No. 646,172. Patented Mar. 27, 1900.

# G. HERMANSON.

## CAR COUPLING

(Application filed Oct. 10, 1898.)

(No Model.)

FIG. 1.

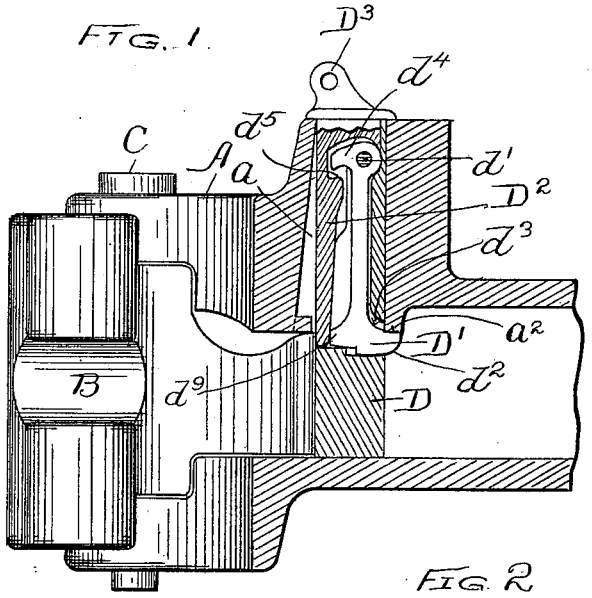



FIG. 4.

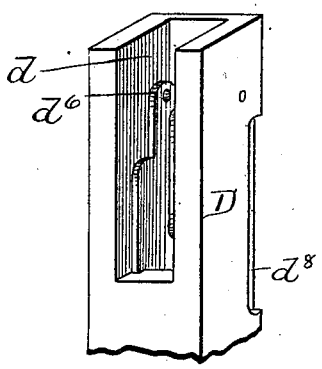



FIG. 2.

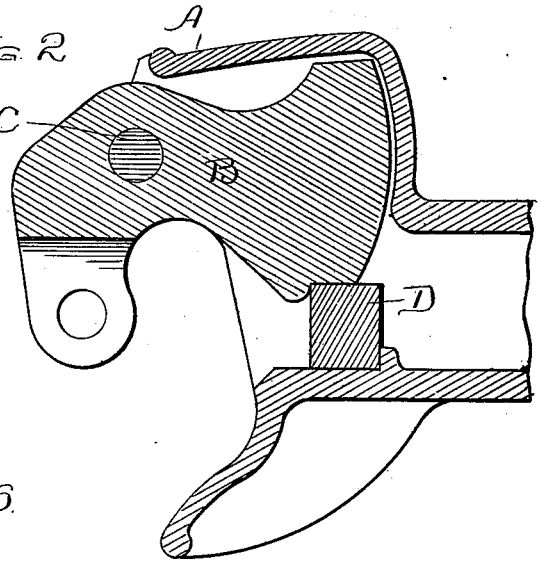



FIG. 3.

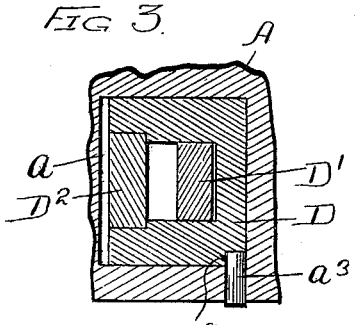



FIG. 5.

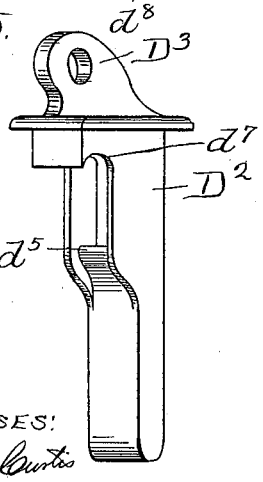
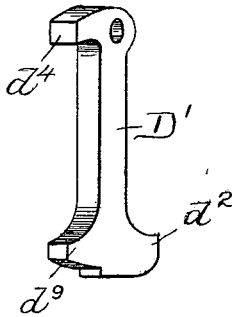



FIG. 6.

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# UNITED STATES PATENT OFFICE.

GUSTAF HERMANSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO JAMES MUNTON, OF MAYWOOD, ILLINOIS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 646,172, dated March 27, 1900.

Application filed October 10, 1898. Serial No. 693,113. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAF HERMANSON, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to automatic car-couplers.

The object of my invention is to provide a car-coupler of a simple, efficient, and durable construction having the customary automatic gravity-lock and in which the gravity-lock is prevented from working upward or "creeping" or climbing upward when the cars are coupled under the combined intermittent action of pulling strains and the up-and-down vibrations of the car when in motion, which in the couplers heretofore in use occasionally results in the uncoupling of the cars of a train in motion and serious accidents.

My invention consists in the means I employ to accomplish this result—that is to say, it consists in the combination, with the draw-head and pivoted knuckle, of a vertically-sliding gravity-lock adapted to be moved up and down in a suitable passage-way in the draw-head and provided with a movable latch or stop adapted to project out and engage a wall of the draw-head when the coupler is in the closed position, and thus prevent the lock positively from working upward or creeping, and which movable stop or latch is adapted to shut within the passage or hole in the draw-head in which the lock fits to permit the lock to be raised by the movable lifting-pin, which engages the movable stop or latch when the lock is lifted to uncouple the cars.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and specified in the claims.

In the accompanying drawings, forming a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a vertical longitudinal section of a car-coupler embodying my invention. Fig. 2 is a horizontal section. Fig. 3 is a cross-section through the lock, and Figs. 4, 5, and 6 are detail perspective views of the lock.

In the drawings, A is the forked draw-head, B the pivoted knuckle, and C the pivot-pin, of the car-coupler, these parts being of any ordinary, customary, or desired construction.

D is the vertically-sliding automatic gravity-lock, the same moving up and down in a suitable passage-way or hole $a$ in the draw-head.

D′ is a movable latch or stop with which the lock D is provided, the same being preferably pivoted thereto near the upper end of the lock in a suitable chamber $d$ by the pivot $d'$. The stop or latch D′ or its operative projection $d^2$ extends out through a suitable opening $d^3$ in the lock when the coupler is closed and engages a ledge or wall $a^2$ of the draw-head, and thus positively prevents the lock from creeping or working upward. The latch or stop D′ is positively held in this locked position by the lifting pin or block $D^2$, which fits within the chamber $d$ of the lock and fills out the chamber to the full size of the lock, the back of the lifting-block bearing against the wall of the passage-way in the draw-head. The movable stop or latch D′ is provided at its upper end with an angle-arm or projection $d^4$, which is engaged by a ledge or projection $d^5$ on the lifting pin or block $D^2$, so that when the lock D is lifed by the lifting block or pin $D^2$ the first operation will be to turn the movable stop or latch D′ on its pivot, and thus withdraw its projection $d^2$ within the face of the lock D, so that the lock can be readily lifted to permit the knuckle of the coupler to open. The lock D is provided with rounded projections $d^6$ to receive the rounded socket $d^7$ on the lifting block or pin $D^2$. The lock or pin D is also provided with a slot $d^8$, which is engaged by a pin or projection $a^3$ to prevent the lock being raised too high or lifted entirely out. The lifting pin or block $D^2$ is also provided at its upper end with the customary eye $D^3$ to connect with the chain and lifting-lever.

To cause the latch or stop D′ to be positively forced out into its locking position, as shown in Fig. 1, I provide it with a cam-shaped projection $d^9$, which is engaged by the lifting-block $D^2$ as it descends to position.

I claim—

1. In a car-coupler, the combination with

a forked draw-head and pivoted knuckle, of a vertically-sliding gravity-lock provided with a movable latch or stop pivoted thereto and adapted to project out and engage the wall of the draw-head when the knuckle is closed and thus prevent creeping of the lock and to withdraw from such engagement to permit the lock to be lifted when uncoupling the cars, and a lifting pin or block $D^2$ having a sliding movement on said lock and adapted to engage said latch to withdraw it from engagement with the draw-head substantially as specified.

2. The combination with the draw-head and knuckle of a car-coupler, of a gravity-lock D, a movable latch or stop D′, pivoted to said lock and having locking projection $d^2$, and operating-arm $d^4$, and lifting pin or block $D^2$ provided with projection $d^5$ engaging the operating arm of the movable latch or stop, substantially as specified.

GUSTAF HERMANSON.

Witnesses:
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