Nov. 9, 1926. 1,606,371

W. M. KITCHEN

CAR REPLACER

Filed Sept. 16, 1925 2 Sheets-Sheet 1

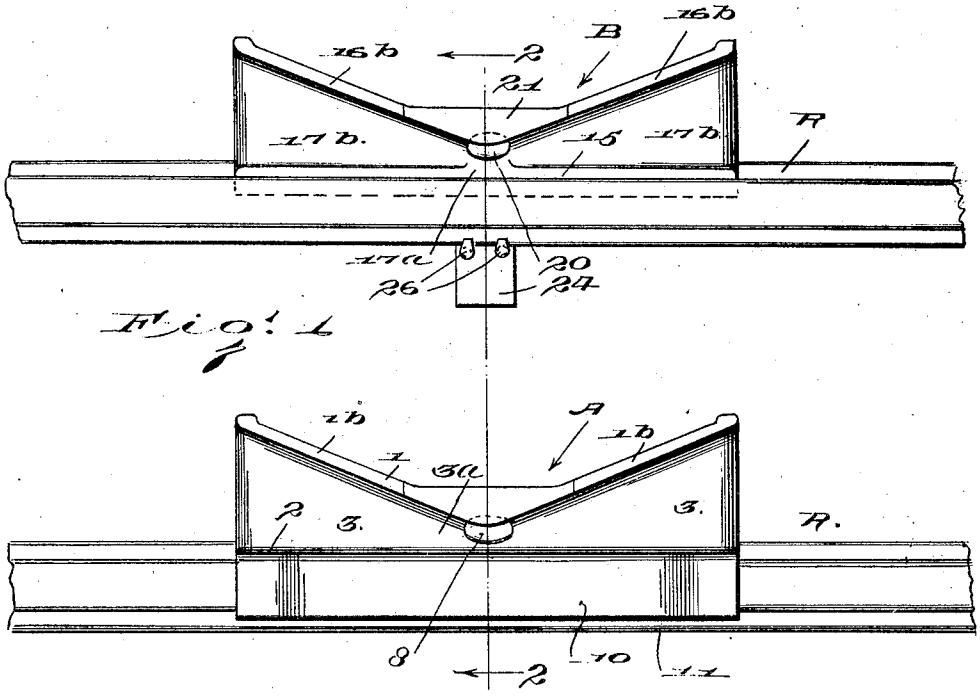
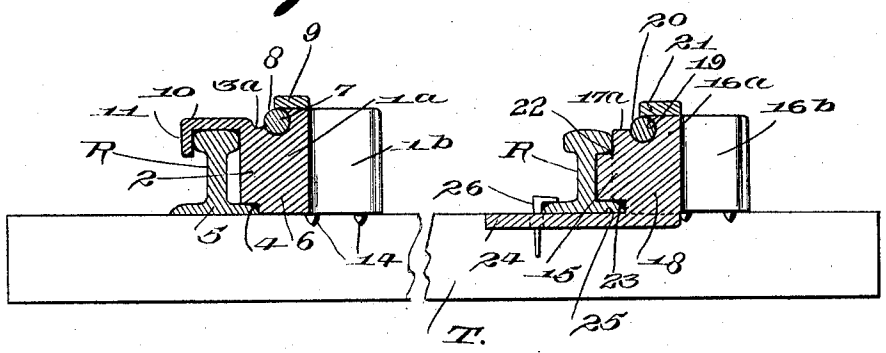


Fig. 1.

Fig. 2.



WITNESSES

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Fig. 3

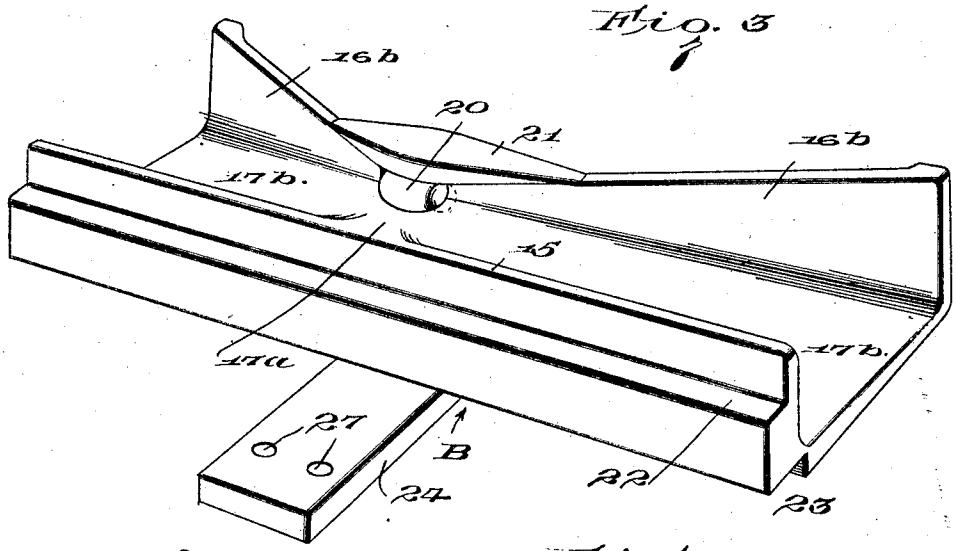


Fig. 4

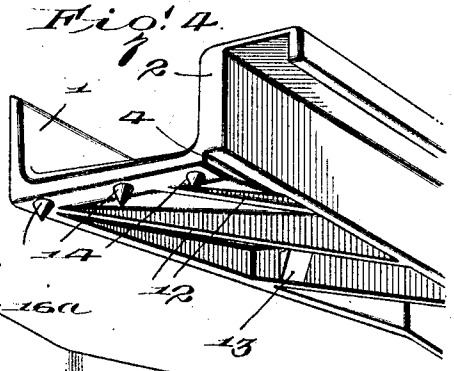


Fig. 5

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UNITED STATES PATENT OFFICE.

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CAR REPLACER.

Application filed September 16, 1925. Serial No. 56,696.

My invention relates to improvements in car replacers, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of the invention is the provision of a car replacer which comprises members adapted to be readily applied to the rails of a tract and which then afford facilities for guiding the wheels of a de-railed car onto the rails without appreciable strain of or wear on the members of the replacer, the rails or the supporting structure of the car.

A further object of the invention is the provision of a car replacer which will be reliable in use, and which is adapted to be manufactured at a relatively low cost.

A still further object is the provision of a car replacer comprising a pair of members having novel means for diverting car wheels from the members of the replacer onto the rails and comprising elements automatically adjustable to distribute the wear resulting from the compact of car wheels thereagainst over a relatively great area.

Other objects and advantages of the invention will be apparent from the following description, considered in conjunction with the accompanying drawings, in which:—

Figure 1 is a plan view of the members of the car replacer applied to a pair of track rails,

Figure 2 is a section along the line 2—2 of Fig. 1,

Figure 3 is a perspective view of one of the members of the car replacer,

Figure 4 is a fragmentary perspective view showing an end portion of the other member of the car replacer in tilted position, and

Figure 5 is a perspective view of the first member of the car replacer in tilted position.

The improved car replacer comprises a pair of replacer members generally indicated at A and B respectively. The member A will be termed the inner replacer member, since it is adapted to be placed at the inner side of one of a pair of rails, R, while the member B is adapted to be placed at the outer side of the other rail R, and therefore is termed the outer replacer member.

The member A comprises a substantially channel shaped body comprising a pair of side walls 1 and 2, respectively, and a bottom 3. The side wall 2 is substantially straight and is undercut along its lower edge at 4 to rest on and engage with the inner edge portion of the base flange 5 of the adjacent rail R. The wall 1 comprises a portion 1^a which is merged into the middle portion of the side wall 2 by an integral connecting and strengthing web portion 6, as best seen in Figure 2. The side wall 1 also comprises a pair of end portions 1^b which are inclined inwardly from the plane of the middle portion 1^a.

The bottom 3 comprises end portions which are inclined upwardly from their outer ends to a middle portion 3^a which is relatively narrow since it is located between the middle portions of the upper edge portions of the side walls 1 and 2. The middle portions 3^a of the bottom 3 is located at about the level of the upper face of the head of the adjacent rail R and is integral with the connecting and strengthening web portion 6 which connects the middle portions of the side walls 1 and 2.

A socket or seat 7 is formed partially in the upper edge portion of the middle part of the side wall 1 and partially in the middle portion of the bottom 3 for the partial reception of a roller 8. The latter has rounded ends as best seen in Figure 1 and is prevented from moving bodily completely from the socket 7 by a cap plate 9 which is secured to the wall 1 in superimposed relation to the middle portion of the wall 1 in any suitable known manner, as by welding. The arrangement is such that the roller 8 is supported to turn about an axis parallel to the direction of length of the side wall 2. The roller 8 protrudes from the socket 7 in the middle and upper portion of the guidway, which extends longitudinally of the body of the member A above the bottom 3 and between the side walls 1 and 2, nearly to inner face of the upper edge portion of the wall 2 intermediate the length of the latter. The bottom of the guideway just mentioned of course, is the upper face of the bottom wall 3. The bottom of the guideway therefore is inclined upwardly from its opposite ends and also decreases in width from its opposite ends to the portion thereof in which the roller 8 is partially disposed.

The body of the member A is integral

with a horizontal flange 10 which extends laterally outward from the upper edge portion of the side wall 2 in position to extend across the upper face of the head flange of the adjacent rail R. The flange 10 has a pendant outer edge portion or lip 11 adapted to engage with the outer edge of the head flange of the adjacent rail R to prevent lateral movement of the body of the member A inwardly from position against to the inner side of the rail, as shown in Figure 2. However, the member A can be lifted bodily from the position shown in Figures 1 and 2 if desired and thus disengaged from the adjacent rail.

The body of the member A is further reinforced and strengthened by obliquely extending integral reinforcing members 12 which are integral with the end portions of the bottom 3 and depend underneath the latter, the respective reinforcing members 12 under each of the opposite ends of the bottom walls 3 of the body of the member A being of different lengths and each of such bracing members being joined integrally to at least one of the side walls of the body of the member A. Certain adjacent members 12 adjacent to opposite ends of the body of the member A may be connected by integral web portions as at 13, adapted to serve as handles when the member A has been turned upside down, whereby the member A can be conveniently moved from place to place when desired.

The end edge portions of the bottom 3 may be formed with depending pointed studs or spikes, as at 14, adapted to bite into an underlying road bed or tie T, and serving to prevent bodily movement of the member A in a horizontal plane from a desirable position.

The member B is similar in many respects to the member A. The member B also comprises a substantially channel shaped body comprising a substantially straight inner side wall 15 and an outer side wall 16 which comprises a relatively short middle portion 16^a and a pair of longer end portions 16^b which are inclined outwardly toward their outer ends from the plane of the middle portion 16^a, as best seen in Figures 3 and 5. The body of the member B also comprises a bottom having a relatively short middle portion 17^a located in the plane of the upper edge of the side wall 15 and a pair of end portions 17^b which slope downwardly from their junctures with the middle portion 17^a toward their extremities. The middle portions of the side walls of the body of the member B are joined integrally by a reinforcing web portion 18. A longitudinal guideway thus is produced in the body of the member B and the bottom of this guideway of course, is the upper face of the bottom wall 17^b—17^a—17^b. A socket 19 is formed partially in the upper inner edge of the middle portion 16^a of the outer side wall of the member B and partially in the middle portion of the bottom wall thereof. A roller 20 having rounded ends is partially received in the socket 19 and turnable about an axis which is parallel to the direction of length of the wall 15. The roller 20 protrudes from the socket 19 into the guideway in the body of the member B nearly to the plane of the side wall 15. A retaining cap plate 21 which is welded or secured to the body of the member B in any other suitable known manner prevents the roller 20 from moving bodily completely from the socket 19.

The side wall 15 has laterally cut away inner, upper and lower edge portions 22 and 23, respectively, adapted to engage with the outer edge portions of the head and base flanges, respectively, of the adjacent rail R. The body of the member B may be held against bodily movement outward from position against the outer side of the adjacent rail R by holding means comprising a tie plate 24 integral with the body of the member B intermediate the length of the latter and extending in a recess 25 in the underlying tie T underneath the base flange of the adjacent rail R and being secured to the tie T by spikes 26 which extend through vertical openings 27 in the inner end portion of the tie plate 24. The heads of the spikes 26 preferably engage the inner edge portion of the base flange of the rail.

The body of the member B also has integral spaced reinforcing members as at 28 underneath the end portions 17^b of the bottom wall of the body of the member B. Adjacent members 28 may be connected by cross web portions 29 adapted to serve as handles when the member B has been turned upside down. Pendant pointed holding projections or spikes 30 on the end portions of the bottom of the body of the member B are adapted to bite into the underlying road bed or tie to prevent slipping or creeping of the member B from a desirable position.

From the foregoing description of the various parts of the device the operation thereof will be readily understood. The wheels at the outer side of a de-railed car will be guided along the guideway in the body of the member B from either end of the latter to the level of the upper or tread surface of the adjacent rail while at the same time the corresponding wheels at the inner side of the car will move in guideway in the body of the member A nearly to the level of the upper or tread surface of the other rail of the track. Corresponding wheels at the outer and inner sides of the de-railed car will contact the rollers 20 and at the same time and thus will be deflected laterally in the middle portions of the guide-

ways in the bodies of the members A and B so that farther forward movement of the car will cause the wheels thereof which are traversing the bodies of the replacer members A and B to move from the latter onto the rails of the track, the flanges of such wheels engaging with the inner edges of the head flanges of the rails, as is usual. A de-railed car thus may be quickly and accurately replaced on the rails of a track when the members A and B are employed in the manner just described. The contact of the wheels with the rollers 20 and 8 will cause the latter to turn about their axes so that different portions of the peripheral surfaces thereof will be struck by successive wheels and the rollers therefore will not be unduly worn at any particular place as a result of continued use of the device.

Obviously, the invention is susceptible of embodiments in forms other than that which is illustrated in the accompanying drawings and I therefore consider as my own such modifications and adaptations thereof as fairly fall within the scope of the appended claims.

I claim:—

1. A car replacer comprising a pair of members respectively adapted to be placed against corresponding sides of the rails of a track, each of said members having a body formed with a guideway, extending longitudinally thereof and open at the top of said body, the bottom of said guideway being inclined upwardly from its opposite ends toward the transverse median line of said body, the middle portion of the bottom of the guideway in the outer replaced member lying in the plane of the upper surface of the adjacent rail and the middle portion of the bottom of the guideway in the inner replacer member lying in a plane slightly lower than that of the upper surface of the adjacent rail, and rollers supported in the middle portions of said guideways for diverting wheels from the guideways on to the adjacent rails, said rollers having rounded ends and being supported to turn about axes parallel to the direction of length of said replacer members.

2. A car replacer comprising a pair of members respectively adapted to be placed against corresponding sides of the rails of a track, each of said members having a body formed with a guideway extending longitudinally thereof and open at the top of said body, the bottom of said guideway being inclined upwardly from its opposite ends toward the transverse median line of said body, the middle portion of the bottom of the guideway in the outer replacer member lying in the plane of the upper surface of the adjacent rail and the middle portion of the bottom of the guideway in the inner replacer member lying in a plane slightly lower than that of the upper surface of the adjacent rail, and reinforcing members comprised in each of said replacer members underneath the end portions of the bottom of the guideway in the body of said replacer member, certain of said reinforcing members being adapted to serve as handles when the body of the replacer member is turned upside down.

3. A car replacer comprising a pair of members respectively adapted to be placed against corresponding sides of the rails of a track, each of said members having a body formed with a guideway extending longitudinally thereof and open at the top of said body, the bottom of said guideway being inclined upwardly from its opposite ends toward the transverse median line of said body, the middle portion of the bottom of the guideway in the outer replacer member lying in the plane of the upper surface of the adjacent rail and the middle portion of the bottom of the guideway in the inner replacer member lying in a plane slightly lower than that of the upper surface of the adjacent rail, a tie plate integral with the body of the outer replacer member extending laterally of the replacer member and adapted to extend underneath the base flange of the adjacent rail beyond the inner edge of the latter, the extending end portion of the tie plate having apertures for the reception of spikes for securing the plate to an underlying tie and to the base flange of the adjacent rail, the inner replacer member having a laterally extending flange adapted to extend across the top surface of the adjacent rail, said flange having a depending rib at its outer edge for engaging with the outer edge of the head of the adjacent rail.

WILLIAM M. KITCHEN.