

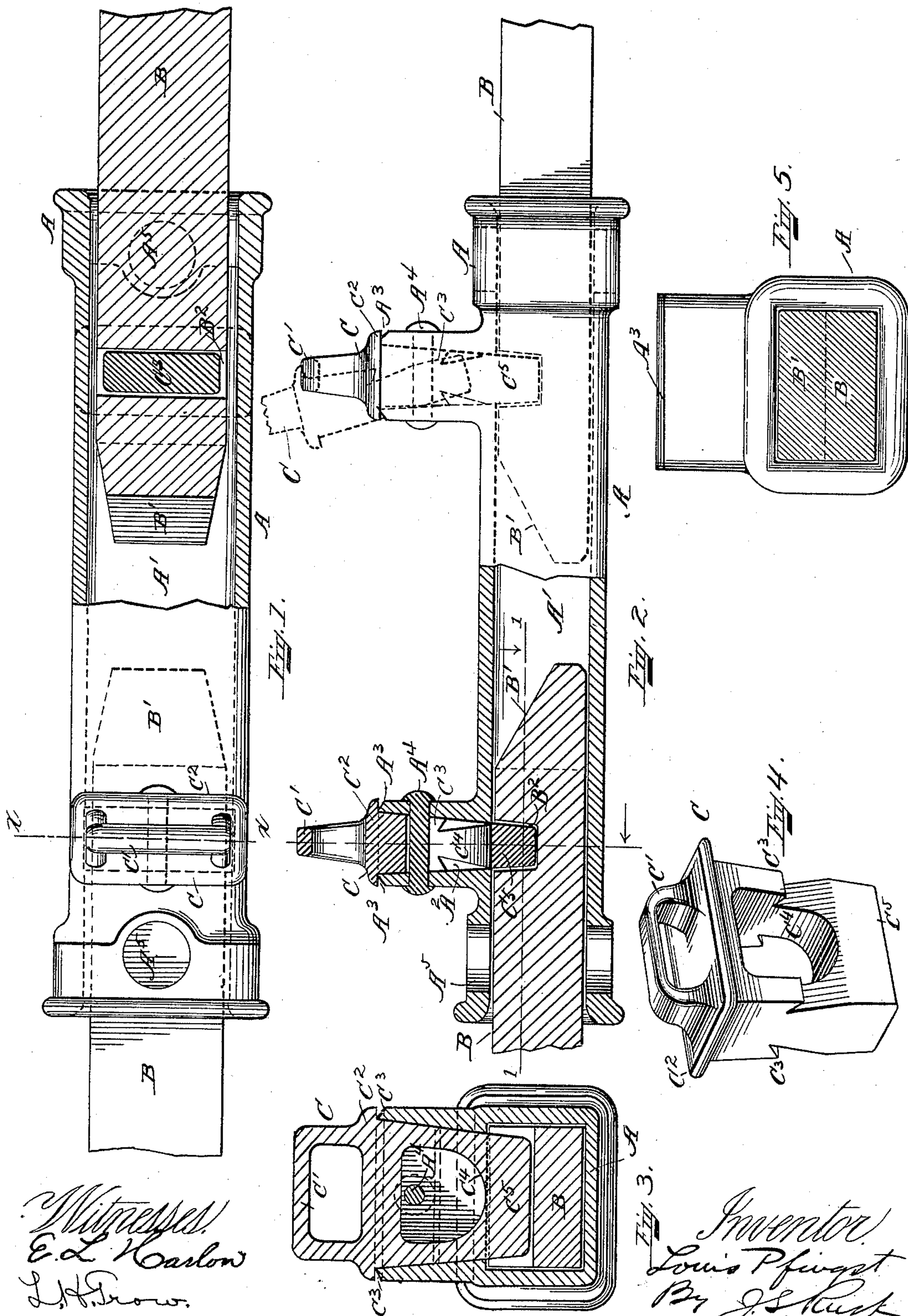
(No Model.)

2 Sheets—Sheet 1.

L. PFINGST.
CAR COUPLING.

No. 584,519.

Patented June 15, 1897.



Witnesses:
E. L. Carlson
L. H. Brown.

Inventor:
Louis Pfingst
By J. S. Burk
att'y

(No Model.)

2 Sheets—Sheet 2.

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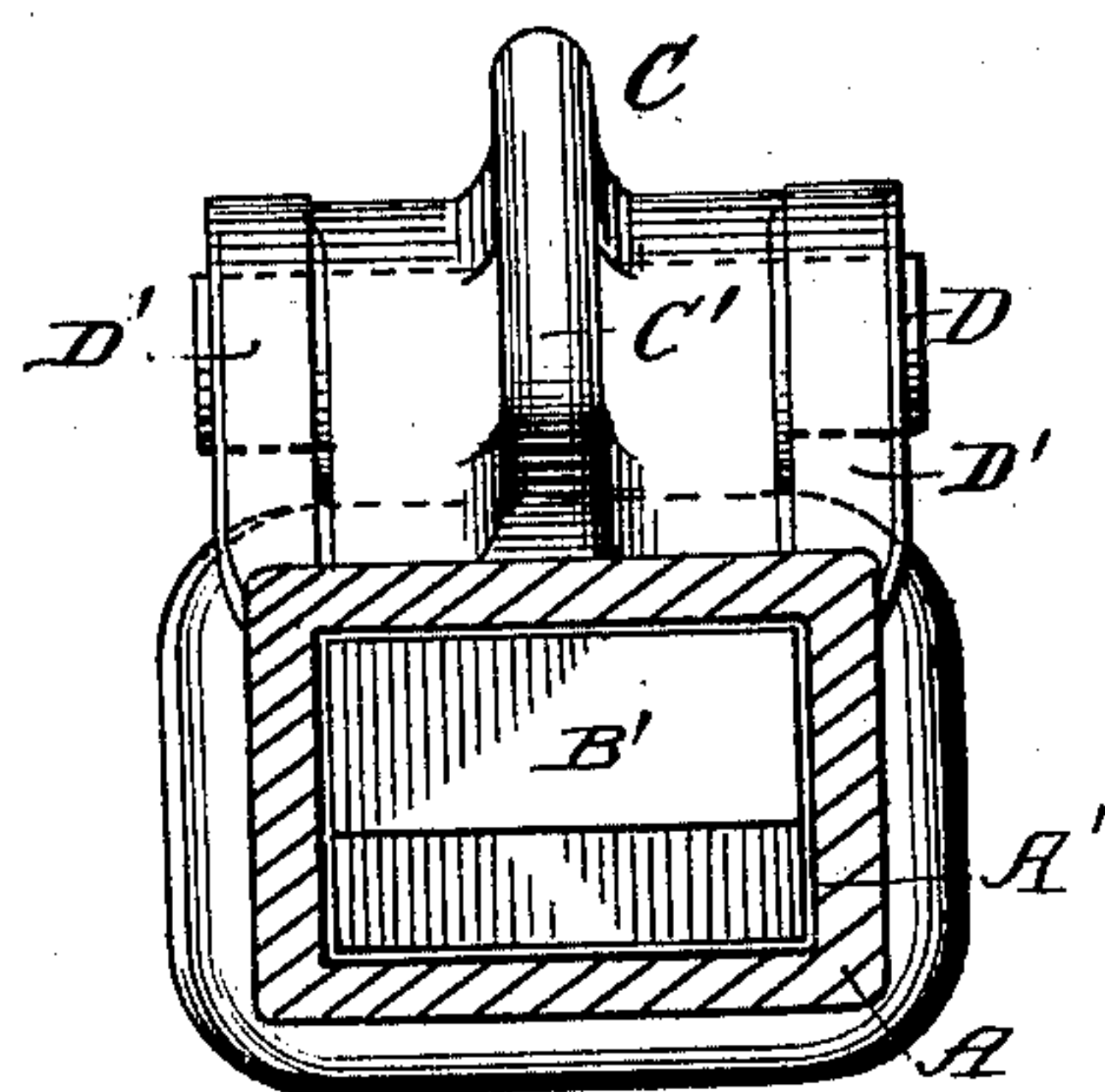
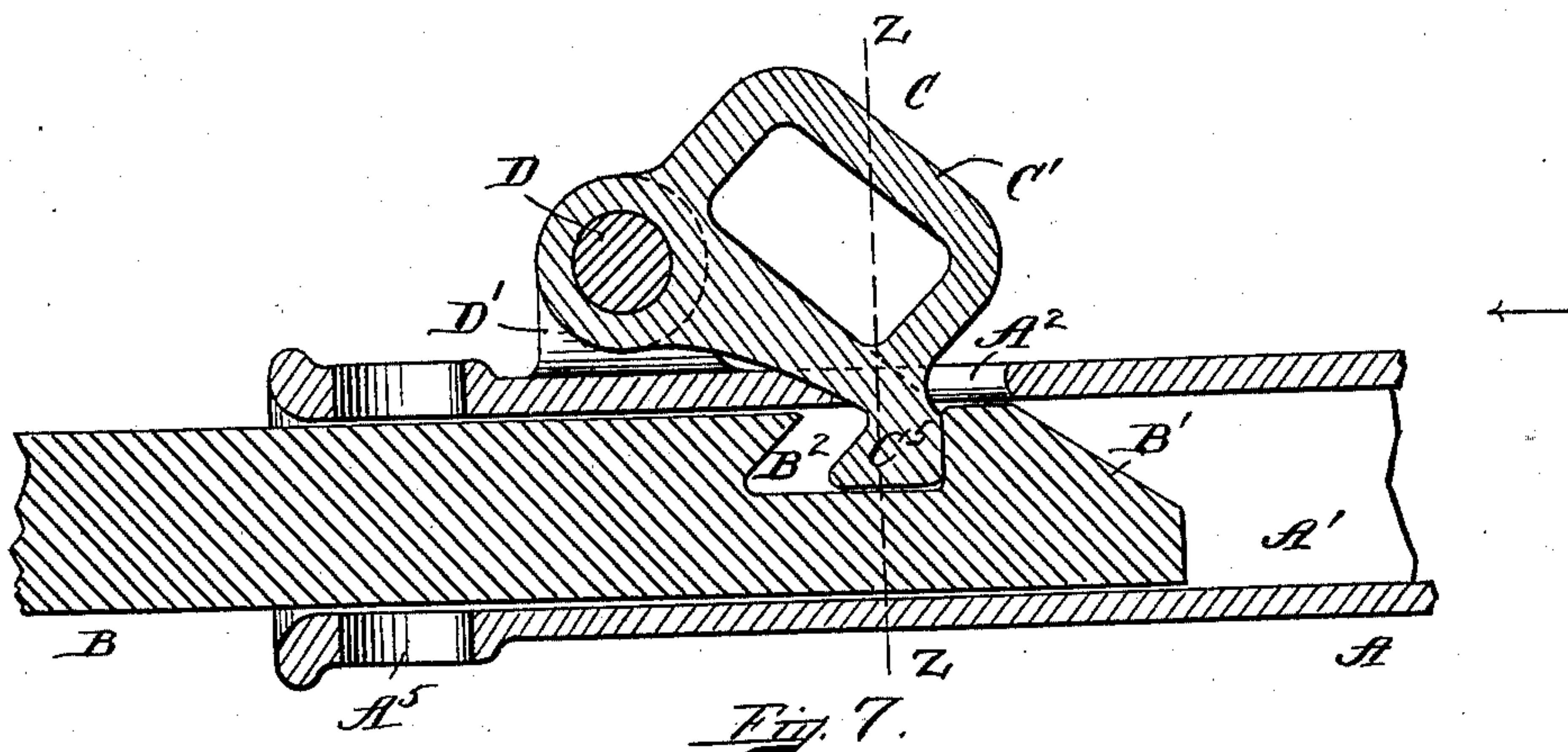
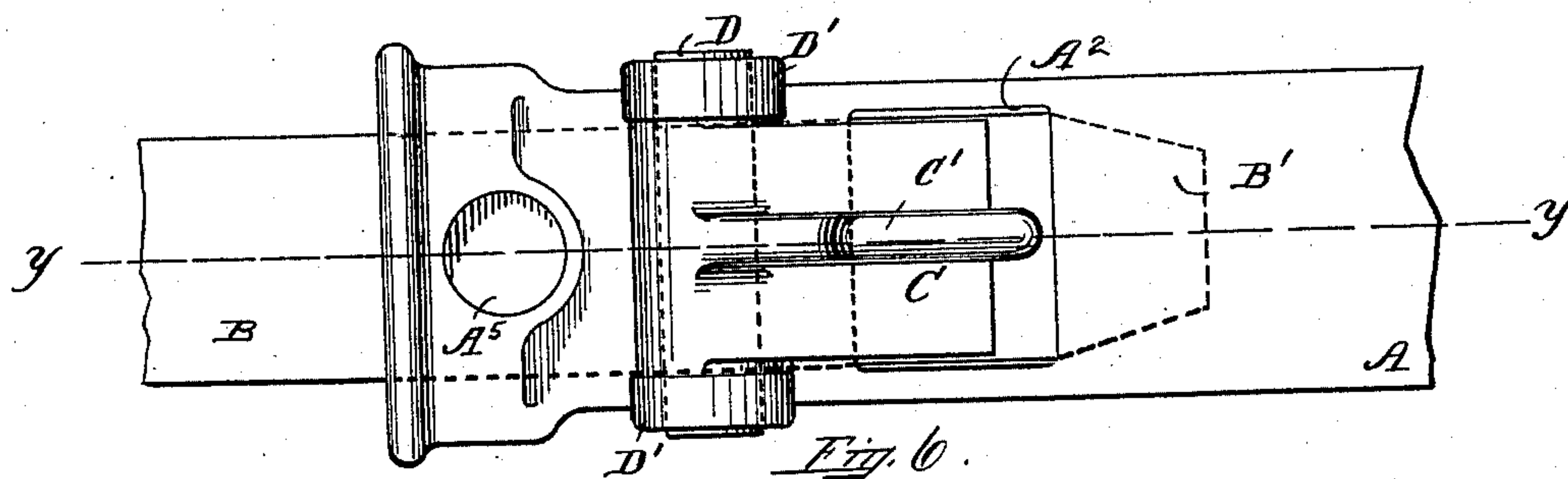


Fig. 8.

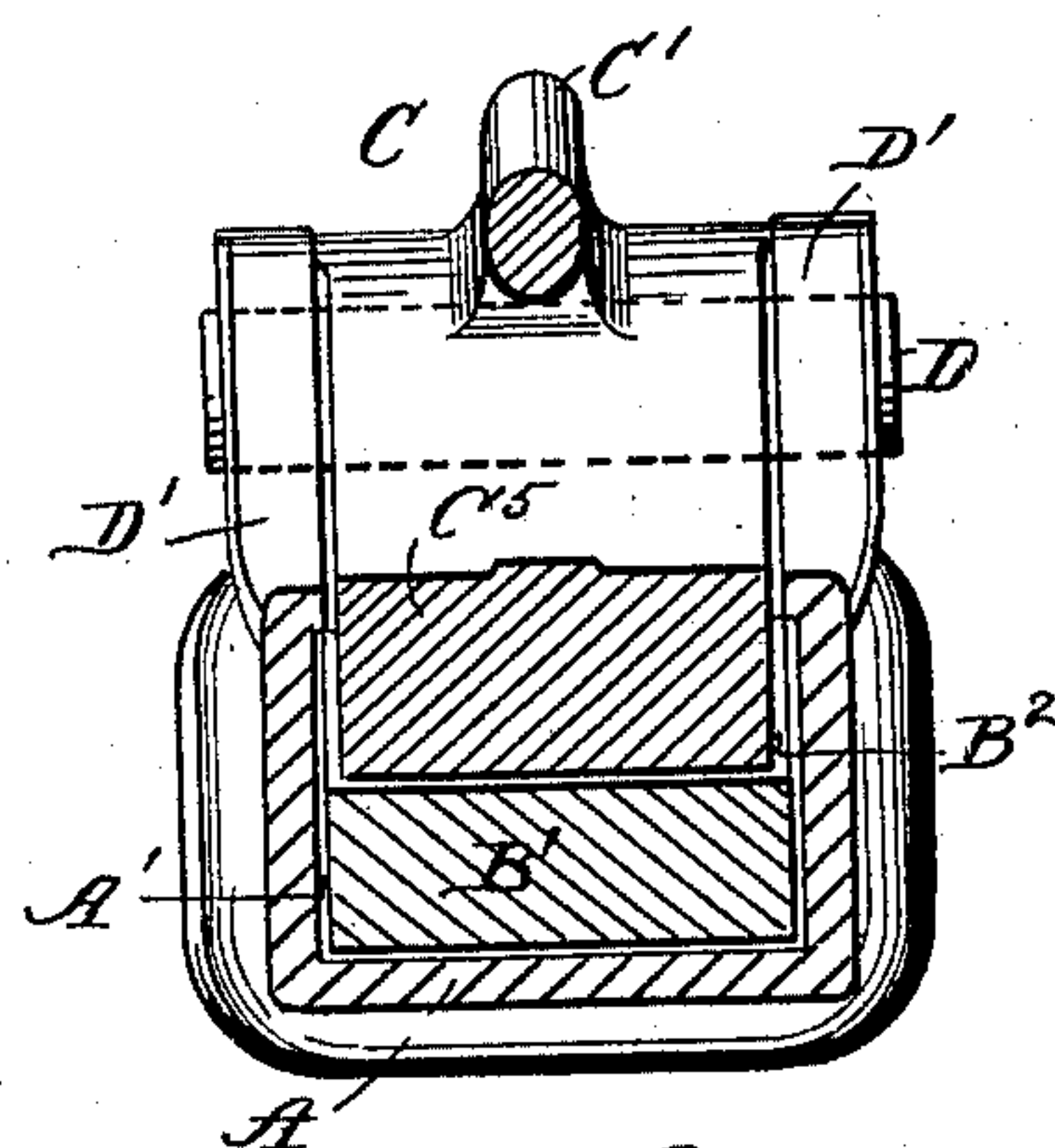


Fig. 9.

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UNITED STATES PATENT OFFICE.

LOUIS PFINGST, OF BOSTON, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 584,519, dated June 15, 1897.

Application filed April 8, 1895. Serial No. 544,861. (No model.)

To all whom it may concern.

Be it known that I, LOUIS PFINGST, of Boston, county of Suffolk, and State of Massachusetts, have invented new and useful Improvements in Automatic Car-Couplers; and I hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to automatic car-couplers; and the object of the same is to couple cars automatically without the necessity of inserting pins or removing the same or requiring the attendance of an operator; and it further relates to improvements upon the car-coupler shown, described, and claimed in United States Letters Patent No. 426,317, issued to me on the 22d day of April, 1890; and my invention also consists of certain novel features, arrangements, and combinations hereinafter described, and particularly pointed out in the claims.

In the drawings which form a part of this application and which illustrate a construction embodying my invention, Figure 1 is a plan view, partly in section, showing the link draw-head with the draw-bars inserted within the link draw-head in position when the cars are coupled. Fig. 2 is a side view, partly in section, showing the link draw-head and draw-bars in the position shown in Fig. 1 and showing the automatic lock in position for holding the draw-bars within the link draw-head and representing the parts in position when the cars are coupled. Fig. 3 is a cross-section through Figs. 1 and 2 on the line $x x$ and showing in section the automatic lock. Fig. 4 is a detail view of the automatic lock. Fig. 5 is an end elevation of the link draw-head. Fig. 6 is a plan view showing one-half of the device illustrated in Fig. 1 and provided with a modified form of automatic lock. Fig. 7 is a longitudinal cross-section on the line $y y$, Fig. 6, and showing the parts in section with the automatic lock holding the draw-bar within the link draw-head. Fig. 8 is an end view looking in the direction indicated by the arrow, Fig. 7. Fig. 9 is a cross-sectional view taken on the line $z z$, Fig. 7, and showing a section of a modified form of the automatic lock.

In the drawings like letters of reference refer to like parts throughout the several views.

The link draw-head A is provided with an internal chamber A', and near each end of said link draw-head there is provided an opening A² in the top of said link draw-head, surrounded by walls A³ open at the top, and in this opening there is located an automatic gravity-lock C, having a flanged top C², which rests when in a locking position upon the top of the walls A³, as shown in Fig. 2, and said lock is also provided with a handle C', by which the same is raised out of its locking position with the draw-bar when uncoupling cars, and the said lock is also provided with dovetailed recesses C³, which fit over the top edges of the side walls A³, as shown in dotted lines, Fig. 2, when said lock is raised out of its locking position, and when thus supported in the upper unlocking position the said draw-bar can be pulled out without resistance from the draw-head when the cars are being uncoupled, and in order to prevent the gravity-lock C from being removed entirely from said opening A³ there is provided a cross-bar A⁴, which passes through the opening C⁴, formed through the body of the automatic lock.

As shown in the drawings, especially Figs. 1 and 2, two cars are coupled together by means of the two draw-bars B B, inserted through opposite ends within the chamber A' of the link draw-head A. The car which is being coupled to the link located on the other car has a draw-bar B, the end of which draw-bar is provided with an incline B', which enters underneath the lower end C⁵ of the gravity-lock, raising the same on the incline until it falls into the recess B² in the draw-bar, thereby preventing the draw-bar from being pushed in farther or pulled out while the cars are coupled until it is desired to separate said cars, when the operator can lift said lock and support it in the manner previously described, and, if desired, after the removal of the draw-bar the lock can be permitted to fall back by gravity into this opening, with the top seat C² resting on the top edges of the walls A³, and is then in position for the automatic coupling of another car.

When the link draw-head is not in use in

coupling cars, the same can be slipped back on the draw-bar and held in position by one of the gravity-locks, and this eliminates the serious objection of having the draw-head extending out in front of the car when cars are not coupled, and when it is desired to couple two cars the link draw-head is pulled forward, so that the rear gravity-lock falls into the recess in the draw-bar on which the said link draw-head has been supported and permitting the other end of the link draw-head to receive a draw-bar located on another car, and the front gravity-lock locks the said draw-bar on the other car to the link draw-head.

While I have shown both ends B of the link draw-head provided with an automatic lock, it will be understood that the draw-bar which carries the link prior to the coupling thereto of another car may simply be provided with the ordinary coupling-pin, (shown in my patent previously referred to,) but at the opposite end of the link draw-head, where the coupling of the cars takes place, I would provide an automatic lock in order to carry out the automatic coupling of the cars.

On each extreme end of the link draw-head there is provided pin-openings A⁵, through which the usual pin coupling-bar may be used to connect the draw-bar to the draw-head when the said draw-bar is not provided with the incline and recess, as shown, which is necessary to lift the automatic lock and allow it to drop afterward into the recess, and in this case the draw-bar must have the usual openings to permit the passage through of the ordinary coupling-pin.

As shown in Figs. 6 to 9, inclusive, I have provided a modified form of an automatic lock and have shown an automatic locking-dog C, mounted on a pin D, resting in the lugs D', located on the top of the link draw-head A, and ordinarily is cast therewith or could be secured thereto in any desired manner, and said dog has a handle C' by which its lower free end C⁵ may be raised out of the recess B² in the draw-bar B in order to uncouple cars. The operation of coupling cars by this modified form is similar to that described for Figs. 1 and 2, and the incline B' on the draw-bar B contacts with and lifts up the loose end C⁵ of the dog C until the recess B² is reached, when said end C⁵ drops into said recess and holds said bar within the chamber A' of the link draw-head A and prevents the bar being pushed in farther or withdrawn, as said dog remains in this locking position, due to its gravity, in the same manner as the automatic lock C operates in the construction shown in Figs. 1 and 2.

When it is desired to uncouple cars, the dog C is raised out of its locking position above the draw-bar B, and the draw-bar can be removed from the link draw-head A, and in this construction, as shown in Figs. 1 and 2, each end of the link draw-head is provided with an ordinary pin-opening A⁵, with which

an ordinary coupling-pin may be used, when desired, with the ordinary coupling-bar, which has an opening through which said coupling-pin passes and holds said link draw-head and draw-bar together, thus coupling the cars to one another, as shown in my patent previously referred to.

I do not limit myself to the arrangement and construction shown, as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature of my invention and set forth a construction embodying the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car-coupler, a draw-bar, and a sleeve adjustably mounted thereon so that said sleeve can be moved forward into an operative position or entirely clear of said draw-bar, or moved back on said draw-bar out of the way.

2. In a car-coupler, a draw-bar, a sleeve adjustably mounted thereon so that said sleeve can be moved forward into an operative position or entirely clear of said draw-bar, or moved back on said draw-bar out of the way, and a mechanism for locking said sleeve on said draw-bar in either its forward or its retracted position.

3. In a car-coupler, a draw-bar, a link draw-head adjustably mounted thereon so that said draw-head can be moved forward into an operative position or slipped back out of the way, and an automatically-operated mechanism for locking said draw-head on said draw-bar in either of said adjustments.

4. In a car-coupler, a draw-bar and a link draw-head having an internal chamber for the reception of said draw-bar, said chamber having such dimensions as to allow the passage of said draw-bar through the entire length of said draw-head.

5. In a car-coupler, a draw-bar, a link draw-head having an internal chamber for the reception of said draw-bar, said chamber having such dimensions as to allow the passage of said draw-bar through the entire length of said draw-head, and a mechanism, or mechanisms, mounted on said draw-head to lock the same in either a forward or a rearward position on said draw-bar.

6. In a car-coupler, a draw-bar, a link draw-head having an internal chamber for the reception of said draw-bar, said chamber having a depth greater than the length of the entering portion of the draw-bar, and an automatically-operated locking device located on said draw-head for engaging with said draw-bar when the latter is inserted in said chamber and holding the same relatively to the draw-bar against a pull or thrust exerted on said draw-head.

7. In a car-coupler, a draw-bar, a draw-head provided with an internal chamber for the reception of said draw-bar and having an opening leading into said chamber, a wall

surrounding said opening, and a gravity-lock mounted in said opening and provided with dovetailed recesses adapted to engage with the upper edge of said wall.

5 8. In a car-coupler, a draw-bar, a link draw-head having an internal chamber for the reception of said draw-bar, and an automatically-operated locking device located on said draw-head for engaging with said draw-bar
10 when the latter is inserted in said chamber and for holding the same relatively to said

draw-bar against either a pull or a thrust exerted on said draw-head.

In testimony whereof I have signed my name to this specification, in the presence of 15 two subscribing witnesses, on this 6th day of April, A. D. 1895.

LOUIS PFINGST.

Witnesses:

E. L. HARLOW,
L. H. TROW.