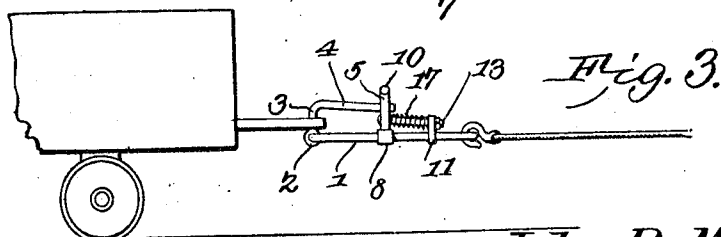
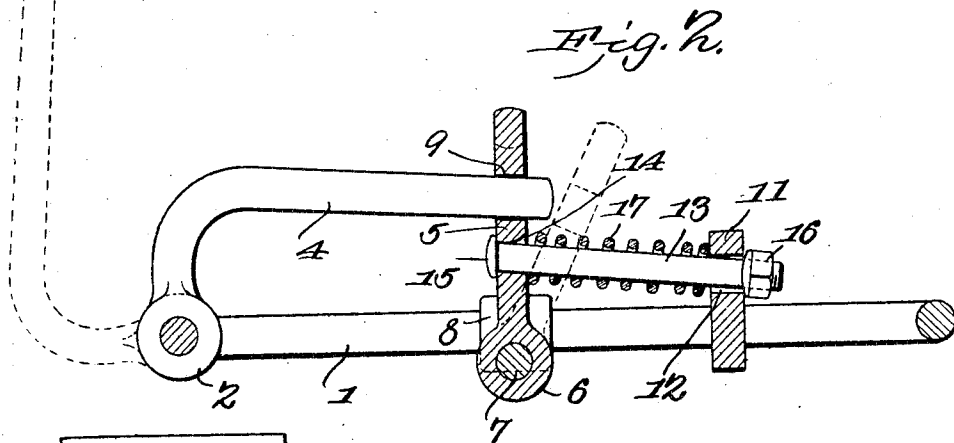
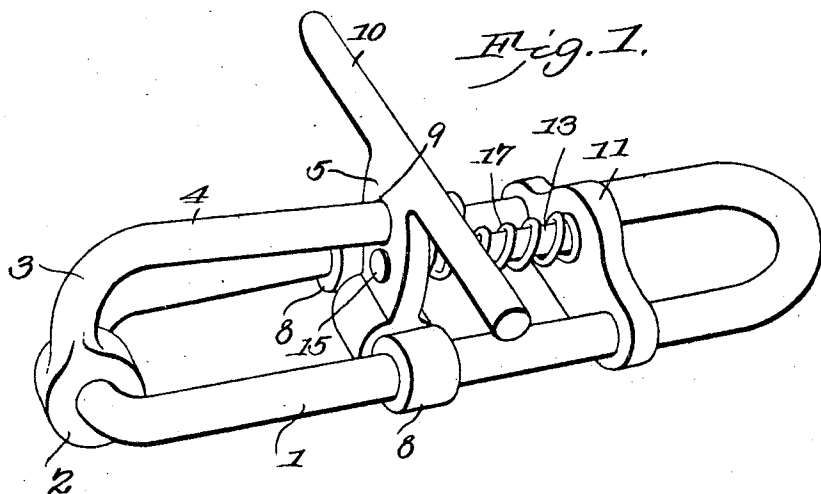


No. 849,412.

PATENTED APR. 9, 1907.

J. R. MITCHELL.
CAR COUPLING.
APPLICATION FILED OCT. 4, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN R. MITCHELL, OF HILL TOP, WEST VIRGINIA.

CAR-COUPLING.

No. 849,412.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed October 4, 1906. Serial No. 337,450.

To all whom it may concern:

Be it known that I, JOHN R. MITCHELL, a citizen of the United States, residing at Hill Top, in the county of Fayette and State of West Virginia, have invented a new and useful Car-Coupler, of which the following is a specification.

This invention relates to car-couplers, and has for its object to cheapen and materially simplify the same, to enable the convenient manipulation of the coupler for engaging and releasing it, and to increase the efficiency of the device in many respects.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a car-coupler embodying the features of the present invention. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a side elevation of a portion of a car, showing the improved coupler in position thereon.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

The body 1 of the present coupler is of skeleton or open structure and is in the nature of an elongated loop or link of the shape employed in the ordinary link-and-pin style of couplers. Upon the front end of the body is carried the coupling-knuckle made up of a bearing-eye 2 rotatably embracing the end of the body, an elbow 3 integral with the eye, and an arm 4 integral with the elbow and disposed to extend rearwardly across the top of the body when the coupler is in use.

For the purpose of holding the jaw in its locked position there is provided an upstanding locking element 5, which has its lower end provided with a bearing-eye 6, loosely embracing a cross-bar 7, which terminates in eyes 8, that embrace and are fixed to the sides of the link 1. This member is pierced adjacent its upper end by an opening 9 for the reception of the free end of the jaw. A cross-head or handle-bar 10 is carried by the upper end of the member 5 and projects a suitable

distance at opposite sides of the coupler, so as to be accessible from either side of a car to swing the member 5 rearwardly and thereby free the locking-jaw.

In rear of the element 5 there is a cross-bar or abutment 11 rigid upon the body or link 1 and pierced by an opening 12, through which loosely passes a rod 13, which also passes loosely through an opening 14 in the member 5. There is a head 15 upon the front end of the rod 13 and lying against the front side of the member 5, while a nut 16 is fitted upon the rear end of the rod to bear against the rear side of the abutment 11. A helical spring 17 embraces the rod and bears in opposite directions against the fixed abutment 11 and the pivotal locking member 5, whereby the latter is yieldably held at its forward limit, the rod 13 serving to limit the forward swing of the member 5.

In practice the handle-bar 10 is manipulated to swing the member 5 rearwardly clear of the free end of the arm 4, whereupon the latter is swung forwardly and downwardly and engaged with another coupler, preferably a link and then the locking-jaw is swung upwardly and rearwardly and reengaged with the member 5, which is positively held in engagement therewith by the spring 17.

By making the coupler in the manner described the car may be readily uncoupled or detached from the draft device regardless of the tension on the draft rope or chain, whereas in the old style of couplings the draft-rope has to be slackened before the locking-pin can be removed to permit the uncoupling of the car.

If desired, the locking element 5 may be mounted for sliding movement on the link 1 instead of being pivotally mounted thereon and the free end of the knuckle 4 may be bent downwardly or laterally to form a locking-hook.

Having thus described the invention, what is claimed is—

1. A car-coupler including a link having a knuckle pivotally mounted for swinging movement on one end thereof, and a spring-pressed pivotal locking element arranged in advance of the knuckle and having a portion for engagement with the knuckle to lock the same in its operative position.

2. A car-coupler including a link having a knuckle pivotally mounted for swinging movement on one end thereof, and a verti-

cally-swinging locking element arranged in advance of the knuckle and having an opening to receive the free end of the same.

3. A car-coupler including a link having a
5 knuckle pivotally mounted for swinging movement on one end thereof, a swinging locking member for engagement with the free end of the knuckle, and a spring bearing against the locking member to yieldably hold
10 the latter in engagement with the knuckle.

4. A car-coupler having a vertically-swinging knuckle, a swinging locking member for engagement with the knuckle, an abutment in rear of the locking member, a limiting-bar
15 extending between the locking member and the abutment, and a helical spring embracing the bar and bearing against the abutment and the locking member.

5. A car-coupler comprising an elongated
20 link, an elbowed knuckle pivotally embrac-

ing the front end of the link, a cross-bar carried by the link, a swinging locking member mounted upon the cross-bar and provided with an opening to receive the free end of the knuckle, a handle-bar carried by the locking
25 member and projecting at opposite sides thereof, an abutment in rear of the locking member, a headed limiting-bar loosely piercing the abutment and the locking member, and a helical spring embracing the bar and
30 bearing in opposite directions against the abutment and the locking member.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN R. MITCHELL.

Witnesses:

AUSTIN BURGESS,
J. D. BURKE.