(No Model.)

J. E. NORWOOD.

CAR REPLACER.

No. 457,326. Patented Aug. 4, 1891.

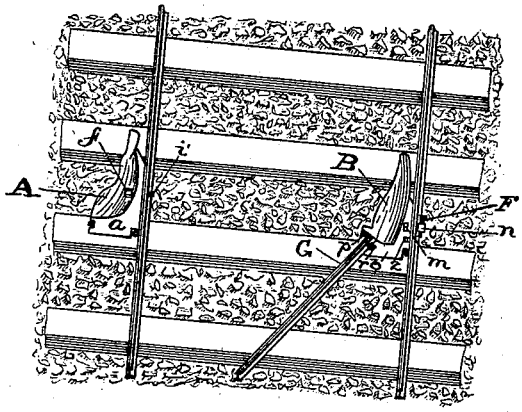

Fig. 1.

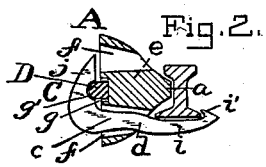

Fig. 2.

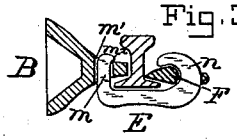

Fig. 3.

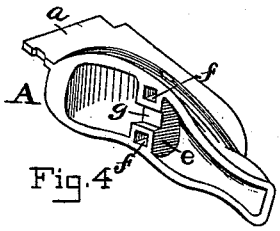

Fig. 4.

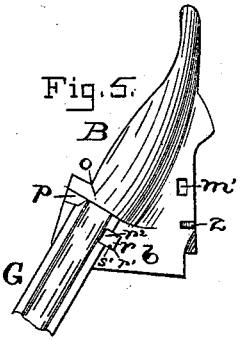

Fig. 5.

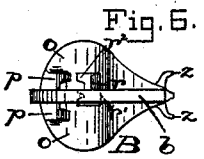

Fig. 6.

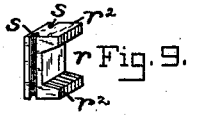

Fig. 9.

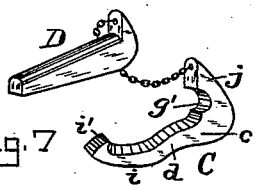

Fig. 7.

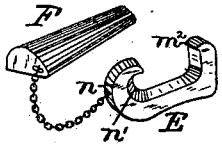

Fig. 8.

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CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 457,326, dated August 4, 1891.

Application filed February 17, 1891. Serial No. 381,744. (No model.)

To all whom it may concern.

Be it known that I, JOHN E. NORWOOD, a citizen of the United States, residing at Sykesville, in the county of Carroll and State of Maryland, have invented certain new and useful Improvements in Car-Replacers, of which the following is a specification.

This invention relates to car-replacers, and is an improvement upon the devices illustrated in my former patent, No. 329,939, granted November 10, 1885, the object being to provide improved clamps for securing the replacer-shells to the rails, and also to provide improved means for applying an extension-rail to the inside shell.

With these ends in view my invention consists in the novel features of construction and combinations of parts hereinafter described, and set forth in the claims, and which are illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, showing the replacer-shells clamped to the rails and the extension-rail in place; Fig. 2, a cross-section through the center of the outside replacer-shell and rail; Fig. 3, a similar section through the inside shell; Fig. 4, a perspective view of the outside shell; Fig. 5, a top view of the inside shell, showing the extension-rail in place; Fig. 6, an end view of the inside shell; Figs. 7 and 8, detail views of the clamps and keys for the outside and inside shells, respectively; Fig. 9, a detail view of the reversible slug for holding the extension-rail.

The letter A designates the outside shell, and B the inside shell, both of which are formed with an exterior contour and with flanges *a b*, and are secured in position alongside of the rails, substantially the same as in my patent above referred to.

The outside shell A has a transverse bridge or web *e* at its center to give it strength and stability, and two holes *f*, one on each side of the flange *a*, extending through the said bridge or web *e*, which is provided at the middle between the two holes with a lengthwise groove *g*, having squared sides. The holes are made flaring toward the open side of the shell to accommodate the thick part of the clamp C, which is run through them. The two holes are provided to render the shell reversible, and only one is used at a time.

The clamp C is made L-shaped, and its long arm has a thick tapering portion *c*, which extends through one of the holes *f* in the shell, and a slight upbend *d*, beyond which extends a straight portion *i*, which fits beneath the rail and has at its extremity a hook or catch *i'*, which takes over the inside base-flange of the rail, as shown in Fig. 2. It will be seen that the upbend *d* in the long arm is provided in order that the thickened tapering portion *c* can extend straight through the hole *f* of the shell. When the clamp is through the shell, its short arm *j* assumes a vertical position and extends across the groove *g* in the bridge. This short arm has a cross-groove *g'*, which is half-rounded out and not squared, as is the groove *g*.

The key or wedge D, employed with the outside shell, is tapered, and squared on one side and rounded on the other to correspond to the grooves *g* and *g'*, respectively, and when driven in said grooves will tighten the clamp, and the shell will thereby be securely clamped to the rail. The advantage of the rounded groove in the short arm of the clamp is that when the latter cannot be brought by hand to its proper place the small end of the key can be inserted in the groove. Then as the key is driven home the clamp will be drawn to its proper position. The squared groove in the shell prevents the key from turning.

It will be seen that the clamp C has a shorter arm *j* than is possible with the device shown in my prior patent, and that by passing the long arm directly through the shell, instead of around it, the clamp has greater strength and the strain upon it is less.

The inside replacer-shell B for the other track-rail has a hole *m'* through the middle of its flange *b*, which fits between the tread and flange of the rail, and said shell is secured to the rail by a clamp E, having the form of an open link, which embraces the rail by passing beneath the same. The projecting arm *m* at one end of this clamp is introduced through the said opening *m'* in the flange from beneath and has on its end a lip m^2, which takes over the flange to prevent the

clamp from dropping back through the said opening. At its opposite end the clamp has a hook n, which projects up on the outside of the rail, and the inside of this hook is made flaring, as shown at n', Fig. 8.

The key F, which secures the inside clamp, is a tapered bar, being flat on one side and rounded on the other to correspond to the hook of the clamp. The small end of this key is inserted in the clamp with its round side uppermost and fitting the hook and its flat side on the flange of the rail, and the said key upon being driven home will tighten the clamp and the replacer-shell will be securely clamped in place against the rail. It will be seen that this clamp is strong and at the same time is of small size and light in weight and can be easily handled and applied. Lugs z project from the opposite faces of the flange b of the shell B, and one of said lugs takes under the base-flange of the rail to prevent the said shell from tilting, it being of course understood that only that lug which comes on the under side is brought into service, the other one being employed when the shell is reversed. The flange at the broad end of the shell is extended beyond the inside edge of the said shell to form a bearing-surface for the extension-rail G, and on each side of this flange is a perpendicular wall o, against which the end of the extension-rail will abut squarely. A burr or lug p is formed integral with the wall and the flange b at the outside edge of the same, and takes over one side of the base-flange of the extension-rail G, while the other side of said base-flange is confined by a slug r, which fits loosely in a hole r' through the flange b and projects on opposite sides of the latter. This slug is provided on each end with a projection or lug r^2, which takes over the flange of the rail, as stated.

When the shell B is placed in position, with its end flange resting on the cross-tie, it will be seen that the slug r will be pushed up through the hole r' by coming into contact with the upper surface of the said cross-tie, and hence the upper lug r^2 will project from the upper surface of the flange of the shell, so that the rail-flange can be readily introduced beneath it. The arrangement of the parts described is precisely the same on the opposite side of the shell, and hence an extension-rail can be applied as readily at one side of the track as at the other. It will thus be apparent that this lug is reversible and will secure the rail on either side of the flange b.

The extension-rail G is used when the wheels of a car have been thrown so far from the track that the replacers will not receive them, and the said extension acts to guide the wheels to the replacers.

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

1. The combination, with the rail, of the outside replacer-shell A, having a bridge with a transverse hole extending therethrough and provided with a groove, a clamp running through said hole and beneath the rail and having at one end a hook which engages the inside of the rail-flange and at its opposite end an arm provided with a groove coinciding with that in the bridge of the shell, and a key introduced between the bridge and said arm and occupying the said coinciding grooves, for the purpose set forth.

2. The combination, with the rail, of the inside replacer-shell B, having a flange fitting up to the said rail, a clamp connected at one end to the said flange and extending beneath the rail to the outside of the same, and a key introduced between the outer end of said clamp and the outside of the rail, whereby the replacer-shell is clamped in position.

3. The combination, with the rail, of the inside replacer-shell having a hole m' through that portion adjoining the said rail, a clamp extending beneath the rail and having at one end an arm which is introduced through said hole and provided at the opposite end with an upward projection on the outside of the rail, and a key introduced between the said upwardly-projecting end and the rail, whereby the replacer-shell is clamped in position.

4. The combination of the rail, a replacer-shell having a flange fitting up to said rail and provided on each of its opposite faces with a lug z, adapted to take under the rail-flange, and a clamp connecting said shell and rail, as set forth.

5. The combination of the rail, the inside replacer-shell B, clamped thereto and having a flange extending across its broad end and a burr p on each side of the flange, a reversible slug extending loosely through the said flange and having projections on its opposite ends, and an extension-rail, the flange of which fits beneath one of said burrs and one of the projections of said loose slug, as set forth.

6. The combination of the track-rail and an extension-rail G, the inside replacer-shell clamped to the track-rail and having a flange extending across its broad end and an abutting wall o on each side of the flange, and means attached to the shell-flange for confining the base-flanges of the extension-rail, as set forth.

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

JOHN E. NORWOOD.

Witnesses:

ROBT. H. HOOPER,

WM. H. JONES.