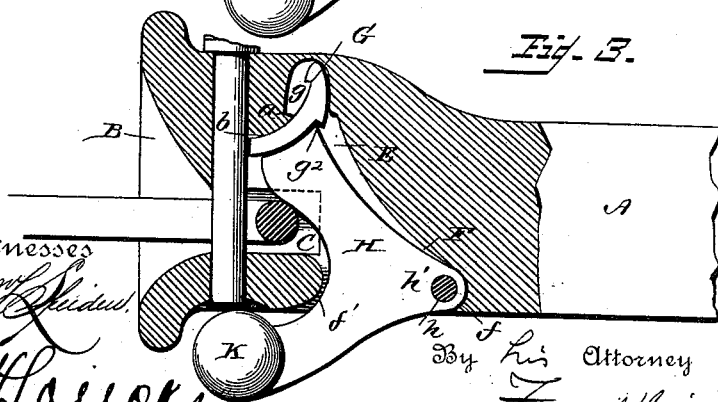
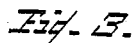
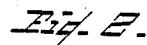


J. F. COOK.  
CAR COUPLING.

Patented Dec. 31, 1889.



Witnesses  
"J. S. S. S."  
"J. S. S. S."

W. H. L. A. C.

Inventor  
Joshua F. Cook,

By His Attorney

Franklin F. Hong

# UNITED STATES PATENT OFFICE.

JOSHUA FREEMAN COOK, OF PORT MATOUN, ASSIGNOR OF FIVE-TWELFTHS  
TO GEORGE THOMAS MOORE AND THOMAS KEES BARTLING, OF LIVER-  
POOL, NOVA SCOTIA, CANADA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 418,640, dated December 31, 1889.

Application filed May 18, 1889. Serial No. 311,303. (No model.)

### *To all whom it may concern:*

Be it known that I, JOSHUA FREEMAN COOK, a subject of the Queen of England, residing at Port Matoun, in the county of Queens, in the Province of Nova Scotia, Dominion of Canada, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in car-couplers; and it has for its object to generally improve upon the construction and render more efficient in operation this class of devices.

The further and immediate object of the present invention is to provide an improved car-coupler which will be simple, durable, and inexpensive in construction, and which will be very effective and automatic in operation.

To these ends, and to such others as the invention may pertain, the same consists in the peculiar combinations and in the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which drawings—

Figure 1 is a central vertical section of my improved coupler, the same being shown in position for receiving the coupling-link. Fig. 2 is a like view of the same holding the coupling-link. Fig. 3 is a perspective view of the improvement as applied to a car.

Reference being had to the details of the drawings by letter, A represents the draw-head, which is held in the usual manner to the car, and is provided in its front end with the opening B for the reception of the coupling-link, the entrance to said opening being beveled in the usual manner to facilitate the entrance of the link.

C is a recess or chamber communicating at its outer end with the opening B, and through this chamber or recess C is passed the hole D for the reception of the coupling-pin.

E is a central vertical recess or chamber in the upper part of the draw-head, communicating at its lower edge or bottom with the recess C and at its front end with the hole for the reception of the coupling-pin. At a point directly above the entrance of the chamber E to the recess C a notch or shoulder *a* is provided, and from this shoulder the lower front edge of the recess is cut away to form the arc of a circle, as shown at *b*.

F is a central vertical chamber or recess communicating at its upper end with the recess E, and its front end opening into the recess C, as shown. The rear edge of this recess F is in the form of an arc of a circle, which extends downward and toward the rear of the draw-head, and the lower rear end is formed with a rounded or curved corner *f*, while the front lower side is formed in substantially an arc of a circle, as shown at *f'*. Within the recess E is held the inclined or curved key G, said key being formed upon an arc of a circle corresponding with the curved front edge of the recess. The upper end of the said key G is provided with a notch or shoulder *g* to engage the shoulder *a*.

H is a dog fitted within the recess F in the draw-head and provided at a point adjacent to its rear end with an opening *h*, through which passes the pin *h'*, secured in the draw-head. The upper end of this dog terminates directly below the entrance to the recess E, and said upper end is formed with a curve corresponding with the curvature of the key G, and the lower face of said key is provided with a notch or shoulder *g*<sup>2</sup>, for a purpose which will presently appear. The lower end of the dog H extends downward and forward through the open bottom of the recess F, and is provided with a weight K, preferably in the form of a ball or disk, as shown.

In operation the coupling-pin is inserted within the opening D in the draw-head and allowed to drop within said opening until its progress is arrested by the free end of the key G, which key, by reason of the position of the dog H, has moved downward and forward until its free end has been projected

across the opening D. The coupling is now in readiness to receive the coupling-link attached to the car to which it is to be coupled. As the cars are moved together, the coupling-link enters the opening B, and, contacting with the lower face of the portion of the dog H within said recess, the said dog is turned upon its pivot, and the upper corner of the dog is thrown into contact with the shoulder  $g^2$  of the key G, and in the further progress of the said dog the key G is thrown upward, thus releasing the coupling-pin, which is permitted to drop through the link within the recess B. Upon removing the coupling-pin the dog H is again returned to its normal position by the operation of the weight K, and the key G is permitted to drop downward across the opening D, where it will again serve to retain the coupling-pin in readiness for coupling.

What I claim as new is—

1. The combination, with the draw-head, recessed as described, of the dog pivoted within said recess at the under side of the draw-head, and the key within said recess and provided with a shoulder  $g$ , substantially as and for the purpose specified.

2. The combination, with the draw-head provided with chamber E and recess F, of the dog pivoted within the recess at the bottom of the draw-head, and the key formed with shoulders  $g$  and  $g^2$ , substantially as shown and described, and for the purpose specified.

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

JOSHUA FREEMAN COOK.

Witnesses:

WILLIAM McMILLAN,  
JOHN FREDERICK SELDOM.

It is hereby certified that the name of one of the assignees in Letters Patent No. 418,640, granted December 31, 1889, upon the application of Joshua Freeman Cook, of Port Matoun, Nova Scotia, Canada, for an improvement in "Car-Couplings," was erroneously written and printed "Thomas Kees Bartling," whereas said name should have been written and printed *Thomas Rees Bartling*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 28th day of January, A. D. 1890.

[SEAL.]

CYRUS BUSSEY,  
*Assistant Secretary of the Interior.*

Countersigned:

C. E. MITCHELL,  
*Commissioner of Patents.*