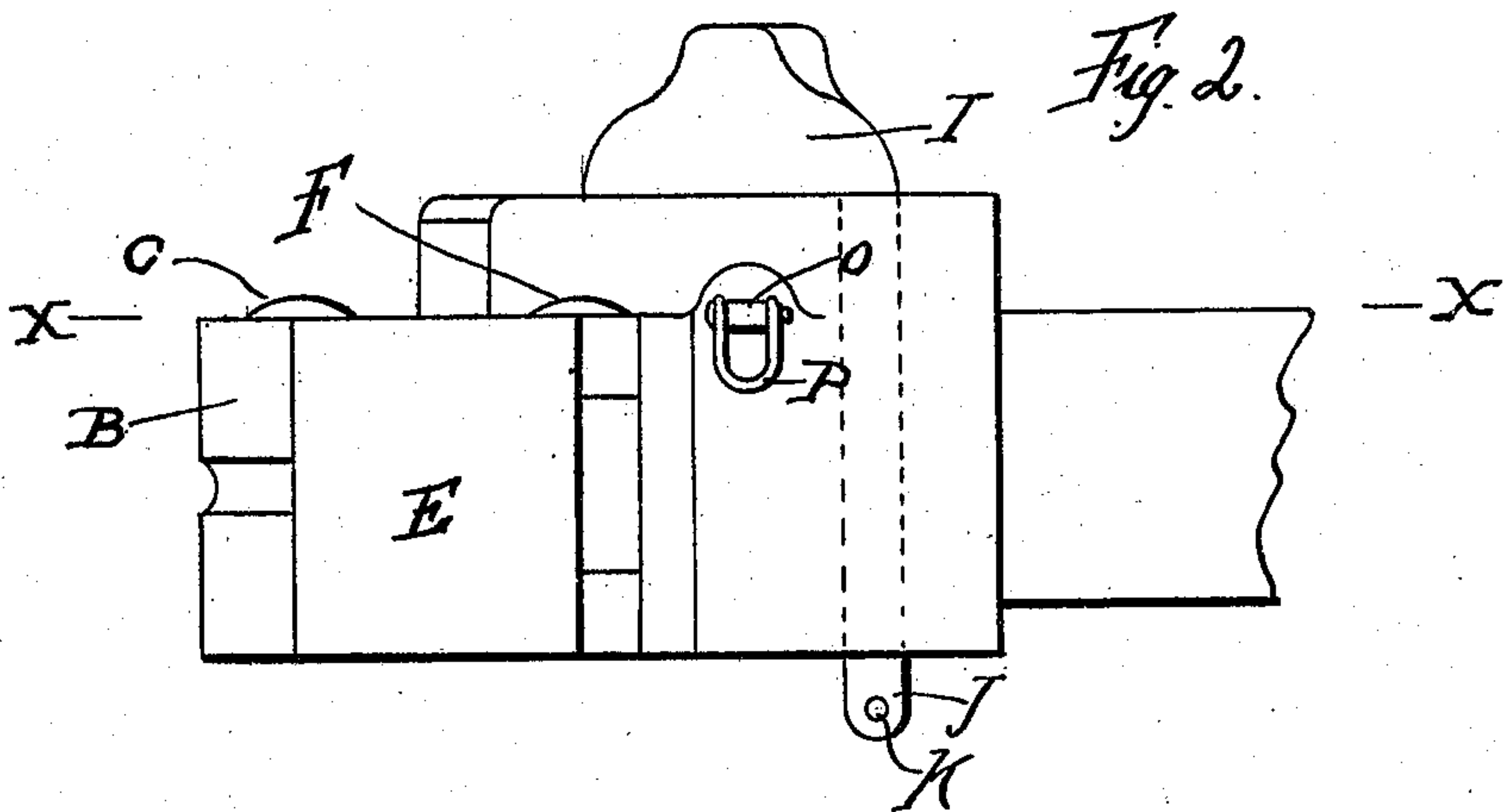
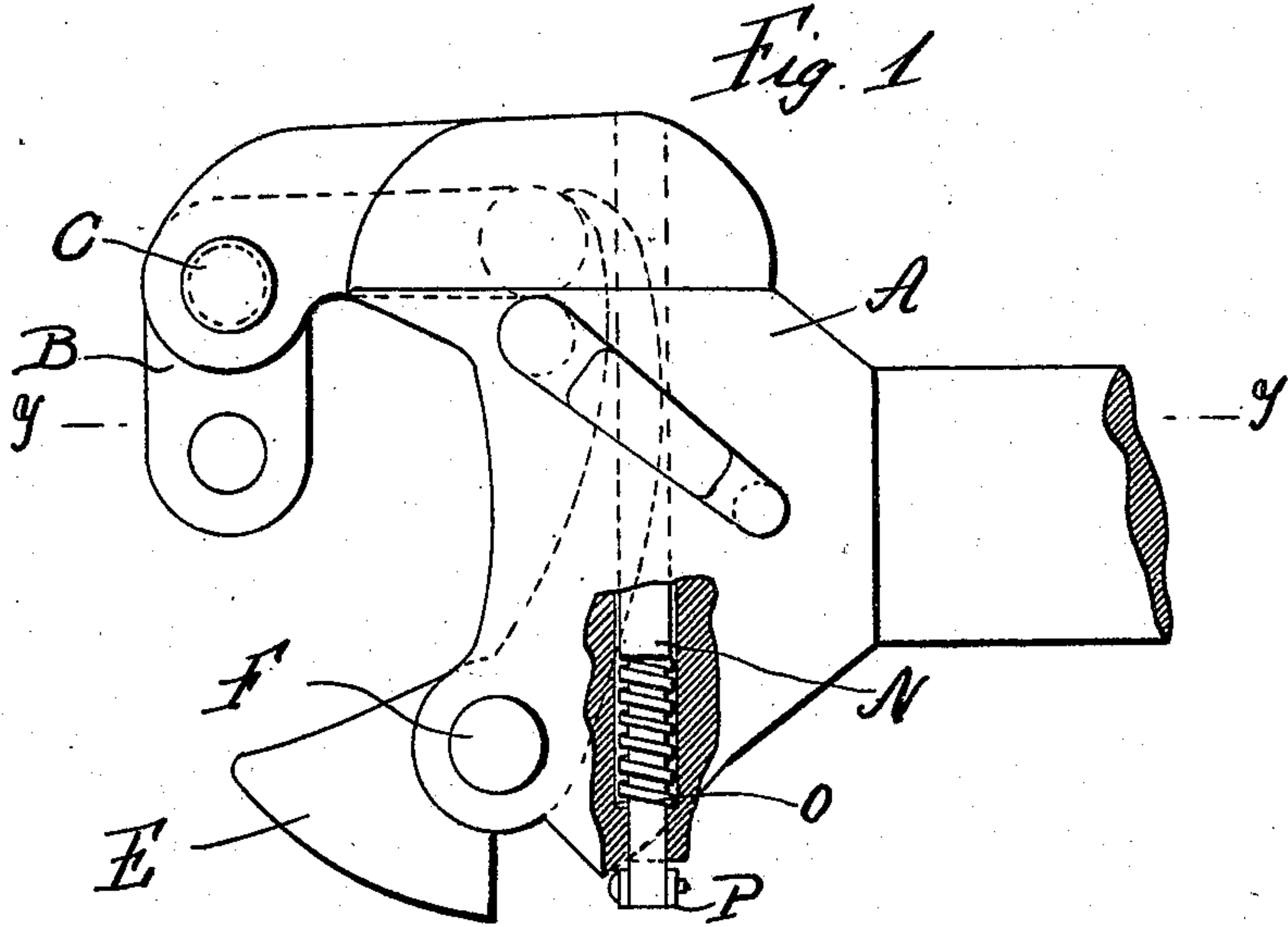


No. 858,787.

PATENTED JULY 2, 1907.

S. H. BOLTZ.
RAILWAY CAR COUPLING.
APPLICATION FILED OCT. 24, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

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SOLOMON H. BOLTZ, OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY-CAR COUPLING.

No. 858,787.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed October 24, 1905. Serial No. 284,155.

To all whom it may concern:

Be it known that I, SOLOMON H. BOLTZ, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Railway-Car Coupler, of which the following is a specification.

This invention relates to improvements to railway car couplers of the impact type, and is intended for use on all classes of freight cars, passenger cars and locomotives.

The object of the invention is to provide a coupler, first, that has a larger opening between the points of the jaws when the coupler is open; second, to provide a positive locking device for such coupler; and third, to provide a coupler that will open automatically when the locking pin is raised.

The invention is fully set forth in the following specification and clearly illustrated in the accompanying drawings.

Figure 1 is a plan view of a coupler made in accordance with my improvement, a portion of the head being broken away so as to show the spring actuated slide for elevating the coupling pin. Fig. 2, a side elevation. Fig. 3, a section at the line $x-x$ of Fig. 2. Fig. 4, a section at the line $y-y$ of Fig. 1. Fig. 5, a detail view of the spring actuated slide for elevating the coupling pin.

In carrying out my invention as here embodied, A represents the main casting or head of the coupler, to which is pivoted the knuckle B at C, and the heel end of this knuckle extends into the cavity of the head, and has journaled thereon the roll D.

E represents the movable jaw or guide, which is pivoted by the pin F to the opposite side of the head, and has an extension E' formed therewith which projects into the cavity in the head, the front edge of which is so curved as to act upon the roll D to throw the latter sidewise thereby swinging the knuckle B outward, and this extension is forced outward by the coil spring G.

H represents the coupling pin, which is formed with the yoke I, the latter also having formed therewith the guide pin J, which extends down through the head, and is provided with a stop pin K to prevent its withdrawal from the head.

When the coupling is closed the coupling pin H lies in front of the heel end of the knuckle B, thus preventing it from being swung open, and so long as the knuckle is held closed the roll D bearing upon the extension E' of the swinging jaw will maintain the latter in its closed position, but when the coupling pin is raised above the heel end of the knuckle the action of the spring G will force the extension E' forward, and by so doing cause the roll D to ride on its outer edge, thus opening the knuckle at the same time the swinging

jaw is opened. This provides a flared mouth coupling so that the opposite coupling when coming in contact will readily enter between the knuckle and swinging jaw and be guided into place, and when pressure is exerted upon the knuckle to swing it into its closed position the jaw E will also be swung inward so as to confine the knuckle to the opposite coupling for the well known purpose.

L represents a lever, which is pivoted at L', and has a slot L² formed in its forward end through which the pin M projecting from the heel end of the knuckle passes, so that when the knuckle is swung open this lever is swung sidewise across the path of the coupling pin H and prevents said pin from being again lowered until the knuckle has been closed.

In coupling two cars together carrying my improved coupler as soon as the knuckles of each coupler enters the other and said knuckles are forced to their closed positions, the pins H will be freed by the levers L passing from beneath the same, thus permitting the coupling pin to automatically drop down and lock the knuckles in their closed position. This is an important feature in my improvement, in that it does not necessitate a trainman passing between the cars to lock the couplings.

N represents a slide, which is fitted in the head and is forced in one direction by the spring O, and adapted to be drawn in the opposite direction by the link P, and this slide has a beveled surface N' which when the slide is drawn outward passes beneath the yoke and lifts the coupling pin so as to free the knuckle and permit it to be swung outward as before described, and this arrangement overcomes the necessity of a trainman passing beneath the cars to uncouple the same, as it is only necessary to use a hook rod or other device for engaging the link P to draw the slide outward, thereby elevating the pin and uncoupling the cars.

Having thus fully described my invention, what I claim as new and useful, is—

1. In a car coupler, the combination of a head, a knuckle pivoted thereto, said knuckle having a heel end, a roll journaled in the heel end of said knuckle, a swinging jaw also pivoted to the head, a curved extension formed with said jaw and adapted to bear against the roll, a coil spring adapted to force the curved extension outward, a coupling pin adapted to hold the knuckle in its locked position, a guide pin, a yoke with which the coupling pin and guide pin are formed, a spring actuated slide adapted to elevate the yoke when moved in one direction and a lever pivoted within the head and connected to the heel end of the knuckle so as to move beneath the coupling pin when the knuckle is open, as specified.

2. In combination with the head of a car coupler, a knuckle pivoted to said head, said knuckle having a heel end, a roll journaled to the heel end of the knuckle, a swinging jaw pivoted to the opposite side of the head from the knuckle, an extension formed with the swinging jaw,

the outer edge of which is so curved as to act upon the roll to swing the knuckle outward when the swinging jaw is forced open, a coil spring for forcing said swinging jaw open, a coupling pin, a yoke with which said pin is formed, a guide pin also formed with the yoke, a lever pivoted within the head, said lever having a slot formed therein, a pin carried by the heel end of the knuckle and projecting within said slot, a slide having a bevel formed thereon adapted to elevate the yoke and thereby elevate

the coupling and guide pin, a spring adapted to actuate 10 the slide in one direction and a link attached to the slide by which it may be actuated in the opposite direction, as and for the purpose set forth.

SOLOMON H. BOLTZ.

Witnesses:

OLIVER S. WEIBLE,
RUSSELL H. GATES.