(No Model.)

C. ROBERTS & H. D. BROCKWAY.

CAR COUPLING.

No. 266,202. Patented Oct. 17, 1882.

Fig. 1.

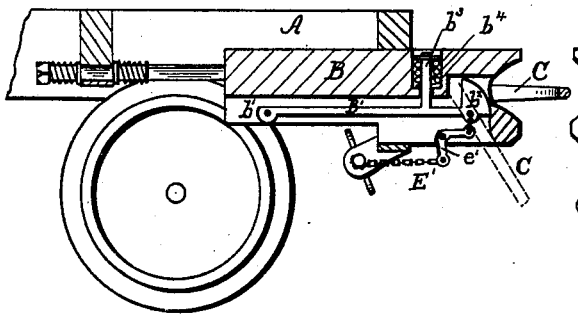


Fig. 2.

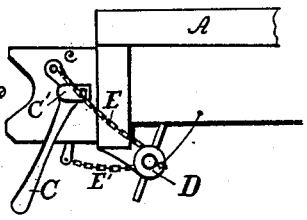


Fig. 3.

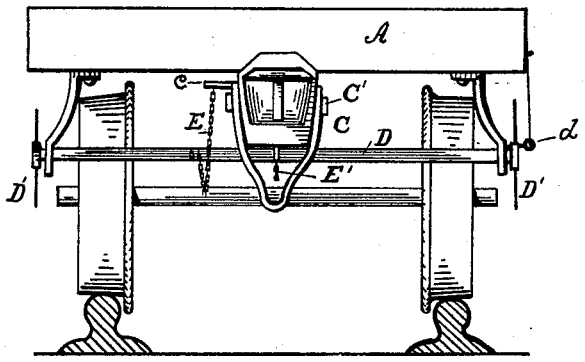
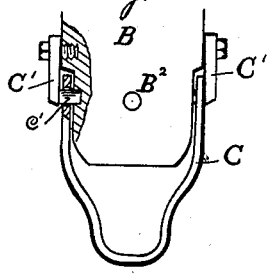


Fig. 4.



WITNESSES

Samuel E. Thomas.

J. Edward Warren

INVENTORS

Cyrus Roberts

H. Deane Brockway

By W. W. Leggett, Attorney

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CYRUS ROBERTS, OF THREE RIVERS, AND H. DUANE BROCKWAY, OF DETROIT, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 266,202, dated October 17, 1882.

Application filed May 9, 1882. (No model.)

To all whom it may concern:

Be it known that we, CYRUS ROBERTS, of Three Rivers, St. Joseph county, Michigan, and H. DUANE BROCKWAY, of Detroit city, county of Wayne, State of Michigan, have invented a new and useful Improvement in Car-Couplers; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

Our invention consists in the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a longitudinal section, illustrating the construction of our car-coupler. Fig. 2 is a side elevation; Fig. 3, an end elevation of the same. Fig. 4 is a top view.

Heretofore in the construction of car-couplers a difficulty has generally been experienced growing out of the fact that from the peculiar construction of the device it is rendered incapable of readily coupling with cars of the ordinary construction.

It is the object of our invention to overcome this difficulty, and also to make a strong and durable structure, one in which the link can be raised from the side and directed into the opposite draw-head, or be held in a horizontal position, and whereby with the same means the car can be uncoupled from the side of the train. We provide also the ordinary link-and-pin coupling, which may be used in case of breakage or other emergency.

In carrying out our invention, A represents any ordinary car. B is the draw-head; C, the link. D is a shaft projecting to the sides of the car. D′ represents handles or cranks for operating the shaft, and E E′ are chains, cables, or links for communicating the motion of the shaft to the coupling-link or to the uncoupling mechanism. The draw-head B is provided with a bar, B′, hinged at b' to the draw-head, and at b^2 provided with a hook, which engages the coupling-link of the opposite car. b^3 is a stem which engages a spring, b^4. The chain E′ connects this bar B′ with the shaft D, and a lever, e', may be suitably located so as to give the chain a direct draw upon the bar B′.

The coupling-link C is in the nature of a loop which embraces the outer surface of the draw-head. It is held in place by the cheek-pieces C′, which are provided with gudgeons c', upon which the extremities of the link are pivoted. These gudgeons, projecting through the link, enter the sides of the draw-head, so as to form a very strong support for the link. The link is provided with a short lever-arm, c, which engages the chain E.

The operation of the device will now be understood. We will presume two cars to be provided with this same improved coupling. As the cars approach each other, the links will be down in the position shown by the dotted lines. The trainman, stepping to either side of one of the cars, takes hold of the lever D′, and by turning it he winds the chain E upon it. This, drawing upon the lever-arm c, lifts the link and directs it into the opposite draw-head. As it enters this draw-head it impinges against the hook b^2, presses it down, rides over and engages with the hook. The hook then springs back to place by means of the spring b^4. In case the opposite car is provided with one of the ordinary couplings, the link C is such that it will readily enter the ordinary draw-head and engage with the ordinary coupling-pin; or the ordinary link may enter this improved draw-head and engage with the hook b^2. When it is desired to uncouple the car the trainman, grasping the lever D^2, turns it in the opposite direction. This winds the chain E′ upon the shaft D, thus forcing down the hook and disengaging the link.

We prefer, generally, to provide the draw-head with the ordinary hole, B^2, for an ordinary coupling-pin, so that should anything break or the apparatus get out of order the car can be coupled in the usual way by stepping between the cars.

If it is desired to set the link in a horizontal position, so that it will couple with the adjacent car whenever they are pushed together, it may be accomplished by a pin or ratchet, d, which will hold the lever D in any desired position.

It will be observed that the forward end of the bar B′, when the strain is upon the hook, is permitted to abut squarely against the body of the draw-head, so that the draft does not have to be sustained by the pivot at b'.

What we claim is—

1. The combination, with the draw-head B, of the bar B′, pivoted at its rear end, and with the hook b^2 at its front end, the stem b^3, and the spring b^4, the shaft D, and intermediate connections, by means of which the turning of the shaft is caused to draw the hooked bar downward, substantially as described.

2. The combination, with the spring-actuated hooked bar B′ and the link C, of the shaft and the intermediate connections by means of which motion is transmitted from the shaft to either the link or hooked bar, according to the direction in which said shaft is turned, substantially as described.

In testimony whereof we sign this specification in the presence of two witnesses.

CYRUS ROBERTS.
H. DUANE BROCKWAY.

Witnesses:
J. EDWARD WARREN,
SAMUEL E. THOMAS.