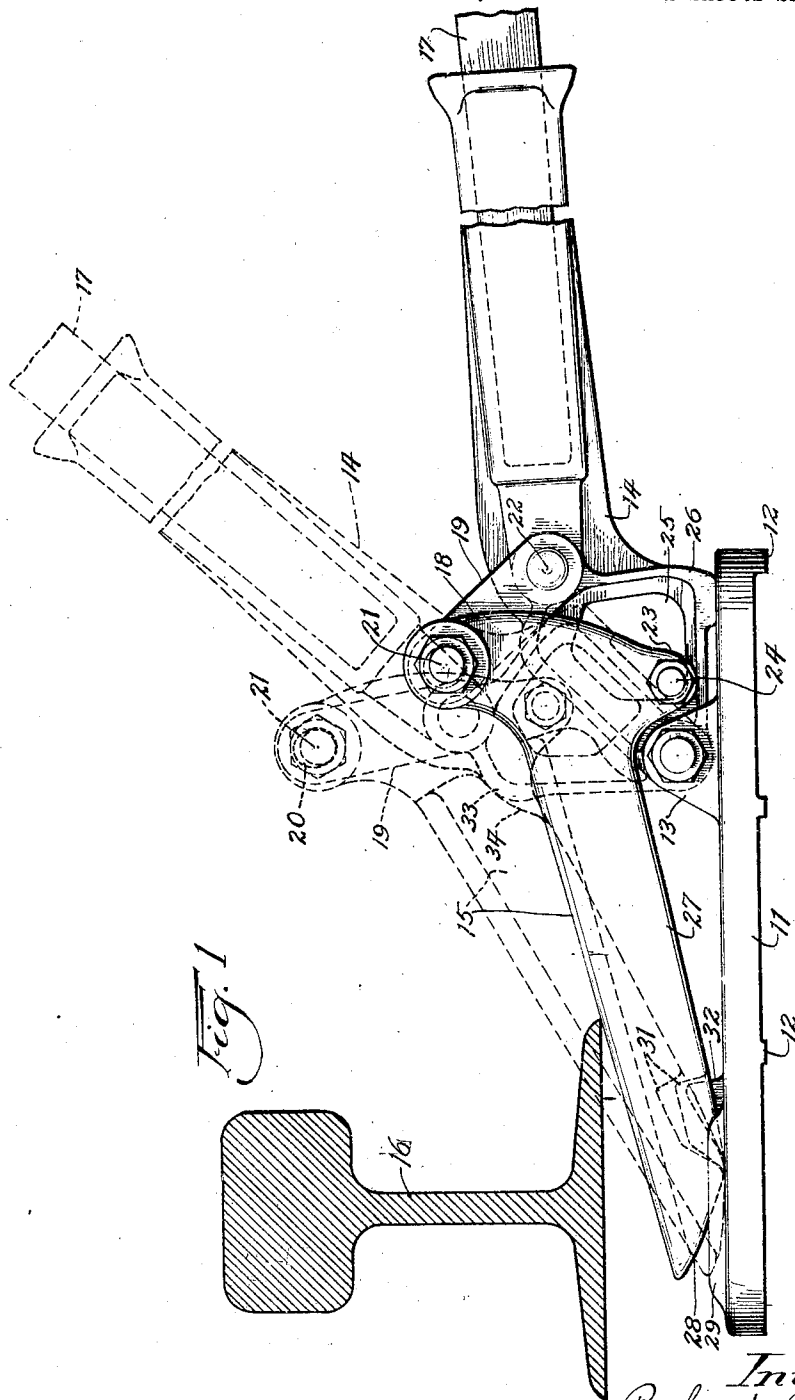
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R. ROSTRON

TRACK LINER

Filed June 27, 1924

2 Sheets-Sheet 1



Inventor:
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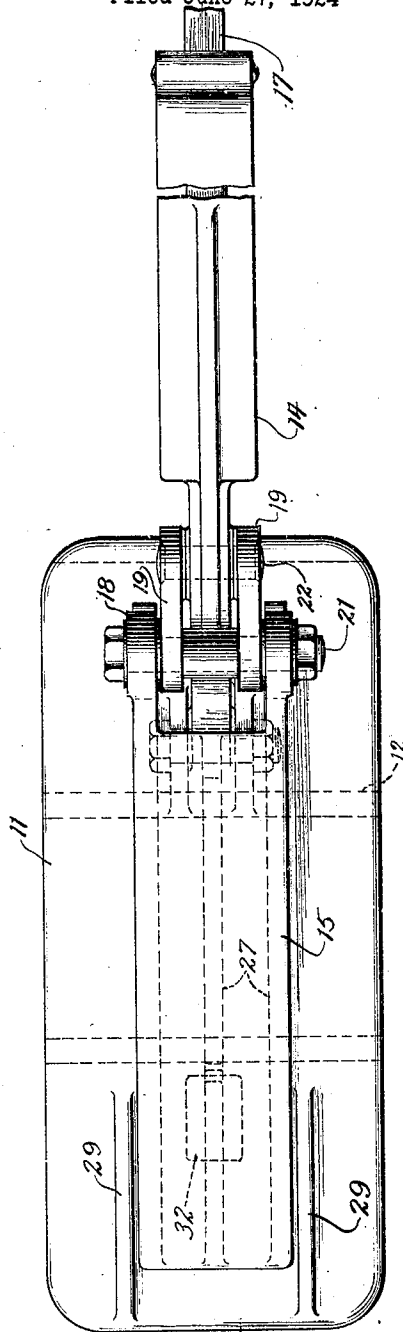
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2 Sheets-Sheet 2

Fig. 2



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UNITED STATES PATENT OFFICE.

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TRACK LINER.

Application filed June 27, 1924. Serial No. 722,800.

My invention relates to track lining tools of the general type illustrated and described in my co-pending application Serial No. 722,799, of even date herewith, the primary object of the present invention being the provision of a modified and, from certain aspects, perhaps preferable mechanical relation between the track shifting member and actuating lever of the tool.

An important object of the invention is the provision of a track liner in which a toggle action may be employed in actuating the track shifting member.

A further object is the provision of a tool of this character in which the track shifting member is connected with the actuating lever by means of a slotted link adapted to permit slight continued movement of the member after the link has reached its final position.

Another object of the invention is the provision, in a combination involving a double pivot between the track shifting member and actuating lever, of means for preventing the parts from moving from starting position until a predetermined stage in the operation is reached.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings.

Figure 1 is a side elevation of a track liner in which my invention is embodied, a part of the lever and lever socket being broken away for convenience in illustration; and

Fig. 2 is a top plan view thereof.

In the embodiment of the invention shown in the drawings for purposes of illustration, I have shown a base plate 11, having transverse bottom ribs 12 adapted to prevent slippage of said plate upon the ground during operation of the tool, said plate having upstanding ears, or lugs 13 on the upper side near the rear thereof, and a lever socket member 14 being pivoted to said lugs and having secured thereto, in manner to be hereinafter described, a track shifting plate 15, which is adapted to be inserted beneath a rail 16 for the purpose of moving the latter to desired position or relation with an adjacent rail. A lever 17 may be inserted in the socket member 14, though it will be

understood that said member might be extended in other manner and, for this reason, may itself be referred to as an actuating lever. The plate 15 is bifurcated at its rear end, and the bifurcated portion thereof has upward extensions 18 adapted to be pivotally connected with links 19 by means of a bolt 21 extending therethrough and through a slot 20 in the ends of said links. The lower ends of said links are pivotally connected with the actuating lever by means of a rivet 22, and it will thus be seen that a toggle action is rendered possible by this construction. Lower projections 23, on the rear bifurcated portion of the plate 15, have a bolt 24 extending therethrough and disposed in an opening 25 in a foot portion 26 of the lever socket 14. The object of this construction is to return the plate 15 to starting position after it has been disengaged from the stop 32, and this is accomplished through a cam action of said bolt 24 on the forward walls of said opening.

Said plate 15 is provided with a plurality of depending flanges 27 and the forward ends of said flanges are beveled, as indicated at 28, to provide a cam surface adapted to act upon the upper surface of the base plate 11 between guiding ribs 29 provided at the forward end of said plate. Rearwardly of the beveled portion 28 of the center flange 27, I provide a notch 31 adapted to fit upon a protuberance 32 on the top of the plate to provide a stop preventing forward movement of the plate 15 while the tool is being inserted beneath a track and until the lever 14 has been lifted a predetermined distance. The foot 26 on said lever socket 14 permits the lifting of the entire mechanism with the base plate 11 without disturbing the relation of the parts.

In operation, the tool is positioned under the rail 16 and the actuating lever lifted to first ground the plate 11 and then move the plate 15 in such manner as to shift said track 16 to desired position. The initial part of the lifting movement of said actuating lever serves to firmly ground said plate 11, the plate 15, at this time, being held against forward movement by means of a stop 32. After said lever has been lifted sufficiently to cause the plate 15 to disengage said stop 32, the upward movement of said plate 15 exerts a lateral or forward push upon the rail 16. Provision is made for giving

ing an additional forward push to the plate after it has been raised to this predetermined position. A shoulder 33 is formed upon the lever socket 14 and is adapted to engage a cam portion 34 on the central flange 27 of the plate 15 when said lever socket is lifted and continued movement of the socket, after this contact is established, tends to move the plate 15 forwardly across the base 11. The slot 20 in the link 19 allows this action without removing the pressure upon the base 11 which is necessary to prevent slippage thereof. It will be understood, however, that the rail is shifted by the upward movement of the plate 15 and that the forward push upon said plate is not essential to successful operation, though, from certain standpoints, it is a distinct feature of advantage.

With the foregoing construction, accurate positioning of a rail may be accomplished by an efficient mechanical action involving the use of relatively simple mechanism and inexpensive parts.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention, or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A track liner, comprising a base, an actuating lever pivoted to said base, and a track shifting member connected for actuation by said lever, said lever having a shoulder adapted to contact with said member as the lever approaches its raised position, and said member having a cam portion adapted to be acted upon by said shoulder.

2. A track liner, comprising a base, an actuating lever pivoted to said base, a track shifting member adapted to slide upon said base, a link pivotally connected with said member and said lever, and means for limiting the relative movement of said link when the lever is lifted, thereby preventing said member from falling forward to inoperative position.

3. A track liner, comprising a base, an actuating lever pivoted to said base, a track shifting member adapted to slide upon said base, a link pivotally connected with said member and said lever, and means for limiting the relative movement of said link with respect to the lever, thereby preventing said member from falling forward to inoperative position.

4. A track liner, comprising a base, an actuating lever pivoted to said base, a track shifting member adapted to slide upon said base, a link pivotally connected with said

member and said lever, and means for limiting the relative movement of said link with respect to the lever, said link being slotted to permit slight continued lifting of said member after the link has reached the limit of its movement.

5. A track liner, comprising, a base, a lever having one end pivoted to said base and having a portion adjacent to said pivoted end, provided with an abutment adapted to contact with the upper face of said base, to limit downward movement of said lever relative to said base, a link connected to an intermediate portion of said lever, a rail engaging member having a free end adapted to slide over the face of said base and having a pivotal connection adjacent its other end with said link, said free end of the rail engaging member and the base having means for preventing sliding movement of said rail engaging member until the lever is moved a predetermined distance, whereby to facilitate the insertion of said tool beneath the rail.

6. A track liner, comprising a base, an actuating lever pivoted to the upper side of said base, a track shifting member having a sliding action upon said base, a link pivoted to said member and to said lever, and means for preventing said member from falling forwardly from starting position until after said lever is partially raised.

7. A track liner, comprising a base, a track shifting member carried upon said base, an operating lever connected for actuation of said member and adapted to act directly upon the latter during an advanced stage only of the operation.

8. A track liner, comprising, a base, an operating lever pivoted to said base, a track shifting member having one end slidable along said base, a link pivoted to said member and lever, and means for controlling the position of said member to prevent the latter from collapsing and to cause it to be restored to starting position by the movement of said lever.

9. A track liner, comprising, a base, an operating lever pivoted at one end of said base, a rail contacting member and a toggle connection between said lever and member adapted to actuate said member on operation of said lever to shift said rail, said lever and member having co-operating portions adapted to contact during an advanced stage of movement of said lever, whereby to cause said lever to directly push said member and thereby push the rail.

10. A track liner, comprising a base and actuating lever pivoted to said base, a track shifting member, a link pivotally connected with said member and said lever, and means for limiting the relative movement of said link with respect to the lever, said link being constructed and arranged to permit the con-

tinued lifting of said member after the link has reached the limit of its movement.

11. In a track liner, the combination of a base having at its forward end two parallel upstanding ribs, and an upstanding projection intermediate said ribs and disposed adjacent their rear, a lever of the second class pivoted at the rear of said base, a rail engaging member having a link connection with an intermediate portion of said lever, the forward portion of said rail engaging member having a tapered nose lying between said parallel upstanding ribs and having a recessed portion provided with a rear wall adapted to contact with the rear edge of said upstanding projection to form an abutment, whereby to prevent forward sliding motion of said rail engaging member until said member has been raised clear of said projection by movement of said lever.

12. In a track liner, the combination of a base, a lever pivoted to said base, a track engaging member having a free forward end slidable over the front portion of said base and having a rearwardly extending portion provided with a link connection to said lever, whereby on shifting of said lever said rail engaging member is lifted and slid forward, said rail engaging member and base having interengaging portions forming an abutment adapted to prevent forward movement of said rail engaging member until said member has been raised to disengage said abutment portions.

13. A device of the class described, a base, a lever having its forward end pivoted to said base, and provided with an adjacent abutment adapted to contact with said base, a link pivoted intermediate the ends of said lever, a rail engaging member having a forward end slidable over said base and having a connection with said link, said base and forward portion of said rail engaging member having associated walls providing an abutment to prevent forward movement of said rail engaging member until said member has been raised to disassociate said abutment walls.

14. A device of the class described, the combination of a base, a lever having one end pivoted to said base, a rail engaging member having a forward end slidable over said base and a rearward end provided with an upstanding portion having an opening, and a depending portion provided with a pin adapted to engage and slide in said lever, a link connection to an intermediate portion of said rail engaging member, said latter opening being larger than the portion of said link passing through said opening, said lever having a forwardly extending face, and said rail engaging member having a corresponding cut-away wall, whereby to permit said wall and face of said lever to engage only after a predetermined shifting movement of said lever.

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