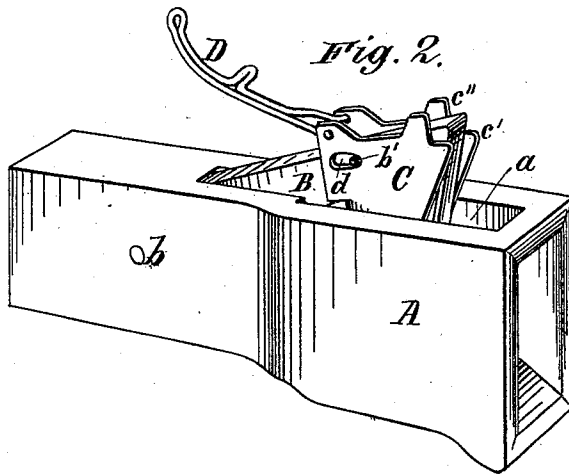
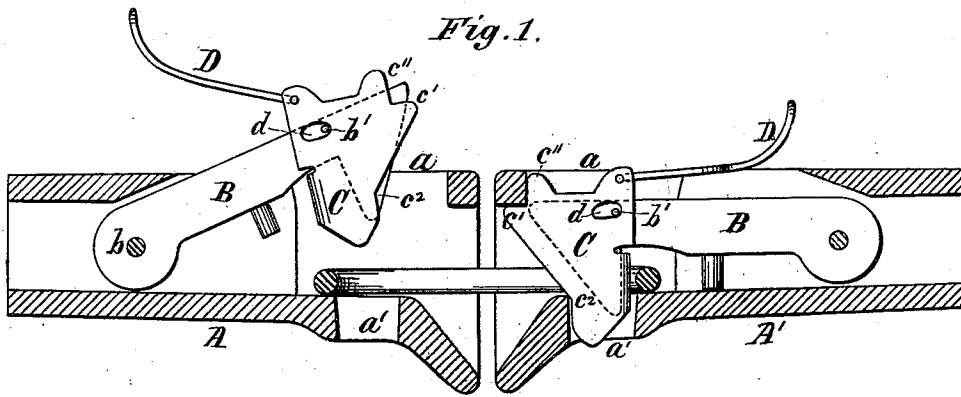


S. D. UCKER.
CAR-COUPLING.

No. 177,035.

Patented May 2, 1876.



Witnesses:
Alexander Mahon
John E. Kenter.

Inventor:
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UNITED STATES PATENT OFFICE.

SAMUEL D. UCKER, OF CIRCLEVILLE, OHIO.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 177,035, dated May 2, 1876; application filed April 15, 1876.

To all whom it may concern:

Be it known that I, SAMUEL D. UCKER, of Circleville, county of Pickaway, State of Ohio, have invented certain new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 represents a vertical section through two draw-heads, showing the arrangement of the coupling devices; and Fig. 2 is a perspective view of one of the draw-heads with the coupling-latch raised.

Similar letters of reference denote corresponding parts in both figures.

My invention relates to a novel construction and arrangement of self-locking plate or block, in combination with a pivoted coupling-latch, whereby, when said coupling-latch is dropped into position for holding the link, the locking plate or block is made to lock the coupling-latch automatically, thereby preventing the cars from becoming accidentally uncoupled, and also to take the strain or draft of the coupling-link, as hereinafter explained.

In the accompanying drawing, A A' represent two draw-heads, which may be of the usual construction, adapting them to employ the link in common use, and provided with the usual flaring mouth, adapted to receive and guide said link to place. The upper wall of this hollow draw-head has an elongated slot, *a*, cut through it, and within this slot is placed a stout hook or latch-bar, B, pivoted at its inner end in the draw-head by a transverse horizontal pivot at *b*, upon which the bar B is free to rise and fall within certain limits in the slot *a*. The outer swinging end of the pivoted bar B is, by preference, made in the form of a pendent hook or latch, (indicated by the dotted lines, Fig. 1,) and surrounding, or partially surrounding, this hook or latch end is a strong metal latch or plate, C, bent into U shape, the vertical closed portion of said plate forming the part engaging the link, as shown. The outer face or open end of this plate or block C is cut away at its upper corner, forming a notch or shoulder, *c'*, from which said outer face is made to recede downward to a point, *c*², forming an inclined

face, against which the link acts for automatically raising the latch in coupling the draw-heads. The part of the plate or block C extending below the point *c*², when the block is in position, passes through a slot, *a'*, in the lower wall of the draw-head, and the forward face of the block below said point *c*² is made more nearly vertical, adapting it to rest against the forward wall of slot *a'*, and thus to form one of the points of support of said block or latch against the strain or draft of the coupling-link. When in this position, the shoulder *c'* passes underneath the upper wall of the draw-head in front of the slot *a*, and the vertical shoulder *c''* is drawn against the forward wall of said slot, and serves as another point of support to the block or latch against the strain of the link, while the shoulder *c'*, passing under the upper wall of the draw-head in advance of the slot *a*, as explained, effectually locks the block or latch C in place when under tension. The locking block, latch, or plate C, thus constructed, is connected with the pivoted bar or latch B by a transverse pin, *b'*, arranged in rear of the center of gravity of the block, and passing through horizontal or slightly-inclined slots *d* in the sides of the bent plate C, at or near its rear upper corner. The upper wall of this slot *d* is inclined or curved downward toward the front or outer end of the draw-head, as shown, in such manner that when the latch-block C is dropped into position for holding the coupling-link its gravity will cause it to ride forward on the pivoting-pin until the shoulder *c'* passes under the draw-head, as explained, and locks it in place, and the weight of the block, in connection with the inclined or curved face of the slot, as described, serves to hold it there when it is not held by the link under tension.

For withdrawing the locking block or latch, it is provided at its rear upper corner with a pivoted link, bail, or handle, D, by means of which the attendant can draw the block or latch C back out of engagement with the draw-head, when, by lifting on the link or handle, the pivoted bar B rises and lifts the block or plate C out of the link, uncoupling the draw-heads.

The handle D may, if desired, be connected with a cord running up over a guide-pulley,

and thence to the side of the car, if desired, for convenience in uncoupling the cars; or any other suitable arrangement of devices may be used in connection with the pivoted latch-bar B and locking-latch C, for withdrawing them, as described.

In coupling two cars together, the link is supposed to have been placed in one of the draw-heads, and is supported thereby in a position sufficiently near horizontal to permit the free end to enter the flaring mouth of the opposing draw-head, and said end, striking the forward inclined face of the latch-block C, forces said block backward until it is out of lock with the draw-head, when the latch-bar B is free to rise, forced upward by the action of the link on the inclined face of latch C, until the latter passes over the end of the link, when the latch-bar descends, and the latch drops into the link, and into its locked relation to the draw-head, as before, effectually locking the draw-heads together, until released again in the manner explained.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the draw-head of a car, of the pivoted latch-bar, B, and pivoted locking plate or latch C, arranged and operating substantially as described.

2. The locking plate or latch C, secured to the pivoted latch-bar B, and provided with the shoulders c' c'' c^3 , for locking said plate in position and sustaining the draft of the coupling-link, as described.

3. The pivoted latch-bar B and pivoted sliding locking plate or latch C, in combination with the link or handle D, for withdrawing the latch, and permitting the latch-bar to be raised for releasing the latch, as described.

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Witnesses:

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