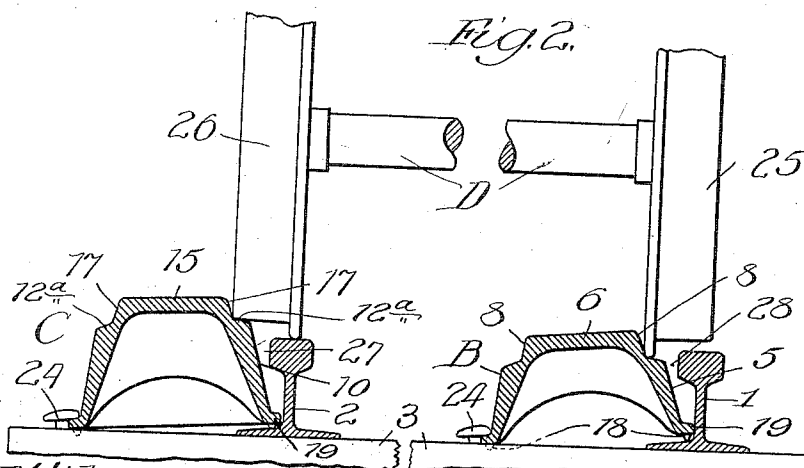
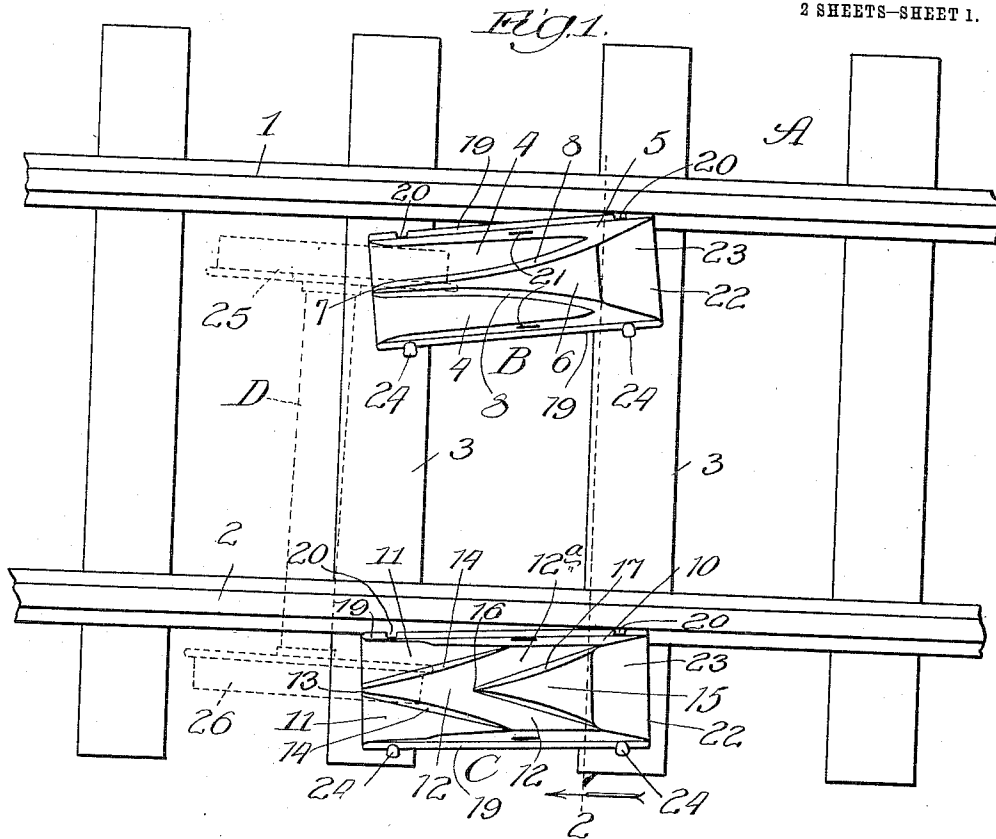


J. A. FOSTER.
CAR REPLACER.
APPLICATION FILED JAN. 2, 1912.

1,044,767.

Patented Nov. 19, 1912.
2 SHEETS—SHEET 1.



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1,044,767.

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2 SHEETS—SHEET 2.

Fig. 3.

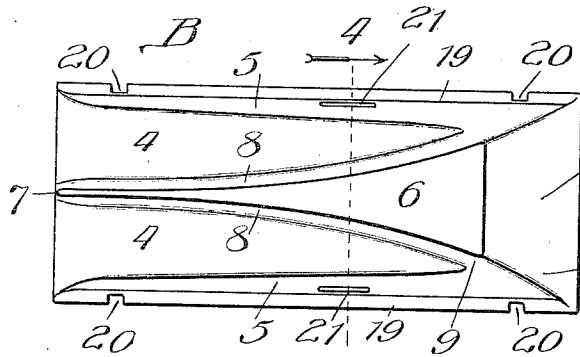


Fig. 4.

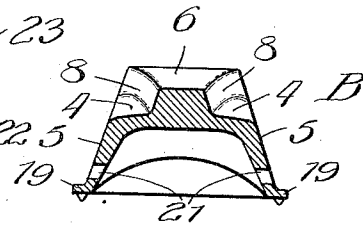


Fig. 5.

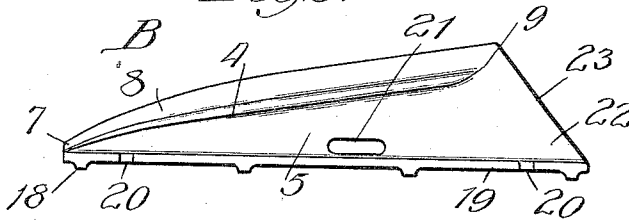


Fig. 6.

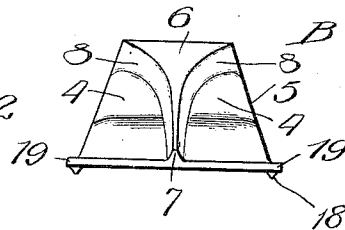


Fig. 7.

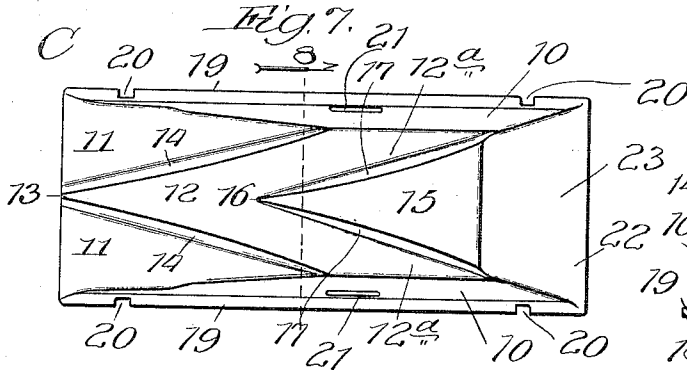


Fig. 8.

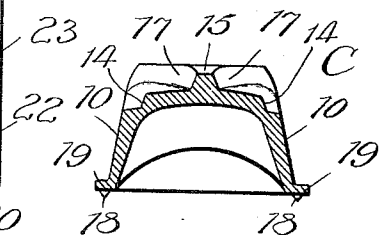


Fig. 9.

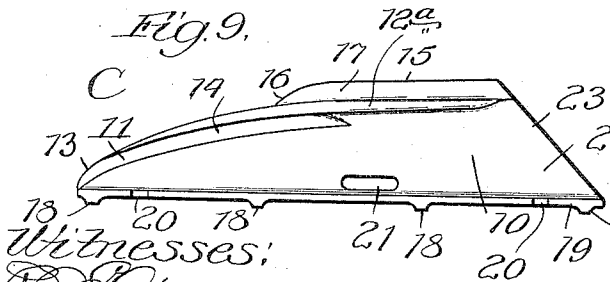
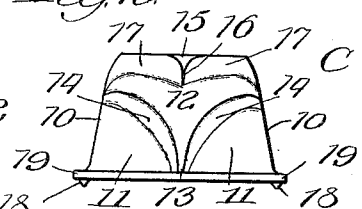


Fig. 10.



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UNITED STATES PATENT OFFICE.

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CAR-REPLACER.

1,044,767.

Specification of Letters Patent.

Patented Nov. 19, 1912.

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To all whom it may concern:

Be it known that I, JULIAN A. FOSTER, a citizen of the United States, residing at Salem, in the county of Kenosha and State of Wisconsin, have invented a new and useful Improvement in Car-Replacers, of which the following is a specification.

The present invention pertains to replacers adapted to replace a car or engine on the rails, regardless of which side of the track the derailed car is and regardless of the direction of travel necessary in effecting replacement.

The primary object of the invention is to provide a pair of replacers which will act with greater certainty than known replacers, and which are perfectly adapted to meet the exigencies of the many trying situations of derailments which are liable to be met in actual practice.

The invention is illustrated in the preferred embodiment in the accompanying drawings, in which—

Figure 1 represents a fragmentary view of a railway track with the improved replacers arranged adjacent the rails in position to effect replacement of a car, of which one pair of wheels is shown in dotted lines; Fig. 2, an enlarged broken section taken, as indicated, at line 2 of Fig. 1, but showing the pair of car-wheels (brokenly) at the point where they are about to be set on the rails; Fig. 3, a plan view of the inside replacer employed; Fig. 4, a transverse vertical section taken as indicated at line 4 of Fig. 3; Fig. 5, a side elevational view of the member shown in Fig. 3; Fig. 6, a front elevational view of the same; Fig. 7, a plan view of the outside replacer; Fig. 8, a transverse vertical section taken as indicated at line 8 of Fig. 7; Fig. 9, a side elevational view of the member shown in Fig. 7; and Fig. 10, a front elevational view of the same.

In the illustration given, A represents a portion of a railway-track having rails 1 and 2 mounted on ties 3; B, an inside replacer of improved form; C, an outside replacer of improved form, with which the replacer B coöperates; and D, a pair of wheels of a car-truck (shown in dotted lines in Fig. 1 and in full lines in Fig. 2).

The inside replacer B comprises a block having an enlarged rectangular base and a rearwardly and upwardly sloping top surface 4 which intercepts the lateral surfaces 5 of the block, the lateral surfaces being

slightly convergent upward, as shown in Fig. 6. Superposed on the surface 4, so as to divide the same into two portions, is a centrally-disposed longitudinally-extending raised wedge-portion 6, whose taper end 7 is at the front end of the block, and whose lateral edges 8 diverge rearwardly and meet or merge with the rear portions of the slightly convergent lateral surface 5 at the points 9. The edges 8 are preferably of a beveled character, that is, converge somewhat upwardly, as will be understood from Figs. 2 and 4.

The outside replacer C comprises a block having an enlarged rectangular base and lateral surfaces 10 which converge slightly upward as shown in Fig. 10. The upper surface of the member C has a general rearward and upward slope, as will be understood from Fig. 9. Specifically this member has sloping surfaces 11, separated by a centrally-disposed raised wedge-portion 12 having its taper end 13 at the front end of the block and having rearwardly diverging edges 14 which intercept or merge with the lateral surfaces 10 approximately midway the length of the block. Superposed on the rear portion of the surface 12 is a centrally-disposed raised wedge-portion 15 having its taper-end 16 located near the longitudinal center of the block, and having rearwardly divergent lateral edges 17 which merge with the lateral surfaces 10 at or near the rear end of the block. The lateral edges of the wedge-portions 12 and 15 are slightly beveled, as will be understood from Fig. 8. The surface 12 is separated at its rear portion by the wedge-portion 15 into two treadways 12^a.

Both blocks are preferably formed hollow and reinforced internally by suitable strengthening ribs, and are provided at their base-portions with anti-slipping lugs or brads 18. Also, the base-portions of the blocks are shown provided with small flanges 19 provided with recesses 20 adapted to receive spikes. Each block is also shown provided with finger-recesses 21 located near the longitudinal center and in the lower portions of the lateral surfaces of the blocks, to facilitate gripping of the blocks when they are to be carried, and the rear end of each block is extended some distance beyond the high points of the rear-end portions, as indicated at 22, the extension thus afforded being bounded by an inclined rear-

end surface 23. The purpose of the extensions 22 is to give added base or more secure footing to the blocks.

In Fig. 1 is illustrated the manner of positioning the blocks with reference to the rails to meet the requirements when the pair of wheels D is located as shown in dotted lines. The blocks are here shown secured by spikes 24. The block B is so placed that the flange of the wheel 25 will ride on the surface 4 which is nearest the rail, while the corresponding edge 8 of the wedge-portion 6 will positively guide the wheel by engagement with the wheel-flange. The block C is so placed that the tread of the wheel 26 will ride on the surface 12, while the flange of the wheel will engage the lateral edge 14 of the wedge-portion 12 which is nearest the rail; and when the wheel-tread passes the taper-point 16 of the wedge-portion 15, the wheel-tread will continue on the treadway 12^a, while the outer edge of the wheel-tread will engage the lateral edge 17 of the wedge-portion 15, so that the outside wheel will thus be positively guided toward the rail. As the wheels mount to the high points of the blocks, they are shifted laterally by the positive action of the edge-surfaces 8 and 17, until the wheel 25 is deposited on the rail 1 and the wheel 26 is placed on the rail 2.

From Fig. 2 it will be understood that the member C may be so placed with relation to the rail 2 as to afford only a slight space 27 between the rear portion of the lateral surface 10 of the replacer and the head of the rail 2; and the inside replacer B may have its rear end so located with relation to the rail as to afford only a slight space 28 between the lateral surface 5 of the replacer and the head of the rail 1. Thus the space 27 will be sufficient to accommodate the slight overhang of the tread of the wheel 26 after it is replaced on the rail; and the space 28 will be sufficient to accommodate the flange of the wheel 25 after it is replaced.

From this description it will be understood that the improved replacers are adapted not only to positively perform the function of shifting the wheels to a proper position over the rails, as the wheels mount the replacers, but the replacers are, notwithstanding, adapted to permit the wheels of cars to pass freely on the rails, so that there will be no tendency on the part of the replacers to derail any car which may pass while the replacers are in position.

The construction of the replacers is such as to adapt them to be used with the greatest facility in the many complicated situations which are met with in derailments. Moreover, the front ends of the replacers may be swung a considerable distance from the rails without militating against the successful replacement of the car by one carrying move-

ment; or, in other words, the replacers are adapted to shift the truck laterally a considerable distance and effect the replacement at a single operation. In those cases where the wheels are located too far from the rails to enable this to be accomplished, the replacers may be so set as to first carry the wheels within reaching distance; and afterward the replacers may be reset to effect the complete replacement.

From the description given, it will be readily understood that the replacers are reversible, and may be used for replacing a derailed car, regardless of the direction of travel necessary in effecting replacement.

Minor modifications within the spirit of my invention may be made; hence no undue limitation is to be understood from the foregoing detailed description, but the appended claims are to be construed as broadly as permissible in view of the prior art.

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

1. A reversible outside replacer, comprising a block adapted to lie adjacent a rail and having lateral surfaces slightly convergent upwardly, and having, also, an upper wall formed with longitudinally inclined surfaces at the front end, said surfaces being separated by a wedge-portion with rearwardly divergent lateral edges adapted to guide the wheel-flange and with an upper wall adapted to serve as tread-engaging surfaces, and a wedge-portion superposed on the rear portion of the first-named wedge-portion and having divergent lateral edges adapted to engage the edge-portion of the wheel-tread, the lateral edges of said wedge-portions terminating at their rear ends substantially flush with the lateral surfaces of the block.

2. A reversible outside replacer, comprising a block with an enlarged base, and a general rearward slope, said block having a centrally-disposed raised wedge-portion with its taper end at the front end of the block and divergent lateral edges which intercept the planes of the side surfaces of the block approximately midway of the length of the block, and said block having, also, another centrally-disposed raised wedge-portion with its taper end near the longitudinal center of the block and with divergent lateral edges which intercept the planes of the sides of the block near the rear end of the block, for the purpose set forth.

3. A reversible outside replacer, comprising a block having an enlarged base and upwardly convergent lateral surfaces, and having, also, a general rearward slope, said block having a centrally-disposed raised wedge-portion, with its taper end at the front end of the block and divergent lateral edges which intercept the planes of the side surfaces of the block approximately midway

of the length of the block, and said block having, also, another centrally-disposed raised wedge-portion with its taper end near the longitudinal center of the block and with 5 divergent lateral edges which intercept the planes of the side of the block near the rear end of the block, the lateral edges of said wedge-portions being beveled.

4. A reversible inside replacer, comprising a block with an enlarged base, and upwardly convergent lateral surfaces, said block having a general rearward slope and provided with a centrally-disposed longitudinal wedge-portion with its taper end at 15 the front end of the block and with divergent edges which merge with the lateral surfaces of the block at the rear portion thereof.

5. Car-replacing means of the character 20 set forth, comprising an inside replacer having upwardly convergent lateral surfaces and a rearwardly sloping top surface with a centrally-disposed wedge-portion having

its taper end at the front end of the block and divergent lateral edges which intercept 25 the lateral surfaces of the block near the rear end thereof, in combination with an outside replacer comprising a block having upwardly convergent lateral surfaces and having, also, a rearwardly sloping top-sur- 30 face with a wedge-portion having a taper end at the front end of the block and divergent lateral edges intercepting the lateral surfaces of the block near its center and having, also, a higher centrally-disposed wedge- 35 portion with its taper end near the middle of the block and divergent lateral edges intercepting the lateral surfaces of the block near the rear end thereof, whereby both wheels will be positively shifted on to the 40 rails, substantially as set forth.

JULIAN A. FOSTER.

In presence of—

R. A. RAYMOND,
A. C. FISCHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."