

(No Model.)

W. O. COOKE.

PORTABLE FROG OR CAR REPLACER FOR RAILWAYS.

No. 364,091.

Patented May 31, 1887.

FIG. I.

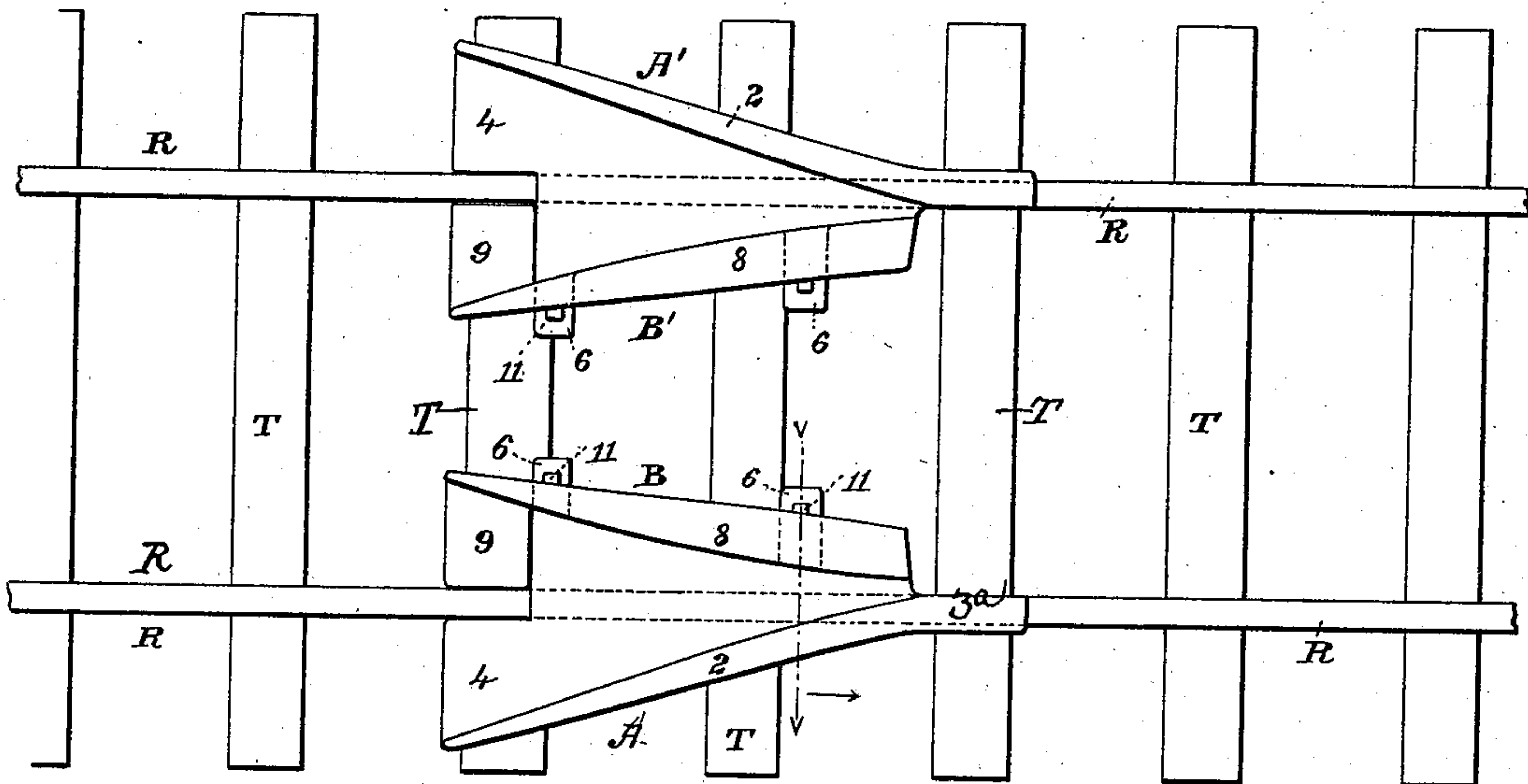


FIG. II.

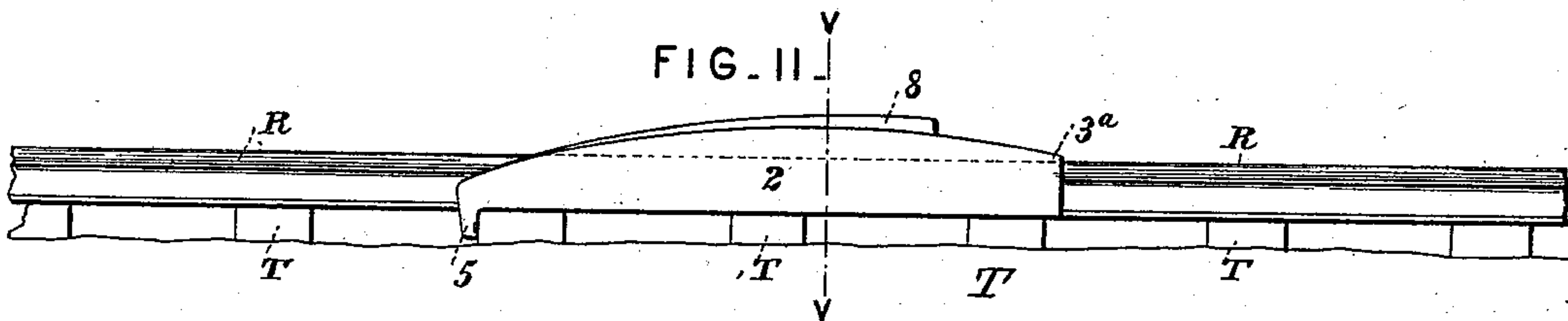


FIG. III.

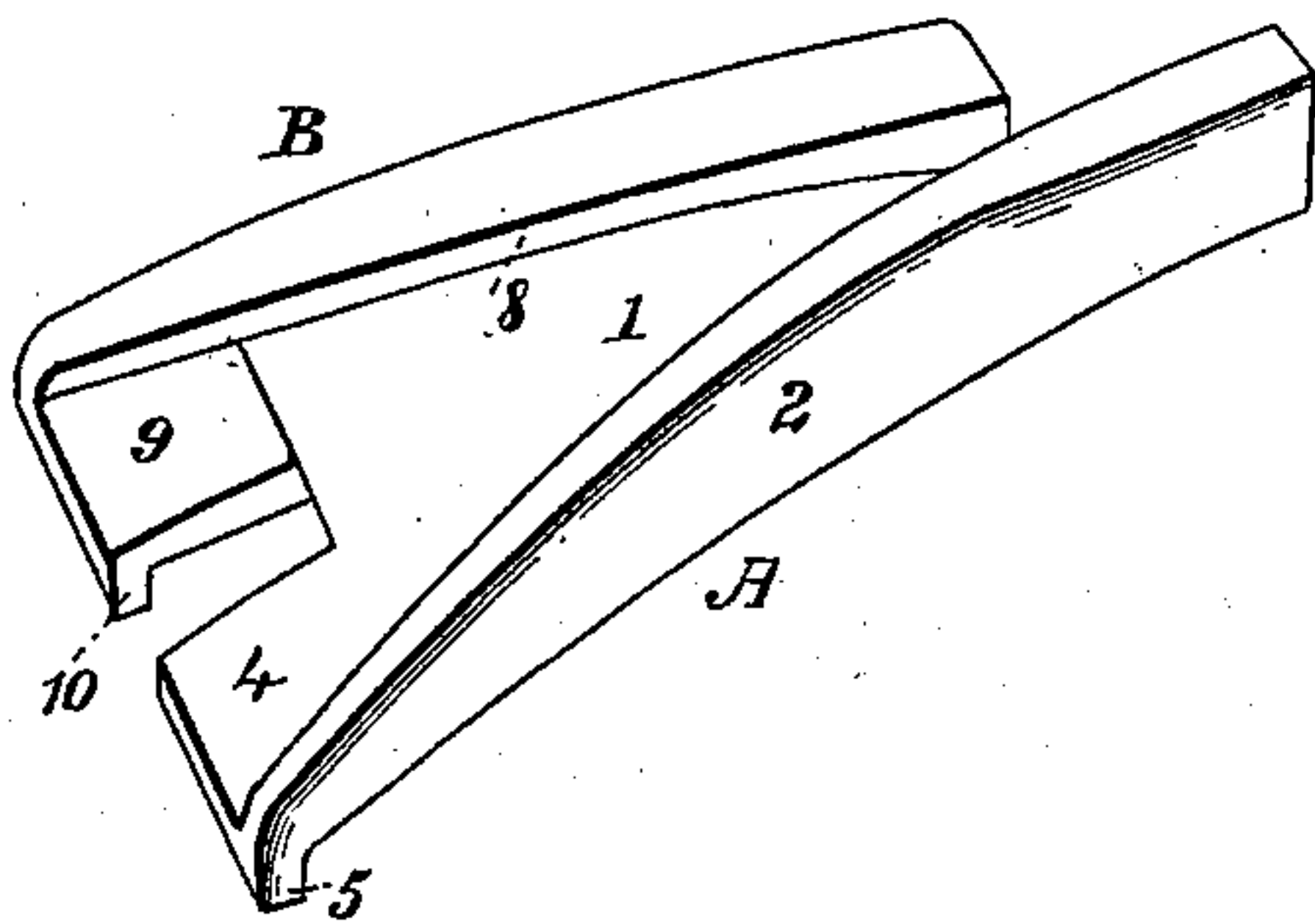


FIG. IV.

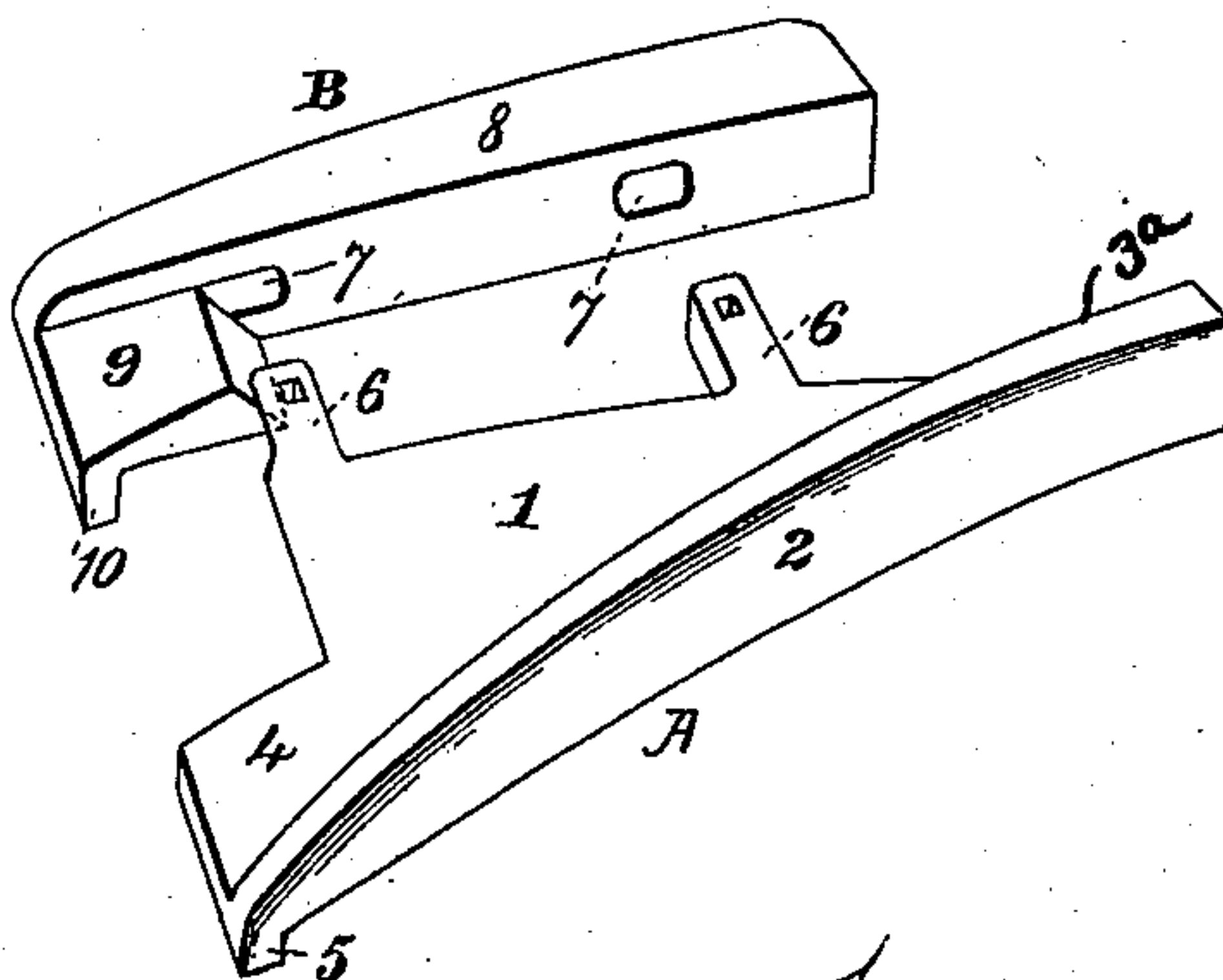
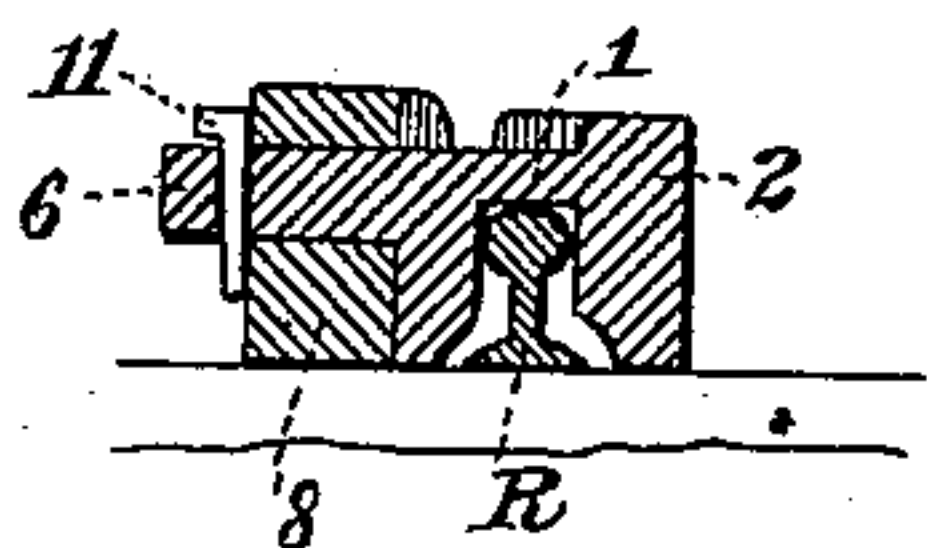


FIG. V.



Attest,
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UNITED STATES PATENT OFFICE.

WILLIAM O. COOKE, OF PROVIDENCE, RHODE ISLAND.

PORTABLE FROG OR CAR-REPLACER FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 364,091, dated May 31, 1887.

Application filed March 3, 1887. Serial No. 229,612. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. COOKE, a citizen of the United States, residing at Providence, county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Portable Frogs or Car-Replacers for Railways, of which the following is a specification.

Car-replacers as heretofore made are subject to disadvantages, either from being so cumbersome and ponderous that they cannot be brought into use quickly and with facility when required, or when made of such small dimensions as to permit them to be readily carried from end to end of a long train by the trainmen they are generally unavailable for all conditions and requirements of derailed cars.

The subject of my invention is a pair of portable frogs adapted for the right and left rails, consisting of two flanged plates or bars, one formed with a converging base or bridge piece to extend over the tread of the rail and a side flange having a convex crown terminating in front in an inclined tongue to conduct the tread of the wheel to the top of the rail, and a projecting heel to rest against the side of the rail and engage against the vertical face of one of the ties, while the other member consists of a bar mortised or perforated to receive projections, studs, bolts, or tenons by which it is firmly keyed or fastened to the first member, and constituting the second converging flange by which the flange of the derailed wheel is conducted to its place on the inner side of the rail, said second member having, moreover, a projecting heel-piece corresponding with the first, resting against the inner side of the rail and engaging against the face of the tie.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I represents a plan of a short section of a railroad-track with my invention applied. Fig. II is a side elevation of the same. Fig. III is a perspective view of the car-replacer for the right-hand rail. Fig. IV is a perspective view of the same, showing the parts detached. Fig. V is a vertical transverse section on the line 5 5, Figs. I and II.

R represents railroad-rails, and T ties of customary form.

A B represent two castings or forgings, which, when united, as shown in Fig. III, and applied, as illustrated in Figs. I and II, constitute the portable frog or car-replacer for the right-hand rail, a similar portable frog or replacer being provided for the left-hand rail by the counterpart castings A' B'. The casting or forging A or A' consists of an arched or crowning bed or bridge piece, 1, adapted to fit over the rail, and a side bar, 2, projecting below the bridge-piece 1, so as to rest on the ties T, as shown in Fig. II, and extending above it, so as to form a vertical projecting flange, as represented in Figs. III, IV, and V, with a crowning upper surface of the form shown in Fig. II, which is nearly parallel with the surface of the bridge-piece 1. The said bar 2 rests closely against the side of the rail, as represented in Fig. V, and tapers in front to an edge, 3^a, corresponding in width with the tread of the rail on which it rests. The heel 4 of the bridge-plate 1 projects downward at the side of the rail, as shown in Figs. I and II, and is formed with a downwardly-projecting vertical flange or shoulder, 5, which engages against the vertical face of one of the ties, as shown in Fig. II, to prevent the longitudinal displacement of the apparatus. The casting or forging A is furthermore provided with lateral projecting tongues or studs 6, which, however, may be replaced by bolts. These tongues, studs, or bolts fit in corresponding apertures or mortises, 7, in the casting or forging B. The casting or forging B consists of a bar, 8, perforated with the holes or mortises 7, as already described, and fitting against the inclined edge of the bridge-piece 1, so as to form a vertical flange converging relatively to the bar or flange 2, and having a heel-piece, 9, adapted to rest against the inner face of the rail, as shown in Fig. I, and with a downwardly-projecting vertical shoulder, 10, corresponding with the shoulder 5 on the casting or forging A.

It will now be understood that the rail R is clamped between the two members A B, which are firmly held together by the tongues or bolts 6 and keys 11, driven therein, or suitable

nuts instead of the said keys. The castings or forgings A' B' are formed as counterparts of the castings A B, adapted to the left-hand rail, so that the description of one of the paired portable frogs or replacers answers for both, and the corresponding parts in each are accordingly marked with the same reference-numbers.

By making the device in two parts it is rendered easily portable, and may be readily carried from end to end of a long train and placed in position whenever required. It is so constructed that a direct draft applied to the derailed car will draw it up the incline and deflect the leading wheels by direct contact against the flanges 2 or 8 on one or the other side, so as to turn the wheels into the line of the rails until the wheels, resting on their flanges, having climbed to the summit of the convex bridge-piece 1 and reached the converging throat between the forward ends of the flanges 28, the tread of the wheel is thrown directly over and upon the tongue-piece 3^a forming the forward extremity of the bar 2. The tread of the wheel then descends this inclined tongue-piece, and is thereby conducted to the rail B. The same effect occurs on both rails, and any number of derailed cars may thus be replaced in succession.

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

1. The two-part portable frog or car-replacer, consisting of the block A, constructed, as herein shown and described, with a flanged bridge-piece extending over the rail, and the guide-bar 8, converging with the flange of the block A and secured to said block, substantially as set forth.

2. The block A, consisting of the convex base or bridge piece 1, the convex upwardly-projecting flange 2, terminating in an inclined tongue-piece, 3^a, and an inclined heel, 4, in combination with the separate flange-bar 8, secured to the bridge-piece 1, substantially as herein shown and described.

3. The combination of the bridge-piece 1, longitudinal flange 2, heel-piece 4, vertical shoulder 5, separate flange-bar 8, heel-piece 9, and vertical shoulder 10, substantially as and for the purposes set forth.

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Witnesses:

OCTAVIUS KNIGHT,
HARRY E. KNIGHT.