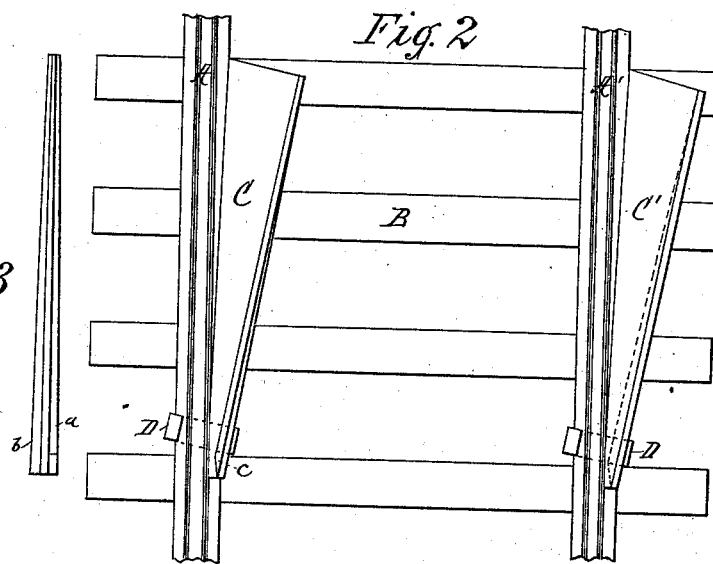
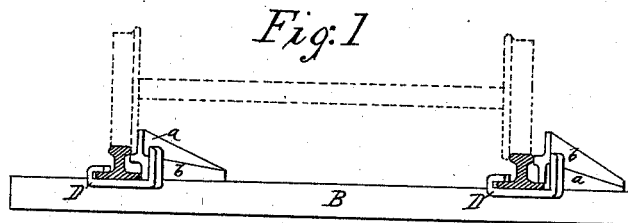


A. RUTHERFORD.  
Car-Replacer.

No. 216,350.

Patented June 10, 1879.



*Fig. 3*



*Witnesses*  
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# UNITED STATES PATENT OFFICE.

ALBERT RUTHERFORD, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN CAR-REPLACERS.

Specification forming part of Letters Patent No. 216,350, dated June 10, 1879; application filed November 18, 1878.

*To all whom it may concern:*

Be it known that I, ALBERT RUTHERFORD, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Portable and Reversible Switch-Plates for Railways; and I do hereby declare the following to be a clear, full, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 represents an end view of a set of portable and reversible switch-plates for railways embodying my invention. Fig. 2 is a top view of the same, and Fig. 3 is a side view of one of the switch-plates.

Like letters of reference indicate like parts.

The object of my invention is to provide portable and reversible switch-plates for use upon railways, to assist in replacing cars or locomotive-engines upon the rails, when removed therefrom by accident or otherwise; and my invention consists in the construction and arrangement of the several parts, as hereinafter described and claimed.

In the drawings, A A' represent the track or rails; B, the ties; C and C', the switch-plates; and D D', clamps for the purpose of clamping or holding the switch-plates to the rails, as shown.

The switch-plates are made preferably of cast-steel, and wedge-shaped, as shown, the inner edges being straight, so as to correspond with the side of the bottom flange of the rails. The outer edge of switch-plate C is provided with flanges *a* and *b*. These flanges are at right angles with the upper and lower surfaces of the switch-plate proper, commencing and projecting slightly at the heel or flared end, and extending and diverging upward and downward, respectively, to the front or narrowed end, and also extending and diverging to the right and left, respectively.

The diverging direction of the flanges *a* and *b*, as described, will cause their ends, at the narrowed end of the plate, to be in different vertical planes, and so that when placed in proper position the flange *b* will impinge and be firmly held against the lower flange of the rail by means of clamp D, which is placed

so as to clamp the switch-plate to the rail, as shown, and the front or narrowed end of the switch-plate proper will also be impinged against the curve of the rail.

Flange *a*, it will be seen, extends in height beyond the upper surface of the rail, thus forming a stop which directs and guides the wheel of the car or locomotive to be replaced, and is beveled at its end nearest to the rail, as shown at *c*, so as to form a passage or groove, formed between the top of the rail and the beveled portion of flange *a*, for the purpose of guiding the flange of the car or locomotive wheel upon the inner side of the rail.

Switch-plate C' is in construction identical with, but the converse of, plate C, and when placed in proper position the front end of the flange *a* rests on the upper surface of the bottom flange of the rail, and the narrowed end of the switch-plate proper is impinged against the side of the head of the rail, and so that the upper surface of the rail and the upper surface of the narrowed end of the switch-plate are flush, thus presenting an even surface for the flange of the car or locomotive wheel to travel over, which is forced onto the inner side of the rail by reason of the opposite wheel-flange traveling, as shown at *c*. These switch-plates, being formed and arranged one conversely to the other, may be reversed and utilized to replace cars and locomotives traveling in either direction.

D D are clamps, made preferably of wrought-iron, of suitable width, and so as to pass underneath the rails, one end of which is bent upward at right angles, and to a height corresponding with the top of the rail, and the other end is bent so as to clasp loosely the outer side of the rail-flange, the clamp being in length greater than the width of the flange of the rail, and so as to permit the narrowed ends of the switch-plates to be forced between the rails and the upward-projecting ends of the clamps D D, as shown.

In operating my said invention the switch-plates are placed in position, as shown, and so that the flaring ends or heel of the plates come under the two nearest wheels off the track, and so that the inner edge of the plates come in contact with the sides of the rails, as shown, when the clamp is placed in position,

holding the switch-plates firmly against the rails. The car or locomotive, traveling in the direction of the narrowed end of the switch-plates, is confined in its course by the flanges *a* and *b*, thus guiding it onto the rails, as hereinbefore described.

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

1. The switch-plates C and C', provided with the flanges *a* and *b*, one of said flanges being beveled, substantially as and for the purpose specified.

2. The combination, with the switch-plates C and C', provided with the flanges *a* and *b*, of the clamps D D, substantially as and for the purpose specified.

3. The combination of the switch-plates C and C', provided with flanges *a* and *b*, and clamps D D of the rails, substantially as and for the purpose specified.

ALBERT RUTHERFORD.

Witnesses:

G. R. HOFFMAN,  
FRANK BAKEMAN.