

No. 775,987.

PATENTED NOV. 29, 1904.

J. W. PETTEE.
CAR REPLACER.

APPLICATION FILED MAR. 19, 1904.

NO MODEL.

Fig. 1.

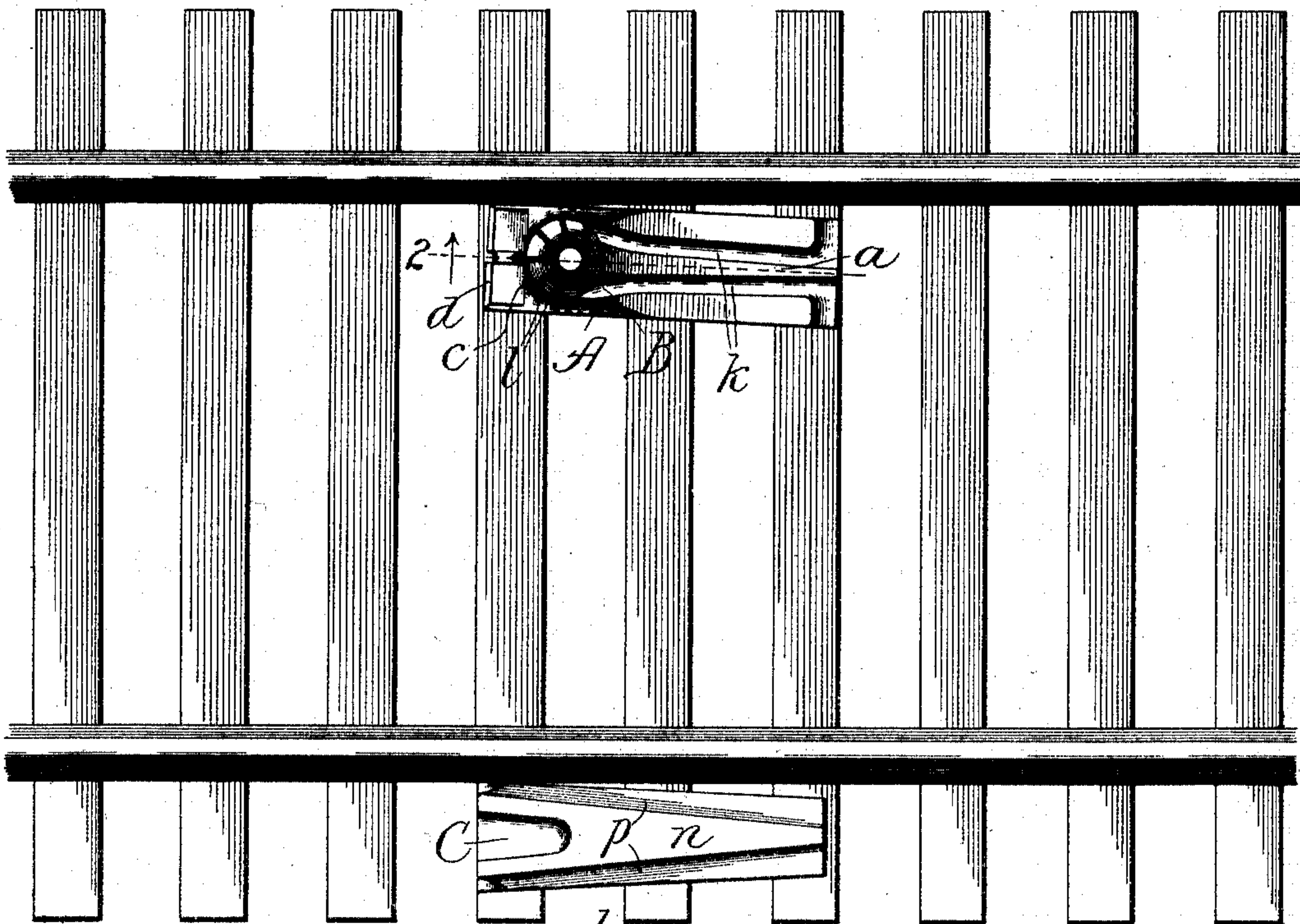


Fig. 2.

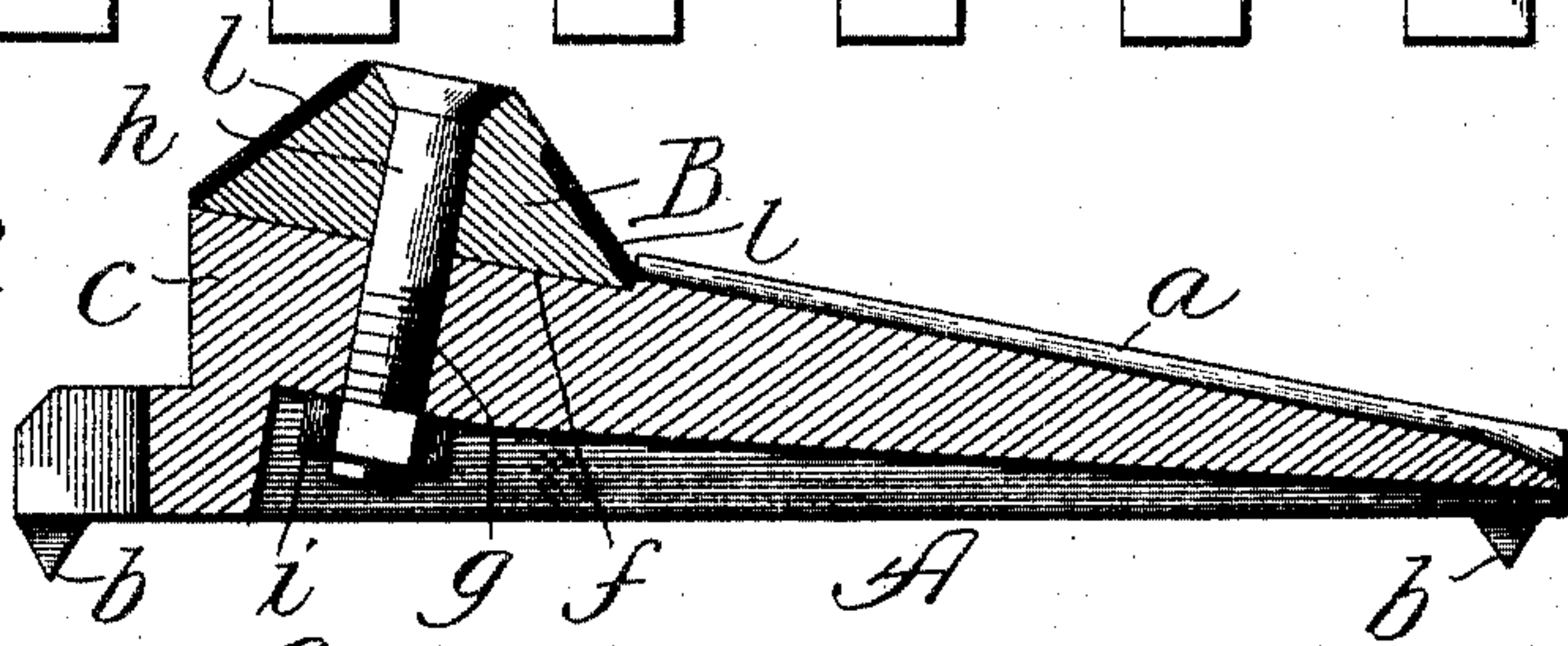


Fig. 3.

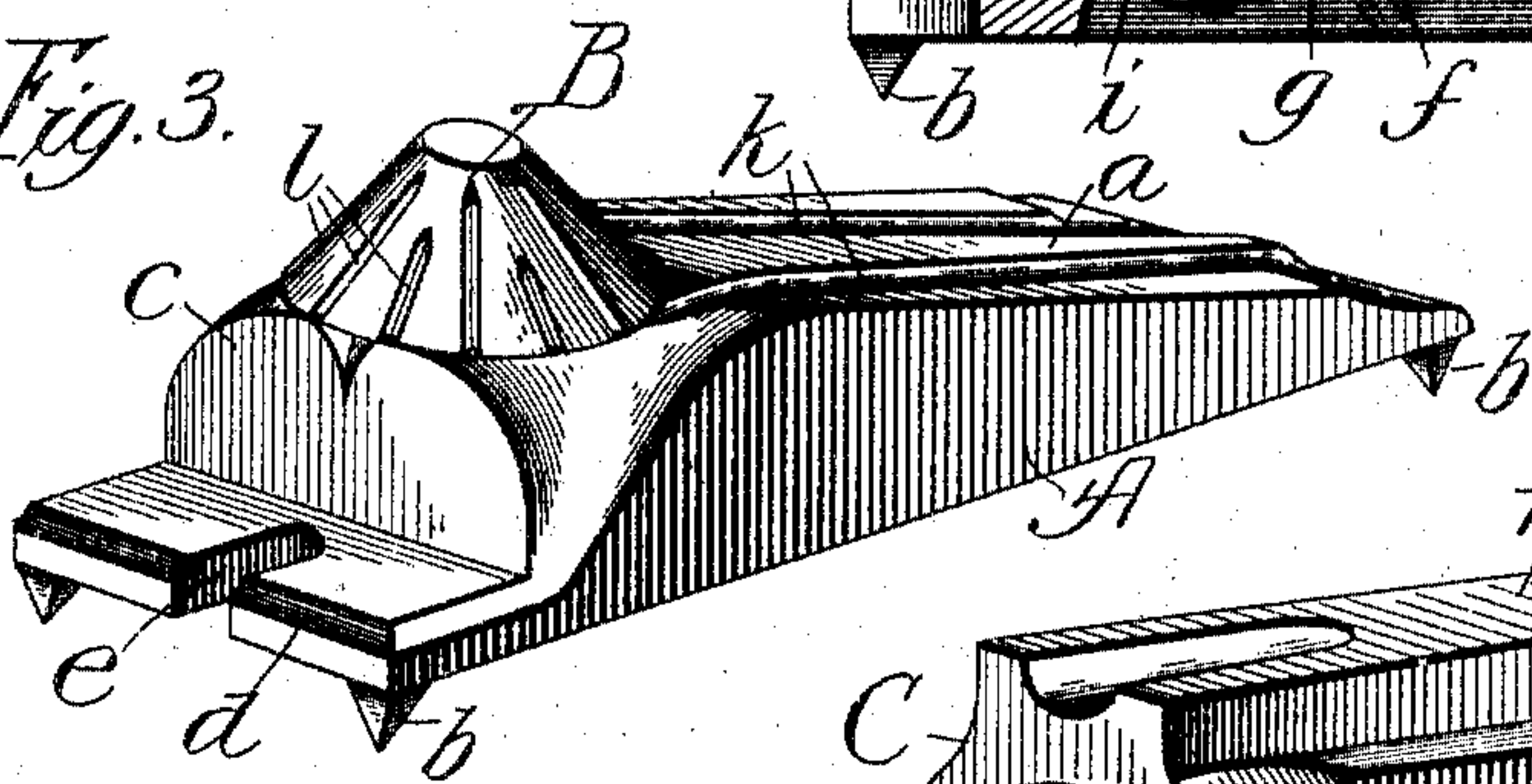
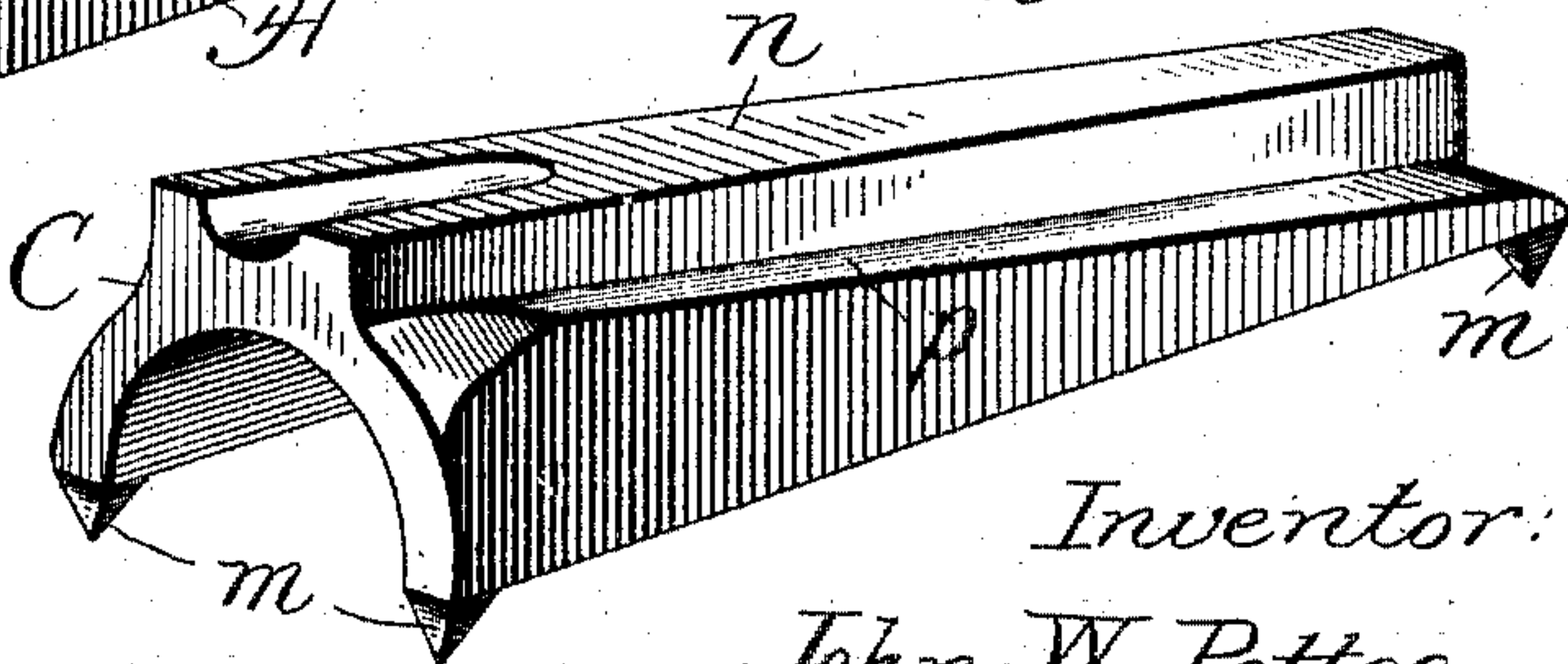


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN W. PETTEE, OF DENVER, COLORADO, ASSIGNOR OF TWO-THIRDS TO
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CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 775,987, dated November 29, 1904.

Application filed March 19, 1904. Serial No. 198,992. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PETTEE, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented a new and useful Improvement in Car-Replacers, of which the following is a specification.

My invention relates to improvements in devices or appliances for use in replacing derailed locomotives and cars upon railroad-tracks. Such appliances as hitherto commonly provided comprise two distinct metal blocks formed with inclined upper faces. One of these blocks, usually referred to as the "guide-frog," is adapted to be placed at the inner side of one rail and presents right and left hand grooves for engaging and guiding the flange of one wheel. The other block, usually referred to as the "raising-frog," is adapted to be placed at the outer side of the other rail and presents a shoulder or surface extending to a plane above the track-rail for the tread-face of the other wheel to climb until its flange clears the track-rail. The guide-frog is intended to force the wheels when raised laterally onto the track; but it has been found in practice, particularly when an entire truck is derailed, that the necessarily rather shallow guide grooves or shoulders as hitherto provided will not always prevent the wheel-flanges from climbing out of the grooves or onto the shoulders, so that at times the wheels run over the frogs without being forced laterally onto the rails, as intended.

My object is to provide a car-replacing appliance which will overcome the above objection, and in carrying out my invention I provide one of the blocks, more especially the replacing-frog, with a raised conical or frusto-conical rotatable head which will operate as a means for positively shifting and replacing the wheels, as hereinafter set forth.

In the drawings, Figure 1 is a plan view of a section of railroad-track with my improved replacer in position; Fig. 2, an enlarged section taken on line 2 in Fig. 1; and Figs. 3 and 4, perspective views, respectively, of my improved guide-frog and its companion raising-frog.

The guide-frog A is an oblong metal block having an inclined upper face *a* and a recessed under side provided at its four corners with pointed tie-engaging studs *b*. Beyond the thick or raised end portion *c* is a flange *d*, formed with a spike-slot *e*. At the upper side of the end portion *c* is a flat circular bearing-face *f*, at the center of which is an opening *g* through the block.

B is a head of preferably conoidal form, conic, or frusto-conic, having a central opening through it at which it is journaled upon a bolt or the like *h*, passing downward through the opening *g*. A nut or the like *i* holds the parts against separation. In the face *a* are the relatively diverging right and left hand guide-grooves *k*, terminating toward opposite sides of the head B. The surface of the head B may be provided with shallow grooves *l*, as indicated, to roughen said surface.

The lifting-frog C has a recessed under side with pointed tie-engaging studs *m* at its four corners. Its upper inclined face presents a central flaring rib *n*, flanked by inclined guiding tread-surfaces *p p*. Each of the frogs is right and left hand, as indicated, and they are placed in position after the manner shown in Fig. 1—the block A at the inner side of one rail and the block C at the outer side of the other rail. When in position, the head B is in a plane slightly above the tread-surface of the track-rail and the upper end of the tread-surface *p* of the lifting-frog is in a plane sufficiently higher than the tread-surface of the track-rail to lift the flange of a wheel over the rail.

In replacing a car or locomotive it is moved along to cause the displaced wheel at the inner side of one track-rail to climb at its flange in the groove *k* of the guide-frog and at the tread of its other wheel along the inner tread-surface *p* of the lifting-frog. As the first said wheel nears the upper end of the groove *k* it is engaged by the frusto-conical face of the head B. The head turns readily under the pressure of the wheel, thereby resisting any tendency of the wheel to climb over the head, and in the further movement of the wheel it is forced by the turning of the head B lat-

erally onto the track. The frogs should be so placed with relation to the track-rails that when one wheel is engaged by the head B, as described, the flange of the other wheel will be moved onto the tread-surface of the other rail, so that in the final turning of the head B the said flange will drop to the inner side of the rail. The pointed studs on the under sides of the blocks will by engaging the ties on which they rest prevent lateral movement of the blocks under strain. For additional security the block A may be further fastened by a spike driven through the slot *e* into the tie. This slot being open at its end permits the frog to be removed from beneath a car after the replacing operation without making it necessary to draw the spike. The bearing-surfaces between the head B, bolt or shaft *h*, and block A may be well greased to insure the desired ready turning of the head B, or any suitable antifriction mechanism may be provided between the head B and block A. A pin or stud cast or formed integral with the head B may be substituted for the bolt *h* to rotate in the bearing-opening *g*.

Modifications of the construction within the spirit of my invention as defined by the claims may be made. Hence no undue limitation should be placed upon my invention by reason of the foregoing detailed description.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a car-replacing appliance, a replacing-

frog comprising, in combination, a block having an inclined upper face provided with longitudinally - extending diverging guide-grooves and a rotary upwardly - projecting head journaled on the block in a vertical plane between the upper ends of said grooves, to operate substantially as and for the purpose set forth. 35 40

2. In a car-replacing appliance, a replacing-frog comprising, in combination, a block having an inclined upper face provided with a longitudinally - extending guide-groove, and having a spike-slot in one end, pointed studs on the under side of said block, and a rotary upwardly-projecting head journaled on the block at the end of said groove, to operate substantially as and for the purpose set forth. 45 50

3. In a car-replacing appliance, a replacing-frog comprising a block having an inclined upper face provided with longitudinally-extending diverging guide-grooves and a rotary upwardly-projecting head journaled on the block in a vertical plane between the ends of said grooves, in combination with a lifting-frog having a central rib flanked by inclined diverging tread-surfaces all constructed and arranged to operate substantially as and for the purpose set forth. 55 60

JOHN W. PETTEE

In presence of—

P. O'BRIAN,
JOHN P. HEISLER.