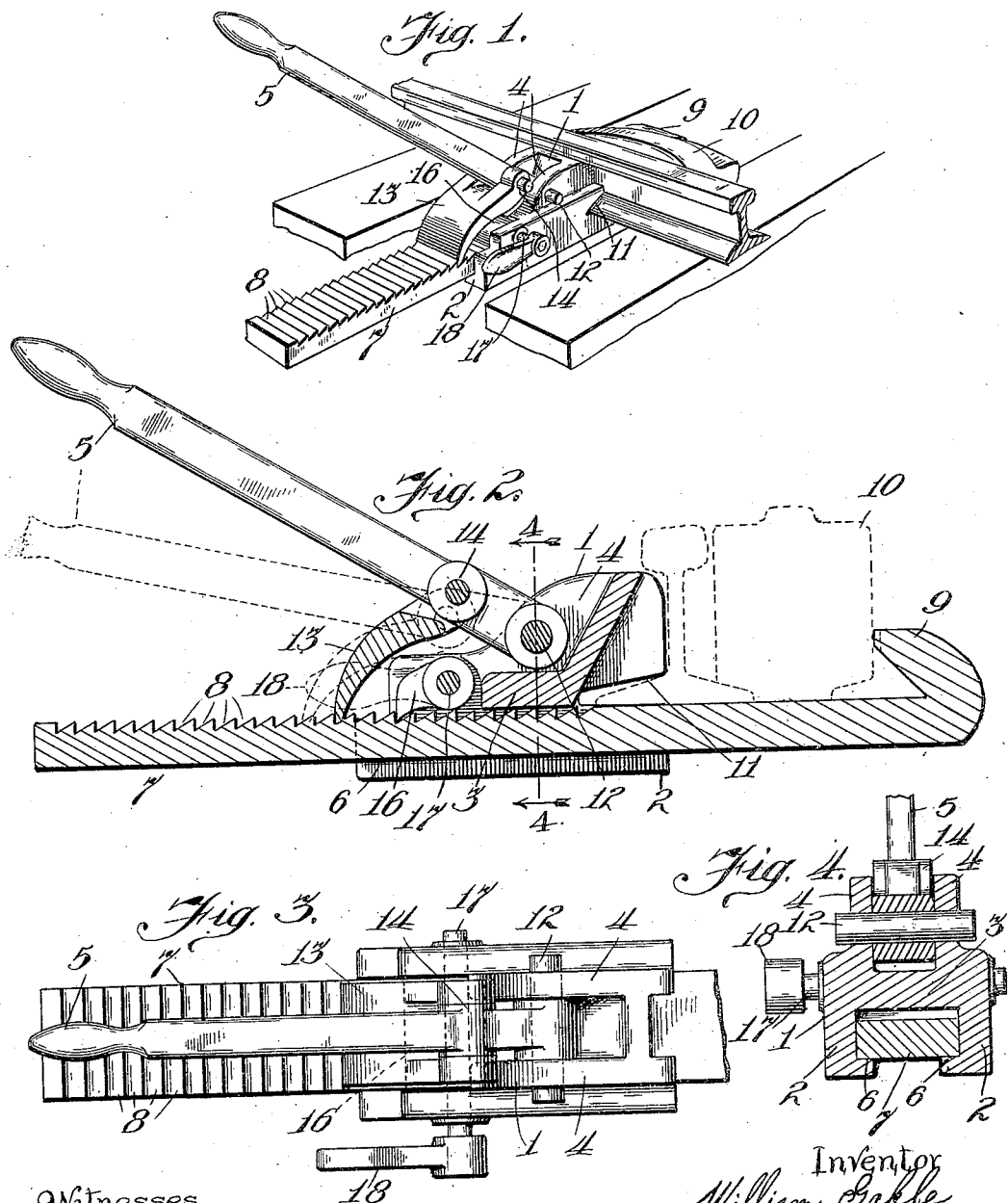


W. GAKLE.
 RATCHET CLAMP FOR CAR REPLACERS.
 APPLICATION FILED DEC. 5, 1908.

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Witnesses
 Milton Lewis
 Emilie Rose

Inventor
 William Gakle
 By Albert H. Graves
 Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM GAKLE, OF CHICAGO, ILLINOIS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM GAKLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ratchet-Clamps for Car-Replacers, of which the following is a specification.

This invention relates to improvements in ratchet clamps for car replacers and has among its salient objects to provide a construction in which a car replacer of any well known type may be clamped to the rail by a simple ratchet or step-up mechanism; to provide a ratchet clamp of the above character which fits closely around the rail and replacer, draws them together and then automatically locks them rigidly in clamped position; to provide a construction in which a maximum leverage may be secured with minimum power and in which the operating parts may be shifted out of the way below the level of the replacer after the latter has been clamped to the rail; to provide a construction which is adapted for use with either inside or outside replacers, and in which the various parts may be readily removed or replaced if necessary; to provide a construction of the above character which is operated by means of a simple hand lever which can be dropped below the level of the car after the replacer is locked in position; and in general to provide a simple and durable construction of comparatively few parts of the character referred to.

The invention consists in the matters hereinafter described and more particularly pointed out in the appended claims.

Referring to the drawings Figure 1 is a perspective view of my invention shown as applied to a car replacer and rail. Fig. 2 is an enlarged vertical sectional view of the same, the rail and replacer being shown in dotted lines. Fig. 3 is a top plan view of my ratchet clamp. Fig. 4 is a vertical sectional view of the device along the line 4-4 of Fig. 2.

Describing now my improved device and referring to the drawings 1 designates as a whole a main body-casting of generally inverted trough-shape comprising side supports 2-2, and a connecting cover member 3 upon the top of which is a pair of ear like extensions 4 which serve as journal supports for an operating lever 5 hereinafter described. The inner lower edges of the

side members 2 are each provided with a rabbet-like seat 6 which is adapted to support and guide the reciprocating rack bar 7, the upper face of which is provided with a series of teeth 8 in the usual manner. The forward end of the rack bar is provided with an upwardly extending head 9 which is adapted to impinge against the face of a car replacer 10 and draw the latter against the rail when the rack bar is reciprocated rearwardly as will hereinafter appear. In order that the locking device may fit more closely around the rail and thus more efficiently lock the car replacer to the latter, the side members 2 are cut away as shown at 11 to fit around the base of the rail, and the ears 4 are so shaped as to fit between the base and the tee of the rail.

In order to actuate the rack bar, I provide an operating lever 5 pivotally mounted upon a journal pin 12 extending through the sides of the ears 4, which lever carries an actuating pawl 13 pivotally connected to the lever as shown at 14 and adapted to engage the teeth 8 of the rack bar. As the lever is forced outwardly it will be seen that the rack bar will be stepped up thus drawing the car replacer 10 into engagement with the rail. It may be here noted that the lever is preferably detachably mounted between the ears 4 in order that it may be more readily removed or replaced.

After the car replacer has been drawn into clamping engagement with the rail through the action of the rack bar and pawl 13, I provide means for automatically locking the latter in position. To this end a dog 16 is rigidly keyed to a journal pin or shaft 17 which is mounted between the rear ends of the side members 2. One end of this shaft extends through the corresponding side member 2 and is provided with a handle 18 which is so mounted as to cause the dog to drop downwardly into engagement with the teeth of the rack bar by gravity. This handle, of course, serves to lift the dog out of engagement with the teeth when it is desired to release the rack bar.

The operation of the device will be understood from the foregoing description, but may be briefly described as follows: After the replacer is in position, the clamping device is set on the opposite side of the rail and the rack bar reciprocated beneath the latter so that the head 9 is upon the outer side of the replacer. The main casting is

then slipped up against the rail until the base of the latter enters the recess 11 whereupon the lever 5 is operated and the head 9 drawn into engagement with the replacer. 5 After the latter has been rigidly clamped against the rail the lever is released whereupon the dog automatically drops into engagement with the rack bar and locks the latter against movement. The pawl 13 may 10 then be lifted out of engagement with the teeth 8 and the lever lowered to the position shown in dotted lines in Fig. 2 in order that it may be entirely out of the way of the car as the latter rides onto the rail. It is of 15 course apparent that my invention is equally adaptable with either inside or outside car replacers. When it is desired to release the replacer the handle 18 is operated, lifting up the dog 16 and releasing the rack bar. 20 While I have herein shown a preferred embodiment of my invention it is apparent that it may be varied considerably in details of construction without in any manner departing from the spirit thereof. It is to be 25 particularly noted that the head 9 may be so shaped as to be adapted for use with various kinds of replacers.

It is of course apparent that my device may be operated in a reverse manner, *i. e.* 30 with the head of the rack bar against the rail and the body of the device against the replacer.

I claim as my invention:

1. In a ratchet clamp for car replacers, 35 the combination with a main body, of a rack bar reciprocating therethrough and provided at one end with a head adapted to engage a car replacer, an operating lever connected to said main body, a pawl carried 40 by said lever and actuating said rack bar,

and a dog pivotally mounted within said main body and automatically engaging said rack bar to lock the latter.

2. In a ratchet clamp for car replacers, the combination with a main body casting, of a 45 rack bar adapted to reciprocate therethrough, and provided with a head for engaging a car replacer, means for actuating said ratchet bar to clamp the replacer against the rail, and means for locking said 50 rack bar in clamped position.

3. In a ratchet clamp for car replacers, the combination with a main frame adapted to engage the rail, of a rack bar reciprocating therethrough and provided with a head 55 for engaging a car replacer, a pawl for stepping-up said rack bar, means for actuating said pawl, and means for locking said rack bar.

4. In a ratchet clamp for car replacers, 60 the combination with a main casting adapted to engage the rail, a rack bar reciprocating therethrough and provided with a head for engaging the car replacer, means for stepping-up said rack bar, and means for auto- 65 matically locking said rack bar.

5. In a ratchet clamp for car replacers, the combination with a main body casting provided with a guide way, of a rack bar reciprocating in said guide way, an oper- 70 ating lever pivotally mounted in said main body, an actuating pawl carried by said lever, and a locking dog pivotally mounted in said main casting to automatically lock the rack bar in its stepped-up position.

WILLIAM GAKLE.

Witnesses:

LOIS FORCE,
F. L. BELKNAP.