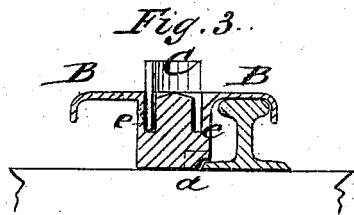
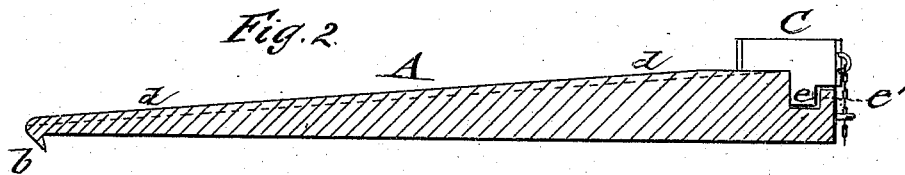
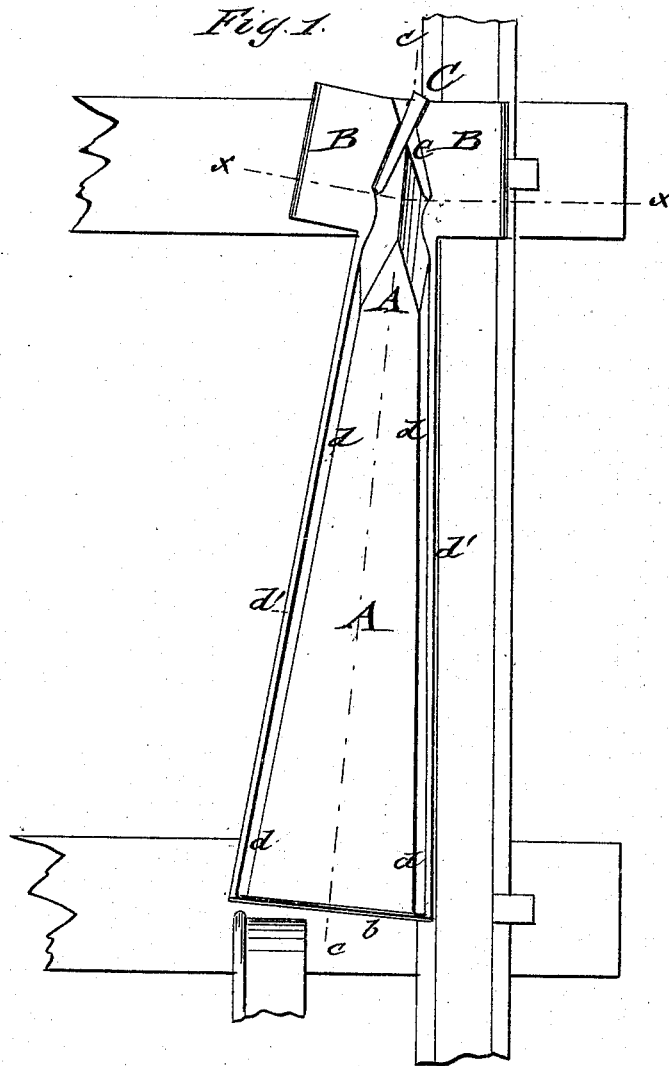


H. G. BROOKS.  
CAR-REPLACERS.

No. 182,348.

Patented Sept. 19, 1876.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

HOMER G. BROOKS, OF GREENVILLE, SOUTH CAROLINA.

## IMPROVEMENT IN CAR-REPLACERS.

Specification forming part of Letters Patent No. 182,348, dated September 19, 1876; application filed February 28, 1876.

*To all whom it may concern:*

Be it known that I, HOMER G. BROOKS, of Greenville, in the county of Greenville and State of South Carolina, have invented a new and Improved Car-Replacer, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view; Fig. 2, a longitudinal section on the line *c c*, Fig. 1; and Fig. 3, a vertical transverse section on the line *x x* of my improved device for replacing cars on the track.

Similar letters of reference indicate corresponding parts.

My invention is designed to provide a simple and effective device for replacing railroad-cars on the track in an easy and quick manner; and it consists of a casting, that rises gradually on an inclined plane from the broader lower part to the narrower higher end, at a level with the rail, being fitted thereto by bottom recesses and rail-head binding-wings. Guide-grooves and flanges lead the car-wheel to a key, socketed at suitable angle at the highest end of the replacer, to transfer then the wheel to the rail.

In the drawing, A represents the inclined portion of the car-replacer, which is wider at the lower end and tapers gradually to the higher end, near the head of the rail. The inclined part rises gradually from about three-quarters of an inch at the lower edge to the level of, or to slightly greater height than, the top of the rail. The replacer is secured to the rail by a recess, *a*, (shown in Fig. 3,) that runs along the lower edge of the device, and fits the base of the rail. The recess *a* is enlarged at the under side of the higher end to fit over the head of the spike that fastens the rail to the tie. The device is further secured to the head of the rail by a V-shaped extension or wing, B, that bears on the top and side of the head and holds the higher end rigidly in position on the rail. The lower wider end is provided at the under side with a lip or pointed edge, *b*, that rests either like a shoulder on the cross-tie next to the tie on which the higher end is placed, or on an intermediate part of the same, according to the distance at which the ties are laid. The lip or edge *b* is then forced by the weight of the car into the tie, so

as to "bite" the same and retain the lower part rigidly attached thereto. The car-wheel passes up on the incline and enters with its flange a guide-groove, *d*, at the edge of the replacer, being retained in the groove by a flange, *d'*, at the outer edge. The flange *d'* curves slightly toward the inside at the higher end of the replacer, and meets there the end of a detachable key, C, that is set into a socket-recess, *e*, of the higher end. The key C projects a few inches above the upper surface of the replacer, and bears by a recess at its lower rear end on a heel, *e'*, of the end of the socket *e*, as shown in Fig. 2. The key C is preferably attached by a chain to a staple of the replacer, to prevent its getting lost and keep it always on hand for use. The socket-recess *e* is arranged at an angle of about fifteen degrees to the longitudinal axis of the replacer, which imparts the same inclination to the key, and causes thereby, by the striking of the car-wheel against the same, the turning of the wheel toward the rail. Between the outer end of the key C and rail-binding wing B is a space sufficient to admit the dropping of the wheel-flange sidewise of the rail when leaving the raised end of the replacer. The depressed heel *e'* holds the key from being pushed out, and strengthens the side walls of the socket, making them less liable to separate. The wing B serves as the connecting-bridge from the replacer to the rail, being at the same time by the pressure of the car rigidly held on the rail-head. The replacer is made throughout its length perfectly symmetrical, having guide-grooves, key-sockets, and wings at both sides, for the purpose of being applied at either side of the rail, and in any direction, two replacers being required to carry the car along the same onto the track. The key is placed into socket at the required inclination toward the rail.

The replacer may be applied, with the exception of near a frog or switch, at any part of the track, taking up the wheels at a distance of from ten to eleven inches, the car requiring to be carried toward the lower edge of the device or planks when being too far away from the track. When the replacers are placed in position alongside of the track-rails, the car is carried with great facility and ra-

pidity on the track, and is thus replaced by means of a very simple, cheap, and readily-applied implement.

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

1. A car-replacer made of an inclined wheel-guiding main part, that tapers gradually from the lower wider end to the upper higher end, in connection with rail-binding end wings and a wheel-guiding key at the higher end of the main part, substantially in the manner and for the purpose set forth.

2. The key-sockets *e*, extending at a small

angle of inclination toward the axis of the replacer from the curved end part of the guard-flange *d'* to such distance from the wing that the key carries the flange of the wheel toward the rail and allows the same to drop readily between key and rail, substantially in the manner described.

3. The combination of the key having rear recess with the re-enforcing heel of the sockets, to prevent pushing out of key, as set forth.

HOMER G. BROOKS.

Witnesses:

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