(No Model.) 2 Sheets—Sheet 1.

D. Q. WALKER.

CAR REPLACER.

No. 586,982. Patented July 27, 1897.

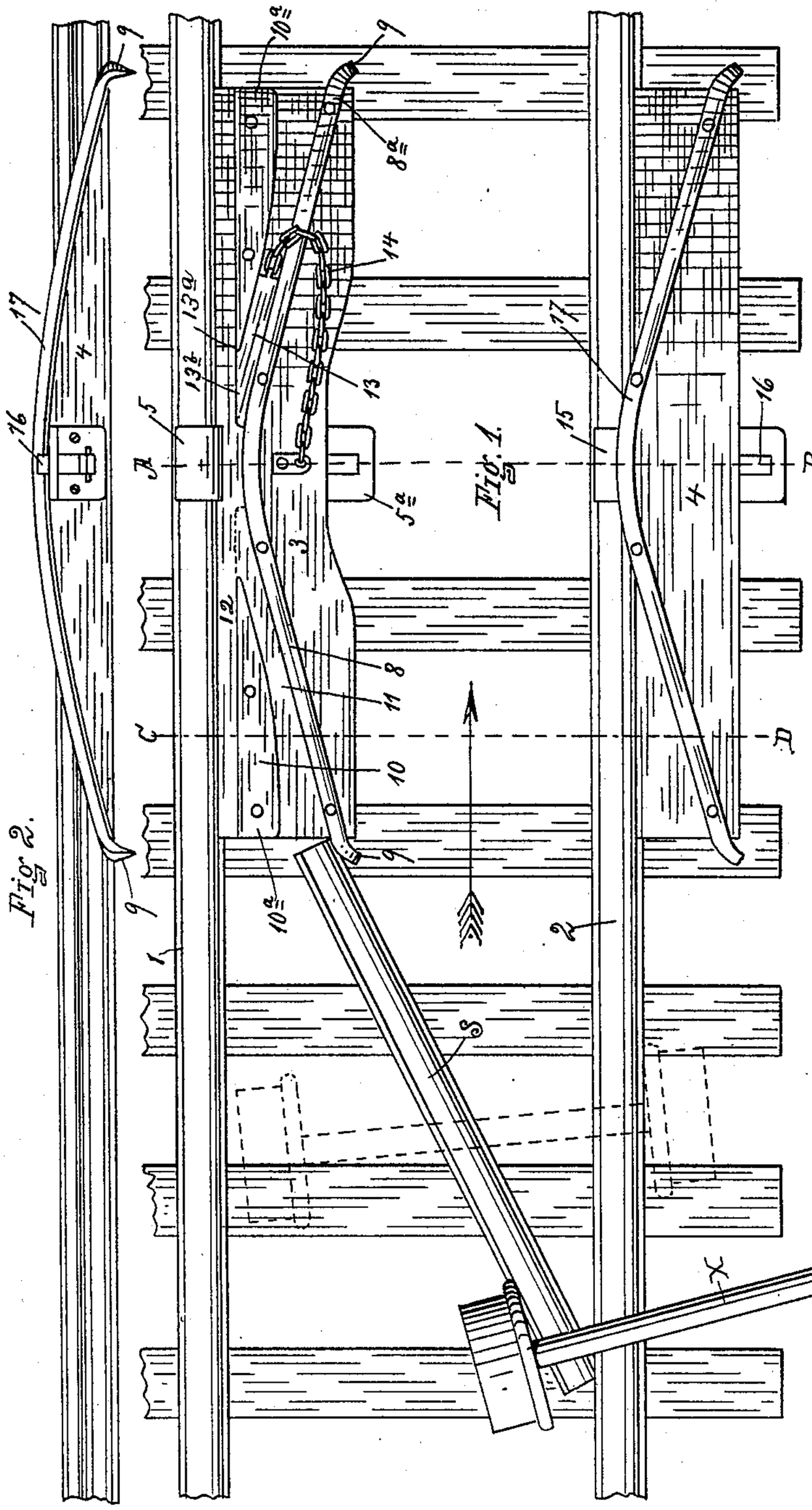

Fig. 2.

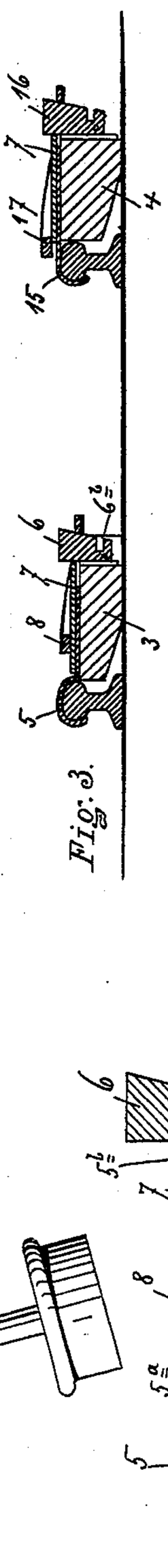

Fig. 3.

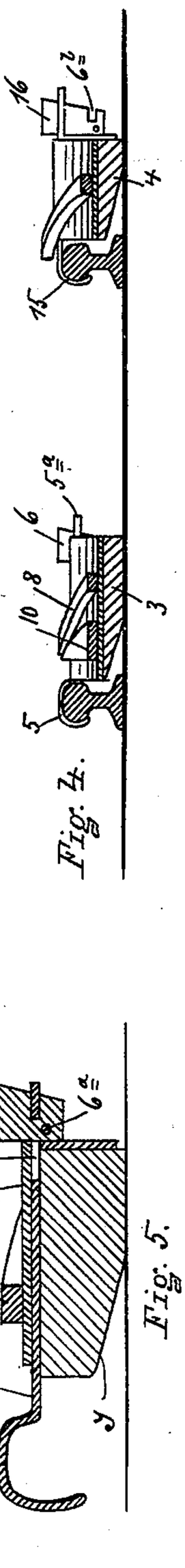

Fig. 4.

Fig. 5.

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(No Model.) 2 Sheets—Sheet 2.

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CAR REPLACER.

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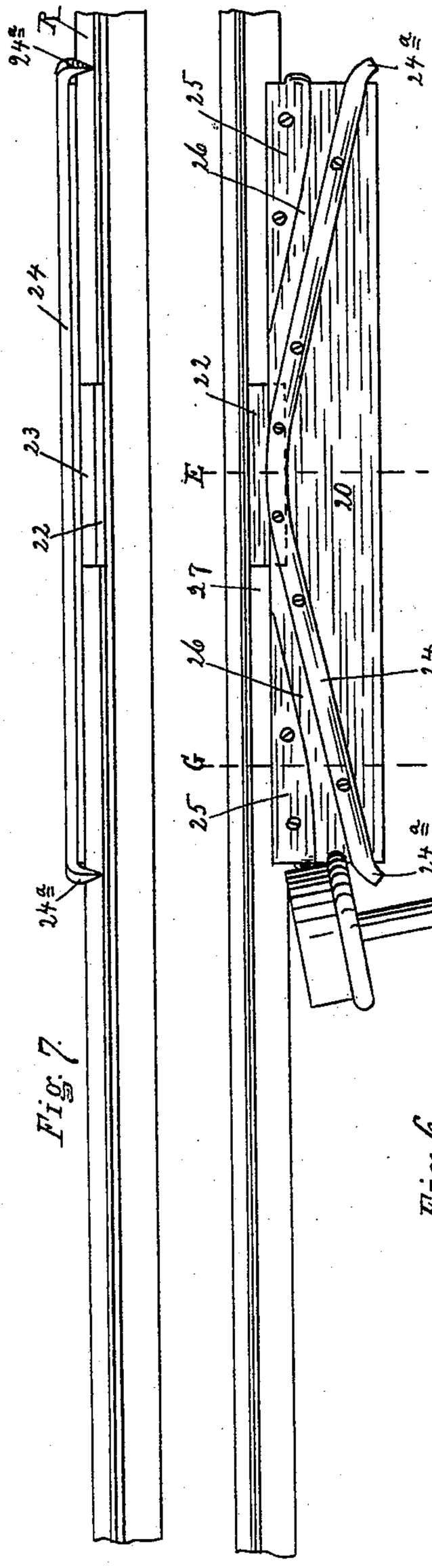

Fig: 7.

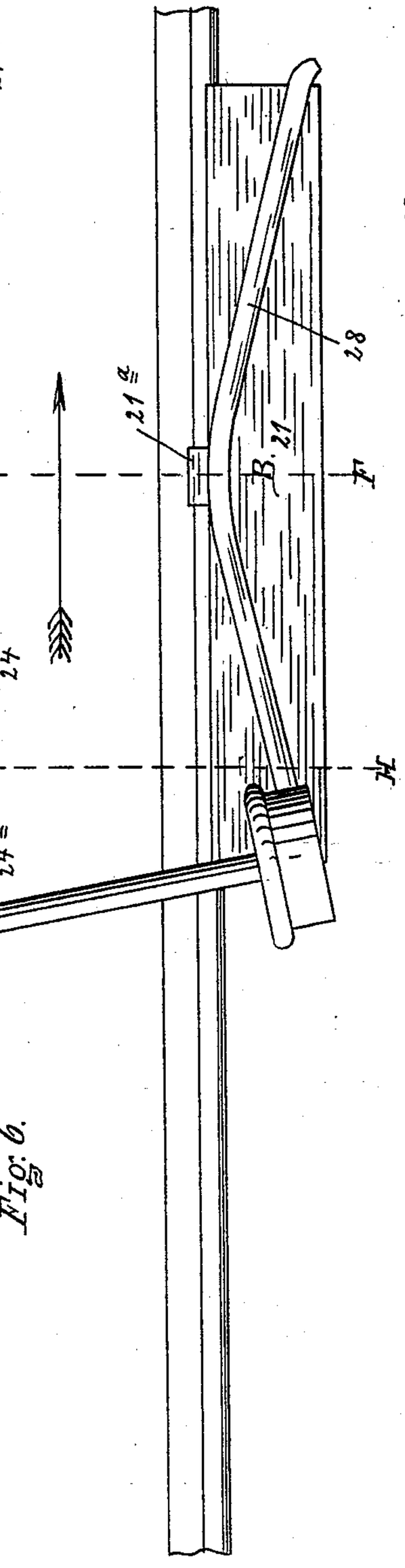

Fig: 6.

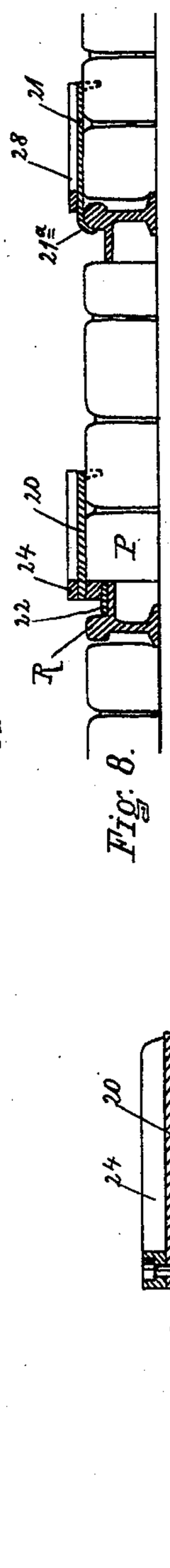

Fig: 8.

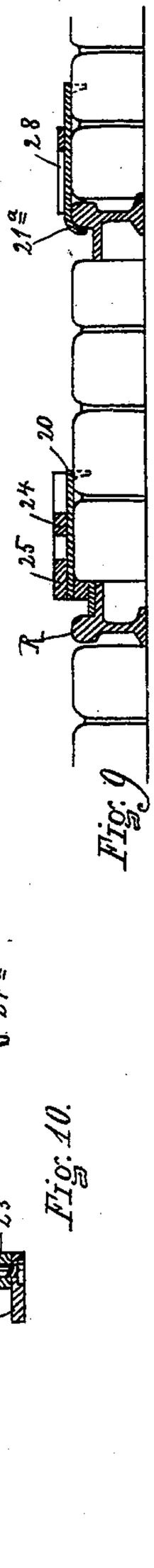

Fig: 9.

Fig: 10.

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UNITED STATES PATENT OFFICE.

DANNIEL Q. WALKER, OF UTICA, NEW YORK.

CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 586,982, dated July 27, 1897.

Application filed February 8, 1897. Serial No. 622,435. (No model.)

To all whom it may concern:

Be it known that I, DANNIEL Q. WALKER, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Car-Replacers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form part of this specification.

Figure 1 shows a plan view of a section of railway-track having my car-replacing devices applied, in connection with a pair of wheels for exhibiting the operation. Fig. 2 shows a side elevation of the rail and one of the parts of the replacing device on a side elevation. Fig. 3 shows a section of track and replacers, taken on line A B of Fig. 1. Fig. 4 shows a section taken on line C D of Fig. 1. Fig. 5 shows a section of replacers similar to that shown on the left of Fig. 3, with the devices for attaching the replacer to the rail in the position which they may assume when the attaching devices are unfastened. Fig. 6 shows a plan view of a modified form of the device particularly intended for a street-car track. Fig. 7 shows an edge view of the device as shown in Fig. 6. Fig. 8 shows a cross-section of track, including a pavement and the car-replacers, as taken on line E F of Fig. 6. Fig. 9 shows a similar section taken on line G H of Fig. 6. Fig. 10 is an enlarged detail in section of the car-replacer as shown on the left of Fig. 8.

Referring to the reference letters and figures in a more particular description of the device, 1 2 indicate the two rails of the railway-track.

3 4 are the two parts of the car-replacing device, each consisting of a crowning-body adapted to rest on several ties of the track or on the ground, as the case may require. The inside replacer 3 is adapted to be secured on the inner side of the rail, while the outside replacer part 4 is adapted to be secured on the outer side of the rail, as shown. The parts are provided with similar means of attachment to the rail, which consists of a flat hook 5, adapted to engage the head of the railway-rail and mounted on the sliding shank 5^a, which passes in the recess beneath the sheathing or covering 7 across or through the body of the replacer, and is provided at its opposite end with a slotted opening 5^b. This slotted opening receives the wedge 6, which is adapted to press against the outer side of the body of the replacer and draw the hook 5, so as to clamp the device onto the rail. The wedge 6 is provided in its lower smaller end with a cross-pin 6^a, which prevents the wedge from being removed from the slot 5^b or otherwise displaced. The wedge is also provided with a notch or recess 6^b adjacent to its lower end, which is adapted to receive the portion of the shank 5^a which is outside of the opening 5^b and permits the shank and hook 5 to have quite an extended lateral movement when so engaged.

The part 3 of the replacer is provided with a curved-flange guide-rail 8, which at its center or middle approaches the side of the body of the replacer, which fits against the side of the rail and from its middle diverges to the outer ends 8^a at the outer corners of the part 3 and terminates in downwardly-extending teeth or prods 9. On either side of the middle of the replacer 3 and between the diverging ends of the rail 8 and the side of the piece adjacent to the railway-rail are located the two fixed wedge-shaped block-pieces 10 10, secured firmly to the replacer. The ends of the pieces 10 terminate in downwardly-extending points 10^a. The arrangement of the pieces 10 10 is such as to afford the two flangeways 11 and 12, the entrance at the end of the flangeway 11 being widened. The flangeway 11 affords a passage for the flange of a wheel which is being operated upon by the devices to replace it on the track, while the flangeway 12 between the pieces 10 at the side of the replacer, or more particularly perhaps between the pieces 10 and the head of the track-rail, furnish a passage for the flanges of the wheels traveling on the track. In connection with the replacer 3 there is employed a removable block 13, having a shoulder 13^a and an inclined end 13^b, adapted to be placed with its body portion in the flangeway 11, so that its inclined face 13^b will form a continuation of the side of the piece 10 and extend the flangeway 12 un-

broken to substantially the middle of the replacer. This block 13 is adapted to be removed from the position in which it is shown in Fig. 1 and replaced the other side up in the position shown in dotted lines on the left-hand side of the replacer, as shown in Fig. 1. The position of the block 13 on one end or the other of the replacer is determined by the direction from which the trucks are to come to be replaced on the track. The block 13 may be secured to the body of the replacer by a chain 14, which will prevent its being lost or not present when required. The outside replacer part 4 is secured to the rail by a hook 15 with a shank-wedge 16, similar to that heretofore described. The outside replacer 4 is provided with a rail 17, which projects over the edge of the body at the middle of the replacer, which is adapted to be placed against the railway-rail. As shown in Figs. 1 and 3, the middle portion of the rail 17 is adapted to overhang the head of the railway-rail when the replacer is in position. The ends of the rail extending either way from the middle portion diverge from the side of the replacer which engages against the rail and diverge from the rail when secured on the track. The ends of the rail 17 also terminate in teeth or prongs similar to 9 to assist in securing the replacer against sliding. The operation of the device may be briefly described as follows:

A truck or set of derailed wheels, which may be in about the position shown in dotted lines in Fig. 1, may be replaced on the track by drawing them in the direction indicated by the arrow in Fig. 1. The flange of the wheel enters the wide end of the flangeway 11, and as the wheel runs on top of the replacer the weight of the wheel, together with any car that may be carried thereby, is taken upon the block 10, on which the face of the wheel runs, while the wheel is directed by the flange rubbing on the rail 8, so far as the inside replacer 3 is concerned. As to the replacer 4, the flange of the wheel enters between the diverging end of the rail 17 and the inside of the replacer, and the face or tread of this wheel is taken by a rail 17. As the wheels pass toward the middle of the replacers and before the face of the wheel treading on the piece 10 has run off the tapering end thereof the face of the wheel will have lapped onto the track or rail *l*, and as further progress is made it comes fully into position on this rail. As the wheel which is passing along the rail 17 reaches the highest point on the rail the flange is carried to the inside of the track-rail 2 by reason of the piece 10, with the block 13 acting as a guard-rail on the inside of the flange of the opposite wheel and holding the wheels over to that side of the track. These pieces also acting as a guard-rail prevent displacement of the wheels of the following trucks of a car or train, which may pass over the devices in the direction of the arrow, and particularly when the wheels traveling on the rail 2 are elevated in passing over the middle portion of the rail 17 at a point where the flange of the wheel would not perform its office in preventing sidewise displacement of the trucks. Where the wheels or trucks are badly off the track, as shown by the pair of wheels X in Fig. 1, so that as the wheels are drawn along the track in the direction of the arrow in Fig. 1 they would not get inside of the projecting ends of the rails 8 and 17, I then employ a section of rail S, which I place in an inclined position, as shown in Fig. 1, so that one end engages against the side of the end of the rail 8^a and the other bears against the side of the track-rail 2. Then as the truck or wheels are moved forward in the direction indicated by the arrow they are brought into a position on the track within the reach of the projecting ends of the rails 8 and 17, after which the car runs onto the track, as heretofore described. When the device is used for replacing cars or trucks moving in the opposite direction from that shown by arrow in Fig. 1, the block 13 is removed from the position shown in full lines and placed in the position shown in dotted lines in this figure, and the rail or bar S, if required, is used in the same manner at the other end of the replacer. By reason of the arrangement of the parts of this replacer, and particularly of the flangeway 12 and the block 13, cars may be readily moved along the track with the replacers in position thereon without danger of derailing.

In the modified form of construction shown in Figs. 6 to 10, inclusive, I have adapted my replacers for use on a street-car track laid in a paved street. To this end the crowning shape of the replacers, as described in the previous figures, is omitted. The body portion of the inside replacer 20 consists of a thin sheet of metal, and the body portion of the outside replacer 21 consists of a similar thin sheet of metal. For securing the replacer 20 I provide a rigid block 22, which in size is adapted to take its position between the paving-block P at the flange of the rail and the head of the rail R. This block 22 may be secured to the body 20 through the medium of an intermediate block 23, as circumstances may require. On the upper service of the inside replacer 20 is provided a curved-flange guide-rail 24, which at its middle portion extends to the edge of the body and at its ends diverge similar to the previous construction. The ends of the rails 24 terminate in points or prods 24^a, similar to 9, heretofore described, which are adapted to engage in the paving or crevices thereof and prevent the device sliding. The inside replacer 20 is also provided with wedge-shaped pieces 25, similar to 10, heretofore described, so located with reference to the curved rail 24 as to afford a flangeway 26 and so placed with reference to the edge of the replacer and the head of the rail R as not to interfere with and to provide for the flangeway 27 between

the piece 25 and the side of the replacer 20 on the one side and the head of the rail R on the other. The outside replacer 21 is provided simply with a curved rail 28, the middle portion of which is adapted to overhang the head of the rail when in position and the ends extending from the middle, diverging each way from the rail. The ends of these rails are provided with points or prods, similar to 9, heretofore described, to prevent displacement of this part. The outside replacer 21 of this modified form of construction is provided with a fixed hook 21ª, adapted to engage the head of the rail and prevent displacement of the part particularly sidewise. In operation the two parts 20 and 21 are placed on the inside and outside of the respective rails opposite each other in a position ahead of the derailed car or truck, which, when moved forward, the flange of the wheel between the rails enters the flangeway 26, while the face of the wheel mounts the piece 25, and as to the outside part the face of the wheel mounts the end of the rail 28, and as the movement is continued the wheels are directed so that the wheel running on the replacer 20 will drop off from the side at the middle into its position on the track, while the wheel running on the replacer 21 will be carried over the head of the rail and also takes its position properly on the track.

As to the construction shown in Figs. 1 to 5, inclusive, the under sides of the body of the parts 3 and 4 may be cut away or chamfered off, as shown at *y*. This enables the replacers to be used in connection with a rail of less height, in which case the replacers would stand somewhat at an angle; but this would not interfere with their proper operation.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a car-replacer of a rail-hook, a sliding hook-shank having a wedge-opening, and a securing-wedge having a notch adjacent to its lower end to receive the end of the shank, substantially as set forth.

2. The combination in a car-replacer of a curved flange-rail, fixed blocks located to afford a flange-track between the blocks and flange-rail, and an outside flange-track between the blocks and a track-rail with which the rail-replacer is used, and a removable block 13, substantially as set forth.

3. The combination in a car-replacer of the body, having a fixed flange-rail and fixed blocks having their upper surfaces transverse of the replacer horizontal and extending from the ends of the body toward the middle respectively and of a height from the body to support the wheels on their face and formed and arranged on the body to afford a flange-track between the blocks and flange-rail converging from each end of the body with the track-rail and also affording a flange-track between the blocks and track-rail, the two flange-tracks uniting at the middle of the replacer, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

DANNIEL Q. WALKER.

Witnesses:

THEO. DYKEMAN,

E. W. JONES.