R. B. POTTER.
Car-Coupling.

No. 212,743. Patented Feb. 25, 1879.

Fig. 1

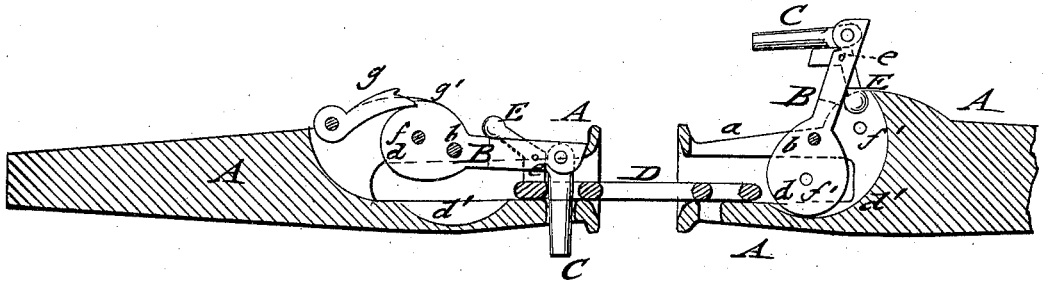


Fig. 2

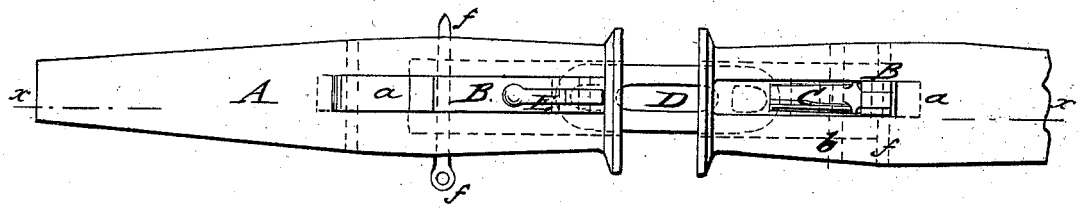
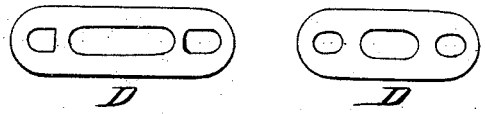


Fig. 3



WITNESSES:
C. Neveux
C. Sedgwick

INVENTOR:
R. B. Potter
BY Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

REUBEN B. POTTER, OF KANSAS CITY, MISSOURI.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **212,743**, dated February 25, 1879; application filed August 26, 1878.

To all whom it may concern:

Be it known that I, REUBEN B. POTTER, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Car-Coupling, of which the following is a specification:

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved car-coupling on line *x x*, Fig. 2, showing it, respectively, in coupled and uncoupled position. Fig. 2 is a top view of the same; and Fig. 3, a top view of the coupling-link as employed, respectively, for freight and passenger cars.

Similar letters of reference indicate corresponding parts.

This invention has reference to an improved coupling for passenger and freight cars, which establishes their connection in an automatic and reliable manner, and dispenses with the danger incident to the going in between the cars for holding the link; and the invention consists of a draw-head with a longitudinal top slot and a fulcrumed gravity-arm, that swings therein and is guided by an arc-shaped bottom recess of the draw-head.

The gravity-arm carries at the upper end the pivoted coupling-pin, and drops the same into the link when the latter enters the draw-head and strikes against the circular bottom part of the swinging arm. The gravity-arm and pin are locked into coupled position by a cross-pin passing through holes of the draw-head and arm, or by a drop-pawl entering teeth of the gravity-arm. The coupling-link is held in horizontal position in the draw-head by a gravity hand-pin of the arm that bears on the head of the link.

Referring to the drawings, A represents a draw-head of the usual construction, with curved or tapering mouth and interior cavity for the link. In a longitudinal center slot, *a*, at the top of the draw-head, swings a gravity-arm, B, that is fulcrumed to a cross-pin, *b*, and made of circular shape at the lower part. The circular part *d* is guided during its swinging motion along an arc-shaped bottom recess, *d'*, of the draw-head, which recess corresponds to the shape of the lower part, *d*, of the gravity-arm. The coupling-pin C is pivoted to the outer end of the gravity-arm B, and supported when the arm is in a raised or uncoupled position by shoulders *e* at such an angle thereon that when the arm swings down for coupling the pin passes in reliable manner through the coupling-link D and the pin-hole in the bottom of the draw-head.

The link D is made with a longer opening at the middle part and smaller openings near the heads or ends. For passenger-cars the size of the middle opening is made shorter, so as to couple the draw-head closer and with less slack, while for freight-cars the middle opening or slot is made longer. The pin of one draw-head passes through one of the smaller openings near the head, while the pin of the opposite draw-head, into which the link enters on its approach, is dropped into the longer middle slot, as appears clearly in Fig. 1. The coupling-link is retained in horizontal position for coupling by a gravity hand-pin, E, which is fulcrumed to the arm B near the pivot of the coupling-pin, and made of angular shape, with an enlarged and weighted head. By swinging the head of the hand-pin E back over the gravity-arm, the lower part projects below the same and bears on the head of the coupling-link, and retains it thereby in proper position for coupling. By throwing the ball-shaped head of the hand-pin forward the coupling-pin admits the free vibration of the triple link, so as to couple any draw-head in use, whatever be the height of the same.

The coupling of the draw-head is accomplished in an automatic manner by the entrance of the link into the draw-head and its contact with the lower circular part of the gravity-arm, which is thereby swung down so that the coupling-pin drops through the link. The coupled position of the link by the gravity-arm is secured in freight-cars by a cross-pin, *f*, passing through registering holes *f'* of the draw-head and gravity-arm; and in passenger-cars by a pawl, *g*, that drops into ratchet-teeth *g'* of the circular part of the gravity-arm, as shown in Fig. 1.

The uncoupling of the draw-head is accomplished by a rope or chain attached to the gravity-arm in connection with any suitable uncoupling mechanism operated either from the top, side, or platform of the car. The locking pin or pawl has to be withdrawn first be-

fore the gravity arm and pin can be uncoupled. The coupling is of simple construction, and accomplishes the different operations—such as coupling the link, holding it in proper position for coupling, and locking the coupling-pin in coupled position—in reliable and effective manner.

In some cases, especially in switching off freight-cars, it may be desirable to hold the gravity-arm or pin in such a position as not to couple with the link. This is accomplished by throwing the pin over the top of the draw-head, or passing the cross-pin through the holes of the draw-head above the circular part of the gravity-arm. In either case the circular part of the gravity-arm is not acted upon by the entering link, so that the pin is prevented from coupling.

When the pivot-pawl is employed in place of the cross-pin, the pawl is thrown forward by the concussion of the draw-heads and locked to the gravity-arm, so as to make the coupling and locking entirely automatic.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the draw-head A, having slot *a* and recess *d'*, of the swinging arm B, fulcrumed to cross-pin *b*, having cam at lower end, pivoted pin at upper end, and weighted angle-arm E, pivoted near the coupling-pin, as shown and described.

REUBEN B. POTTER.

Witnesses:
J. T. SHANNON,
J. A. DARBY.