

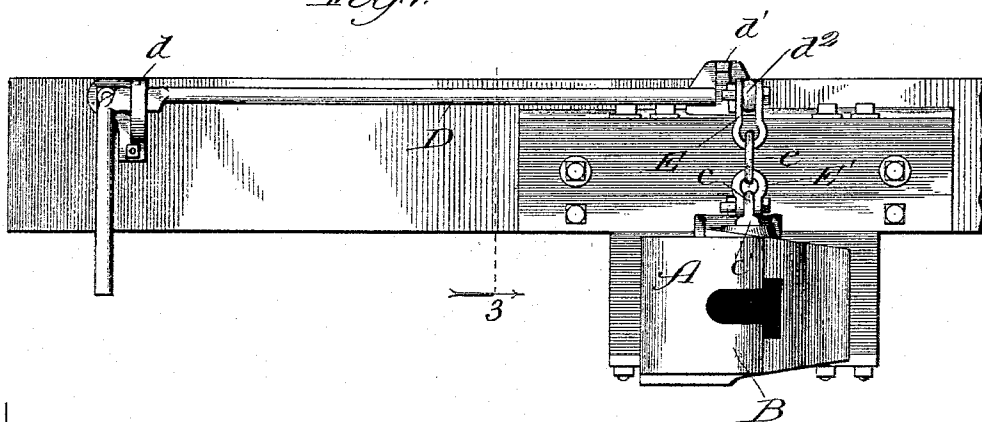
(No Model.)

W. S. SCHROEDER.  
CAR COUPLING.

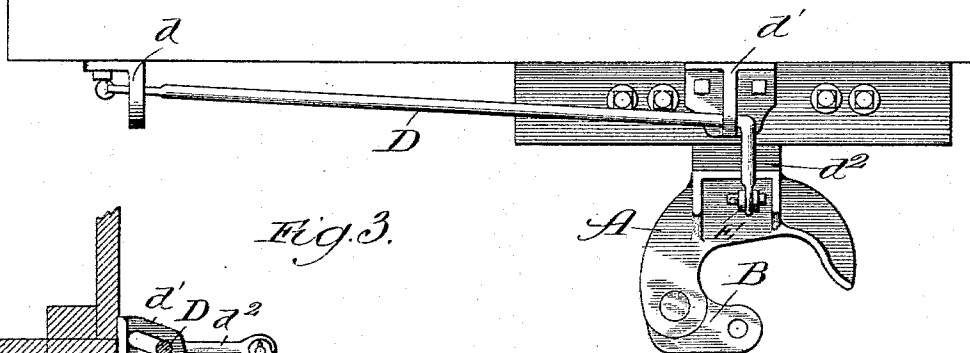
No. 531,810.

Patented Jan. 1, 1895.

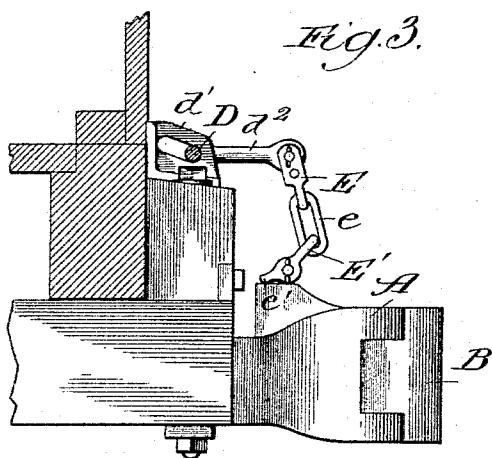
*Fig. 1.*



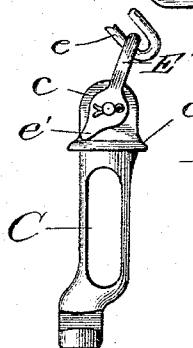
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM S. SCHROEDER, OF CHICAGO, ILLINOIS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 531,810, dated January 1, 1895.

Application filed May 7, 1894. Serial No. 510,324. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. SCHROEDER, of Chicago, Illinois, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates particularly to the mechanism for raising the lifting pin of an automatic coupler, and has for its object the providing of simple, economical and efficient mechanism by which the coupling pin is unlocked; and the invention consists in the features and combinations hereinafter described and claimed.

In the drawings, Figure 1 is an end elevation of a portion of the front end of a railway car, with my improvement attached; Fig. 2, a plan view of the same, looking at it from the top; Fig. 3, a vertical section taken on line 3 of Fig. 1, and Fig. 4 a detail view of the lifting pin.

The lifting pins of automatic couplers in the present constructions are generally attached to the unlocking rod by means of a short chain, so that when the coupler is locked there is always more or less slack in this chain, and it frequently falls toward the car and back of the lug which is cast on all automatic coupler heads to protect the lifting pin and also to act as a stop for the coupler against the dead wood of the car. In such structures, there is always danger when the chain falls behind the lug on the coupler head of it being pinched between it and the dead wood of the car when the cars are being pushed backward or coupled together, thus breaking off the chain and rendering the device inoperative.

My invention is intended to obviate these disadvantages and to provide a mechanism of such construction that the slack of the chain is always toward the front of the coupler head, thus preventing its being broken off by the movement of the car.

In constructing my improvement, I use an ordinary coupler head, A, preferably of the Master Car-Builders' type, attached to the body of the car in any convenient or usual manner, and which I deem it unnecessary to describe here in detail as it does not form any material part of my invention. The coupling knuckle, B, is held in its locked or working position by means of a lifting pin, C, which is provided with a head, c, and a flanged

shoulder, c', which prevents it from entering too far in the opening of the coupler head, as well as for other purposes hereinafter described.

To raise the lifting pin when it is necessary, I provide a bell-crank lever, D, of the shape and configuration shown in the drawings, and pivot it to the sill of the car by means of brackets, d, d'. To the inner projecting arm, d<sup>2</sup>, of the bell-crank lever—which is arranged to swing directly over the lifting pin, I pivot a clevis, E, and to the head of the lifting pin, I pivot a second clevis E', the two clevises being connected together by means of a chain link, e. The pivotal portion of the clevis on the head of a lifting pin is provided with one or more projecting lugs, e', arranged preferably at its rearward portion, so that it contacts the flange on the lifting pin and prevents the clevis from having an angular motion greater than ninety degrees, which will necessarily prevent the clevis from being thrown back beyond a vertical line to allow the slack of the chain to be thrown back of such a line.

As shown in Fig. 3 of the drawings, the lifting pin is in its locking position, and the slack of the chain is toward the front of the car. When the pin is raised the lower clevis assumes the position shown in Fig. 4, with its projecting lug striking the flanged head of the pin and preventing its upper portion from being drawn into a vertical plane, so that when the pin is again dropped, the slack of the chain will again fall toward the front of the coupler head, thus preventing the pinching and breaking of the chain link between the coupler head and the dead wood of the car.

While I have described with more or less minuteness the details of my invention, I do not desire to be limited to its precise forms or arrangements any more than is pointed out in the claims. On the contrary, I contemplate all proper changes in form, construction and arrangement, the omission of parts and the substitution of equivalents, as circumstances may suggest or necessity render expedient.

I claim—

1. In car couplers, the combination of a

coupler head, a lifting pin provided with a pivoted clevis one of such parts being provided with a flange and the other with a projection to prevent the clevis falling back of a vertical line, and mechanism attached to the body of the car and connected with the pivoted clevis for raising the lifting pin, substantially as described.

2. In car couplers, the combination of a coupler head, a lifting pin having a flanged head, a clevis pivoted to such head and provided with a projecting lug for contacting the flanged head of the pin and preventing the clevis from falling back of a vertical line, and mechanism attached to the body of the car and connected with the pivoted clevis for

raising the lifting pin, substantially as described.

3. In car couplers, the combination of a coupler head, a lifting pin having a flanged head, a clevis pivoted thereto and provided with a projecting lug for contacting the flanged head and preventing the clevis from falling back of a vertical line, a bell crank lever pivoted to the body of the car, and a chain connected with such bell crank lever and pivoted clevis for raising the lifting pin, substantially as described.

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Witnesses:

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