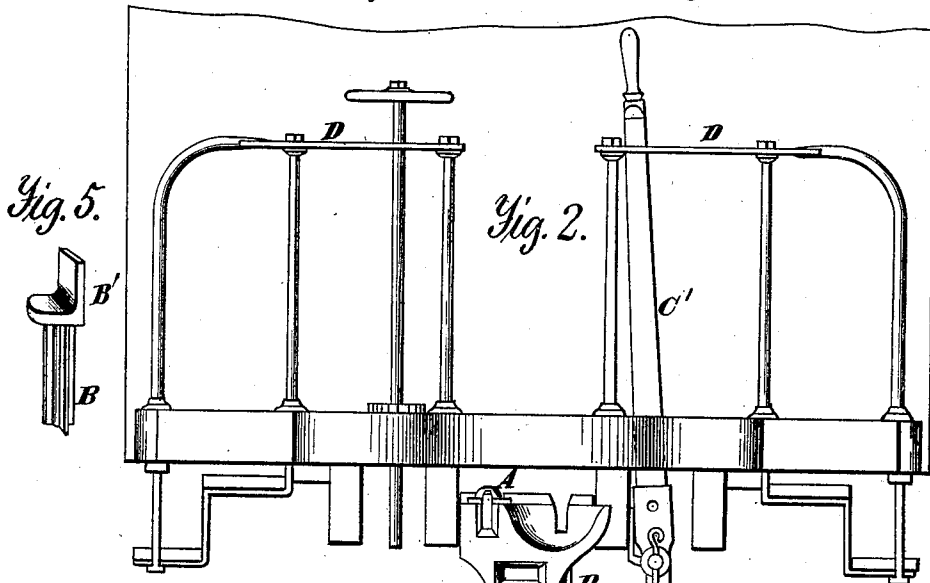
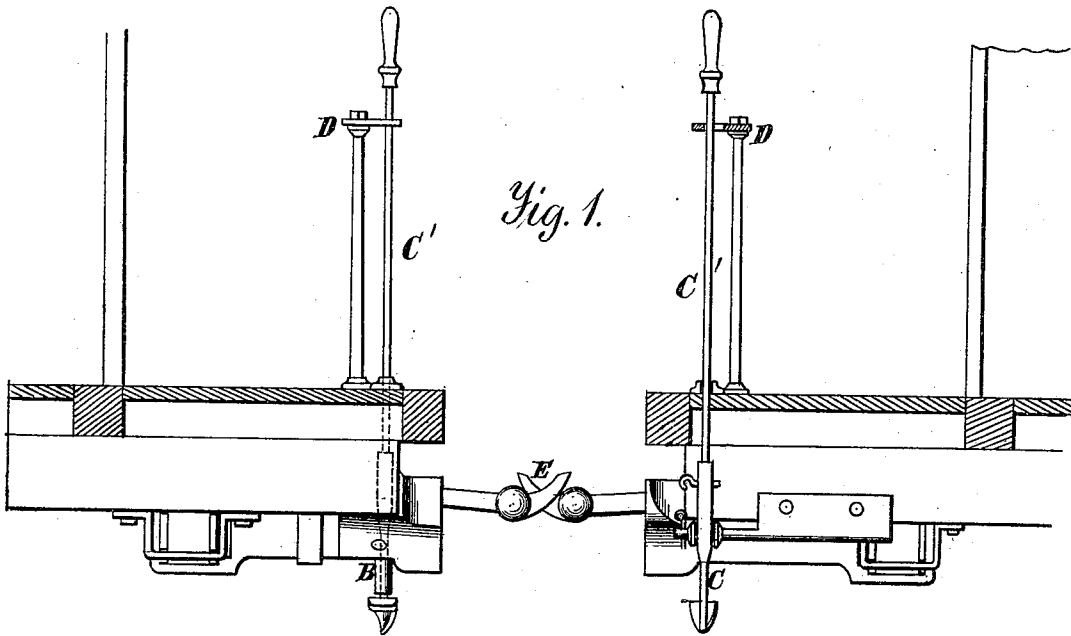


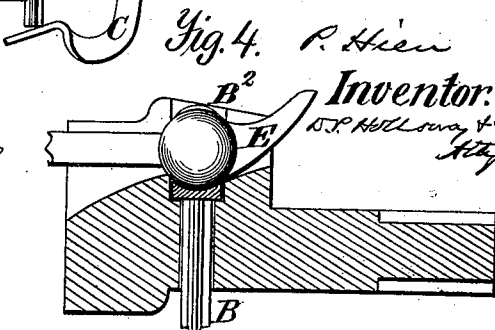
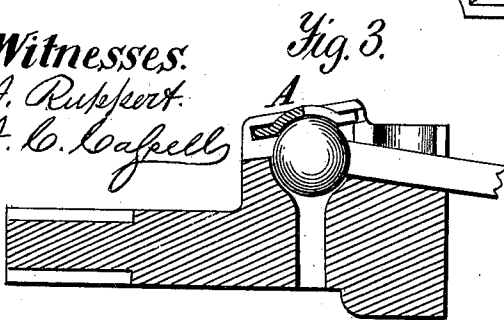
P. HIEN.
CAR-COUPLING.

No. 174.676.

Patented March 14, 1876.



Witnesses:
A. Ruppert.
A. C. Leafell



Inventor:
P. Hien
D. P. Holloway & Co
Attys

UNITED STATES PATENT OFFICE.

PHILLIP HIEN, OF ROCK ISLAND, ILLINOIS.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **174,676**, dated March 14, 1876; application filed December 23, 1875.

To all whom it may concern :

Be it known that I, PHILLIP HIEN, of Rock Island, in the county of Rock Island and State of Illinois, have invented a new and useful Improvement in Automatic Car-Couplings, of which the following is a specification :

This invention relates to an improvement on the car-coupling patented by myself and John Koch, on the 20th day of July, A. D. 1875, No. 165,826; and consists in adding a pin and lever for throwing out the ball-couplings from their sockets, and thus disengaging the cars, and preventing the coupling from reconnecting them as long as the lever remains in that position; also, in the mode of retaining one of the balls in its proper socket by means of a sliding plate which confines it in position.

In the annexed drawings, making part of this specification, Figure 1 is a sectional elevation, showing two cars ready to be connected. Fig. 2 is an end elevation of the car. Fig. 3 is a section of the end of the draw-head, showing the link in its proper pocket; and Fig. 4 is a section showing a corresponding section of the other draw-head, and showing the free end of the coupling-bar and the pin for raising it. Fig. 5 is a perspective view of the pin used for lifting the coupling-bar.

The same letters are employed in all the figures in the designation of the same parts.

The draw-head and coupling-bars are employed as in said former patent, and need not be fully described herein.

In order to confine the ball on the end of the shackle in the recess in the draw-head, and at the same time permit its ready removal when desired, I form a seat on the top of the recess and make rabbeted flanges to receive the cap A, which covers the recess in the draw-head. In order to prevent the cap from falling off with the motion of the cars, I give a downward inclination from the mouth of the draw-head to the seat for the cap. By this means I dispense with any bolt or other means of securing the cap which would make its removal more inconvenient and require greater time to take out or insert the shackle. A notch is cut in the front edge of the cap sufficient to allow the proper play of the shackle in coupling and uncoupling the cars.

In operating under said former Letters Pat-

ent it has been found inconvenient to detach the shackles, and when cars were not intended to be coupled they were liable to be coupled when pushed together. To remedy these inconveniences is the object of the second part of this invention.

I bore a hole through the bottom of the recess in the draw-head, which is intended to receive the free end of the shackle, and in this put a pin. The pin B is preferably made with flanges on the side to form guides, and also to tighten it, still retaining sufficient strength. The head of the pin B has a flange, B¹, received in a groove, B², in the draw-head, also intended to keep it in line. This form is, however, not indispensable, for a round pin with a flat head may be used.

The lever C is bent so that its end may be brought under the point of the pin. I have shown it as constructed with a socket in the upper end to receive the hand-bar C'. It is, however, obvious that it may be made in one piece. The upper end is held in a guard on the hand-rail of the platform, and such tension should be given the lever that it will spring into notches formed at each end of the guard. By turning the lever the pin B may be raised so as to lift the free end of the link out of the recess. If the lever remains in this position, holding the pin elevated, its head will prevent the link from engaging, as the ball cannot fall into the socket, and thus the cars may be prevented from becoming coupled when so desired. By shifting the lever the pin will be dropped and the socket left free to receive the link when it is desired to couple the car to the train.

The inclined point E on the end of the shackle is not in this case required as a handle, but is important to be retained to adapt the coupler to cars of different height.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the ball-shackle, the recessed draw-head and the cap A, resting on an inclined seat, substantially as set forth.

2. In combination with the ball-shackle, the recessed draw-head, into which the ball falls by gravity, and is held by the notch in the front of the draw-head, the pin B, the head B¹, which supports the ball and lifts it to un-

couple the cars, actuated by the lever C, substantially as set forth.

3. In combination with the draw-head and shackle, the pin B, lever C, and guard D, by means of which the pin may be permanently retained in such position as to prevent the coupling of the cars, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PHIL. HIEN.

Witnesses:

CHAS. H. MOULTON,
B. EDW. J. EILS.