

(No Model.)

G. R. J. NEWMAN.  
CAR COUPLING.

No. 572,710.

Patented Dec. 8, 1896.

Fig. 1.

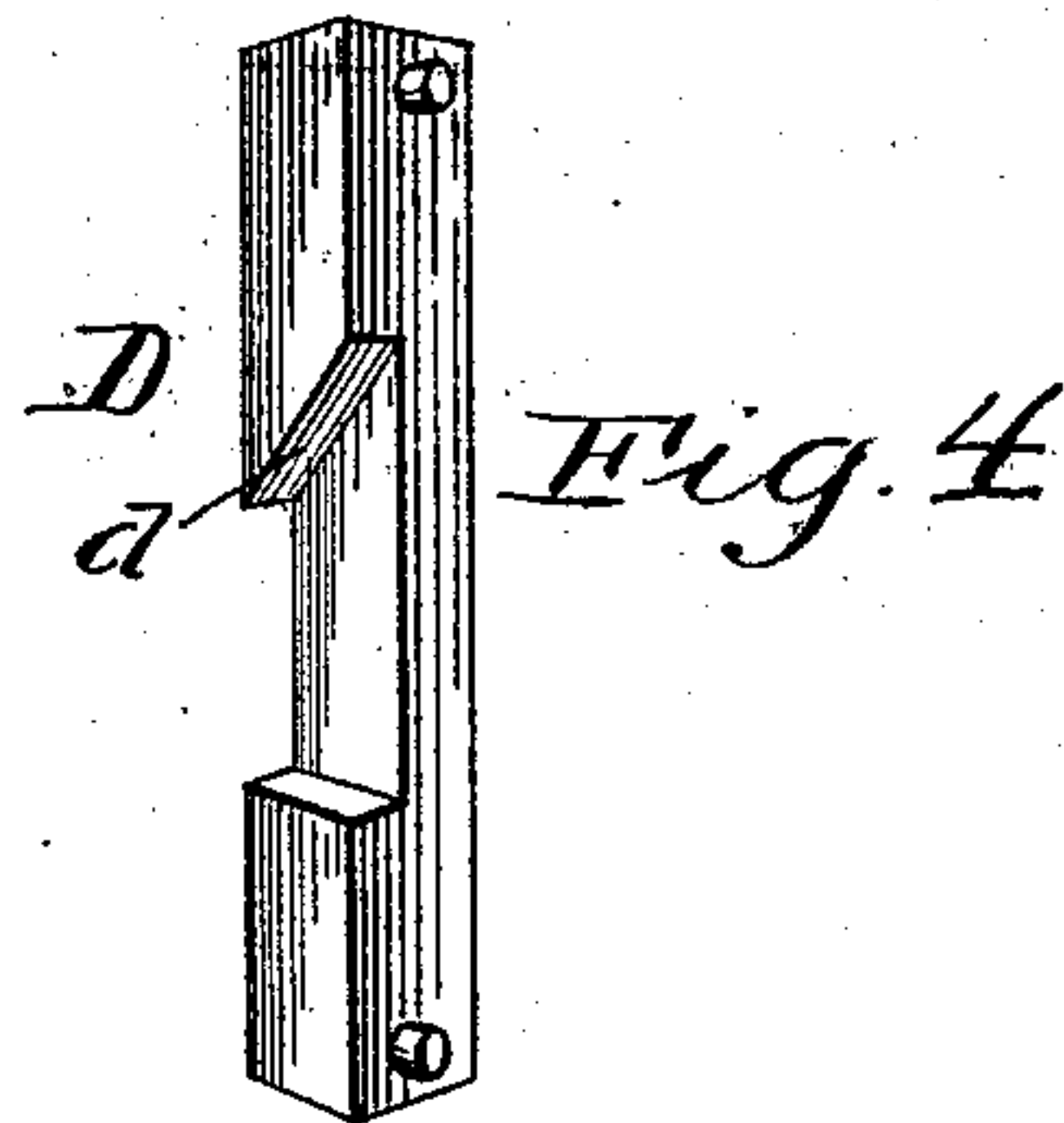
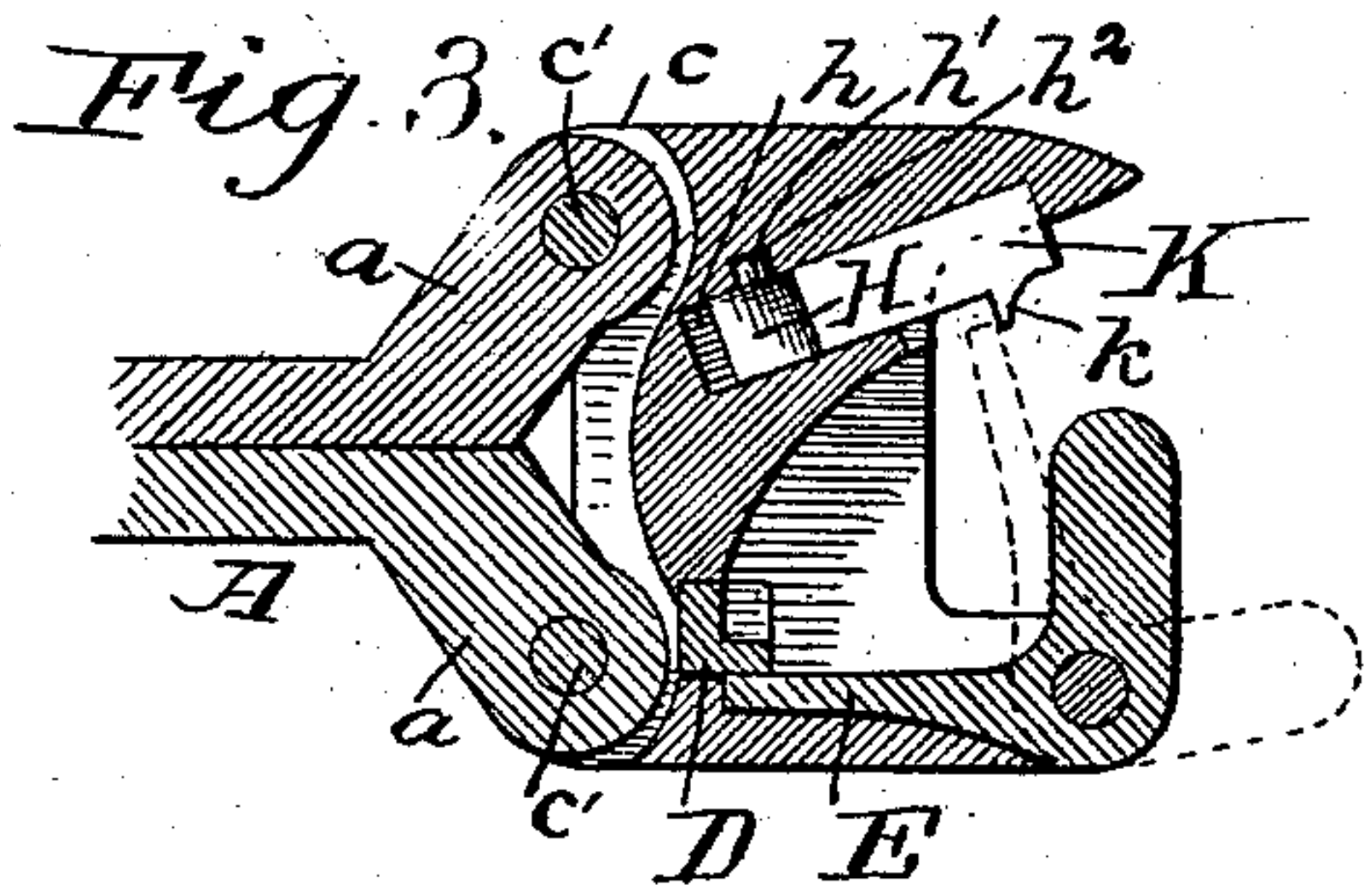
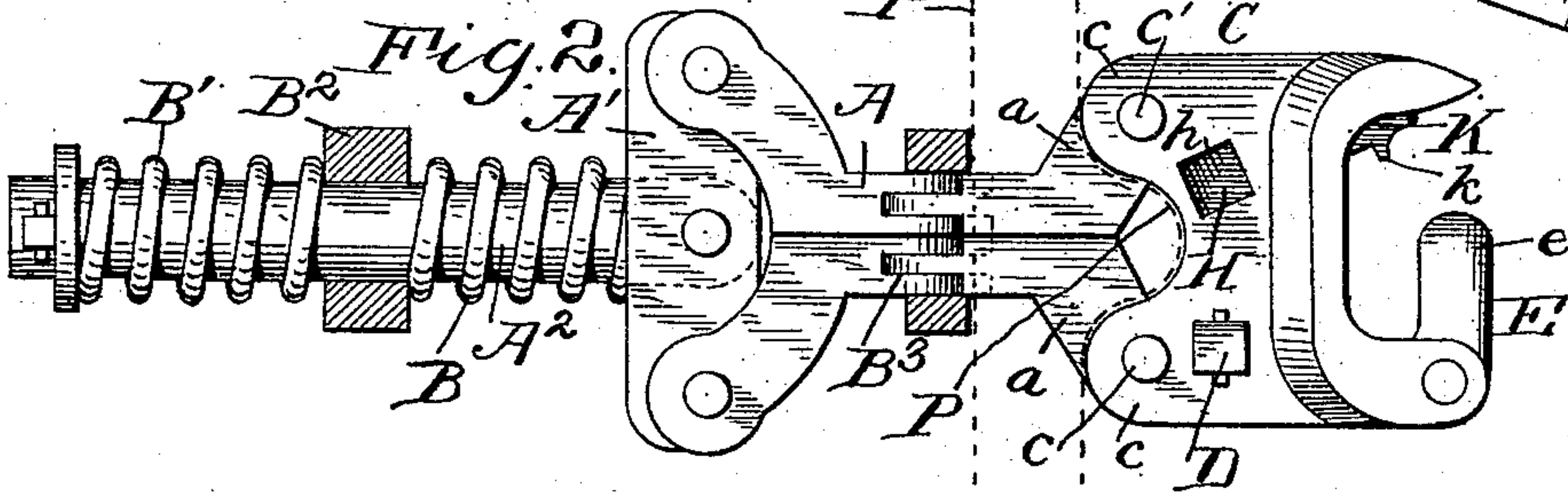
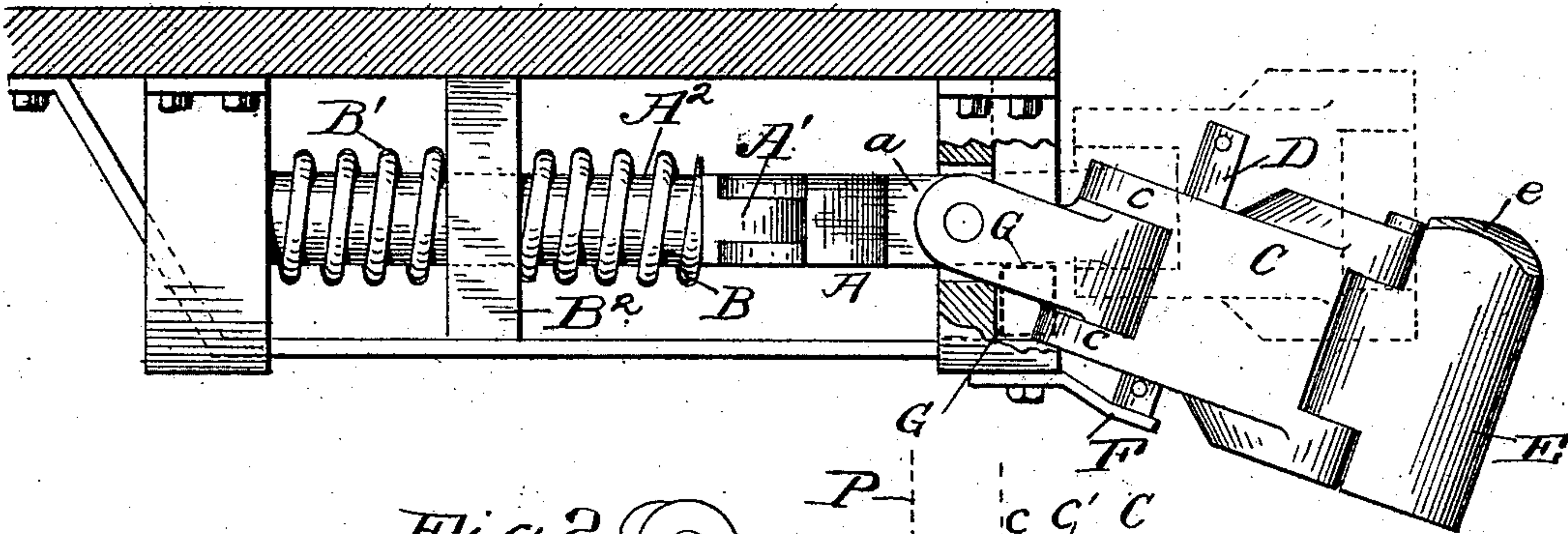
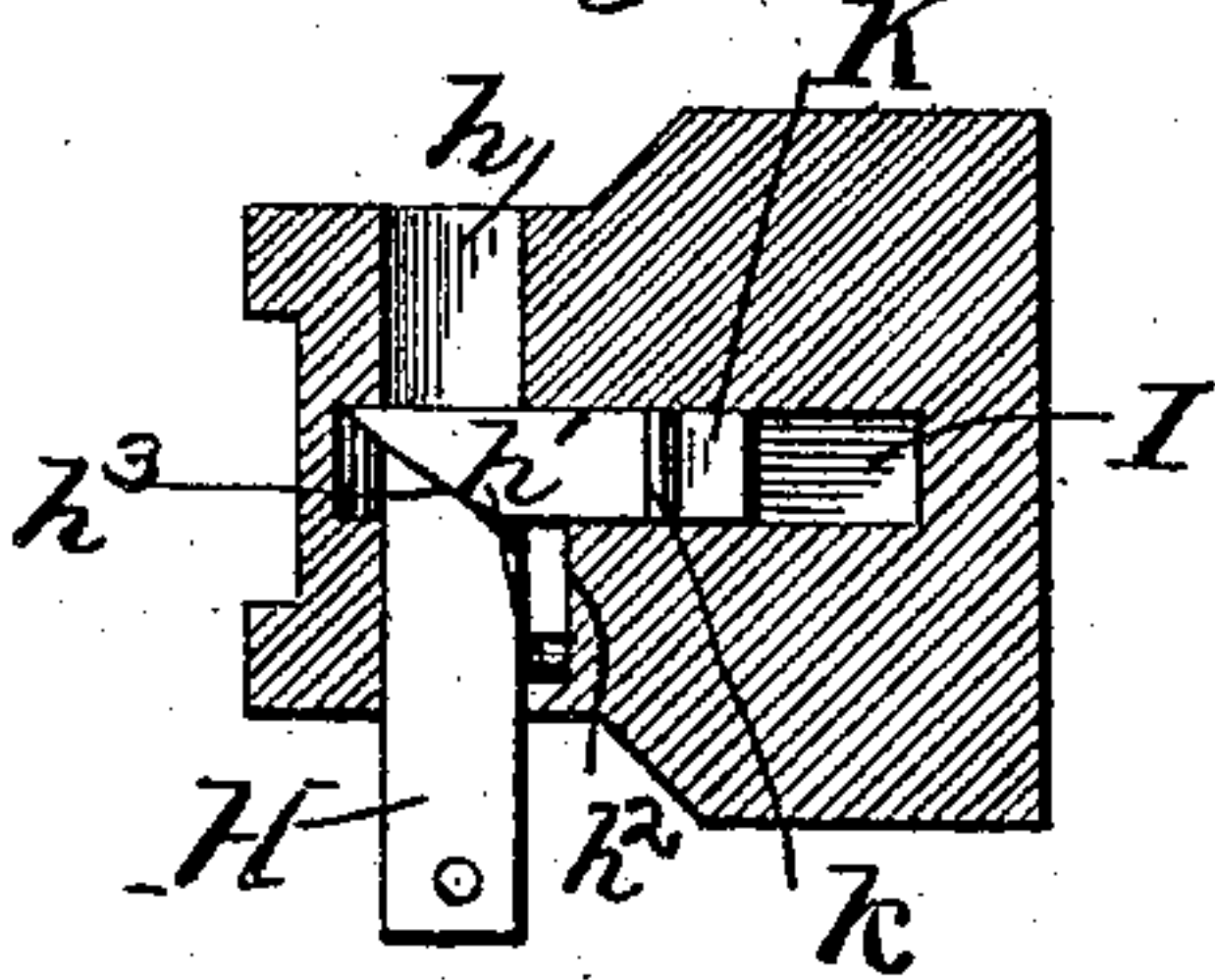


Fig. 5.



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# UNITED STATES PATENT OFFICE.

GEORGE R. J. NEWMAN, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 572,710, dated December 8, 1896.

Application filed June 22, 1895. Serial No. 553,631. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE R. J. NEWMAN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in car-couplers; and it consists in the construction and arrangement of parts hereinafter described, and definitely pointed out in the claims.

The object of the invention is the improvement of that style of coupling known as the "Janney," and primarily to so construct the same that a buffing action is had and the jaw will open automatically when uncoupled, and finally to simplify the general structure.

A still further object is the formation of a draw-bar which will permit of a slight lateral movement of the head.

These objects are attained by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 is a side elevation of the coupler and draw-bar, showing the supporting-frame in section. Fig. 2 is a plan view of the same. Fig. 3 is a cross-section through the head. Fig. 4 is a detail view of the latch; and Fig. 5 is a section on the line  $x x$ , Fig. 1.

In the drawings, A designates the draw-bar, mounted in suitable bearings. This bar is formed of two like parallel lateral sections, which have the lateral arms  $a$  at their forward ends and are pivotally connected at their rear ends to the opposite ends of a cross-head  $A'$ , the ends of the bar being bent laterally.

$A^2$  designates the attaching-section of the draw-bar, the same being pivotally secured to the center of the cross-head.

B B' designate the usual spiral springs sleeved on the part  $A^2$  of the draw-bar on opposite sides of the support  $B^2$ . The sections of the bar A are each bifurcated at  $B^3$ , in which bifurcations the tongues of the forward portion of the draw-bar are placed and pivot-

ally secured, the pivots being horizontal, so that the ends will have a tendency to drop or incline.

C designates the coupler-head, comprising a casting having a recessed rear, with ears  $c$  at opposite ends and sides, through which pintles  $c'$  pass, the same passing through the apertures in the arms  $a$ , located therebetween. By this means the head has a pivotal connection with the draw-bar and is permitted a lateral movement, which is acquired by the longitudinal division of the draw-bar, one member of which moves on the other, each being independent.

The head C is chambered in the usual manner and has the gravity-latch D passing therethrough, the same consisting of a bar or pin of a length greater than the thickness of the head. The latching portion consists of the inclined planes  $d$ , against which the tongue of the jaw E strikes in its backward movement.

The jaw E is beveled or inclined at  $e$  for purposes hereinafter stated.

The normal position of the head is at an incline, as shown in Fig. 1, and to retain the same in a horizontal position when coupled I form a vertical opening  $h$  in the draw-head, in which a squared pin H works, the upward and downward movement thereof being limited by a lateral lug  $h'$ , working in an elongated slot  $h^2$  in the draw-head. The upper end of the pin H is beveled, as at  $h^3$ . The draw-head has a horizontal channel I, leading from the cavity or chamber at the side opposite the jaw and terminating in the vertical opening  $h$  at a point midway its length. In this chamber a sliding plunger K is placed, having a lateral finger  $k$  on its forward end and an inclined lower inner end normally in engagement with the inclined section of the pin H. The finger  $k$  is received in a crevice formed in the rear wall of the chamber when the head is coupled. Below the head is a fixed abutment F, located directly below the pin D, so that as the head assumes an inclined position the pin will strike the abutment and thereby be raised, releasing the tongue and allowing the jaw to swing open by its own weight.

P designates a buffer located slightly above the plane of the draw-bar, mounted on a cross-



beam and with which the upper rear edge of the head engages. The engaging portion of the buffer is circular and fits in a semicircular recess in the head, so that the lateral movement of the head is not interfered with.

In operation when the heads come together the beveled portions of the jaws will tend to elevate the heads by reason of the bevel of each face striking against the opposing head, and when the coupling is completed the heads will stand horizontal, as indicated in dotted lines, Fig. 1, and are there held by the plunger K forcing down pin H until it rests on the stationary stop F, thus holding the same as long as the head of the opposite coupler is against the end of the plunger. When the couplers are to be uncoupled, it is only necessary to raise one locking-pin slightly, which can be done by any of the well-known means. The opposite head will then fall down, owing to its opposing support being removed. As soon as the opposite head falls the locking-pin is disengaged from the tongue and the uncoupling accomplished. It will be seen that the heads are normally at an incline and that they have to assume a horizontal position when coupled. As soon as the opposite head strikes plunger K the same is forced onto the incline of pin H, which rests on the abutment F. By this means the head is raised, and the weight thus raised serves as a means to buff or receive the impact. The inclination of the head always throws the jaw open and the finger *k* prevents overmovement of the jaws by the locking-tongue. When it is desired to use a head with the ordinary or Janney type, it is only necessary to insert a block or removable support G (shown in dotted lines in Fig. 1) below the head, and thereby retain the head in its horizontal position.

It will be observed that the construction of the head is in its nature universal or susceptible of lateral as well as vertical movement.

I am aware that many minor changes in the construction and arrangement of the parts can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having described my invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a car-coupler, the combination with the coupler-head, of a draw-bar comprising two independent longitudinally-movable sections, a pivotal connection between each section and the draw-head, an attaching-section having pivotal connection with each of said movable sections, and a spring substantially as described.

2. In a car-coupler, the combination of a draw-head, a draw-bar comprising vertically-hinged sections and horizontally-hinged sections and pivotal connection between the head and the draw-bar, whereby the head has a vertical and horizontal movement, substantially as described.

3. In a car-coupler, the combination with the draw-bar of the head, a hinged connection between the same and draw-bar permitting the head to swing vertically, a vertically-movable latch, a swinging jaw, and a fixed stop below the latch, substantially as described.

4. In a car-coupler, the combination with a draw-bar, of a head hinged thereto having a vertical movement, a laterally-swinging jaw having a bevel on its upper outer corner, and means for locking the head in a horizontal position, substantially as described.

5. In a car-coupler, the combination of a vertically-swinging head, having a swinging jaw, and means carried by the head for raising and retaining the same in a raised position by the movement of the opposite head, substantially as described.

6. In a car-coupler, the combination with the vertically-swinging head having a swinging jaw, of an abutment below the head, a reciprocating holding-pin and a longitudinally-movable plunger for raising the head and retaining the same in position substantially as described.

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

GEORGE R. J. NEWMAN.

Witnesses:

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