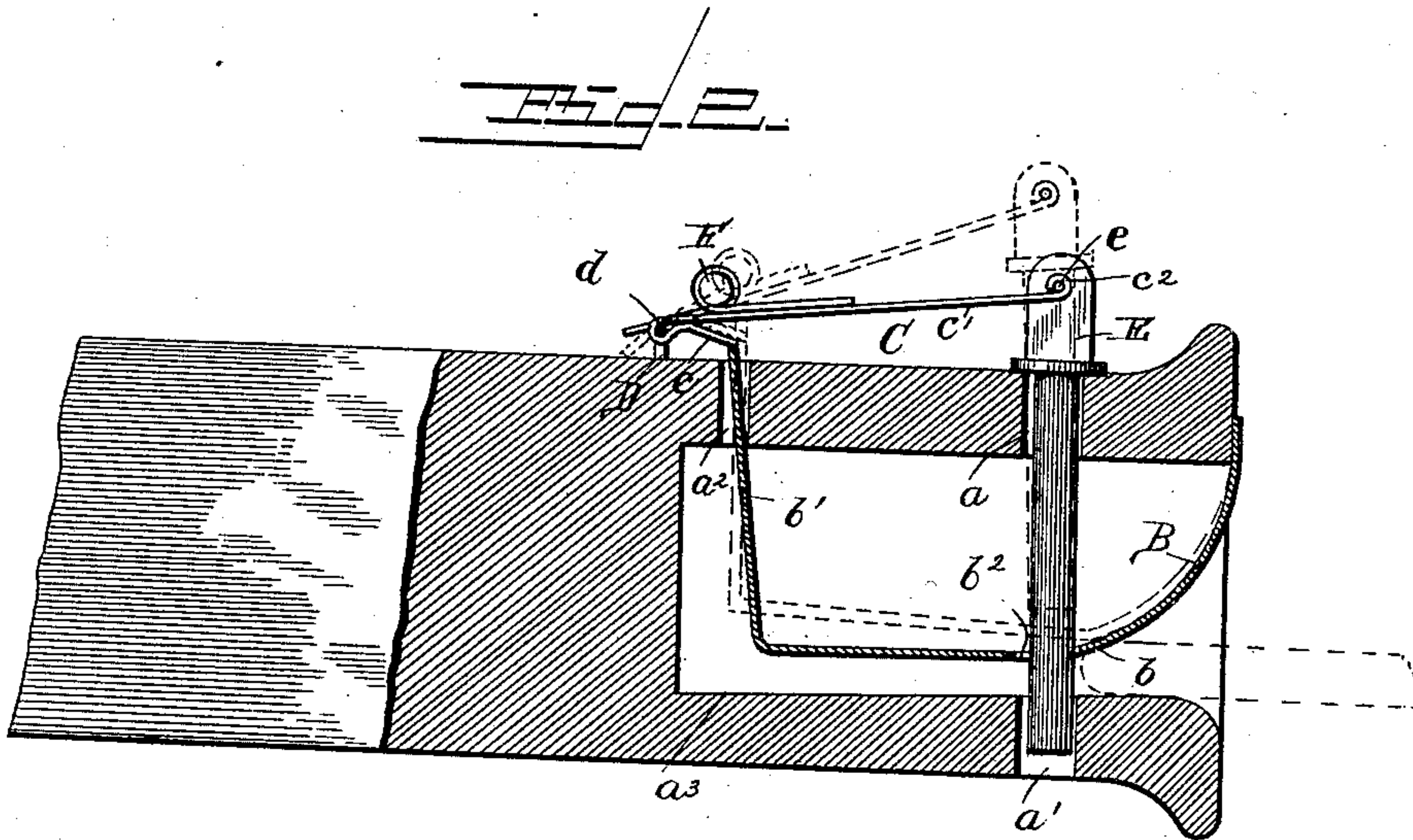
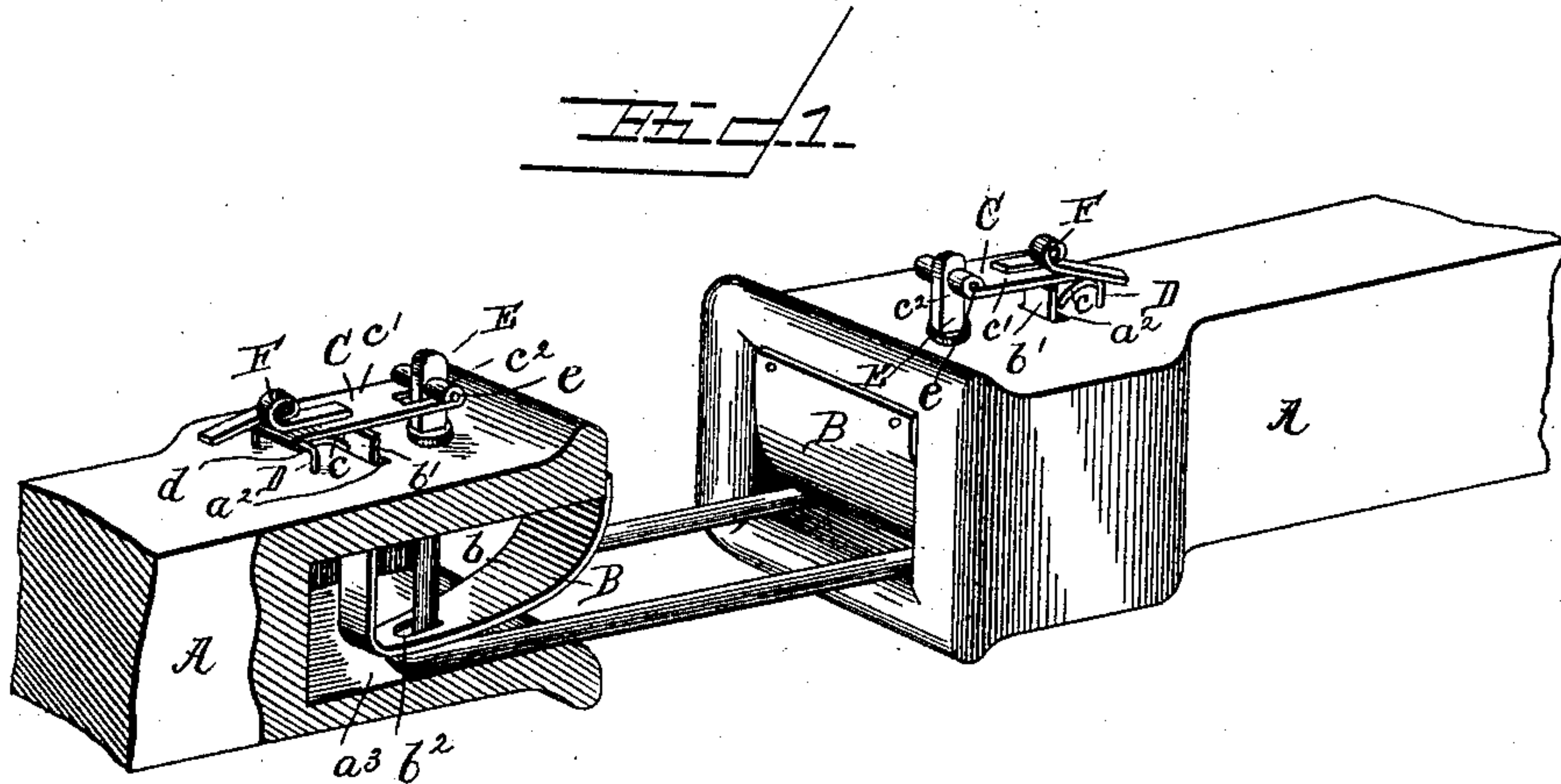


(No Model.)

E. HOUTZ.  
CAR COUPLING.

No. 384,575.

Patented June 12, 1888.



WITNESSES.

Henry G. Dietrich  
Theodore S. West,

INVENTOR.

INVENTOR,  
*Edward Houtz,*

by *C. A. Howard*  
Attorneys.



# UNITED STATES PATENT OFFICE.

EDWARD HOUTZ, OF BLUNT, DAKOTA TERRITORY, ASSIGNOR OF ONE-HALF  
TO JOAB F. WILLIAMS, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 384,575, dated June 12, 1888.

Application filed March 21, 1888. Serial No. 267,945. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD HOUTZ, a citizen of the United States, residing at Blunt, in the county of Hughes and Territory of Dakota, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

The invention relates to improvements in car-couplers of the link-and-pin variety, the object being to lift the pin automatically to engage in the adjacent end of the link; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claims.

In the drawings, Figure 1 represents a perspective view of a car-coupler embodying the invention, one draw-head being cut away at the side to show the internal arrangement. In this view the link is shown engaged by both pins. Fig. 2 represents a vertical longitudinal section of one draw-head of the coupler, showing the link entering and raising the pin.

Referring to the drawings by letter, A A designate the two draw-heads of the coupler, which are similar in all respects, so that a description of one only is necessary. The draw-head A is provided with the upper and lower pin-holes,  $a$   $a'$ , respectively, in its roof and floor, and has, a suitable distance in rear of the upper pin-hole, a transverse slot,  $a^2$ , in its roof. The floor of the recess in the draw-head is recessed at  $a^3$  transversely under the inner end of the spring B, hereinafter described, to form a seat for the inner end of the connecting-link G.

B is a strong leaf-spring, with its outer end secured to the upper edge of the mouth of the draw-head, whence it extends downward and inward till it nearly touches the floor. It then bends in a short curve,  $b$ , and inward and beyond said curve extends inward and slightly upward to a point nearly vertically below the slot  $a^2$ , whence it extends upward at  $b'$  through said slot to a suitable but small height above the draw-head. The spring B is provided with a longitudinal slot,  $b^2$ , that is immediately above the lower pin-hole,  $a'$ .

C is a double-armed angle-lever, pivoted at its angle upon the transverse bar or rod  $d$  of a

bracket, D, secured to the top of the draw-head a short distance in rear of the transverse slot  $a^2$ . The lower arm,  $c$ , of said lever projects forward and downward, and rests on the upwardly-extended rear end,  $b'$ , of the spring B. The upper arm,  $c'$ , of the lever extends forward, and has its end bifurcated and eyes  $c^2$  formed on the ends of the arms of the bifurcation.

E is the pin hanging in the openings  $a$   $a'$  and through the slot  $b^2$  in the spring. The upper end of the pin is pivoted between the eyes  $c^2$  by the pin  $e$ .

F is a spring having one end secured to the top of the arm  $c'$  of the angle-lever, and the other end, which is free, resting upon the top of the draw-head in rear of said lever. The function of the spring F is to prevent the lever C from being raised too high, and thereby pulling the pin out of the upper pin-hole,  $a$ .

When the end of the link G enters the corresponding draw-head, it forces upward the spring B therein, and, by means of the rear vertical portion,  $b'$ , of said spring, raises the arm  $c$  of the angle-lever, and consequently raises the pin from the lower opening,  $a'$ . When the end of the lever has passed inward beyond the pin-openings, the arm  $c$ , which has been inclined more and more upward as the extension  $b'$  was rising, slips off said extension, and the pin consequently falls. When the link is withdrawn, the spring B moves downward, and the extension  $b'$ , which normally bears against the rear side of the slot  $a^2$ , springs again under the arm C, which is sufficiently short to permit this. The spring B also, by bearing upon the link G, holds the same horizontal and in proper position to engage in the opposite draw-head.

The device can be readily and quickly fitted to draw-heads of ordinary construction, and will, as is seen, couple automatically.

Having described my invention, I claim—

1. In a car-coupler, the combination, with the draw-head, of a spring secured within the recess of the draw-head in the path of the link, the rear upwardly-extended free end of which spring extends through a slot in the draw-head, the double-armed lever pivoted on a support on the top of the draw-head, with its

lower arm resting on the extended end of the spring and short enough to fall off said end when raised to the proper height, and the pin hanging from the upper arm of said lever in the pin-holes of the draw-head, and a slot in the spring registering with said holes, substantially as specified.

2. In a car-coupler, the combination of the link G with the recessed draw-head A, having the pin-holes  $a'$ , the slot  $a^2$  in its roof in rear of the pin-holes, and the recess  $a^3$  in its floor within, the spring B, having the curved portion  $b$ , the vertically-extended rear end,  $b'$ , and the slot  $b^2$ , the double-armed lever C, pivoted on a bracket on top of the draw-head, and the hanging pin pivoted to the upper arm of said lever, substantially as specified.

3. The combination of the link with the recessed draw-head having the slot  $a^2$ , the slotted spring B, having the upwardly-extended rear end,  $b'$ , the double-armed pivoted lever, the pin hanging from the upper arm of said lever, and the spring F, having its outer or front end secured to the upper arm of the double-armed lever and its free rear end bearing on the top of the draw-head, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EDWARD HOUTZ.

Witnesses:

SOL. RIMER,  
A. F. REED.