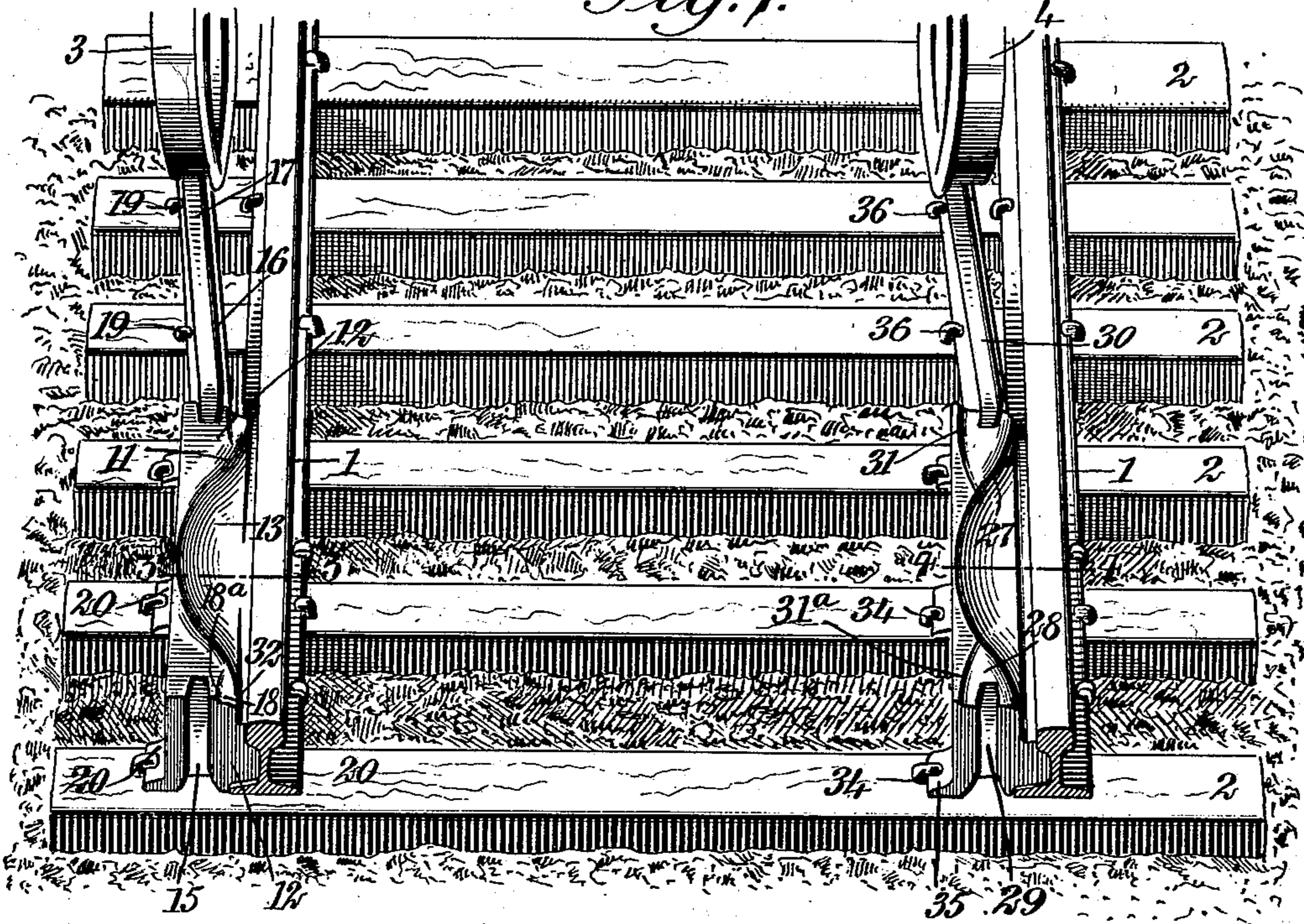


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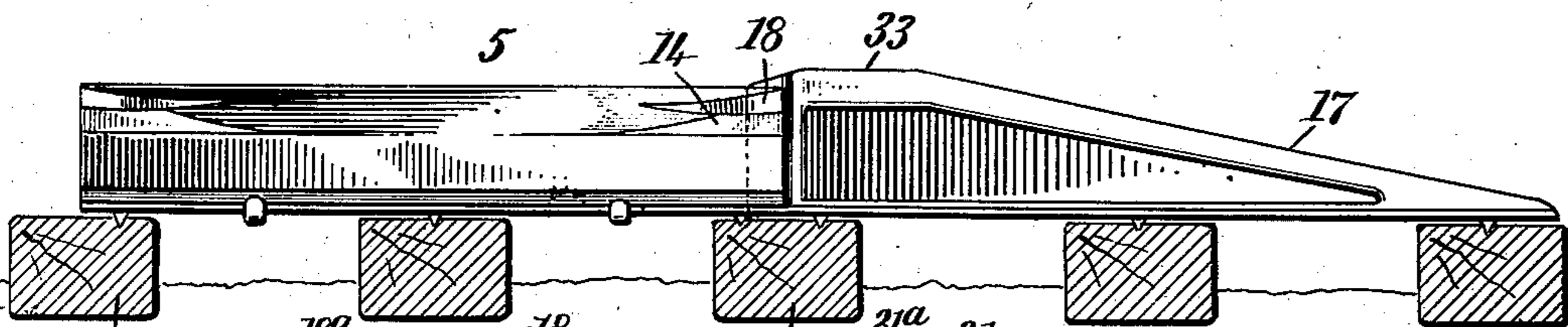
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CAR REPLACER.  
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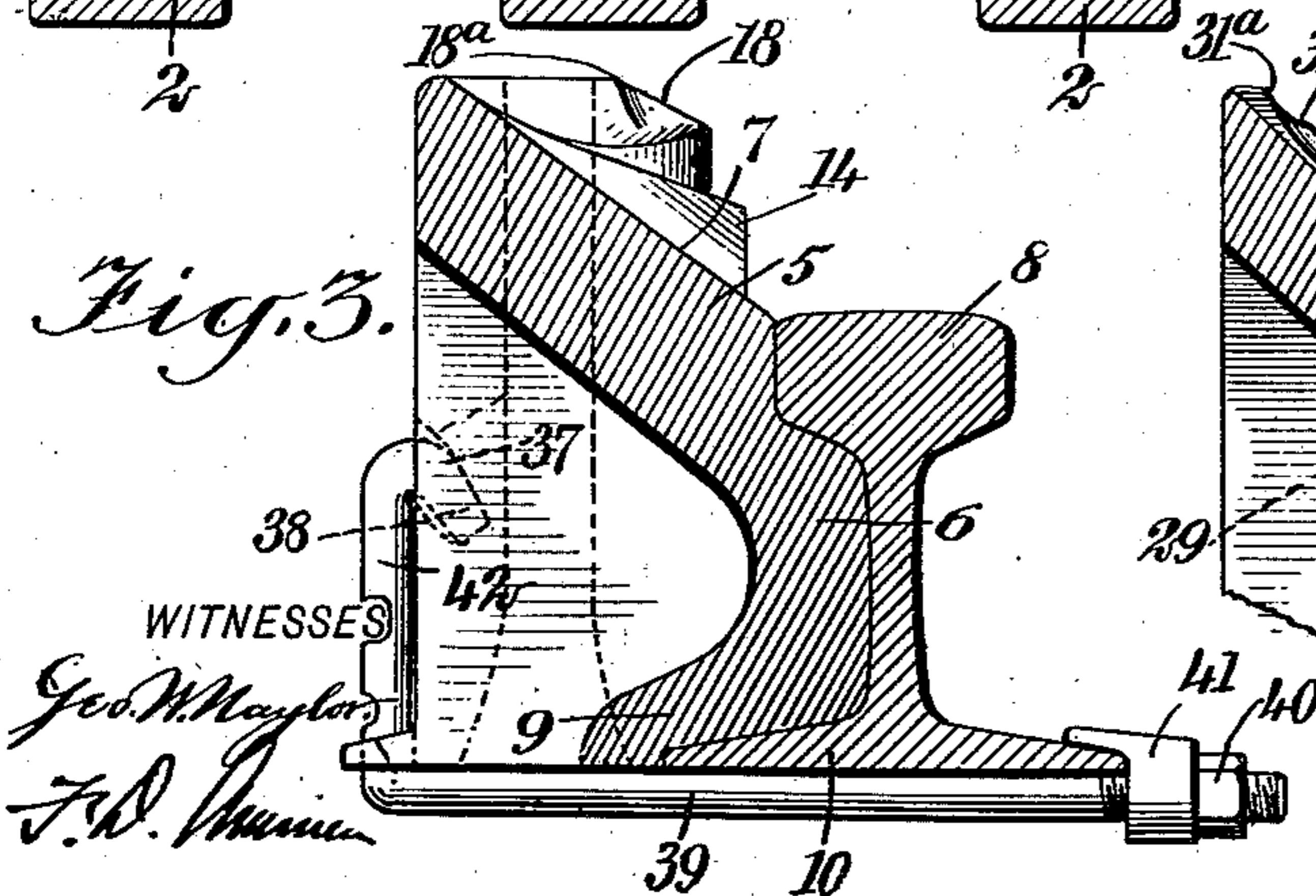
*Fig. 1.*



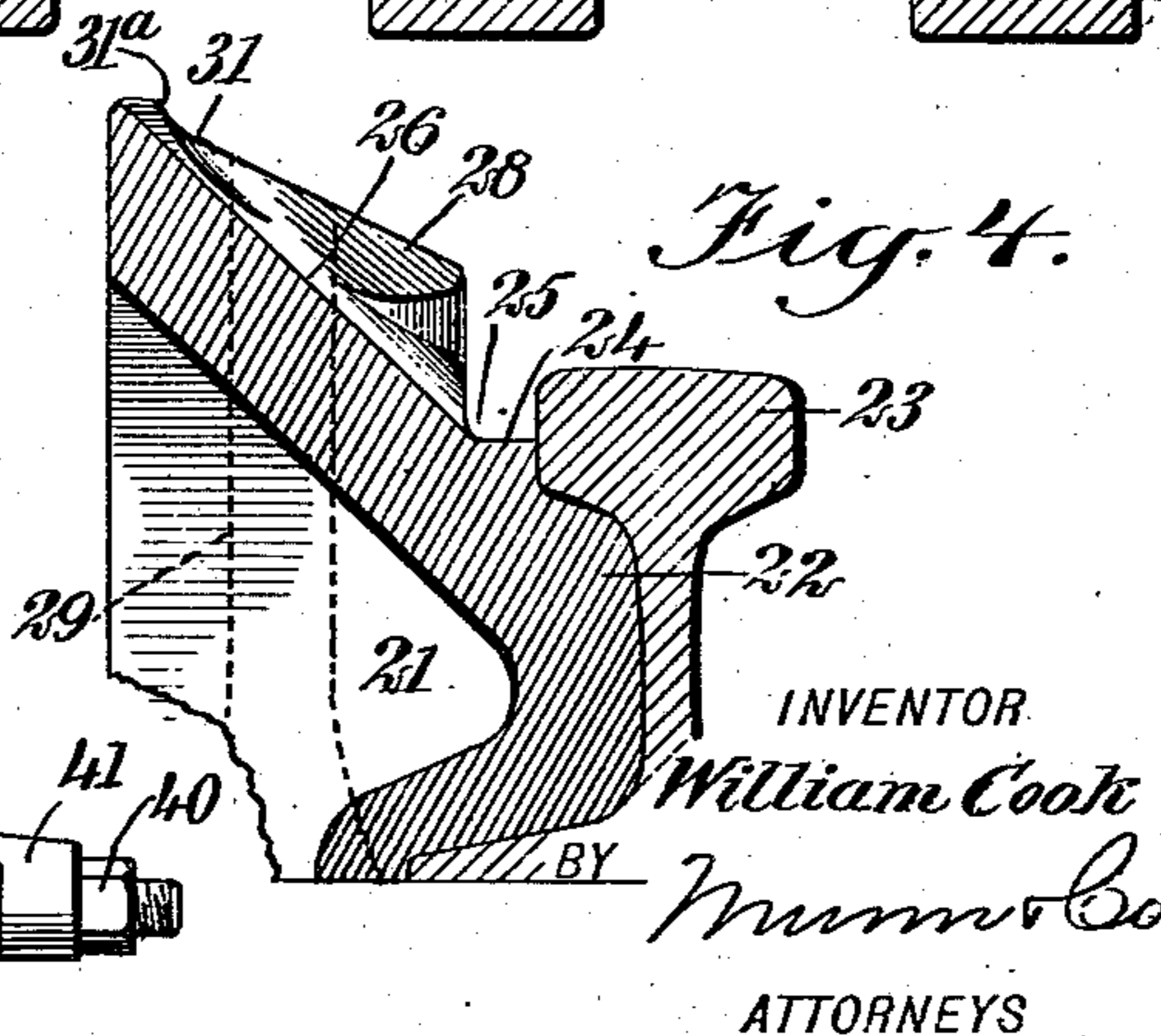
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

WILLIAM COOK, OF HOBOKEN, NEW JERSEY.

## CAR-REPLACER.

No. 847,732.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed January 14, 1907. Serial No. 352,168.

*To all whom it may concern:*

Be it known that I, WILLIAM COOK, a citizen of the United States, and a resident of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Car-Replacer, of which the following is a full, clear, and exact description.

This invention relates to car-replacers, such as used for replacing derailed trains upon the track.

The object of the invention is to produce a device of this kind which can be readily set in position and which will be reversible in its nature, enabling the device to replace a car moving toward it from either direction.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective looking down a railroad-track, showing the rails in section and illustrating the manner in which the device is applied in practice. Fig. 2 is a vertical section taken longitudinally of the rail and showing one of the replacers in side elevation. Fig. 3 is a vertical cross-section on line 3 3 of Fig. 1 and showing the outside replacer, and Fig. 4 is a cross-section on the line 4 4 of Fig. 1 and showing the inside replacer.

Referring more particularly to the parts, 1 represent the rails, which are fastened to the cross-ties 2 in the usual manner. The forward wheels 3 and 4 of the derailed car are represented as lying near the rails.

The construction of the replacing device will now be described.

Referring to Figs. 1 and 3, 5 represents the body of the outside replacer. The lower portion of this body is formed into a chair 6, which conforms closely to the configuration of the side of the rail, as indicated, and the upper portion of the body presents an inclined face 7, which extends upwardly from the outside upper edge of the rail-head 8, as indicated. The lower portion of the body 5 is formed into a base 9, which is adapted to rest upon the cross-ties and the flange 10 of the rail in the manner shown. The inclined face 7 does not extend to the ends of the replacer, so that a curved ridge 11 is formed,

extending throughout the length of the device, and this ridge approaches the inner face of the device at the ends, as indicated. In this way enlarged and substantially rectangular heads 12 are formed at the ends of the device. In one aspect the inclined face 7 may be considered to form a depression or enlarged recess 13, and this recess is deepest near the middle line of the device, inclining upwardly gradually toward each end, at which points shoulders 14 are formed, the purpose of which will appear more fully hereinafter. In the end faces of the heads 12 vertically-disposed slots 15 are respectively formed, and these slots are for the purpose of facilitating the attachment of a skid 16. This skid consists simply of a rail, the inner end of which is received in the slot, as indicated in Fig. 1, and this rail tapers toward its outer extremity, so as to present an inclined face 17, adapted to receive the wheel 3 and guide the same onto the body of the replacer. The replacer 5 may be considered as a block, and the skid 16 operates as a guide, so as to facilitate the passing of the wheel from the track-bed onto this block. The upper inside faces of the heads 12 are provided with inclined or beveled faces 18, which incline toward the rail in such a way that when the flange of the wheel comes upon them the wheel will tend to gravitate down onto the rail. The arrangement is such that a curved shoulder 18<sup>a</sup> is formed at the head, which deflects the flange of the wheel toward the rail. The block and the skid are adapted to be secured in position by spikes 19, applied as shown. For this purpose the base 9 of the replacer is provided with outwardly-projecting flanges 20, at which spikes may be applied, as shown.

The inside replacer device will now be described.

Referring especially to Figs. 1 and 4, this device comprises a body or block 21, which is similar to the body 5 and which is formed on its inner face into a chair 22, which conforms to the configuration of the inner side of the rail, as indicated. Near the inner side of the head 23 of the rail the block 21 presents a depressed face 24, so that a longitudinal channel 25 is formed extending longitudinally of the rail. Near the middle of the block an inclined face 26 extends upwardly in such a way as to form a curved ridge 27, which approaches the rail at the ends of the block, as shown. At the ends of the block upwardly-

projecting shoulders 28 are formed, which constitute heads somewhat similar to the heads 12, described above. The ends of the block are provided with vertical channels or  
 5 guide-grooves 29, similar to the grooves 15, and these grooves are adapted to facilitate the application of a skid 30, which is applied in the manner indicated in Fig. 1, the inner  
 10 end of the skid being received in the groove while the body of the skid projects toward the wheel 4. This skid is similar in construction to the skid 16 described above. The upper face of the block 21 at the heads  
 15 28 is formed with inclined cheeks 31, which are adapted to receive the flange of the wheel as it rolls onto the block, and these form shoulders 31<sup>a</sup>, which are curved inwardly as they approach the middle of the block in such  
 20 a way as to guide the wheel toward the inclined face 26.

Referring again to the outside replacer, it will be observed in Fig. 1 that the heads 12 do not extend laterally sufficiently to bring the side faces thereof into alinement with the  
 25 side face of the head of the rail. In this way the effect is produced of guide-grooves or channels 32, formed at the ends of the device.

Referring to Fig. 2, it will be observed that the upper faces 33 of the skids have their  
 30 highest point above the upper faces of the blocks. From this arrangement it should be understood that when the wheels roll up the skids they can roll easily onto the blocks and be guided into position thereby on the tracks.

35 The manner of replacing the wheels will now be briefly described.

The device being applied in the manner shown, the wheels are forced onto the inclined faces of the skids by pinch bars or  
 40 similar means. As the wheel 3 arrives on the block its flange is received on the bevel 18, which allows the wheel to pass over the head of the block into the depression 13, where it slides down the inclined face 7, so  
 45 as to bring the flange of the wheel onto the upper face of the rail-head. As the wheel advances it comes in contact with one of the shoulders 14 of the ends of the block, and in this way is forced outwardly across the rail.  
 50 Beyond this point when the wheel is sufficiently advanced it will fall into position, with the flange on the inner side of the rail, as will be readily understood. As the wheel  
 55 4 moves up the skid 30 its flange comes in contact with the cheek 31, which guides it toward the inclined face 26. As soon as it reaches this point the wheel tends to gravitate downwardly, so that its flange will come into position in the channel 25. The wheel  
 60 will then be advanced in this channel until it reaches the end of the block, when it will fall into position upon the rail, the flange of the wheel lying against the inner face of the rail-head. The inside replacer 21 is held in posi-

tion by spikes 34, applied to the flanges 35, in 65 a manner similar to that described in connection with the outside replacer, and the skid 30 is similarly held in position by spikes 36.

With the construction described it will be evident that the device may be used to re- 70 place the wheels moving in either direction from the left or from the right toward the blocks or body of the replacer. In addition to this advantage my device has the further advantage that each of the replacers is 75 formed of two parts, and each of these parts is light enough in weight to enable the same to be readily placed in position.

I provide means for securely fastening the replacers to the rails. The arrangement sug- 80 gested is shown in Fig. 3 in connection with the outside replacer by way of illustration. I provide a recess 37 in the outer face of the replacer-block, which is engaged by a hook 38, formed on a bent bolt 39. The body of 85 this bolt extends transversely under the rail and is threaded at its extremity to receive a nut 40. This nut operates to clamp a clip 41 on the edge of the flange. The hook 38 aforesaid is formed on the upper end of a 90 vertical extension 42 from the body 39 of the bolt. By tightening the nut the replacer may be firmly pressed against the side of the rail. This fastening-clamp for the replacer may be used instead of spikes, or it may sup- 95 plement the use of spikes.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An outside replacer consisting of a 100 block adapted to be applied to the side of the rail and presenting an inclined face extending upwardly from the inner edge of the rail-head and having shoulders projecting upwardly from said face near the ends of said body, 105 said shoulders being adapted to deflect a wheel off of said inclined face onto the rail-head, and means for guiding a wheel onto said block.

2. An inside replacer consisting of a block 110 adapted to be applied to the inside face of a rail and presenting a depressed face near the rail-head and an inclined face therebeyond, whereby a channel is formed adapted to guide a wheel-flange adjacent to the rail, said 115 block having heads at the ends thereof with guide-faces on the upper side thereof adapted to receive a wheel-flange to guide the wheel onto said inclined face, and means for guiding the wheel onto said block. 120

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM COOK.

Witnesses:

MICHAEL KENNEY,  
 THOMAS E. KENNEY.