(No Model.)

O. O. WINTER.

CAR COUPLING.

No. 345,608. Patented July 13, 1886.

Fig. 1

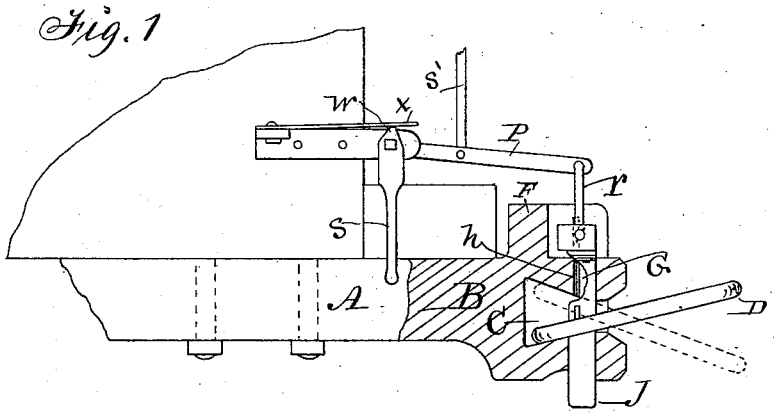


Fig. 2

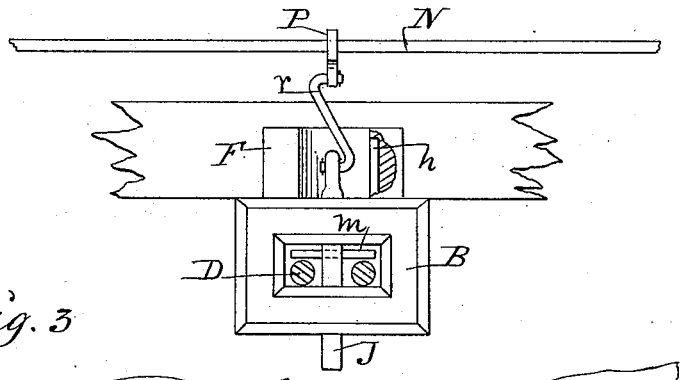
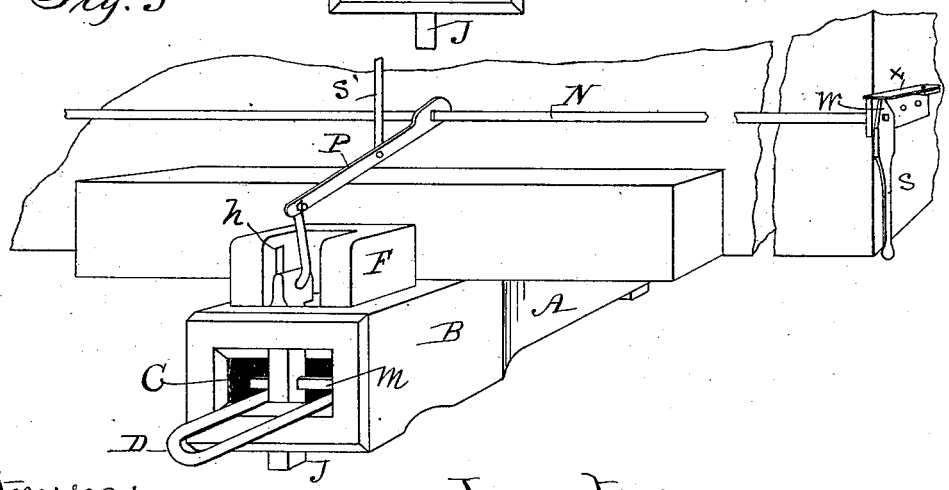


Fig. 3



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UNITED STATES PATENT OFFICE.

OSCAR O. WINTER, OF DES MOINES, IOWA, ASSIGNOR OF ONE-HALF TO FRANK H. PERRY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 345,608, dated July 13, 1886.

Application filed March 29, 1886. Serial No. 197,090. (No model.)

To all whom it may concern:

Be it known that I, OSCAR O. WINTER, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a Safety Car-Coupling, of which the following is a specification.

Heretofore a draw-head has had an inclined floor in the link-cavity and grooves in the sides of a pin-hole, to guide a pin that had lateral projections that entered the grooves and rested upon a link to retain the link at any angle at which it was set by the operator's hand; and to retain the link elevated at its front end above level the pin-hole was inclined to allow the pin to be adjusted backward and forward relative to the link.

My invention consists in the construction and combination of mechanism for adjusting and retaining a link stationary at any angle desired, with a draw-head and car and a pin having lateral projections, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view, Fig. 2 a front view, and Fig. 3 a perspective view, of my invention combined with a section of a car.

A represents the body, and B the head, of a draw-bar adapted to be attached to a car in a common way.

C is a link-cavity that has a floor that inclines downward from the mouth and throat, and a roof that inclines upward from the rear end of the throat in such a manner that a link extended through the throat into the cavity can be retained at any angle desired for the purpose of raising or lowering the end of the link that projects forward from the mouth and front face of the head.

D represents an open link of common form, that can be readily adjusted and retained in the link-cavity by means of the pin and pin-operating mechanism. The mouth of the draw-head is preferably made small, so as to retain more metal in the front end and face of the head, that is subjected to repeated blows in coming in contact with mating draw-heads.

F represents a vertical projection and shoulder on the top of the head, that abuts against the end of the car, or block or buffer fixed to the car.

G is a pin-hole, preferably angular, that extends vertically through the center of the head and intersects the throat or front end of the link-cavity C.

h are vertical grooves in the side faces of the pin-hole.

J represents a pin fitted in the hole G, and provided with a cross-head or lateral projections *m*, that fit into the grooves *h*, and slide up and down therein as the pin is manipulated to adjust the link in the link-cavity.

N is a rock-shaft supported in bearings fixed to the car.

P is an arm formed on or fixed to the center of the shaft N, to project forward over the draw-head. It is flexibly connected with the top of the pin J, by means of a link, *r*, in such a manner that the pin can be raised and lowered thereby as the shaft is rocked, by means of handles *s* on its ends, and outside of the car, or a rod, *s'*, that extends from the central portion of the shaft to the top of the car.

w represents an eccentric or cam on the end of the handle *s*, or formed on or fixed to the end of the shaft N in any suitable way, to be engaged by the free end of a spring, *x*, that is fixed to the car in such a manner that the spring in its normal condition will press upon one of the flat surfaces of the cam, and thereby retain the shaft stationary, as required, to retain the pin J depressed or elevated in the pin-hole G.

To couple two cars that come together on a track by means of a common link carried in my draw-head, I guide the free end of the link into the draw-head of the car that is to be connected by simply rocking the shaft N, to thereby depress or elevate the front end of the link, and retain it at any point of elevation desired by means of the lateral projections *m* of the pin that engage the link and the automatic shaft-holding mechanism, so that I can readily direct the link into the link-cavity of the mating draw-head when the two heads are level with each other, or in different horizontal planes, without going between or reaching between the two cars, and without retaining hold of the lever on the end of the rock-shaft after the link is in proper position; and when the link has entered the mating draw-head I depress the pin J through the link by

corresponding pin-operating mechanism connected therewith, without going between or reaching between the two cars.

To uncouple two cars thus connected, I lift one of the pins by means of the pin-operating mechanism, and let the link escape from the draw-head without going between or reaching between the cars, or incurring any danger or risk to life or limb.

I claim as my invention—

1. In a car-coupling, the combination of a draw-head having the bottom or floor of its link-cavity inclined rearward and downward from its mouth, a vertical pin-hole having grooves in its side faces and intersecting the inclined floor of the link-cavity, and a pin having lateral projections to engage a link of common form, and mechanism for pressing the lateral projections of the pin upon the link to retain the link at any angle desired, for the purposes stated.

2. The draw-bar A, having a head, B, a link-cavity, C, a vertical extension and shoulder, F, a pin-hole, G, provided with grooves *h* in its top portion, and a pin, J, having a cross-head or lateral extensions, *m*, the rock-shaft N, having an arm, P, a rigid link, *r*, the eccentrics *w*, and springs *x*, arranged and combined for the purposes stated.

3. The rock-shaft N, having an arm, P, carrying a pin at its free end, the handles *s*, having eccentrics *w* on their ends, and springs *x*, arranged and combined substantially as shown and described, for the purposes stated.

4. A rock-shaft having handles and eccentrics or cams on its ends, fixed springs to engage the said eccentrics and cams, an arm extending from the rock-shaft and carrying a coupling-pin, in combination with a car, and a draw-head, for the purposes stated.

5. A safety-coupling for cars, composed of the following elements, to wit: a draw-head having a link-cavity that has an inclined floor extending downward and rearward from its throat and mouth, and a pin-hole that has grooves in its side faces, a pin having a cross-head or lateral projections, and pin holding and operating mechanism to operate in the manner set forth.

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