

(No Model.)

S. P. & J. M. CHANDLER.
CAR COUPLING.

No. 295,349.

Patented Mar. 18, 1884.

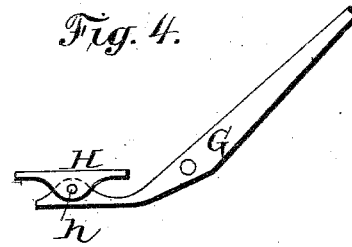
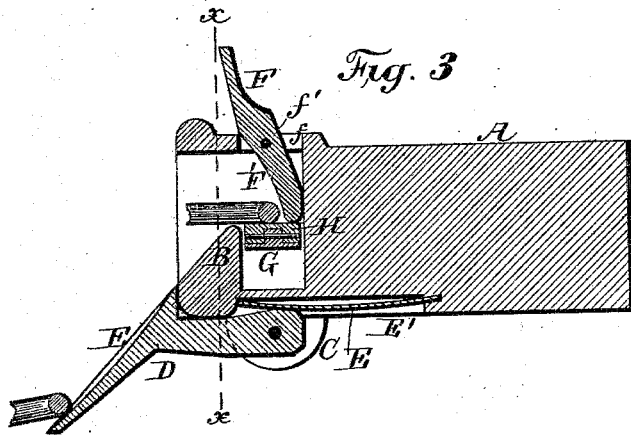
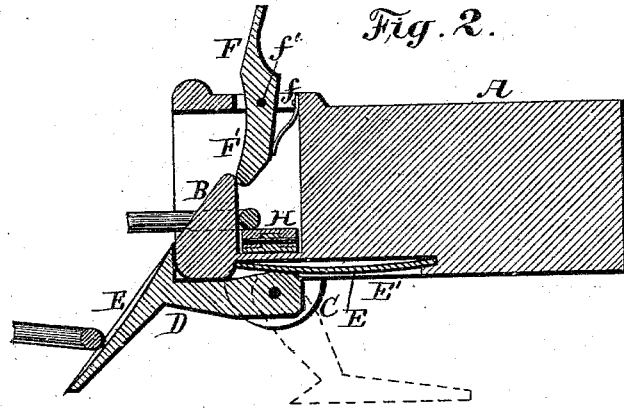
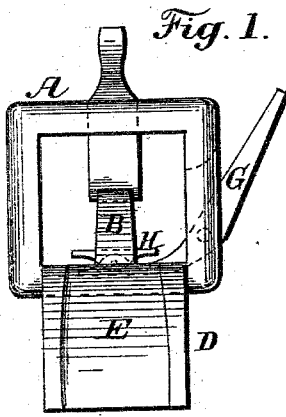
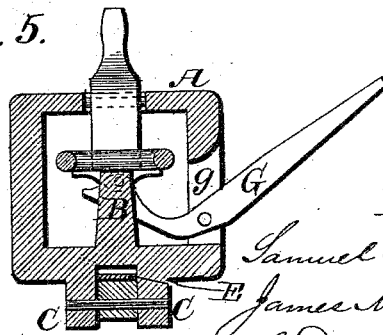


Fig. 5.



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UNITED STATES PATENT OFFICE.

SAMUEL PARROTT CHANDLER AND JAMES MALLORY CHANDLER, OF
LYNCH'S LAKE, SOUTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 295,349, dated March 18, 1884.

Application filed June 28, 1883. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL PARROTT CHANDLER and JAMES M. CHANDLER, citizens of the United States, residing at Lynch's Lake, in the county of Williamsburg and State of South Carolina, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

Our improved coupling is especially adapted for freight-cars; and the improvement consists in the combination of a draw-head provided with an interior fixed catch, sloping rearward and upward from the bottom front edge thereof to receive the link, with a link-guide pivoted to the under side of the draw-head, and forming a prolongation of the inclined front of the fixed catch, whereby the link is received upon the pivoted guide and directed upward and over the fixed catch to effect the coupling. This construction is well suited for coupling cars of different height and for directing the link in the coupling action, although its position may bring its coupling end below the mouth of the draw-head. This combination, in effect, serves to practically extend the fixed sloping catch into a pivoted guide part for receiving and directing the link upon it, and renders the coupling automatic without regard to the position of the link, thus avoiding the use of devices for lifting the link in position for coupling and the use of the coupling-pin.

For uncoupling the link, a bent lifting-lever is pivoted in the side of the draw-head, and, extending into the mouth thereof behind the fixed catch, is provided with a plate pivoted to its inner end upon which the inner end of the link-rests, and by which it is raised in a level position to allow it to pass over the fixed catch. This leveling-plate is pivoted in the middle of its length to the upper side of the lever, and in depressing the outer end of the lever the pivoted plate will, by reason of the weight of the link, be raised in a horizontal position at right angles to the length of the link, and thus prevent it from canting sideways, but raise it level and in proper position to clear the upper end of the fixed catch. For locking the link within the draw-head, a lever is pivoted in the top of the draw-head,

and, extending into the mouth thereof, bears against the rear upper edge of the fixed catch, and prevents the link escaping over the catch so long as the lever remains in its normal position.

Referring to the drawings, which represent a draw-head of a car constructed with our improvement, Figure 1 represents a front view, with the link removed; Fig. 2, central longitudinal sectional elevation, showing the link in position; Fig. 3, the same, showing the link as raised in position to be removed from the mouth of the draw-head in uncoupling, and also showing the link as just striking the lower edge of the guide and about to ride up the same. Fig. 4 is a detail enlarged view of the link-lifting lever with its pivoted plate, and Fig. 5 a cross-section on the line *x x* of Fig. 3.

A is the draw-head, with the usual or any approved form of flaring mouth, having cast or formed as a part thereof at the front bottom portion of the mouth a hook or catch, B, and at the bottom lugs or ears C, pivoted between which is the link-guide D, which consists of a broad, flat front portion, E, which extends from the lower front edge of the mouth of the draw-head in a slanting direction outward and downward on the same plane with the front inclined edge of the catch B.

Arranged beneath the end of the stem D of the link-guide, in a slot or recess, E', formed in the bottom of the draw-head, is a plate-spring, E, which, pressing against the end of the link-guide, holds it in proper position.

F is the lock or stop to prevent the accidental escape of the link above the catch after it has once passed over the same, pivoted in a slot, *f*, in the top of the draw-head, and having an enlarged weighted end, F'. The pivot *f'* of this link-stop is arranged slightly out of a vertical line above the inner vertical face of the catch B, so that the lower end of the stop will always rest against the edge of the catch, as shown in Fig. 2, and thereby prevent the escape of the link past the same. A spring, *f*", may be used for this purpose.

G is the link-raiser, pivoted in a slot, *g*, in the side of the draw-head, and extending into the mouth thereof behind the fixed catch. At the inner end of this link-raising lever is piv-

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oted a platform or plate, H, having a free oscillating movement on its pivot *h*, for the purpose as will hereinafter appear. The face of the link-guide D and the front edge of the fixed catch B being on the same inclined plane, the guide in effect, therefore, forms a prolongation or extension of the catch, and is turned back out of the way—made to fold, to prevent injury to the parts when the cars come together. By reason of the pivoted platform H on the end of the link-raising lever G, the link is, while being raised, held in a proper horizontal position for clearing the hook without catching either of its sides in the end of the catch, which it would do were the end of the lever rigid.

The link-guider is made to fit close against and around the lower front edge of the draw-head, and is pivoted, as before explained, so as to permit it to be turned back as the cars come close together, and thus prevent injury to the same, as in Fig. 2. The spring E holds the guide in position after being forced back.

By reason of the long forward extension of the flaring mouth of the draw-head, resulting from the guide D, a high and low car may be coupled automatically together, and entirely without the necessity of handling the coupling-link to guide the same, this being accomplished by reason of the end of the link coming against the face of the guide and thus directed upward and over the hook, behind which it drops and effects the coupling of the cars. Should the forward movement of the cars continue, the ends of the guides on opposing cars coming together, they are caused to turn back, thus preventing injury to the same.

To uncouple the cars, the stop-lever F is pushed forward with one hand, while at the same time the link-raising lever G is pressed downward, which carries the link upward and permits it to escape over the catch.

The parts of the herein-described coupling being few, they may be made strong and durable; and because of the operating parts being mainly inclosed within the mouth of the draw-head, they are in a measure protected from accumulated ice and snow.

Separately, the catch of the draw-head over

which the link hooks in coupling the cars, and the link-guide hinged to the draw-head and extending in a downwardly-inclined position from the lower edge of the draw-head mouth, to guide the link into the draw-head, are old; but the combination of these two devices for the purpose described gives important advantages in their co-operation in coupling cars of different height without the use of the coupling-pin.

We claim—

1. The combination, in a car-coupling, with a draw-head having a fixed vertical rearwardly-inclined catch, of the hinged link-guide extending outward and downward from the lower front edge of the mouth of the draw-head, and on the same plane with the front edge of the catch, as hereinbefore described.

2. The combination, in a car-coupling having the fixed vertical rearwardly-inclined catch, of the link-lifter having a pivoted oscillating plate for lifting the link above the end of the catch and holding it in a straight position to effect this movement, as described.

3. The combination, in a car-coupling, with the draw-head formed with the fixed vertical rearwardly-extending catch or hook, of the link-guide adapted to be turned back out of the way, and the locking lever or catch resting against the top end of the hook to prevent the escape of the link, as described.

4. The combination, in a car-coupling, with the draw-head formed with a fixed vertical rearwardly-inclined catch or hook, of the pivoted link-guide on the same plane with the catch or hook, locking-lever pivoted at the top of the draw-head, and the link-raising lever, with pivoted oscillating plate pivoted at the side of the draw-head, as herein described and shown, for the purposes specified.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

SAMUEL PARROTT CHANDLER.
JAMES MALLORY CHANDLER.

Witnesses:

S. M. ASKINS,
E. F. DOUGLAS.