

(No Model.)

W. H. HARRIS.
CAR COUPLING.

No. 481,399.

Patented Aug. 23, 1892.

Fig. 1.

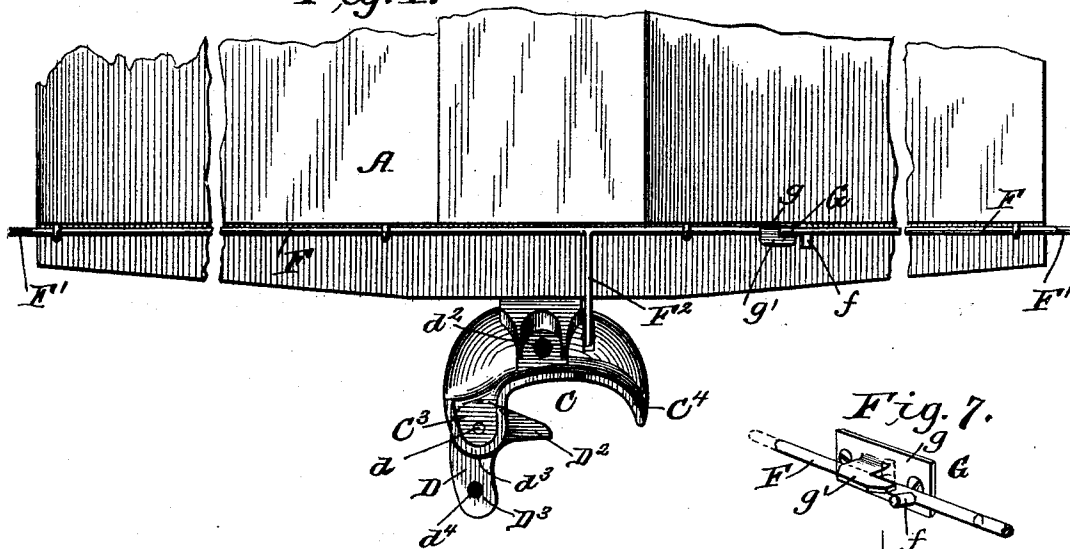


Fig. 7.

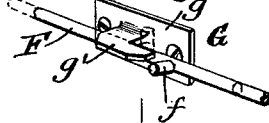


Fig. 2.

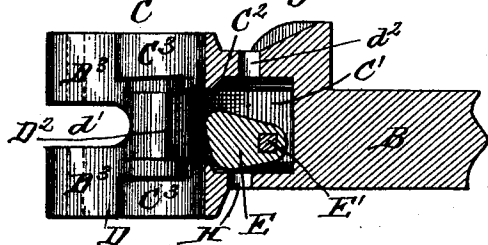


Fig. 3.

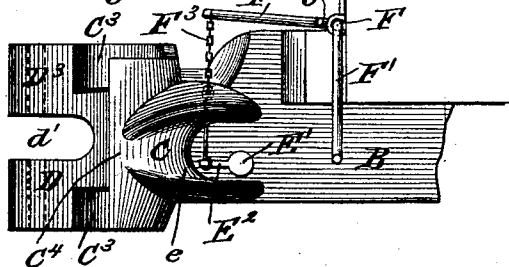


Fig. 4

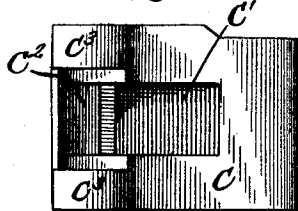
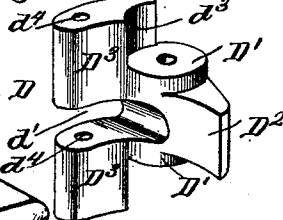


Fig. 5.



c⁴ Fig. 8.

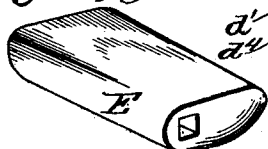
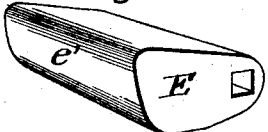


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM HAMILTON HARRIS, OF NEWBERRY, SOUTH CAROLINA, ASSIGNOR
OF ONE-HALF TO AUGUSTUS P. PIFER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 481,399, dated August 23, 1892.

Application filed July 20, 1891. Serial No. 400,165. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HAMILTON HARRIS, of Newberry, in the county of Newberry and State of South Carolina, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

This invention relates generally to car-couplers, and more particularly to that class thereof known as "twin-jaw" couplers, the object of my invention being to provide a coupler of this class that shall be exceedingly simple, consisting of a very few parts, and one in which the coupling-jaws will be automatically and safely locked.

A further object of my invention is to provide means for locking the parts in an uncoupled position.

With these various objects in view my invention consists in the details of construction and combination of parts, all of which will be fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a top plan view of my improved coupler. Fig. 2 is a longitudinal section. Fig. 3 is a side view. Fig. 4 is a front view of the draw-head. Fig. 5 is a detail view of the coupling-jaw. Fig. 6 is a detail view of the catch-block, and Fig. 7 is a detail view of the latch mechanism. Fig. 8 is another detail view of the catch-block.

Referring to the drawings, A indicates the end of a car to which my improved coupler is attached, said coupler comprising the draw-bar B and draw-head C, the bar being constructed and attached to the car in the usual manner. The draw-head C is provided with a central cavity C', and communicating with the same is a side recess C². Forwardly projecting bearing-plates C³ C³ are produced upon the forward face of the draw-head, upon the side adjacent to the recess C², the opposite side being formed with the curved abutting guiding vertical shoulder C⁴. The bearing-plates C³ C³ are apertured vertically and between the said plates is pivoted the coupling-jaw D, said jaw being pivoted upon the bolt d, passed vertically through the bearing-plates and said jaw. The coupling-jaw D comprises a central cylindrical bearing portion D', an inwardly-projecting lock-

ing-arm D², and the coupling-arms D³ D³, arranged at approximately right angles to the locking-arm, the arms D² and D³ being constructed integral with the central portion D', the arms D³ D³ being disposed above the said portion D', thus leaving a space d' for the passage of a link when my improved coupler is used in connection with an ordinary pin-and-link coupler, and to enable my coupler to be used in this manner I provide a vertical passage d² in the draw-head, passing through the cavity C' in the usual manner. The inner ends of the arm D³ D³ are cut away, as at d³, to receive the bearing-plates C³ C³, and the locking-arm D² is shaped to fit the side recess C² when the parts are arranged in a coupled position. The jaw D is also provided with a pin-passage d⁴, through which a pin is passed to secure a link passed between the arms D³ D³. A gravity-catch or locking-block E is arranged in the cavity C', said block being adapted to drop forward and lock the arm D² within the recess C², thus holding the parts in a coupled position. The catch or locking-block E is pivoted at its lower end near the rear end of the cavity, the said block being of peculiar construction, as shown in Fig. 6, and is mounted upon the shaft E', one end of said shaft projecting without the draw-head, and at its outer end is provided with a crank-arm E², the side of the draw-head being cut away, as at e, to permit the movement of said arm E². The rear face of the block is made flat, as shown, while the forward face has an eccentric shape, as shown at e', the end adjacent to the arm D² being cut away to permit the withdrawal of said arm from the recess when the block is drawn up and back in the cavity C', thus permitting the uncoupling of the jaws and also permitting the entrance of the locking-arm. The opposite end is preferably made flat to rest securely upon the bottom of the cavity C'.

In order to operate the catch or lock block, I employ a rock-shaft F, attached to the end of car, said shaft preferably extending entirely across the car, whereby the cars may be uncoupled from either side of the car.

Handles F' F' are arranged upon the ends of the rod, and intermediate the ends adjacent to the crank-arm is arranged an arm F²,

said arms F^2 and the crank-arm E^2 being connected by a chain F^3 , said chain passing through an opening made in the side of the draw-head, as clearly shown. A latch G is
 5 attached to the end of the car, said latch consisting of a bearing-plate g and a right-angled latch-plate g' . A latch-pin f is attached to the rock-shaft adjacent to the latch G , said pin being adapted to engage the angled latch-
 10 plate g' , thereby holding the parts in an uncoupled position, the rock-shaft having a longitudinal movement, and the pin f is so arranged that it will only engage the latch-plate when the block is elevated.

15 In operation the coupling-jaw is thrown forward, bringing the coupling and locking arms outward from the draw-head. The catch-block rests normally upon the bottom of the cavity. When two cars are brought to-
 20 gether to effect a coupling, the coupling-arm of one car will contact with the locking-arm of the opposite car. Each locking-arm will thus be moved inward toward its respective catch-block and the coupling-arms will move
 25 inwardly to engage each other. As the locking arms contact with the cut-off end of the catch-block said block is moved up, permitting the passage of the locking-arm into the recess C^2 . The block then drops by gravity
 30 and locks the arm in said recess and thus holds the coupling-arms in engagement with each other, effecting a safe coupling. In order to uncouple, the shaft is rocked, elevating the block, and if it be desired to lock the
 35 block in this position the shaft is moved lon-

gitudinally to set the pin behind the latch-plate. In case the block-lifting mechanism should become inoperative, I provide the draw-head with an opening H directly beneath the said block, whereby a rod or stick
 40 can be inserted and moved upward to elevate the block and thus release the jaw.

Having thus described my invention, what I claim as new is—

1. The combination, with the car, of the 45 longitudinally-movable rock-shaft journaled at the end of same, the laterally-projecting pin attached to said rock-shaft, the plate secured to the car, and the angular catch attached to the said plate, adapted to receive 50 the pin on the shaft and thereby hold said shaft in a raised position, substantially as shown and described.

2. The combination, with the draw-head having a central cavity and side recess, of 55 the coupling-jaw having a coupling and locking arm, the faces of said locking-arm being vertical, the latch-block pivoted near its lower rear end within the central cavity, the forward end of said block being wider than 60 the rear end, the forward face being cut away adjacent to the side recess, the rock-shaft, upon which the block is mounted, and means for operating said shaft, substantially as shown and described.

WILLIAM HAMILTON HARRIS.

Witnesses:

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