

P. HIEN.  
CAR-COUPLING.

No. 190,858.

Patented May 15, 1877.

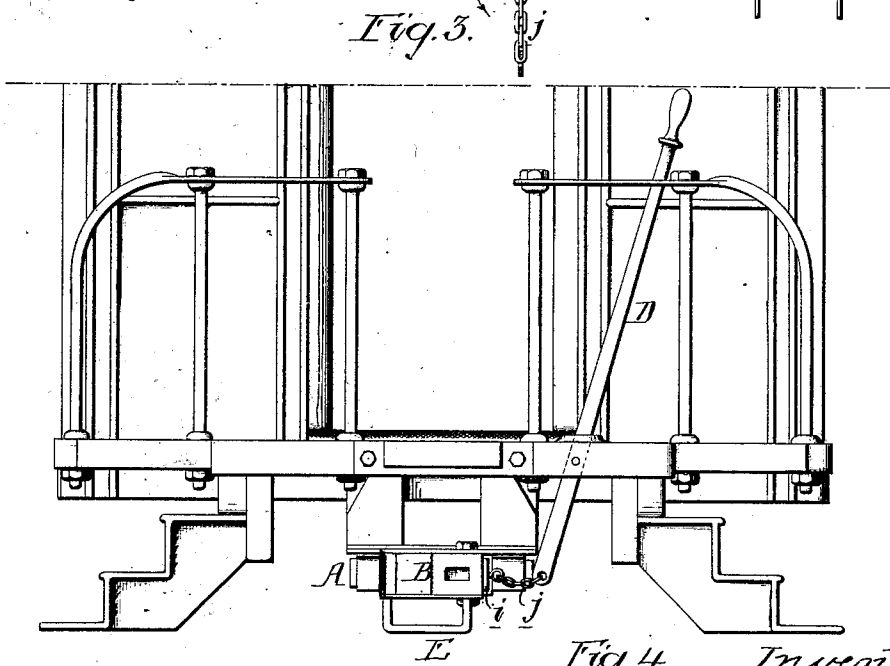
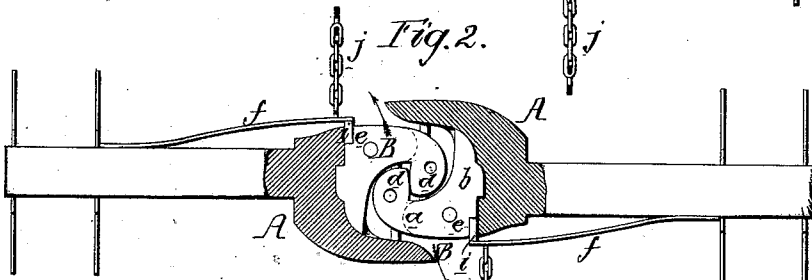
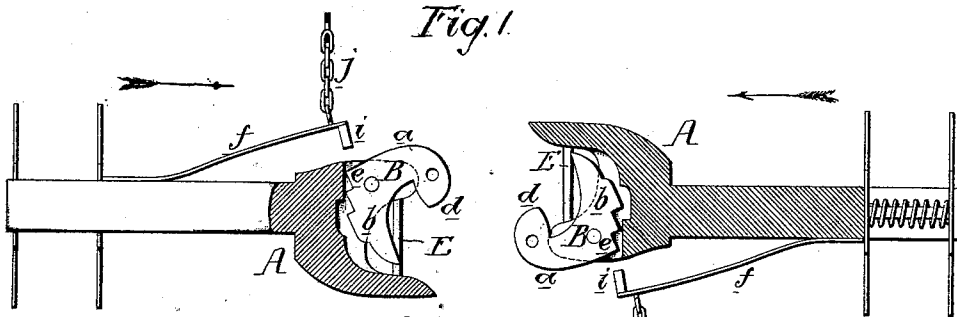
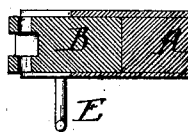


Fig. 4. Inventor's

Witnesses:  
John K. Rupertus.  
Harry Smith.



Phillip Hien  
by his Attorneys  
Howe & Co.

# UNITED STATES PATENT OFFICE

PHILLIP HIEN, OF ROCK ISLAND, ILLINOIS, ASSIGNOR TO SARAH HIEN  
AND B. D. BUFORD, OF SAME PLACE.

## IMPROVEMENT IN CAR-COUPINGS.

Specification forming part of Letters Patent No. 190,858, dated May 15, 1877; application filed  
February 16, 1877.

*To all whom it may concern:*

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

The object of my invention is to construct a simple and efficient self-acting coupling for railroad-cars—an object which I attain in the manner hereinafter described, reference being had to the accompanying drawing, in which—

Figures 1 and 2 are sectional plan views, in different positions, of my improved car-coupling; Fig. 3, an end view of the platform of car furnished with my improved coupling, and Fig. 4 a vertical section of one of the coupling-heads.

A A represent opposite coupling-heads, which are connected to the bodies of the cars in the usual manner.

To a recess in each of the coupling-heads is adapted a pivoted lever, B, having two arms, *a* and *b*, at right angles, or thereabout, to each other, the arm *a* terminating at the front end in a jaw, *d*, and the rear edge of the arm *b* having formed in it a recess, *e*.

To one side of each coupling-head is secured, in the present instance, a spring-arm, *f*, which carries at the end a block, *i*, this block being adapted to the recess *e* in the lever B, so as to prevent the movement of the same, in the manner hereinafter described.

The outer end of the spring-arm *f* is connected, by means of a chain, *j*, to the short arm of a lever, D, which is hung to the platform of the car, and the long arm of which is so combined with a notched plate that it can be retained in either of its extreme positions.

The operation of the coupling is as follows: Supposing the parts to be in the position shown in Fig. 1, when the cars move in the direction of the arrows, the end of the arm *a* of the lever B of one coupling-head will strike the inside of the arm *b* of the lever in the opposite coupling-head, so that the jaws *d* of the two levers will be caused to engage each other, as shown in Fig. 2. When this takes place, the levers D are released, so that the blocks *i* are allowed to spring into the recesses *e* in the lever B. When in this position the blocks *i* retain the arms *b* in the recesses of the draw-head, and effectually re-

sist any tendency caused by the pull on the jaws to turn the levers in the direction of the arrows, Fig. 2, and thus permit the uncoupling of the cars, which operation can only be effected by the withdrawal of the blocks *i*, which will leave the levers B free to swing to the position shown in Fig. 1.

From the under side of each coupling-head depends a yoke, E, which serves to limit the vertical movement of the levers B to such an extent that the risk of uncoupling, owing to this movement, will be prevented.

Each of the jaws *d* is recessed, and has a vertical opening through it, so that the coupling can be used in connection with an ordinary link and pin, if necessary.

I wish it to be understood that although I have shown the block *i* as attached to a spring-arm operated by a lever or chain, I do not desire to confine myself to this special arrangement, as various devices—a weighted lever, for instance—may be substituted for the spring-arm, and various devices may be employed for operating this lever.

It will be evident that, owing to the peculiar construction of the levers B, the cars can be coupled and uncoupled even when standing on a sharp curve, and for the same reason all strain upon the coupling in turning curves is prevented.

I am aware that it is not new to combine pivoted levers and retaining-blocks with the draw-heads of cars. This, therefore, I do not claim, broadly; but

I claim as my invention—

1. The combination, in a car-coupling, of the head A and the pivoted lever B, having the jaw *d* and the arm *b*, adapted to a recess in the said head, with the block *i*, adapted to the recess *e* between the lever B and the draw-head, substantially as shown and described.

2. The combination of the lever B with a coupling-head having a yoke, E, as described.

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

PHILLIP HIEN.

Witnesses:

JOHN T. KENWORTHY,  
HOWARD GRENELL.