

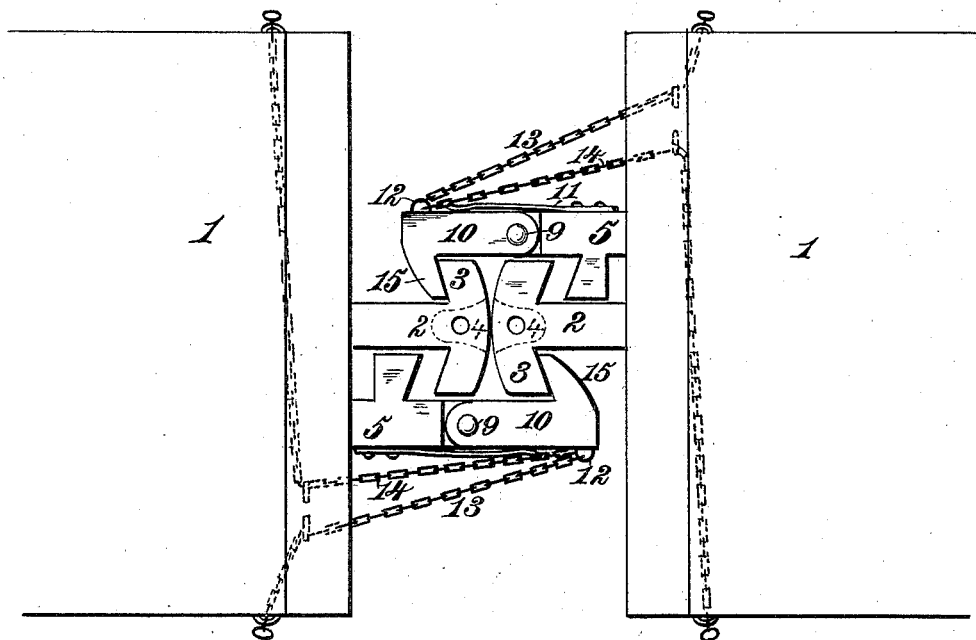
(No Model.)

M. JOO.  
CAR COUPLING.

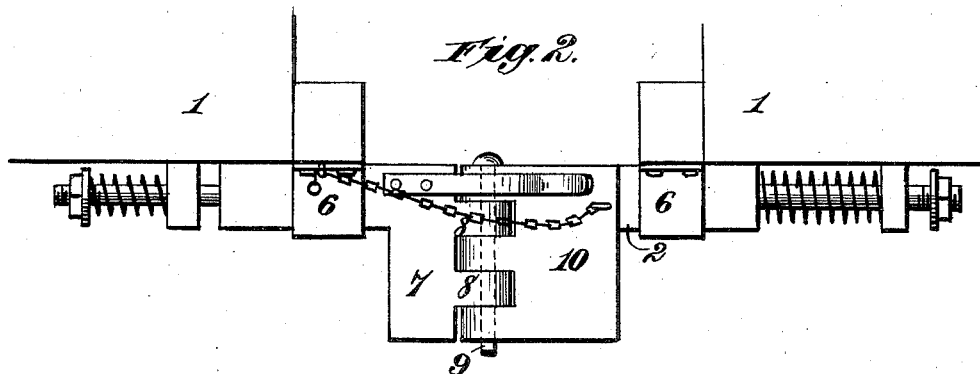
No. 302,849.

Patented July 29, 1884.

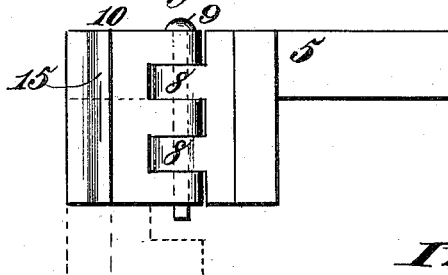
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses.*

*Robert Everett.*

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*Inventor.*

*Morris Joo.*

*By James L. Norris.*  
*Atty.*

# UNITED STATES PATENT OFFICE.

MORRIS JOO, OF ROANOKE, VIRGINIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 302,849, dated July 29, 1884.

Application filed June 7, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MORRIS JOO, a citizen of the United States, residing at Roanoke, Virginia, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to car-couplers, and has for its object to provide a coupling device which has automatic operation, by which both coupling-jaws may be disengaged from either side of the cars, which may be used with or without the ordinary draw-head and upon cars of different heights, and wherein the ordinary coupling link and pin may be employed either in connection with the draw-heads or with the jaws of the opposite coupler-heads.

To such ends my invention consists in the novel construction and combination of devices hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view illustrating my invention. Fig. 2 is a side elevation of the parts shown in Fig. 1. Fig. 3 is a detail view of the coupling-jaw and its support.

In the said drawings, the reference number 1 indicates the car-body, whereupon is mounted, in any suitable manner, a spring-actuated draw-head, 2, having upon its outer extremity lateral hooks or coupling-jaws 3. The end of the draw-head may be chambered or slotted after the usual construction, and an opening, 4, is made therein to permit the use of the ordinary link and pin. Upon one side of the draw-head 2 is placed a supporting-block or coupler-head, 5, which may have any suitable form of traction-spring to connect it with the car and soften the shock of starting. This coupler-head slides in a box, 6, and its outer end, 7, is carried downward and provided with two or more forks or projecting portions, 8, each of which has an aperture to receive a pivot-bolt, 9. Upon this support is mounted a jaw, 10, having openings which receive the forks 8, and also provided with apertures for the pivot-bolt 9, whereby the jaw 10 has free pivotal movement toward and from the draw-head. This jaw has upon its end a hook, 15, and behind said jaw is placed a spring, 11, of any suitable form, bearing against the back of the jaw and normally throwing it toward the draw-head. Upon the rear

face of the coupling-jaw is formed an eye or hook, 12, to which is attached a chain or rod, 13, the latter being carried by any suitable support and brought out at the side of the car near its end and within convenient reach of the brakeman as he stands upon the ground. Attached to the same eye is a second uncoupling chain or rod, 14, which is carried to the rear beneath of and transversely to the car, emerging upon the opposite side. It will be seen that the jaw 10 may be retracted by operating either of these chains or rods, and the uncoupling therefore effected from either side of the car.

From the construction described it will be seen that as the cars are brought together the opposite draw-heads, 2, will meet and be pushed in. Each is so far retracted as to pass the hooked end of the coupling-jaw carried by the opposite car. The moment this is effected the spring 11 throws the pivoted jaw inward, and effects an instantaneous engagement of its hook 15 with the hooked end of the draw-head carried by the opposite car. As each car carries one of these spring-actuated coupling-jaws and each draw-head is provided with a hooked end to engage with the same, the strength and certainty of operation of this device will be readily apparent.

The box 6, which supports the coupler-head, is preferably made of about the same proportions as the box which carries the draw-head, whereby the latter may, if it becomes necessary by the loss or removal of the draw-head 2, be removed and the support 5 inserted in its place, in which position it will readily engage with the correspondingly-arranged jaw upon the adjoining car.

In order to provide for the difference in height of cars of different size and construction, the coupler-head 6 is rendered vertically adjustable by the construction described. It is evident that by merely withdrawing the pivot-bolt 9, the coupling-jaw 10 may be dropped, and still connected with its support, as indicated by dotted lines in Fig. 3. Moreover, should it, for any reason, become necessary to use the ordinary link and pin without connecting it with the draw-head, a safe coupling may be easily arranged by removing the coupling-jaw 10 and connecting the link with the forks 8 of the coupler-head by means of a pin, which

is dropped into the apertures formed in said forks to receive the pivot-bolts.

By operating the uncoupling chains or rods 13 and 14, both coupling-jaws may be thrown 5 outward and disengaged from the draw-head by a man standing upon either side of the car.

This coupling is simple in construction, certain in operation, possesses great strength, and may be easily and quickly adapted to all possible 10 exigencies or to supply the loss or breakage of one or more of the parts.

A stop, 16, may be mounted upon each coupling-head to receive the backward thrust of the draw-head 2.

15 It will be seen that the parts composing the coupling may be carried in duplicate, and in the event of the loss or breakage of any of the parts a new one may be quickly and easily substituted; also, as I have already mentioned, 20 should the draw-head pull out, the coupler-head may be inserted in its place and used either with the coupling-jaw upon it, which engages with the similarly-arranged jaw on the adjacent car, or it may be used with the link 25 and pin in the manner already set forth.

What I claim is—

1. In a car-coupling, the combination, with a coupler-head mounted beside the hooked

draw-head, of a coupling-jaw pivoted thereon and adjustable vertically upon said support, 30 substantially as described.

2. In a car-coupling, the combination, with a draw-head having a hooked end, of a pivoted coupling-jaw mounted beside it upon an independent support, a spring which normally 35 throws said jaw toward the draw-head, and uncoupling chains or rods connected with the jaw and accessible from both sides of the jaw, substantially as described.

3. In a car-coupling, the combination, with 40 the draw-head 2, having hooks or jaws 3, of the coupling-jaw 10, having a hook, 15, and pivoted upon a coupler-head, 5, beside the draw-head, substantially as described.

4. In a car-coupling, the combination, with 45 the draw-head 2, having lateral hooks or jaws 3, of a coupler-head, 5, having forks or bearings 8, a coupling-jaw, 10, and a pivot-bolt, 9, substantially as described.

In testimony whereof I affix my signature in 50 presence of two witnesses.

MORRIS JOO.

Witnesses:

JAMES L. NORRIS,  
A. H. NORRIS.