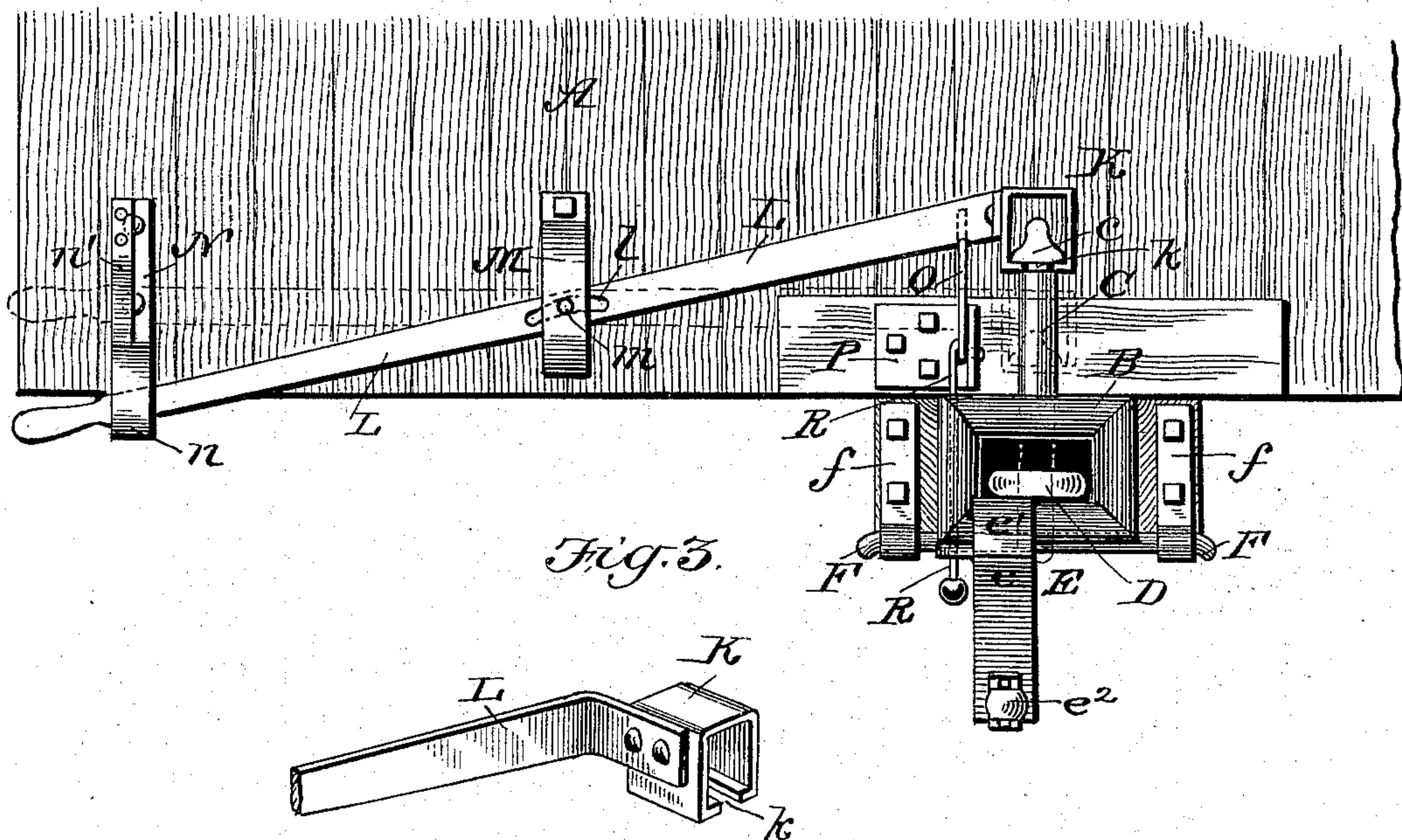
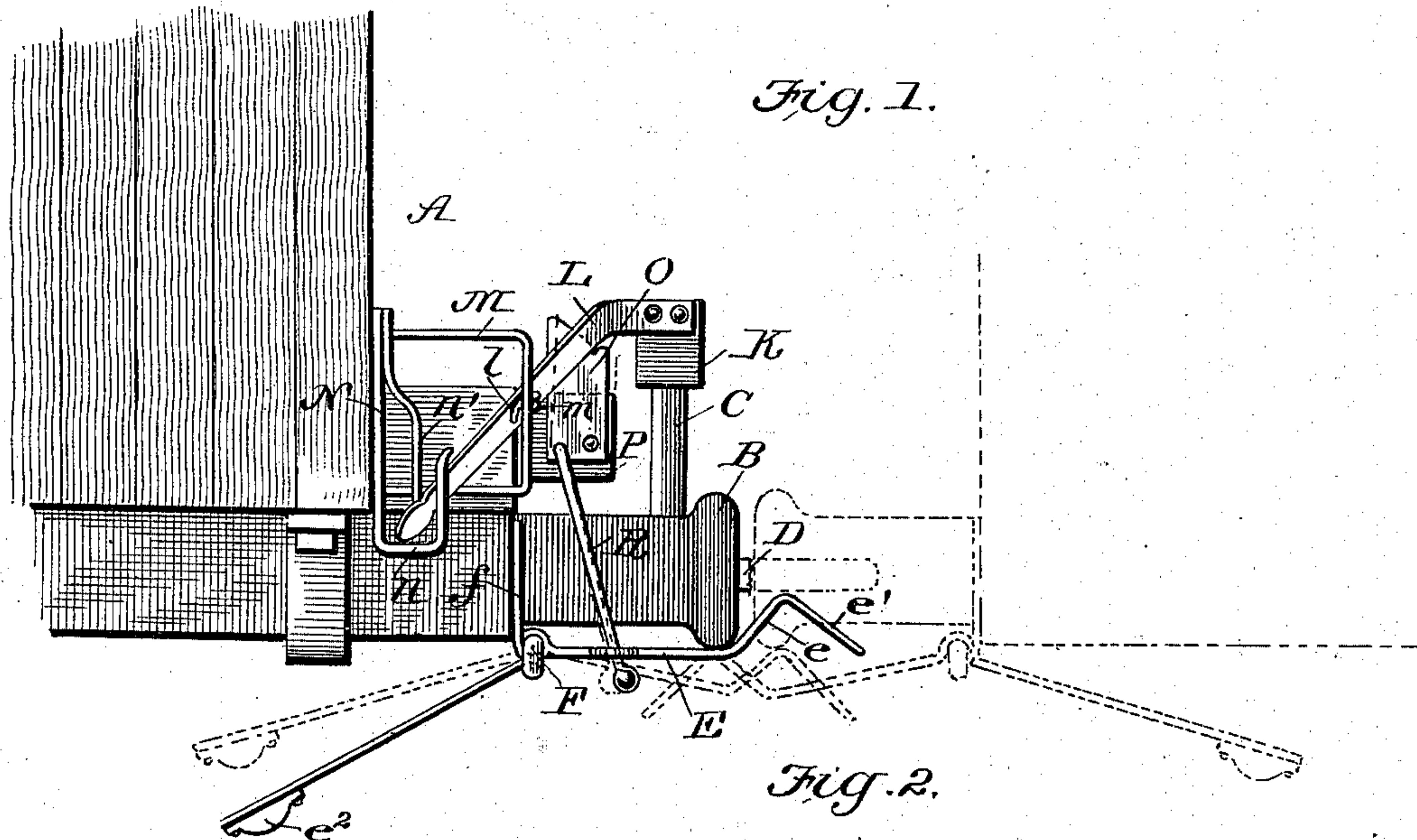


(No Model.)

A. F. KUHLMANN.  
CAR COUPLING.

No. 567,902.

Patented Sept. 15, 1896.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

ADOLPH F. KUHLMANN, OF LA CROSSE, WISCONSIN.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 567,902, dated September 15, 1896.

Application filed January 28, 1896. Serial No. 577,130. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLPH F. KUHLMANN, of La Crosse, in the county of La Crosse and State of Wisconsin, have invented an Improved Car-Coupler, of which the following is a specification.

This invention relates generally to car-couplers, and particularly to that class thereof known as "automatic" couplers, and more especially to certain improvements upon Patent No. 537,832, granted to me April 23, 1895.

One object of my present invention is to provide an improved means for lifting the link to a coupling position and holding the same in such position until the coupling operation is performed.

Another object of my invention is to provide an improved pin-supporting mechanism which shall hold the pin in a raised or uncoupled position ready for coupling; and a still further object is to provide a connection whereby, when the cars are coupled, the coupling operation will be effected automatically.

With these objects in view, and such others as may appear hereinafter, my invention consists in the peculiar construction and arrangement of the various parts, all of which will be fully described in the detailed description and pointed out in the claims.

This coupler, like that shown and described in my former patent, is adapted particularly for flat-cars and can be operated upon the side of the car, so that it will not be necessary for the operator to pass between the cars either during the operation of coupling or uncoupling.

In the drawings forming a part of this specification, Figure 1 is a view showing the end of a car provided with my improved coupler. Fig. 2 is a detailed front view; Fig. 3, a detail view of lever and hanger-brackets.

Referring to the drawings, A indicates the end of a car, which may be either a box or flat car, and B the draw-head, said draw-head being of the usual form and construction.

C indicates the coupling-pin, having a head  $c$ , and D is the link, which is similar to the ordinary link now in common use.

A link-lifting lever E is fulcrumed upon a horizontal shaft F, mounted in brackets  $f$ , attached to the end of the car, the forward end

of said lever being bent upward, as at  $e$ , directly in front of the draw-head, and then inclined downward, as shown at  $e'$ . The rear end of the lever is bent slightly downward and carries a weight  $e^2$  upon the rear end, the object of said weight being to hold the link-lifting lever normally in a raised position, as shown in Fig. 1.

The head of the coupling-pin rests within an essentially rectangular-shaped hanger-bracket K, the bottom of said bracket being slotted longitudinally, as shown at  $k$ , to permit the pin being inserted therein, and said slot is made elongated for the purpose of permitting the draw-head and coupling-pin to move back and forth a limited distance without interfering with the pin-lifting mechanism.

Connected to the bracket K is the inner end of a lever L, said lever being fulcrumed upon a pin  $m$ , passing through the guide-bracket M, arranged upon the end of the car, the extreme outer end of said lever cooperating with a fastening-bracket N, arranged at the end of the car and adapted to hold said lever in a locked position when the pin is raised or in an uncoupled position.

The fastening-bracket N comprises an essentially rectangular loop  $n$ , open at the top to receive the lever, and the downwardly-projecting spring-tongue  $n'$ , which is adapted to bind against the lever and hold the same against the forward side of the loop.

The lever L has a V-shaped slot  $f$  produced therein, and through which the fulcrumed pin passes, the object of said slot being to permit the draw-head and coupling-pin to have a limited lateral play while rounding curves without interfering with the operating mechanism.

In order to support the lever in its raised position when the handle of the lever is thrown downward, I employ a pivoted supporting-plate O, pivoted upon an angle-iron P, attached to the end of the car, said supporting-plate having a notch in its upper face adapted to engage the lever and hold the same in its raised position. In order to disengage said supporting-plate from the lever when the coupling operation is effected, I employ a rod R, which is attached to the supporting-plate at a point to the rear of its



pivot, the lower end of said rod being connected to the link-lifting lever at a point forward of its pivot, said connection being preferably made by passing the rod through the link-lifting lever and placing a head upon the end of said rod, thus allowing a limited amount of play between said rod and link-lifting lever. Now in operation it will be understood that the link-lifting lever being held normally in a raised position will hold said link in a horizontal position, and this irrespective of whether the pin is in a raised or lowered position. Ordinarily, however, when the pin is in its lowered position, and when said link is to be introduced into the opposing draw-head for the purpose of coupling, the pin in the opposing draw-head will of course be raised and supported by means of the supporting-plate.

When the two draw-heads are brought together, the forward end of the link-lifting lever is depressed, pulling down the rod R, which operation throws back the pin-supporting plate, and the lever and pin, being deprived of support, thereby effecting an automatic coupling.

The inclined end of the link-lifting lever is for the purpose of guiding the approaching link into the draw-head, as it frequently happens that, owing to either the difference in the height of the two draw-heads or for some other cause, the link will not properly enter the draw-head, and the object, therefore, of constructing my link-lifting lever in this manner is to serve as a guide for the link in such instances. It will thus be seen that I provide an automatic pin-support and an automatic link support and lifter, and it will also be observed that the coupling operation is entirely effected in an automatic manner,

thus avoiding all necessity of the operator passing between the cars in order to either couple or uncouple them.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination with the draw-head and pin of the pin-lifting lever carrying a hanger-bracket slotted longitudinally, the fastening-bracket and supporting-plate for holding said lever in a raised position, substantially as shown and described.

2. In a car-coupler, the combination with the draw-head and pin of the longitudinally-slotted hanger-bracket, the operating-lever having the V-shaped slot, the fulcrumed pin passing therethrough, and the fastening-bracket adapted to engage the free end of said lever, substantially as shown and described.

3. In a car-coupler, the combination with the draw-head, and pin of the pin-lifting lever, the supporting-plate, the link-lifting lever and the rod connecting said supporting-plate and link-lifting lever, substantially as shown and described.

4. In a car-coupler, the combination of the draw-head, and pin of the hanger-bracket slotted longitudinally, the pin-lifting lever, the pivoted supporting-plate, the link-lifting lever having a weight at its rear end, its forward end being shaped substantially as described, and the rod connecting said pin-supporting plate and the link-supporting lever, substantially as shown and described.

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

ADOLPH F. KUHLMANN.

Witnesses:

WALTER C. WINTER,  
JOHN J. ESCH.