

(No Model.)

W. G. MILLS.

CAR COUPLING.

No. 250,939.

Patented Dec. 13, 1881.

Fig. 1.

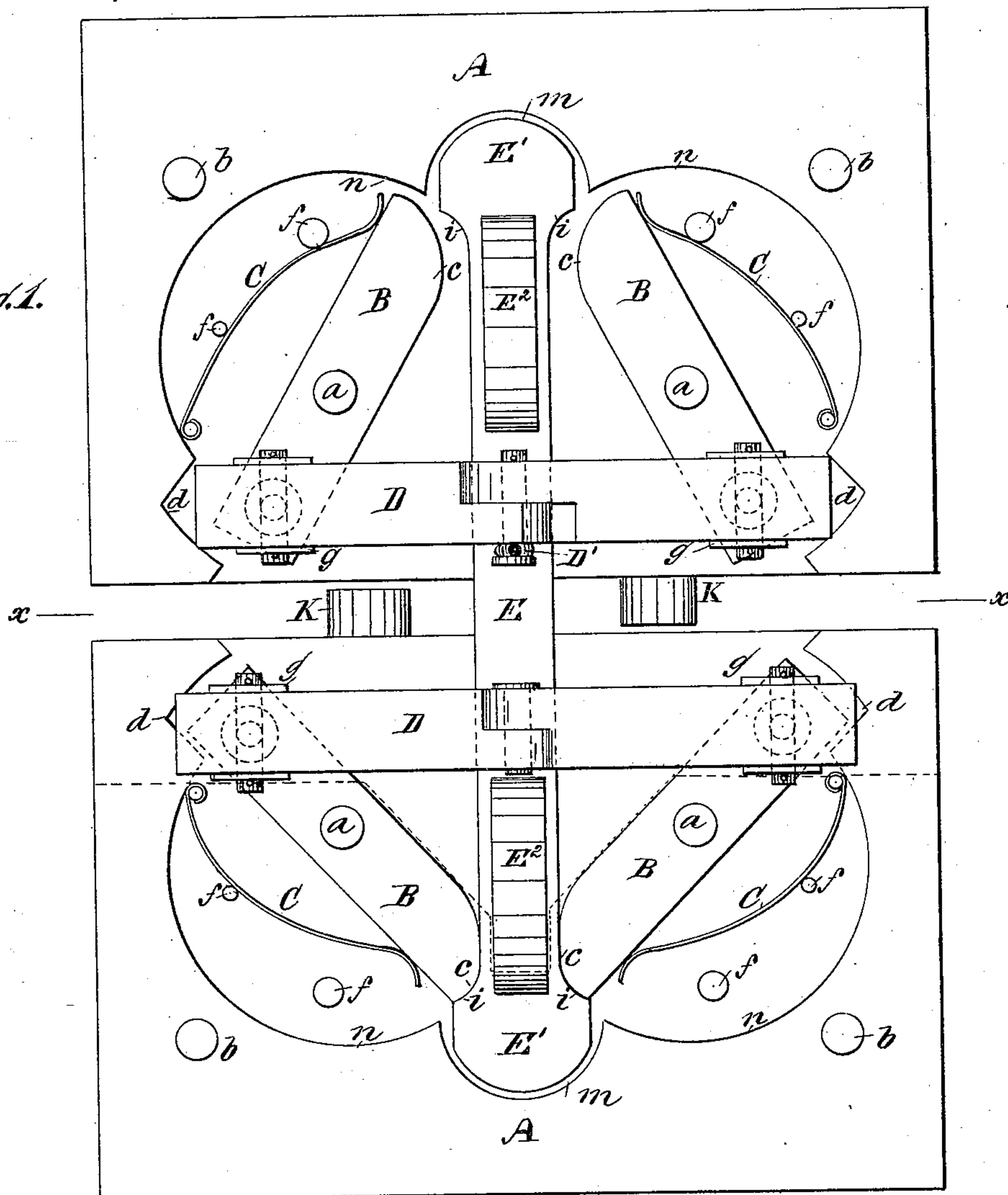
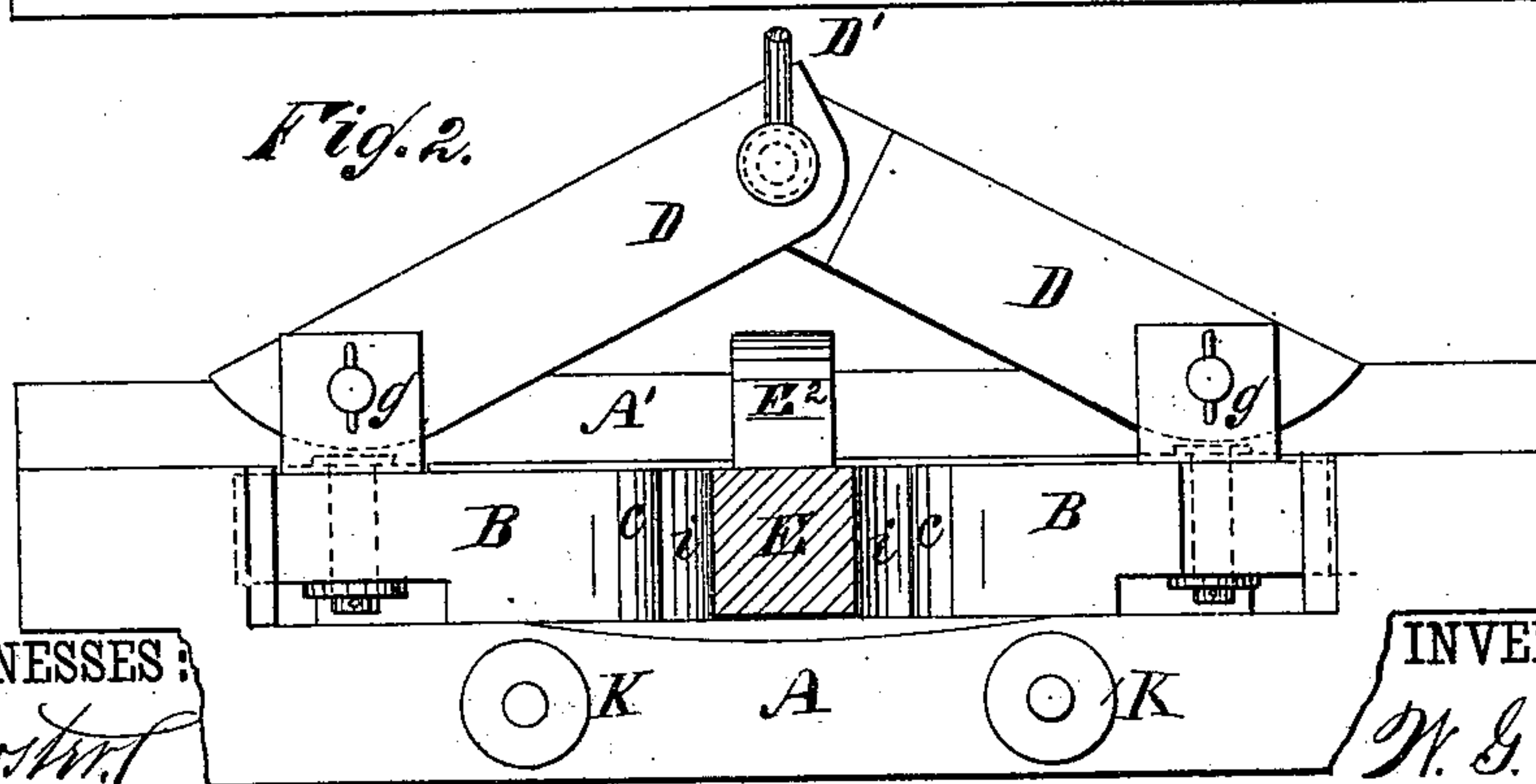


Fig. 2.



WITNESSES:

Thos. H. H. H.
C. Bedgwick

INVENTOR:

W. G. Mills

BY

Wm. H. H.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM G. MILLS, OF MERCED, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 250,939, dated December 13, 1881.

Application filed September 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. MILLS, of Merced, in the county of Merced and State of California, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

This invention relates to those couplers known as "self-couplers;" and it consists of a draw-head having pivoted within it diagonally, on vertical pins, two opposite spring-actuated jaws for holding the coupling-pin. The rounded ends of said jaws are held in contact with each other centrally in the draw-head, and their outward-extending ends are pivoted to the opposite ends of a knuckle-bar that is set horizontally and transversely across the top of the draw-head, and serves to lock the jaws in position.

The cavity or throat of the draw-head is outlined in curves to permit the free movements of the jaws and coupling-pin, and the coupling-pin has an arrow-shaped head to facilitate its entrance between the jaws, and to permit the jaws to close behind it and hold it coupled, all of which will be hereinafter described.

Figure 1 is a plan view, showing my improved device applied to two draw-heads, the draw-head caps being removed. Fig. 2 is a partly-sectional front elevation on line $x x$, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents an improved draw-head, the cap on top A' of which is held in place by pins or studs $a b$. The studs a serve as pivots for the jaws B, that are set centrally thereon, and that are held in diagonal positions with their rounded ends c in contact in the center of the said draw-head A by springs C. The outward-extending ends of these jaws B are accommodated in triangular pockets d , formed in the sides of the draw-head cavity, near the front thereof. Stops f outside of the springs C hold them in place and properly restrict their movements. The outer ends of these jaws B are connected by swiveled couplings g to the outer ends of a knuckle or toggle bar, D, that extends transversely across the top of the draw-head A, near the front thereof.

At the point h of the bar D is attached a rod, D', to which a lever is designed to be connected, by means of which the said bar D may be elevated at the middle, as shown in Fig. 2, to open the jaws B for the withdrawal of the coupling-bar E, and by means of which said bar D may be forced down in a horizontal position, whereby the jaws B are locked and held against the coupling-bar E just behind its head E', as shown in Fig. 1.

The coupling-bar E is provided at each end with an arrow-shaped head, E', of rounded outline, the curves i in rear of its heads E' being designed to correspond in shape with the rounded ends c of the jaws B, so that the latter may securely clasp and hold said coupling-bar E. On the shank of the coupling-bar E, near each end thereof, is an upward-projecting triangular or curved boss, E², whose function is, when in the act of coupling the cars, to break the bar D upward, and thereby open the jaws B. When, on coupling, a head of the coupling-bar E has pushed aside the jaws B and has advanced beyond them, the springs C operate to close said jaws B against the coupling-bar shank directly in rear of the head E', thereby holding said bar E immovable.

In the rear of the cavity of the draw-head A a curved recess or pocket, m , is formed for the reception of the head E' of the coupling-bar E, and at either side of this central pocket, m , the walls of the draw-head cavity are cut away in curves, as shown at n , to permit the sweep of the jaws B as they open and close, and the curves $m n$ intersect each other in such a way and the pocket m permits the entrance of the bar-head E' to such depth that the sweep of the curves n coincides with the curves i on the draw-bar E; hence the jaws B can close thereon freely and without danger of failure to do so.

The knuckle-bar rod D' may be connected with a lever at the top or side of a car, the lever being in convenient position for the brakeman to elevate the bar D, and thus open the jaws B to permit the cars to uncouple.

K K represent the car-buffers.

By the use of this improved device the dangers of life and limb incident upon the usual methods of coupling and uncoupling are avoided.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the swiveled couplings
5 *g*, connecting the outside of jaws *B* with a toggle-bar, as shown and described.

2. The coupling-bar *E*, having the upwardly-projecting boss *E*², in combination with the bar *D*, as and for the purpose specified.

3. The draw-head *A*, having the pocket *m* 10 and curved cut-away *n*, intersecting each other, in combination with the end-curved jaws *B*, as and for the purpose specified.

WM. G. MILLS.

Witnesses:

J. LEESON,

JOS. BLACKBURN.