No. 754,915. PATENTED MAR. 15, 1904.

E. BEST.

CAR REPLACER.

APPLICATION FILED SEPT. 8, 1903.

NO MODEL.

Fig. 1.

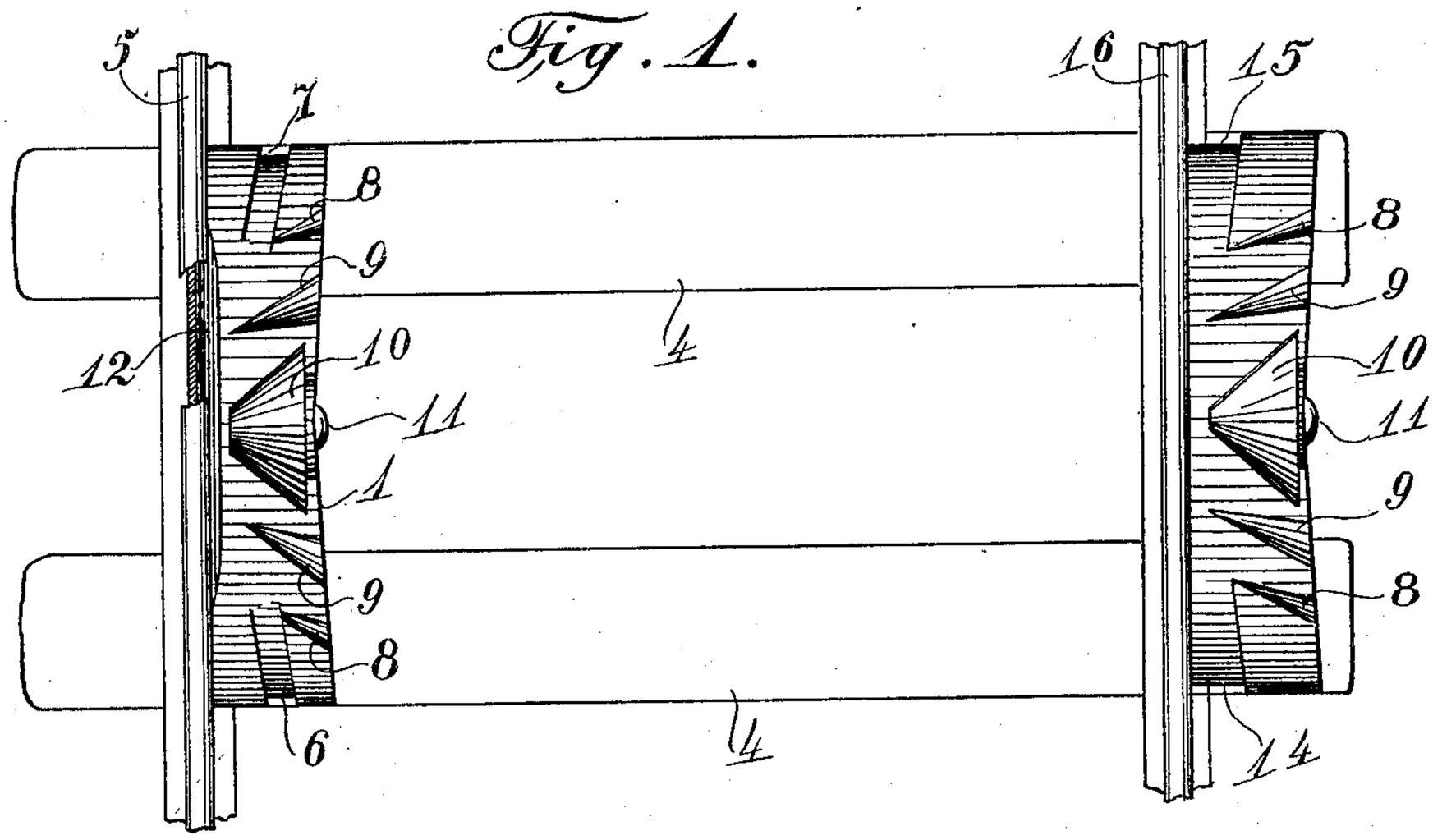


Fig. 2.

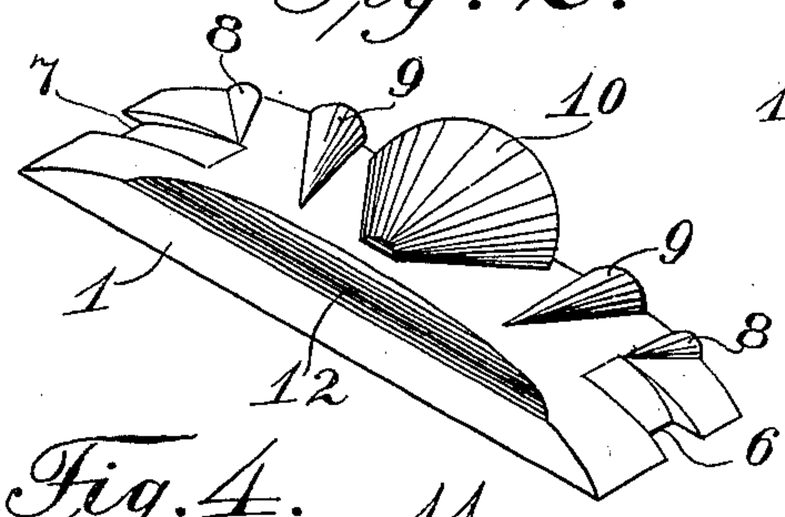


Fig. 3.

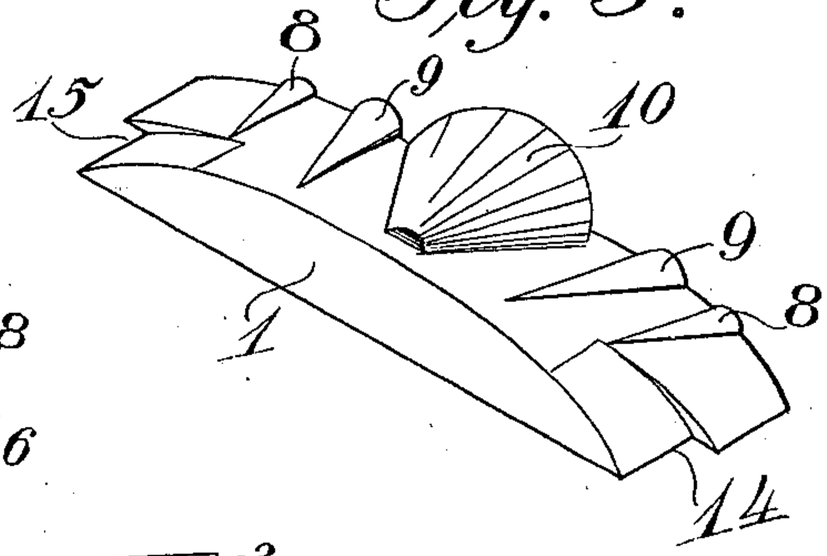


Fig. 4.

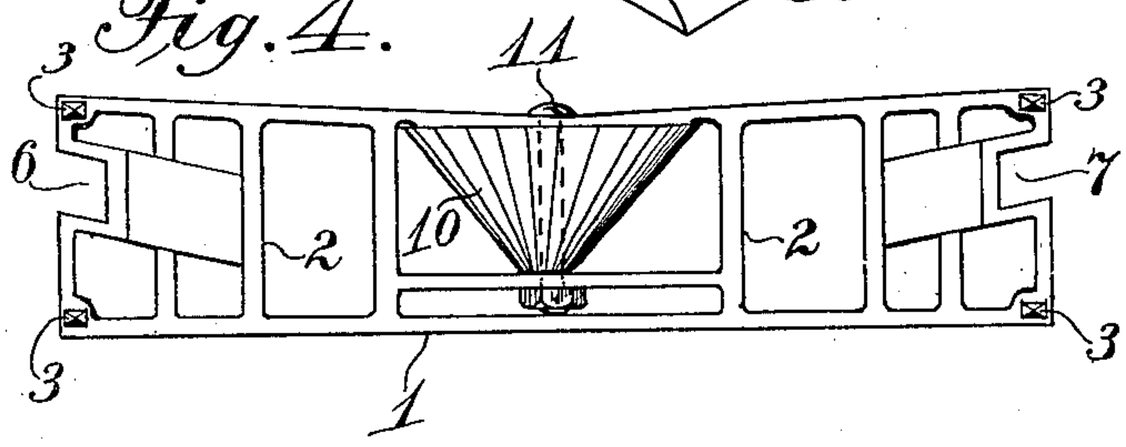
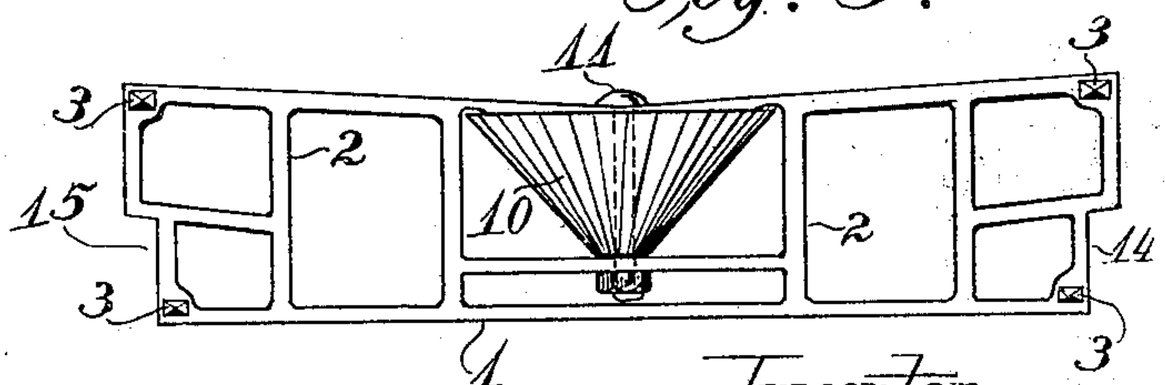


Fig. 5.



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No. 754,915. Patented March 15, 1904.

UNITED STATES PATENT OFFICE.

EDWARD BEST, OF SUPERIOR, WISCONSIN.

CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 754,915, dated March 15, 1904.

Application filed September 8, 1903. Serial No. 172,346. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BEST, a subject of the King of Great Britain, residing at Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Car-Replacers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to make and use the same.

My invention relates to car-replacers, and has for its object the construction of replacers provided with means for sliding and jolting the car toward the track-rails.

With this and other objects in view it consists of the constructions, combinations, and arrangements of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a portion of a railway-track, showing my invention in position thereon. Fig. 2 is a perspective view of one of the members of my said invention, hereinafter referred to as the "inside" replacer. Fig. 3 is a perspective view of the other member of my said invention, hereinafter referred to as the "outside" replacer. Fig. 4 is a bottom view of said inside replacer, and Fig. 5 is a bottom view of said outside replacer.

In the drawings, 1 is the base or body portion of the inside replacer, which is preferably hollow and may, if desired, be strengthened by any number of suitable stiffening ribs or partitions, as at 2. Upon the bottom edges of said base are formed calks 3, adapted to engage the railway-ties 4 or other support, upon which said base is positioned. Said inside replacer is designed to be positioned longitudinally against the inner side of the railway-rail 5. The top of said body portion is preferably flat, or approximately so, for a short distance each side of the transverse central line thereof and at each end inclines longitudinally downward. Grooves 6 and 7, respectively, are formed in said inclined portions, commencing at the lower edges thereof near the side which is farthest from the rail and running diagonally toward the said rail, each of which grooves is relatively deep at the point of commencement and gradually shallows to zero before reaching the transverse central line of said base. Upon the upper face of said base are formed a number of inclined ribs 8 and 9, respectively, preferably semiconical in contour, spaced from each other and having their apexes or lower ends directed toward the side next to the rail. The central portion of said base is apertured through the upper face to receive an inclined or cone-shaped roller 10, which projects above and below said face and is journaled upon a shaft 11, mounted in any suitable manner in said base, or, if desired, said roller may be keyed to said shaft and said shaft may be journaled in suitable bearings in said base, said methods of rotatably securing said wheel in said base being regarded as equivalent. The lower end or apex of said roller is directed toward the side of said base which is nearest said rail. The base of said inside replacer is of such a height, preferably, as to be a little lower than the top of the rail, and the edge thereof which is nearest the rail is preferably beveled, as at 12, to permit the flange of the car-wheel to drop down and engage the near side of the rail. The higher or larger ends of the inclined ribs and roller will, however, be considerably above the plane of the upper surface of said rail. The outside replacer is in nearly all respects similar in construction to the inside replacer, and the similar features thereof are designated in the drawings by the same reference-numerals as designate the same parts of the inside replacer. The grooves are, however, slightly modified in the outside replacer, as at 14 and 15, inasmuch as that in said outside replacer said grooves are open on the side next to the rail, as well as at the lower edges of the ends of said base. In said outside replacer the upper edge of the base on the side nearest the rail is not beveled, and the top of said base is of such a height as preferably to be on the same level or a trifle above the top of the rail. Said outside replacer is in operation positioned against the outer side of the rail 16. In operation said replacers are positioned against the rails, as shown, and secured in position by the engagement of said calks with said ties. The derailed car or engine is then drawn

forward from either direction until the opposite wheels thereof run upon the corresponding said replacers. The tread of the wheel running upon the outside replacer will mount the contiguous inclined end thereof and successively pass over the inclined ribs 8 and 9 upon the same end, receiving a slight jolt in passing the interval between said ribs, which jolt will tend to slide said wheel down said inclined ribs toward the contiguous rail. At the commencement of said run upon said replacer the flange of said wheel is received in said groove, whereby it is prevented from cutting the surface of said base; but as the tread of the wheel mounts upon said inclined ribs the wheel is elevated thereby, so that the flange is held above the surface of the replacer. When said car or engine wheel reaches said roller, the revolution of the wheel will revolve the roller, which will prevent the car-wheel from progressing farther longitudinally of said replacer; but the car-wheel will slip down the roller and partly across the replacer and adjoining rail, and the tread of the car-wheel will overreach the rail and the flange of the car-wheel will drop down inside of said rail. Simultaneously the opposite car-wheel will mount in nearly similar manner upon the inside replacer, the flange in this instance engaging the ribs and roller. Such opposite wheel will not, however, be forced across the rail, for the reason that the flange of said wheel will drop over the beveled edge of said inside replacer and bear against the side of said rail, the tread of the said opposite car-wheel at the same time passing upon the rail contiguous thereto.

While I have described certain details of my said construction, it is obvious that it may be constructed with any suitable number or form of inclined ribs or any suitable number or form of calks or any suitable roller formed or positioned so that it will operate as an incline to govern the movement of a surmounting car-wheel in the manner described and may be modified in other minor details, all within the scope of my said invention.

Having now described my said invention, what I claim, and desire to secure by Letters Patent, is—

1. In car-replacers, the combination of a body portion having longitudinally-inclined ends and rotary guiding means mounted in said body portion and extending above its upper surface, substantially as described.

2. In car-replacers the combination of a body portion having longitudinally-directed downwardly-inclined ends, and provided with transversely-directed inclined ribs upon its upper surface, and a roller mounted in said body portion and adapted to form an inclined plane projecting above the upper surface of said body portion and directed transversely thereof.

3. In car-replacers, the combination of a body portion having longitudinally-directed downwardly-inclined ends, provided with diagonally-directed grooves formed therein and provided with transversely-directed ribs upon its upper surface adapted to form inclined planes sloping transversely of said body portion, the upper edge of said body portion being beveled for a portion of its length on the side nearest the low ends of said ribs, substantially as described.

4. In car-replacers, the combination of a body portion having each end shaped as an inclined plane extending upwardly from the extreme end to the plane of the central portion of said replacer, and provided with a roller journaled in said body portion and projecting above the same with its axis extending transversely thereof, said roller having its upper face inclined transversely of said replacer at an angle to the direction of the rotation of said roller, substantially as described.

5. In a car-replacer, the combination of a body portion provided with inclined approaches at each end having diagonally-directed grooves formed in such ends, stationary means formed upon the upper surface of said body portion adapted to jolt and guide over toward one side of said replacer any transversely-movable wheel mounting thereon, a roller journaled in said body portion and projecting above the same and adapted to guide over to said side of said body portion at an angle to the direction of its rotation any transversely-movable wheel revolving against said roller, substantially as described.

6. In a car-replacer, the combination of a base having a central portion and longitudinally downwardly inclined ends, and provided with grooves formed in the upper surfaces of such inclined ends, respectively, and directed diagonally from the extreme ends toward one side of said base, a cone-shaped roller rotatably mounted in the central portion of said base with its apex directed toward said side thereof, said roller projecting above the upper surface of said base, inclined ribs positioned on the upper surface of said base at opposite sides of said roller with their lower ends directed toward said side of said base, and means for securing said base in position, substantially as described.

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

EDWARD BEST.

Witnesses:

JAMES T. WATSON,

GERTRUDE H. JACKSON.