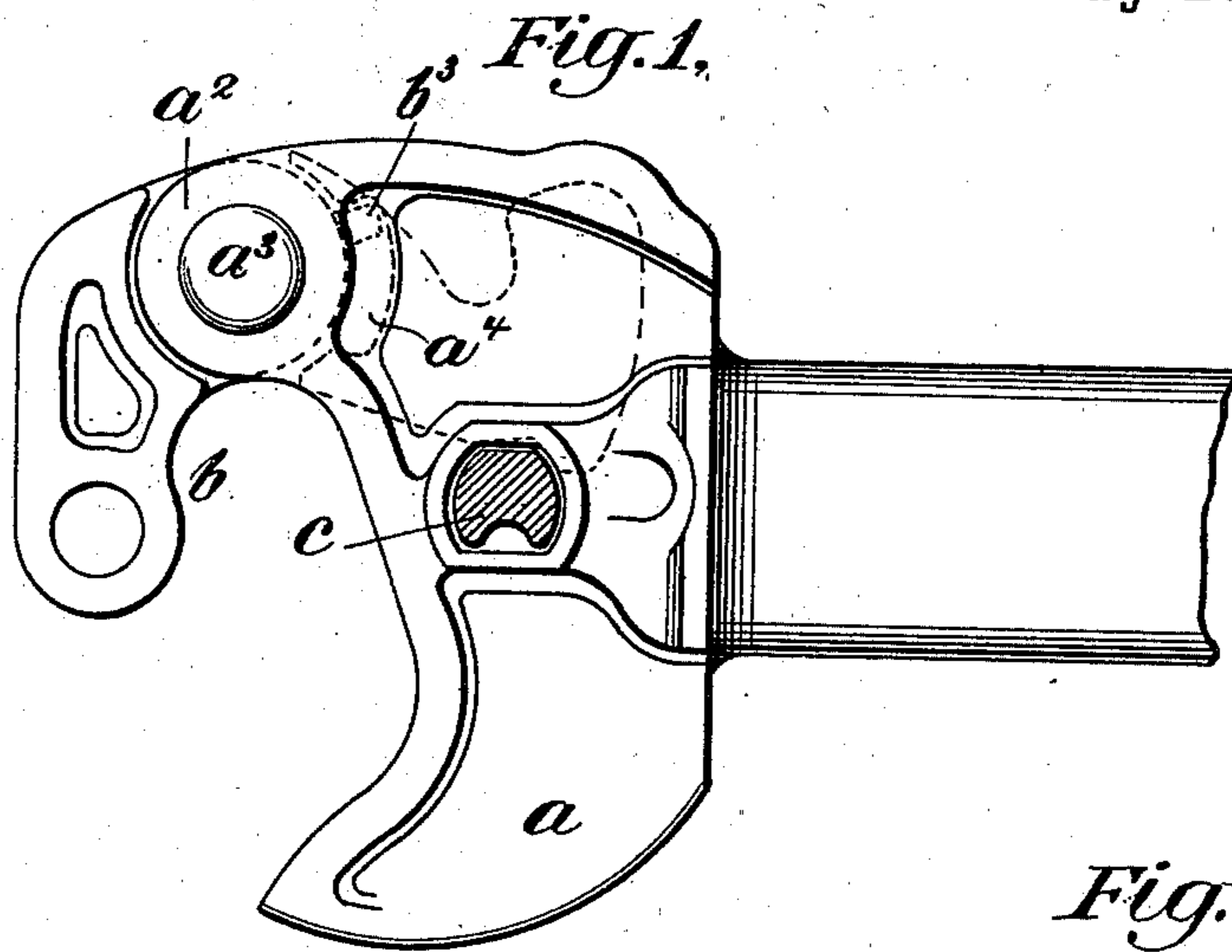


(No Model.)

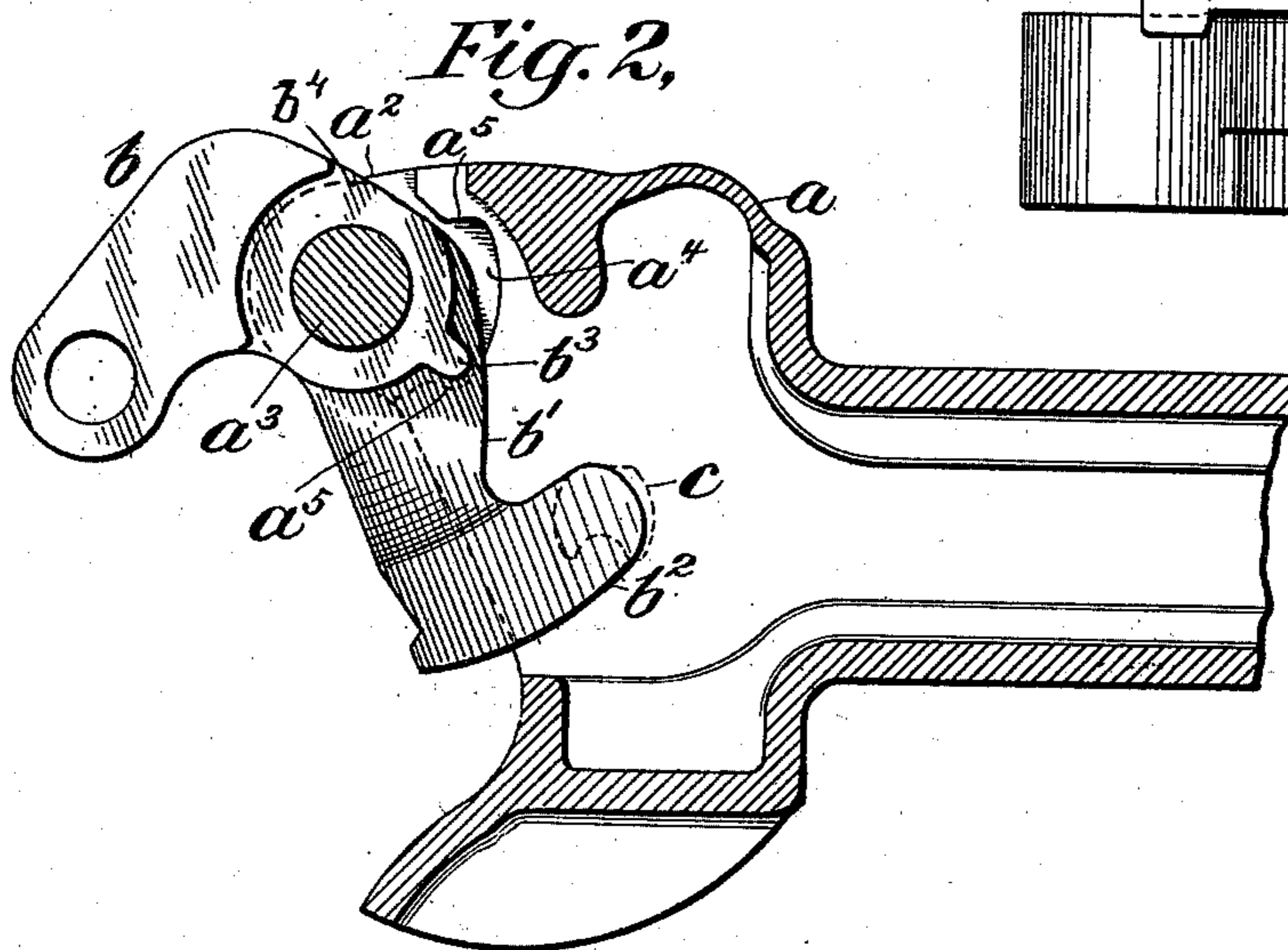
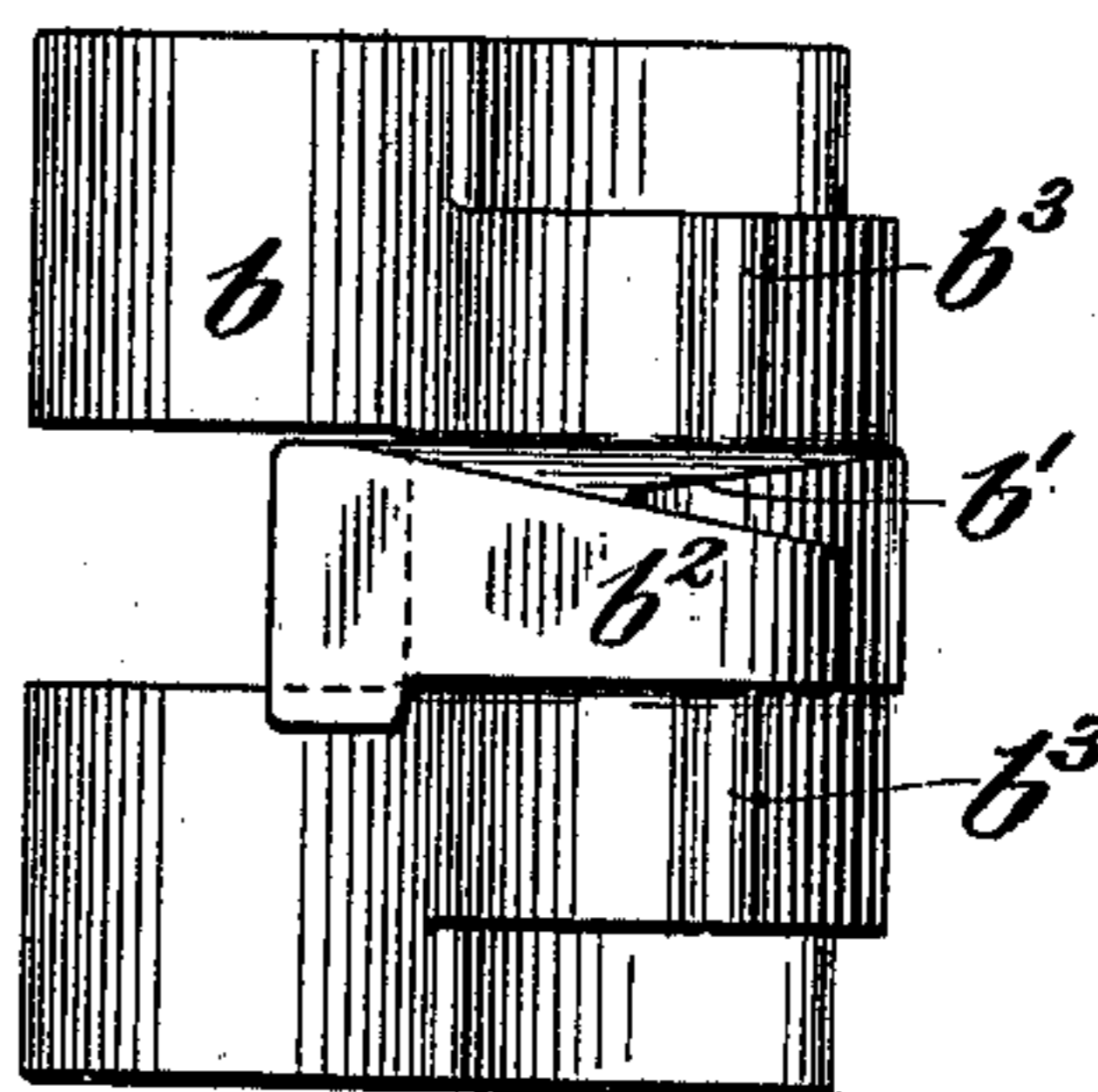
S. J. MEEKER & W. P. DEACON.  
CAR COUPLING.

No. 560,910.

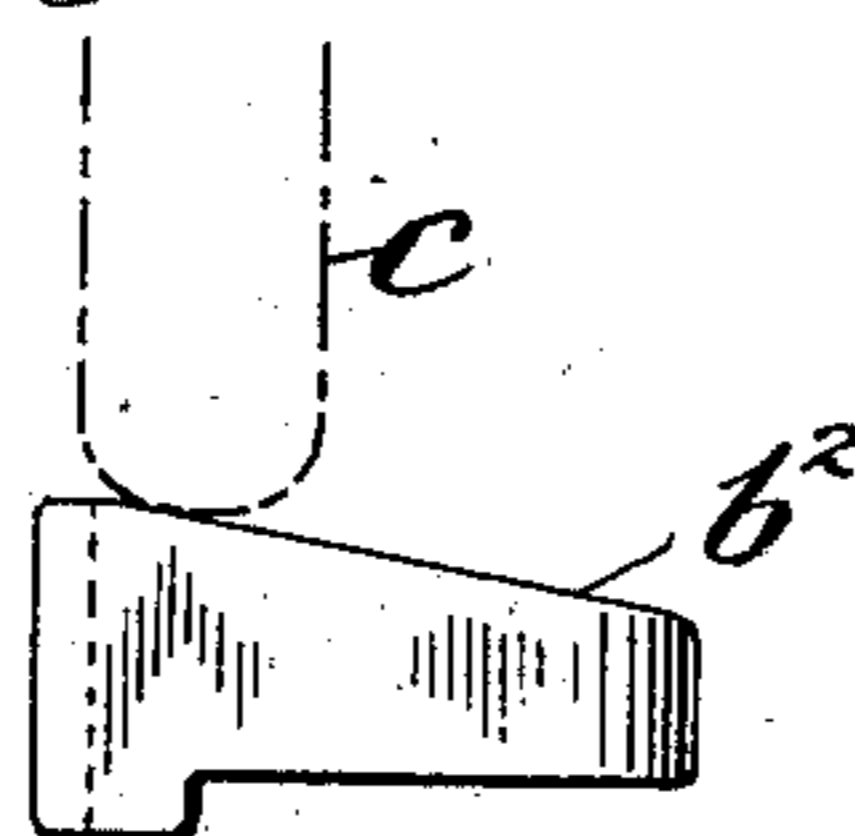
Patented May 26, 1896.



*Fig. 3.*



*Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

STEPHEN J. MEEKER, OF NEWARK, AND WILLIAM P. DEACON, OF EAST ORANGE, NEW JERSEY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 560,910, dated May 26, 1896.

Application filed July 19, 1895. Serial No. 556,450. (No model.)

*To all whom it may concern:*

Be it known that we, STEPHEN J. MEEKER, of Newark, and WILLIAM P. DEACON, of East Orange, Essex county, and State of New Jersey, citizens of the United States, have invented new and useful Improvements in Car-Couplers, of which the following description, taken in connection with the drawings herewith accompanying, is a specification.

Our invention relates to car-couplers of the vertical plane type; and it consists, first, in the means employed for causing the coupling hook or knuckle to be moved to an open position for engagement with another coupler independently of the action of a withdrawing connected coupler and be movably held in such open position, the invention in this part being an improvement upon the construction embodied in the patent to S. J. Meeker, dated October 27, 1891, No. 461,906, and, secondly, the invention consists in the means for limiting the movements of the knuckle, the object of our invention being to secure such operation and control of the knuckle as above referred to and by means of a cheap and simple construction, which object we secure by means of the construction forming our invention, as hereinafter set forth in detail, and pointed out in the claims.

Referring to the accompanying drawings, which illustrate our invention, Figure 1 represents a plan view of a coupler with the locking-pin in section embodying our invention; Fig. 2, a top view of the same with the draw-head in horizontal section; Fig. 3, a rear elevation of the knuckle removed from its connection with the draw-head, and Fig. 4 a detail view to be hereinafter referred to.

To explain in detail, *a* represents the draw-head of the coupler, *b* the pivoted horizontally-moving coupling hook or knuckle, and *c* the vertically-movable locking-pin for engaging with and holding said knuckle in its closed position. The inner arm *b'* of the knuckle, with the forward edge of which the locking-pin is adapted to engage when in locking position, as shown in Fig. 1, is provided with a rearwardly-projecting extension *b<sup>2</sup>*, upon which said locking-pin is adapted to rest and be supported, when raised, from engagement with the knuckle to allow the same

to open. According to our present invention the inner end of the arm *b'* and the continuing extension *b<sup>2</sup>* thereof, which together form an arm extending substantially at right angles to the arm *b'* and across the end of the same, and on which the locking-pin rests and rides when the knuckle is open, is formed with its upper surface extending at a continuous incline from the forward edge downward to the rear edge thereof, as clearly shown in Figs. 3 and 4. When the locking-pin is raised from locking engagement with the knuckle and rested upon the upper edge of the inclined arm at the forward edge thereof in the position as shown in Fig. 4, (which figure shows a side view of said inclined arm with the end of the locking-pin, in dotted lines, supported thereon,) it will be obvious that the weight of the pin and its operating connections upon said inclined surface will cause the arm to move forward beneath the same and the knuckle be thereby opened and movably held in such open position. The position of the pin upon the arm or extension *b<sup>2</sup>* when the knuckle is open is indicated by dotted lines in Fig. 2.

By means of the construction described a most cheap, simple, and positive means for moving the knuckle to an open position and holding the same in such position is secured.

The knuckle *b* is pivotally connected with the draw-head between two ears *a<sup>2</sup> a<sup>2</sup>* and held in such position by a pivot-pin *a<sup>3</sup>*, which passes through an opening in said ears and knuckle in the usual manner and as clearly shown in the drawings. The movement of the knuckle is limited when moved to an open position by means of two lugs or projections *b<sup>3</sup> b<sup>3</sup>*, which are located upon the hub *b<sup>4</sup>* of the knuckle at the rear side thereof and at a point above and below its arm *b'*, as clearly shown in Fig. 3, which lugs extend into grooves *a<sup>4</sup> a<sup>4</sup>*, formed in the wall of the draw-head behind the hub of the knuckle and adjacent to the ears *a<sup>2</sup>*, as clearly shown in Figs. 1 and 2. The end walls *a<sup>5</sup> a<sup>5</sup>* of these grooves *a<sup>4</sup>*, which latter are of the necessary length to allow the required movement of the knuckle, form stops against which the lugs *b<sup>3</sup>* on the knuckle act to limit the movement of the latter. The means for limiting

the movement of the knuckle is thus located and protected from injury wholly within the exterior wall of the coupler, and at the same time is easily accessible by the simple removal of the knuckle, the advantages of which construction and arrangement of parts will be obvious.

Having thus set forth our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car-coupler, the combination with the draw-head, of a horizontally-moving coupling hook or knuckle pivotally supported by said draw-head, provided with a part or extension on its inner arm which moves beneath the locking device or pin when the latter is raised from locking engagement with the knuckle and is of sufficient length to support said pin thereon when the knuckle is in its open position, which said pin-supporting part or extension is formed with an inclined surface extending throughout its en-

tire length and in the direction of its movement, which incline descends from the forward to the rear edge of said pin-supporting part, substantially as described and for the purpose set forth.

2. In a car-coupler, the combination with the draw-head provided with two ears or bearings arranged one above the other and with a horizontally-arranged groove in its vertical wall between said bearings, which groove terminates at one end thereof in a stop wall or projection, of a coupling-hook pivotally supported between said bearings and provided with a projection on its vertical wall extending into said groove in the draw-head, substantially as described and for the purpose set forth.

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