

(No Model.)

L. H. HARRIS.
CAR COUPLING.

No. 383,729.

Patented May 29, 1888.

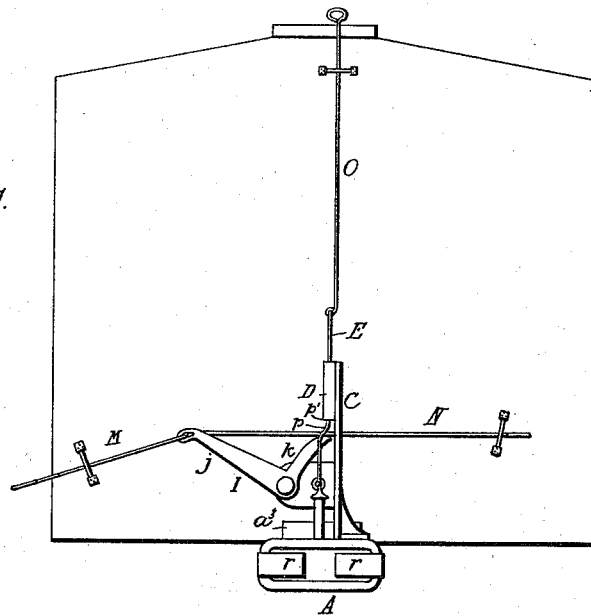
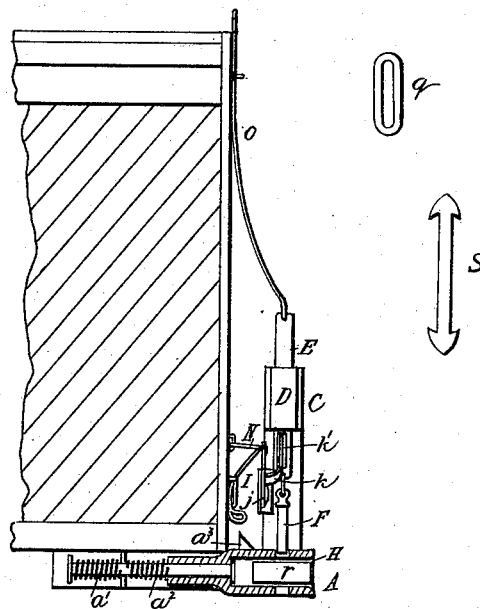


Fig.2.



Witnesses.

Wm. Horton
A. C. Rawlings.

Inventor.

Lorenzo H. Harris.

By his Attorneys

John J. Kalsted & Son

UNITED STATES PATENT OFFICE.

LORENZO H. HARRIS, OF AURORA, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 383,729, dated May 29, 1888.

Application filed March 27, 1888. Serial No. 268,602. (No model.)

To all whom it may concern:

Be it known that I, LORENZO H. HARRIS, of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention consists in a special construction and combination of devices, as will hereafter fully appear.

Figure 1 is a front view of my invention as applied to a freight-car; Fig. 2, a side view of the same partly in section.

This invention is designed to effect the coupling automatically by the mere jarring or jolting of the cars as they are brought together, and to permit an attendant to uncouple them, either from the top of the car or from either side of the car, without the need or risk of going between them.

A is the draw-head, having a wide mouth, and provided with appropriate springs, a' a'' , and with a stop-piece, a^3 , to limit the range of its backward movement. On any suitable projection or support, or upon the upper side of this draw-head, I erect a post or standard, C, having suitable guides, D, through which a slide, E, may have a limited vertical movement sufficient to lift up the coupling bolt or pin F, which is directly attached to it at its lower end, but not sufficient to raise this pin entirely out of the hole H in the draw-head. This provision against lifting the pin out free of the hole insures it from any liability of getting displaced or misplaced, and leaves it always in proper vertical position for coupling after the cars have been uncoupled and separated.

I is a bell-crank lever, one arm, j , of which is longer and heavier than its other arm, k , and thus serves as a weighted lever when not in an upright position; but when in such upright position its weight bears directly downward on its fulcrum-pin, and it ceases to act as a lever. Its arm k projects into a slot, k' , made in the slide E, and the arm j is connected to a

rod, M, and the pulling of this rod by an attendant at the left side of the car lifts the pin and the weight of arm j ; then asserts itself to keep the pin in its raised position, it being understood that when lifted its lower end still remains in the pin-hole, but not projecting into the cavity of the draw-head, or at least not enough to detain any coupling link or bar used to hold two cars together. A similar but longer rod, N, is connected to this same arm j , and extends to the right side of the car, where, by pushing it, (when the pin is down,) it also will cause the crank-lever I to lift the pin to set free any coupling link or bar. A third rod, O, extending from the top of the slide E to the top of the car, so that an attendant may operate it from the top, pulls this rod and lifts the bolt or pin and operates the crank-lever by the upward movement of the slide, and thus the weight of this lever, in the same manner as previously stated, holds up the pin. The action and result, it will be seen, are the same whether the lever be actuated from one side of the car or from the other side or from the top. A stop or bend, p , in the slide E limits the upward movement of the slide by bringing this stop against one of the eyes, clasps, or guides p' in which the slide plays, and prevents the pin or bolt being entirely pulled out of its pin-hole H. The friction of the parts aids the weighted arm in keeping the pin raised by merely overbalancing the weight of the pin and slide. When, however, the cars are run together, any, even a slight, shock or concussion is sufficient to overcome the weight and permit the pin to drop, and thus to effect the coupling by engaging with any ordinary coupling-link—such, for instance, as shown at q . The mouth of the draw-head is, however, made wide enough to permit of coupling with any other car without reference to the kind of coupling-piece such car may be provided with.

I prefer to provide the side walls of the draw-head with springs r r , extending rearward and toward the center of the draw-head, as shown. This allows of using a solid T-head or arrow-head coupling-bar, pointed at both ends, substantially as shown at S. These springs and this style of hook-bar are designed to permit the coupling of a passenger-coach to

a freight-car when running mixed trains. In such case the coach is supposed to be fitted with the well-known "Miller" coupling, now generally used.

5 The springs *r* do not interfere with using the ordinary coupling-links when the cars of a given train are all of them freight-cars.

These attachments are intended to be used upon and applied to any draw-bars (or draw-
10 heads) that are in use on freight-cars.

I claim—

1. In combination, an upright support or standard, the slide *E*, applied to work thereon,

a coupling-pin attached to said slide, the weighted bell-crank lever projecting into said 15 slide, and the rods *M N O*, all substantially as shown and described.

2. In combination, the slide *E*, with its support and coupling-pin, the bell-crank lever, its operating-rods, and the draw-head having 20 the springs *r r* within its mouth, as set forth.

LORENZO H. HARRIS.

Witnesses:

M. O. SOUTHWORTH,
CHAS. E. WEAVER.