A. J. BAZELEY.

UNCOUPLING MECHANISM FOR CAR COUPLINGS.

APPLICATION FILED AUG. 12, 1909.

1,067,579.

Patented July 15, 1913.

2 SHEETS—SHEET 1.

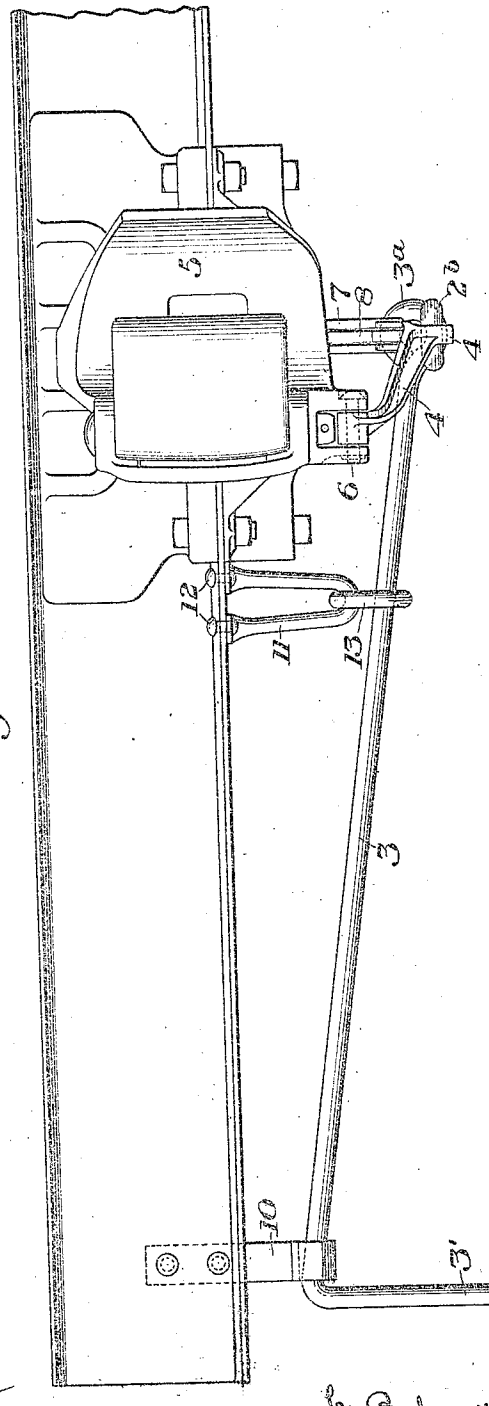


Fig. 1.

WITNESSES

R. A. Balderson

S. B. Bluering

INVENTOR

A. J. Bazeley,

by Bakewell, Cynes & Parmelee,

his Attys

A. J. BAZELEY.

UNCOUPLING MECHANISM FOR CAR COUPLINGS.

APPLICATION FILED AUG. 12, 1909.

1,067,579.

Patented July 15, 1913.

2 SHEETS—SHEET 2.

Fig. 2.

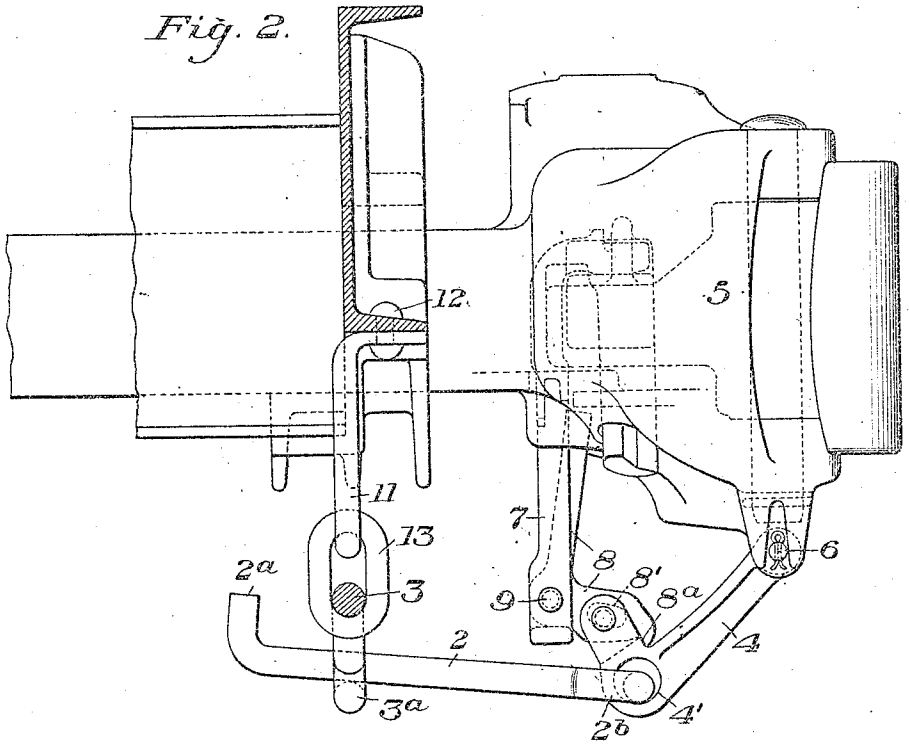
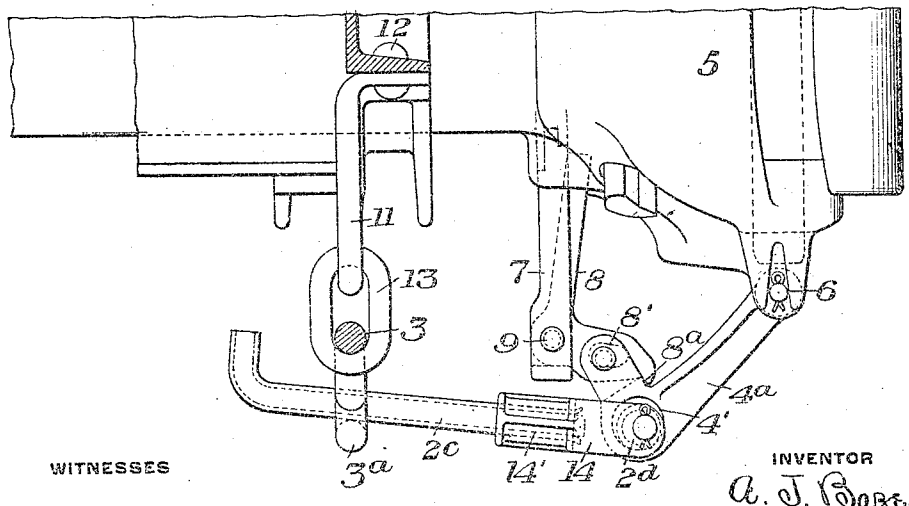


Fig. 3.



WITNESSES

R. A. Balderson

E. B. Fleming

INVENTOR

A. J. Bazeley

by Bakewell, Byrnes & Lamberton,

his Attys.

UNITED STATES PATENT OFFICE.

ARTHUR J. BAZELEY, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

BEST AVAILABLE COPY

UNCOUPLING MECHANISM FOR CAR-COUPLINGS.

1,067,579. Specification of Letters Patent. Patented July 15, 1913.

Application filed August 12, 1908. Serial No. 513,487.

To all whom it may concern:

Be it known that I, ARTHUR J. BAZELEY, of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Uncoupling Mechanism for Car-Couplers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of a car coupler provided with my device; Fig. 2 is a side elevation thereof; and Fig. 3 is a similar view showing a modification.

My invention is an improvement upon the device shown in my patent application, No. 468,418, and provides a new and useful uncoupling rod for operating the locking and opening mechanism of a car coupler.

The rod mechanism which I have invented comprises two parts, a longitudinal rod 2 which extends under and lengthwise of the coupler and is connected to the uncoupling mechanism, and a transverse rod 3 which is connected with the rod 2 in a manner described below, and which extends to the side of the car terminating in a handle 3′, which is adapted to be operated by the trainmen.

4 is a lever forming part of the uncoupling mechanism which is pivoted to the car coupler 5 at a point 6 and is connected with the lifting rod 7 of the coupler mechanism indirectly by being attached to a slot 8′ in the forwardly projecting toe of a swinging stop member 8, which in turn is pivoted by means of a pin 9 to the member 7. The lever 4 is engaged with this slot 8′ and when this lever is raised its first action will be to move back the top of the member 8 within the cavity in the member 7 and disengage it from the bottom of the coupler so as to leave the member 7 free to be moved upwardly within the coupler and to operate the mechanism thereof. The elongation of the slot 8′ permits of longitudinal movement of the lever 4 relative to the lifting rod 7, so that when the lever 4 swings about its pivot on the coupler head only its vertical movement will be transmitted to the lifting rod and there will be no tendency for the latter to bind in the coupler head. The lever 4 is forked and incloses the toe of the member 8 on both sides, and the relative motion of these parts is limited by a stop bearing of the toe on the lever as shown at 8^a in Fig. 2. The member 7 is slotted to receive the member 8, and the slot is open at the front and rear to permit discharge of dirt and water. The rear opening of the slot at its upper end is terminated by a wall extending a short distance below the top of the swinging stop member 8 whereby the latter is prevented from being forced too far rearwardly.

The longitudinal rod 2 has at its front end an eye 2^b which is sufficiently open to enable it to be readily interlinked with an eye 4′ on the lever 4, and the rear end of rod 2 is bent to form a stop portion as at 2^a. The transverse rod 3 is supported by suitable brackets, the outer bracket 10 being preferably a flat piece of iron bent into suitable shape and the intermediate bracket 11 being preferably a U-shape rod which is fixed to the under side of the car sill by rivets 12 and carries a link 13 through which the rod 3 passes. At the inner end of the rod 3 is an eye 3^a through which the longitudinal rod 2 extends. When the brakeman lifts the handle 3′ at the side of the car it rotates the rod 3 on its longitudinal axis, thus causing the eye 3^a to clamp the longitudinal rod 2 and to move it upwardly, thus raising the lever 4, causing it to swing on its pivot 6 and to lift the members 7 and 8, so as to operate the mechanism of the coupler. The extension of the link 13 from the bracket 11 permits the rod 3 to adjust itself to the motion of the rod 2 as the latter moves slightly longitudinally because of its connection with the lever 4 when the lever is raised. If the coupler shank should break, or its attachment to the car should part, the pulling forward of the coupler will cause the bent end 2^a of the rod 2 to engage the eye 3^a, which will restrain the further motion of the rod 2, thus causing a rearward pull on the lever 4 which will lift this lever relatively to the coupler and will automatically unlock the coupler and release it from engagement with the coupler of the adjoining car.

The device which I employ has advantages because of the freedom given to the coupler in its longitudinal and lateral movements which do not affect the position of the transverse rod 3. The position of the bracket of the brake staff at the bottom of the end sill of the car, or the position of the other car attachments, may render it inconvenient to apply a coupling rod beneath the

car sill in such a manner as to allow the rod to move forward and back as the coupler moves longitudinally against the draft rigging. In my device the transverse rod 3 is almost immovable except for its rotation, and it can therefore be applied to the car sill at any convenient point without providing for such displacement, for the rod 2 will move readily through the eye 3^a as the coupler moves longitudinally; and the eye 3^a will also permit lateral displacement of the rod 2 when the coupler moves laterally, considerable lateral movement of the coupler being provided for in this method by elongating the eye 3^a in a horizontal plane.

The device is very flexible and inexpensive. It is simple in construction as it does not require the use of special castings, and is positive in its action. A further advantage of the invention is that if the lock of the coupler is lifted into lockset position, in which case the lever 4 and the member 7 will be held elevated, the elevated position of the rod 2 will not also hold the handle 3′ at the side of the car elevated, but this handle can drop to its original position because of the flexibility of the connection between the rods 2 and 3 at the eye 3^a. This is a matter of importance because if the handle 3′ were kept in raised position it would be apt to interfere with the brakeman at the side of the car. Other advantages will be apparent to those skilled in the art.

In the modification shown in Fig. 3 the eye 2^d at the end of the rod 2^c which connects it to the lever 4^a is made in the form of a separate casting or clevis 14, having at the end a cylindrical socket 14′ in which the end of the rod 2^c is inserted. The rod 2^c in this case may be hollow—a short section of pipe will serve the purpose—and its inner end can be expanded within the socket of the clevis 14 so as to hold it therein. This and other members of the device may be modified in various ways by those skilled in the art, since

What I claim is:

1. In a coupler having a swinging knuckle, a lock, a lock-lifting member projecting upwardly through the floor of the coupler, a stop on the coupler head, a lock-to-the-lock device pivotally mounted on the lock-lifting member at a point below the coupler head and movable into the path of the coupler stop to prevent creeping of the lock, a lifting lever pivoted to the coupler head and pivotally connected with said lock-to-the-lock device, and mechanism for actuating said lever; substantially as described.

2. An uncoupling mechanism for car couplers comprising in combination with the lock-lifting mechanism of the coupler a longitudinal rod connected therewith, a rotary transverse rod having an eye through which the longitudinal rod loosely passes, a swinging support for the transverse rod and a stop portion by which the longitudinal rod is restrained when the coupler breaks and is caused to operate the unlocking mechanism, said stop portion being arranged to come in contact with the eye of the transverse rod.

3. A car coupler having in combination with the locking mechanism, a lifting rod with a stop member pivoted thereto, said stop member having a projecting portion and a lifting member connected therewith by a slotted connection.

4. A car coupler having in combination with the locking mechanism, a lifting rod, and a stop member pivoted to said lifting rod, said stop member having a projecting portion and a lifting lever pivoted to the coupler head and connected with the stop member by a slotted connection.

5. A car coupler having in combination with the locking mechanism, a lifting rod with a pivoted stop member, said stop member having a projecting portion, a lifting lever connected therewith by a slotted connection, and a stop limiting the independent motion of the projecting portion and the lifting lever.

In testimony whereof, I have hereunto set my hand.

ARTHUR J. BAZELEY.

Witnesses:
HARRY E. ORR,
CHESTER K. BROOKS.