(No Model.) 2 Sheets—Sheet 1.

R. E. ALEXANDER.

CAR REPLACER.

No. 523,563. Patented July 24, 1894.

Fig. 1.

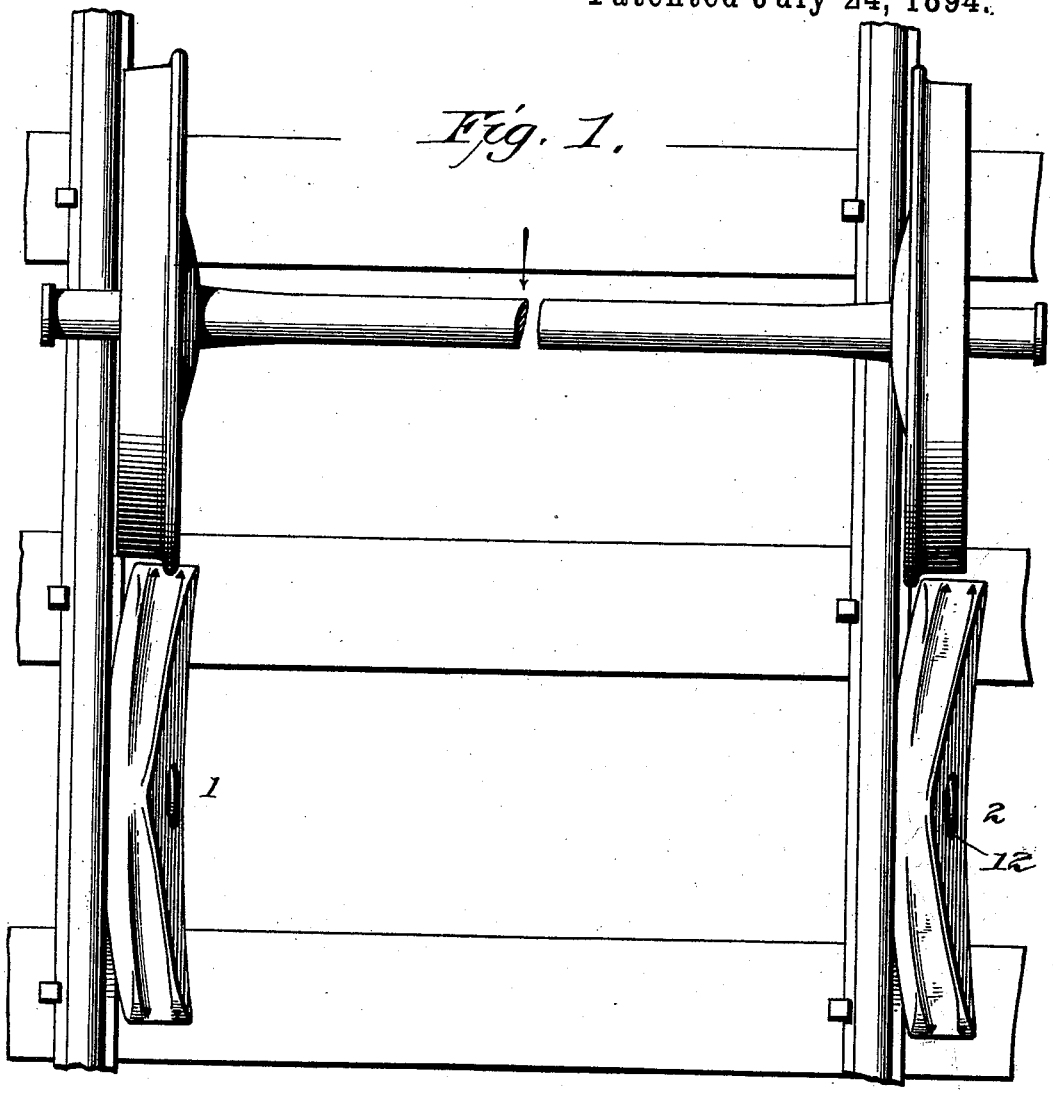
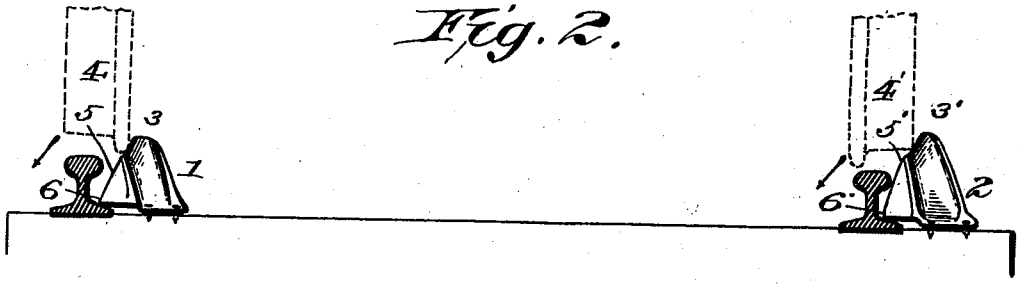


Fig. 2.



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(No Model.)

2 Sheets—Sheet 2.

R. E. ALEXANDER.

CAR REPLACER.

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Fig. 3,

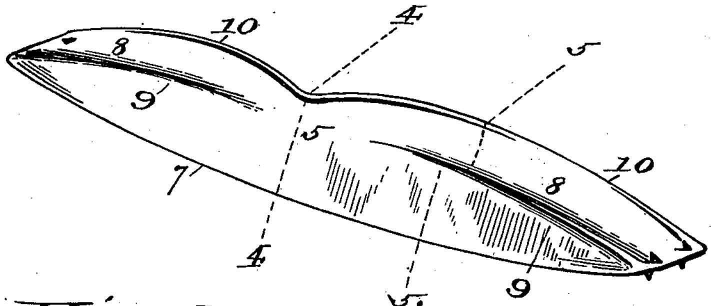


Fig. 4,

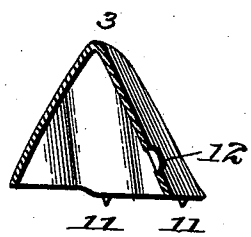


Fig. 5.

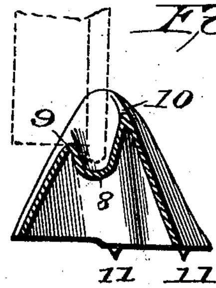


Fig. 6.

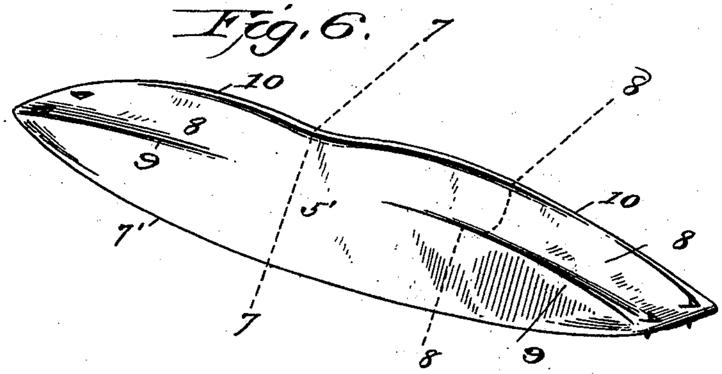


Fig. 7.

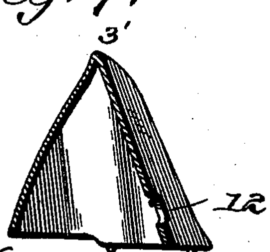
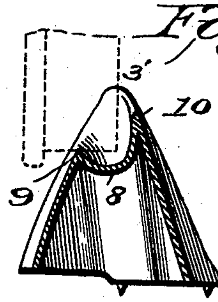


Fig. 8.



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UNITED STATES PATENT OFFICE.

ROBERT E. ALEXANDER, OF FOREST CITY, PENNSYLVANIA.

CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 523,563, dated July 24, 1894.

Application filed April 3, 1894. Serial No. 506,170. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. ALEXANDER, a citizen of the United States, residing at Forest City, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Car-Replacers; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 figures of reference marked thereon, which form a part of this specification.

The object of my invention is to improve upon the car replacer shown and described in my pending application filed 15th day of September, Serial No. 485,571, consisting of a movable track or guide-way having inclined surfaces adapted to extend from the ties upwardly and inwardly to the central apex, and provided with grooves or hollows formed in said inclined surfaces for the purpose of leaving flanges and ridges to guide and receive the wheels. In said device the base was made substantially rectangular in general outline so that when placed against the rail the side contiguous thereto would lie parallel with the rail and thereby make it impossible to shift the extremities of the replacer closer to or farther from the rails without throwing the central portion out of adjustment. The purpose of the present invention is to overcome this difficulty and to provide other features to facilitate the replacement of the wheels, and this I accomplish by using a pair of replacers having many of the same general characteristics, excepting that the sides of the replacer adapted to lie contiguous to the side of the rails are formed so as to diverge away from the rails and from the central portion of the replacers, so that the ends of the replacers can be readily shifted closer to or farther from the sides of the rails without changing to any appreciable extent, the relation of the central portion of the device to that of the rails.

My invention further consists in other peculiar features and characteristics which will be more fully described hereinafter and pointed out in the claims.

In the accompanying drawings: Figure 1, represents a top view of my invention as applied to ordinary railroad tracks, a pair of car wheels being shown ready to ascend; Fig. 2, an end view of my invention in which dotted lines represent a pair of wheels in the act of descending upon the rails; Fig. 3, a perspective view of one member of my complete invention; Figs. 4 and 5 transverse sections through 4—4 and 5—5 respectively of preceding figure; Fig. 6, a perspective view of the right hand guide or replacer, and Figs. 7 and 8 transverse sections through 7—7 and 8—8 of preceding figure.

It is my practice to employ two metallic guides or replacers alike in general construction, one being higher at the center than the other; and these are designated by the reference figures 1 and 2. The central portion 3 of the guide 1 is lower than the corresponding portion 3′ of the guide 2 and each is adapted to be placed upon the right hand side of each rail when the wheels are coming toward the observer as shown in the drawings. This relative altitude of the two guides is for the purpose of depositing first the left hand wheel 4, and then the right hand wheel 4′, successively upon the rails in order to create as little jar as possible and to more perfectly effect the replacing of the wheels. The central surfaces 5 and 5′ respectively slope about forty-five degrees from the apex 3 to the base, the line curving slightly inward as will be clearly seen in the end views given in the drawings.

The inner edges 7 and 7′ or those which lie next to the bottom of the rails, are each curved from one end to the other of the guides whereby they will diverge, from the central surfaces 5 and 5′ away from the rail when placed alongside the rails. This construction permits either end of the guide to be adjusted farther from or nearer to the rails, without throwing the central portions 5 and 5′ out of operative adjustment.

8 indicates the longitudinal grooves in the inclined surfaces of the guides and 9 and 10 the ridge and flange respectively extending along the opposite sides of the grooves. These grooves, ridges and flanges merge into the central smooth surfaces 5 and 5′ and are substantially the same as those in my copending application and therefore need no further description. In order to make the replacers as light as consistent with strength they are

formed by stamping them in a die out of cheap metal. Pins or teeth 11 are formed at the opposite ends so that when the weight of the wheel passes upon the replacer the teeth will sink into the ties and the replacer be prevented from sliding.

From the foregoing description it will be apparent that when the replacers or guides are placed against the rails as in Fig. 1, and the wheels are advanced upon them, the tread of the left wheel will travel upon the ridge 9 while its flange travels in the groove 8, the flangeless side of the tread being guided upward and inward by the sloping side of the flange 10. A corresponding action will ensue with reference to the other wheel, excepting that while the tread is ascending the ridge the flange will be guided to the rail by coming in contact with the ridge 9. As soon as the wheels approach the apexes of the replacers they run onto the smooth, sliding surfaces 5 and 5′, as seen in Fig. 2, and sliding down laterally are successively deposited on the top of the rails. In this latter action the replacer 1 being lower than the replacer 2 the wheel 4 is deposited upon the rail slightly in advance of the wheel 5 for the purposes before explained. Hand holes 12 in the sides of the replacers permit them to be easily handled.

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

1. A car replacer comprising a pair of grooved replacers or guides adapted to be placed alongside the rails, and having laterally and longitudinally sloping outer surfaces converging to a smooth apex, the apexial portion of one of the replacers or guides being made lower than the apexial portion of the other, whereby the wheels are successively deposited upon the track, in the manner and for the purpose substantially as described.

2. In a car replacing device a pair of replacers of different heights, and provided with smooth apexial portions, in combination with grooved surfaces sloping downwardly away from said apexial portion, and a curved or divergent edge whereby the ends of the replacer can be moved toward and away from the rail, in the manner and for the purpose substantially as described.

3. A car replacing member consisting of a grooved guide, substantially as described, having an apexial portion, and a sloping inner side arranged to lie alongside of and to diverge away from the rail at the central or apexial portion, whereby the ends of the replacers can be adjusted toward and away from the rail, as and for the purpose set forth.

4. In a car replacer, a replacing member or guide provided with oppositely sloping surfaces, having longitudinal grooves therein and longitudinal ridges extending upwardly and merging into a smooth apexial surface, said surface extending from the apex obliquely down to the edge of the base, and said edge being made to diverge from the smooth surface toward its ends, in the manner and for the purpose substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT E. ALEXANDER.

Witnesses:
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GERRIT P. ROGERS.