

A. GUYER.
Car-Coupling.

No. 225,981.

Patented Mar. 30, 1880.

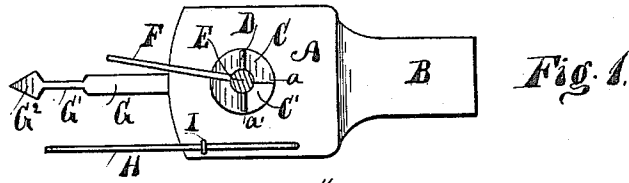


Fig. 1.

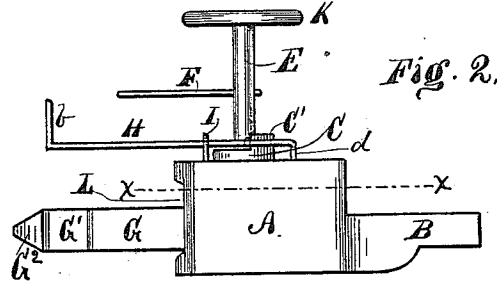


Fig. 2.

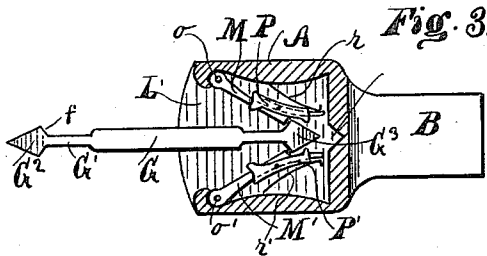


Fig. 3.

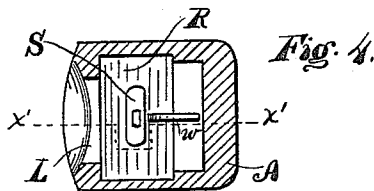


Fig. 4.

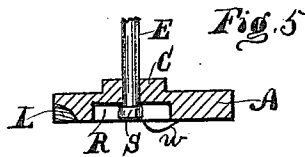


Fig. 5.

WITNESSES;
A. M. Dulles
L. E. Wheeler

INVENTOR.
Adelbert Guyer

UNITED STATES PATENT OFFICE.

ADELBERT GUYER, OF DENVER, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 225,981, dated March 30, 1880.

Application filed February 7, 1880.

To all whom it may concern:

Be it known that I, ADELBERT GUYER, of Denver, in the county of Miami and State of Indiana, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

The invention relates to the construction of car-couplers, and is so arranged as to be self-setting and self-coupling, the object being to produce an automatic coupling that shall possess great strength, simplicity, cheapness, and durability, and that may be uncoupled from the top of the cars with much ease and safety, as will be more fully set forth in the following specification.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a top view of a device embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 shows the top plate of the draw-head removed to show the interior. Fig. 4 shows the under side of the top plate of the draw-head. Fig. 5 is a vertical transverse sectional view through the top plate on the dotted line x' in Fig. 4.

Of the letters in the drawings, A represents the head of the draw-bar B. This bar is constructed in the usual form, and is not fully shown. The head A is nearly square in its external form, and has a flaring mouth, (like many others in common use,) which I do not claim.

The sides of the interior of the mouth L, I make convex from front to rear, terminating at the front in the semicircular recess o . In these recesses are hinged the jaws M. These jaws are concave on the back side, and conform to the convex shape of the sides of the mouth. The face of the jaws is nearly straight, and is provided with shoulders near the back end, to engage with the shoulders f on each end of the coupling-bar G. This bar is made with shoulders on both sides, near the ends, for the purpose of coupling two cars when each car is provided with the coupling device shown in Fig. 1.

$r r$ represent springs. These springs are attached to the sides of the mouth of the draw-head, so as to press the jaws M inward and hold them in contact with the coupling-bar G. On the upper edge of the jaws flanges P P are attached. These flanges are acted

upon by the cam S (see Fig. 4) to open the jaws. The cam and flanges work in a recess in the under side of the top plate of the head A and above the line x in Fig. 2. The cam is turned by means of the hand-wheel K on the shaft E. When the cars are coupled or when the cam is set so that the cars will couple automatically, the longer diameter of the cam stands parallel with the coupling-bar; but when the cam is set so as to allow the cars to uncouple the cam stands at right angles to the draw-bar, and the position of the cam is determined and regulated by the pin D in the shaft E and stud C' on hub C. The stud and pin allow the hand-wheel to be given about a quarter-turn, which will open the jaws sufficiently to allow the cars to part; but before the cars can be again coupled the hand-wheel must be turned back until the pin D strikes the opposite side of the stud C' . To accomplish this automatically a rod, H, having arm b , is attached to the draw-head at d on the car to be detached, so that as the cars draw apart the arm b will engage with the arm F of the opposite draw-head and give the shaft a quarter-turn, and allow the jaws to close.

W represents a spring projecting from the back part of the draw-head, so as to press upon the inner end of the bar G, and thus prevent the outer end from dropping too low to enter the mouth of the draw-head when the cars come together.

In case it should be desirable to couple above-described coupler with the common link-and-pin coupling a hole should be made through the front end of the top and bottom plates to receive the pin.

Having thus fully described my invention, what I claim is—

1. The car-coupler consisting of the bar G, the draw-head A, having recesses $o o$, the jaws M M, having flanges P P, the hand-wheel K, shaft E, cam S, pin D, hub C, stud C' , and springs $r r$ and G^3 , as set forth.

2. The combination of draw-head A, jaws M M, flanges P P, shaft E, cam S, pin D, and springs $r r$ with the rod H and arms b and F, as and for the purposes hereinbefore set forth.

ADELBERT GUYER.

Witnesses:

A. N. DUKES,
L. E. WHEELER.