(No Model.)

J. N. MARTIN & W. H. HARRIS.

CAR COUPLING.

No. 428,119. Patented May 20, 1890.

Fig. 1.

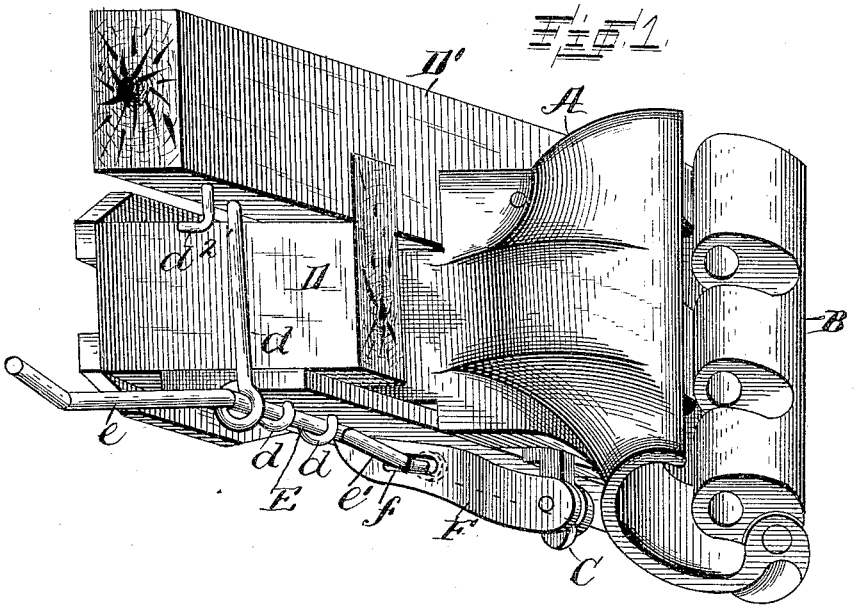
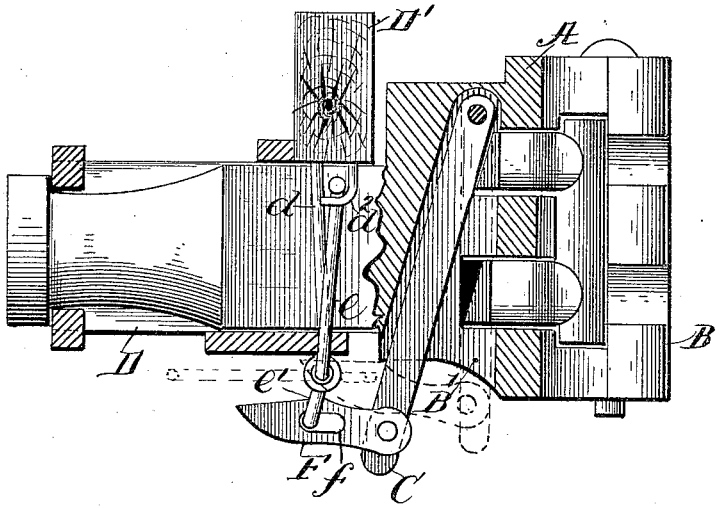


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES NEWTON MARTIN AND WILLIAM HAMILTON HARRIS, OF NEWBERRY, SOUTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 428,119, dated May 20, 1890.

Application filed March 3, 1890. Serial No. 342,336. (No model.)

To all whom it may concern:

Be it known that we, JAMES NEWTON MARTIN and WILLIAM HAMILTON HARRIS, citizens of the United States, residing at Newberry, in the county of Newberry and State of South Carolina, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In Patents Nos. 372,037 and 398,523, granted to us October 25, 1887, and February 26, 1889, and in application for Patent, Serial No. 333,965, filed in the United States Patent Office by us on December 16, 1889, we have shown certain forms of car-couplings consisting of a draw-bar having a hook pivoted therein and provided with a latch pivoted in the draw-bar above the path of the shank of the hook, the said latch, when drawn backward out of a vertical line, permitting the rotation of the hook, and when hanging vertically being in front of the shank thereof and locking it against rotation. Our present invention, therefore, relates to means for operating the latch of such couplers; and for that purpose it consists of a cranked lever attached to the car, and of a link loosely attached to one of the arms thereof and attached to the base of the latch, whereby the coupler is allowed a freedom of movement in relation to the car, which is necessary to avoid shocks and jars, and at the same time the unlocking of the hook by such movement is prevented, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by similar letters, Figure 1 is a perspective view of our invention applied to the framing of a car, the hook being shown locked in place. Fig. 2 is a part section and part side view of our invention, the hook being shown unlocked.

The coupling shown in the drawings has been fully described and claimed in the hereinbefore-mentioned application; but for the purpose of rendering the construction of our invention more clear we will describe the parts essential to the use of our present invention therewith.

A is a draw-bar, which may be mounted in a cradle D, attached to the end framing D′ of the car, the draw-bar having a longitudinal motion in the said cradle, which may be controlled by springs, if desired, as is well known. A coupling-hook B is pivoted in the head of the said draw-bar, having its shank inclosed therein, while a latch C is pivoted in the top of the draw-bar over the path of the said hook, and swinging within vertical longitudinal slot B′ therein passes through the bottom thereof, the latch having a forward-and-backward motion, whereby it may be swung out of the path of the shank of the hook or by which it may be swung in front thereof, and it is to operate this latch and impart to it the desired motion that is the object of this invention, and for which purpose the following mechanism is used.

In stanchions *d*, supported by the end framing D′ and the cradle D, is carried a double-cranked lever E, free to revolve therein, and whose longer arm *e* projects near the side of the car, while its shorter arm *e′* lies substantially in the center thereof under the draw-bar, the two arms projecting from the opposite sides of the lever. A link F is pivotally attached to the base of the pivoted pendent latch C, and is loosely connected to the central arm *e′* of the crank-lever, the said arm passing through the slot *f* in the rear portion thereof. By this means the coupling is permitted a longitudinal movement in relation to the car without causing the hook to become unlocked by the latch being swung backward, the slot *f* affording the necessary play between the latter and the lever, which is attached to the immovable framing of the car. It will also be seen that while the cars may be readily uncoupled by moving the outer end of the arm E upward and forward against the stop d^2 on the frame of the car in front of the vertical plane of the pivoting-points of the lever E, causing the parts to assume the position shown in full lines in Fig. 2, and withdrawing the latch backward, if the handle or arm *e* is thrown down, the parts will assume the position shown in Fig.

1 or in dotted lines in Fig. 2, and as it is impossible, on account of the link, for the latch to be swung back without causing the arm e' to swing downward and causing the arm e to raise, moving the whole crank-lever, and as the latter arm, from its greater length, is the heavier of the two an accidental uncoupling from ordinary jars or shocks is avoided, a considerable power being required to swing the latch backward.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination, with a draw-bar capable of longitudinal movement in relation to the car, having a pivoted hook and pendent latch therein, of a crank-lever attached to the car, and a link attached to the said latch and having a slot in its rear end, through which one of the arms of the said crank-lever passes, as described.

2. In a car-coupling, the combination, with a car-framing having a cradle on the end thereof, of a draw-bar longitudinally movable in said cradle, a pivoted hook and pendent latch pivotally mounted in the said draw-bar, a crank-lever having opposite arms of unequal length attached to the framing of the car, the shorter of the said arms being underneath the said draw-bar, and a link pivotally connected to the base of the said latch and having a slot in its rear end, through which passes the shorter arm of the said crank-lever, as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES NEWTON MARTIN.
WILLIAM HAMILTON HARRIS.

Witnesses:
JAS. K. D. GOGGARY,
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