

No. 607,763.

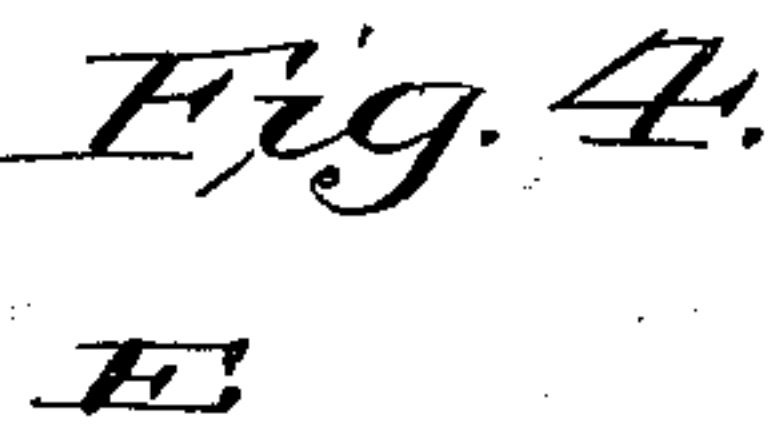
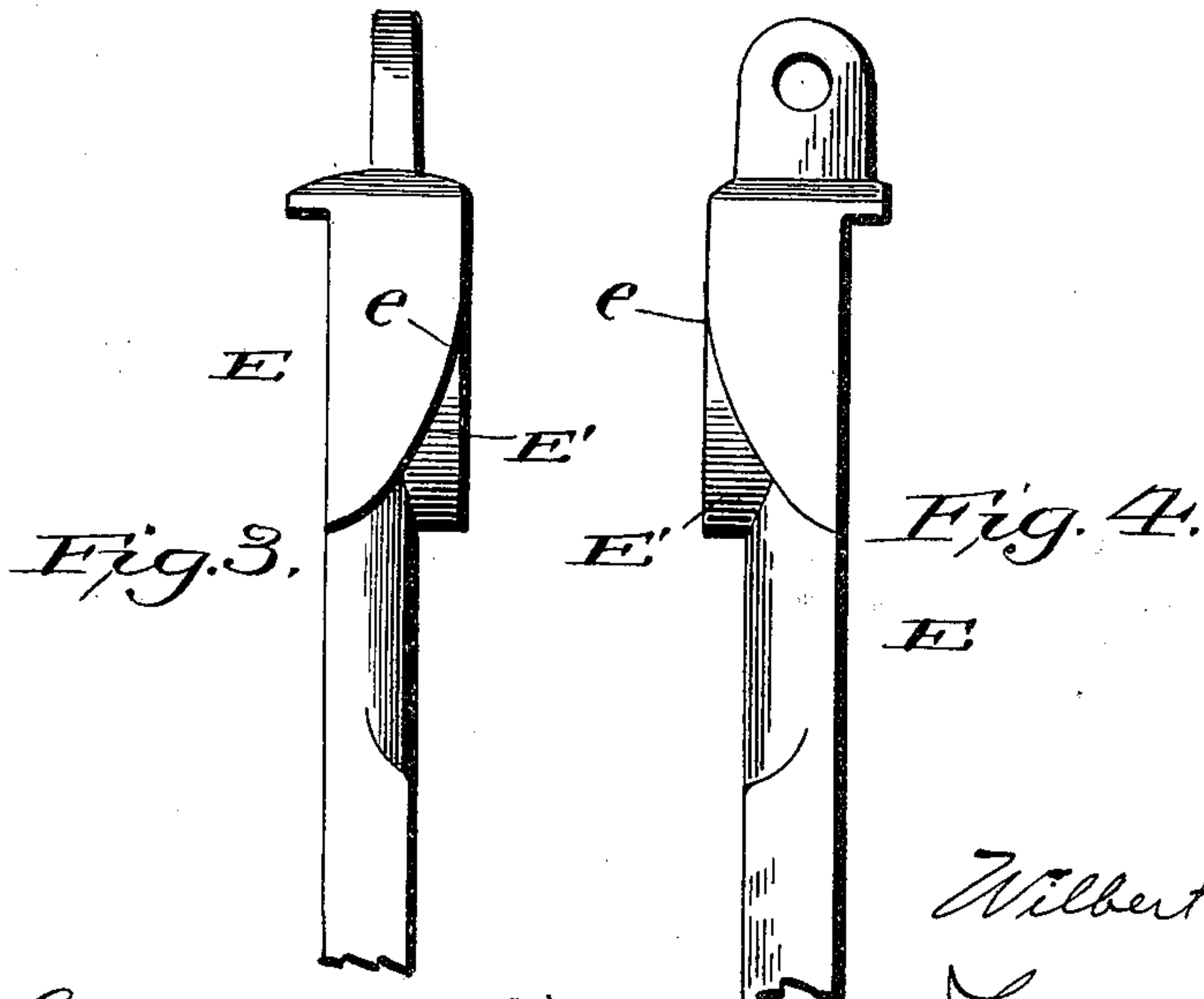
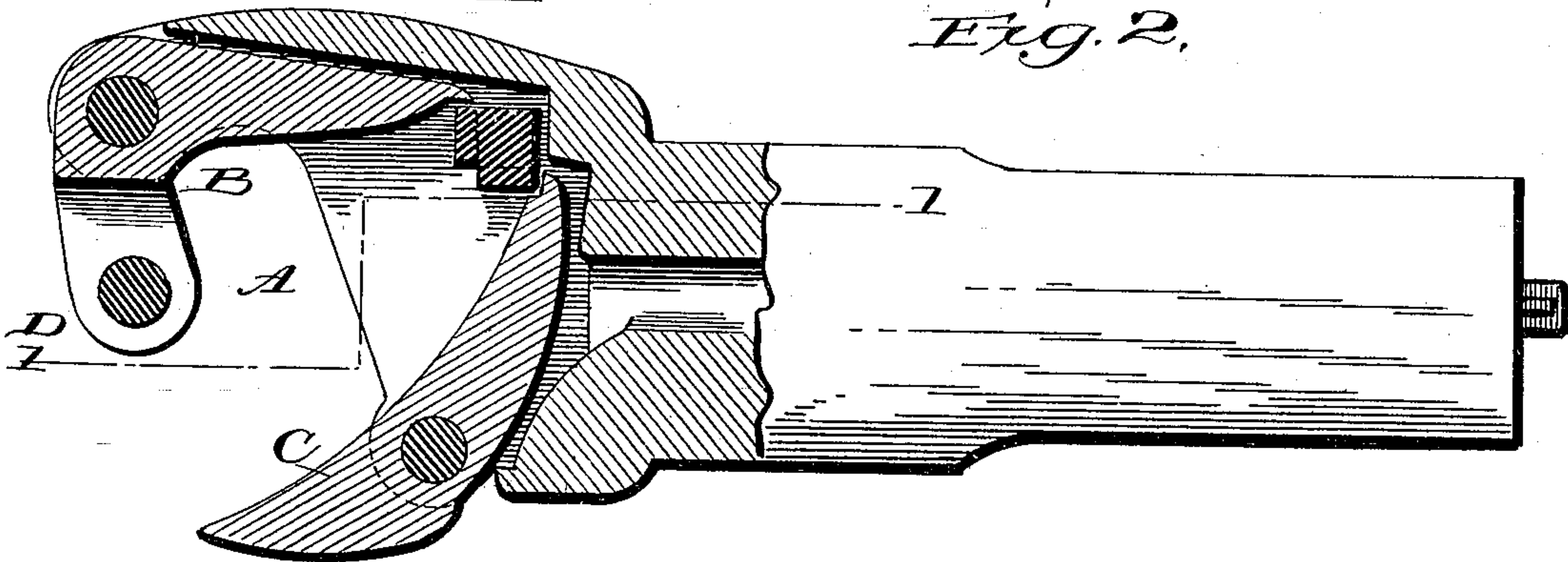
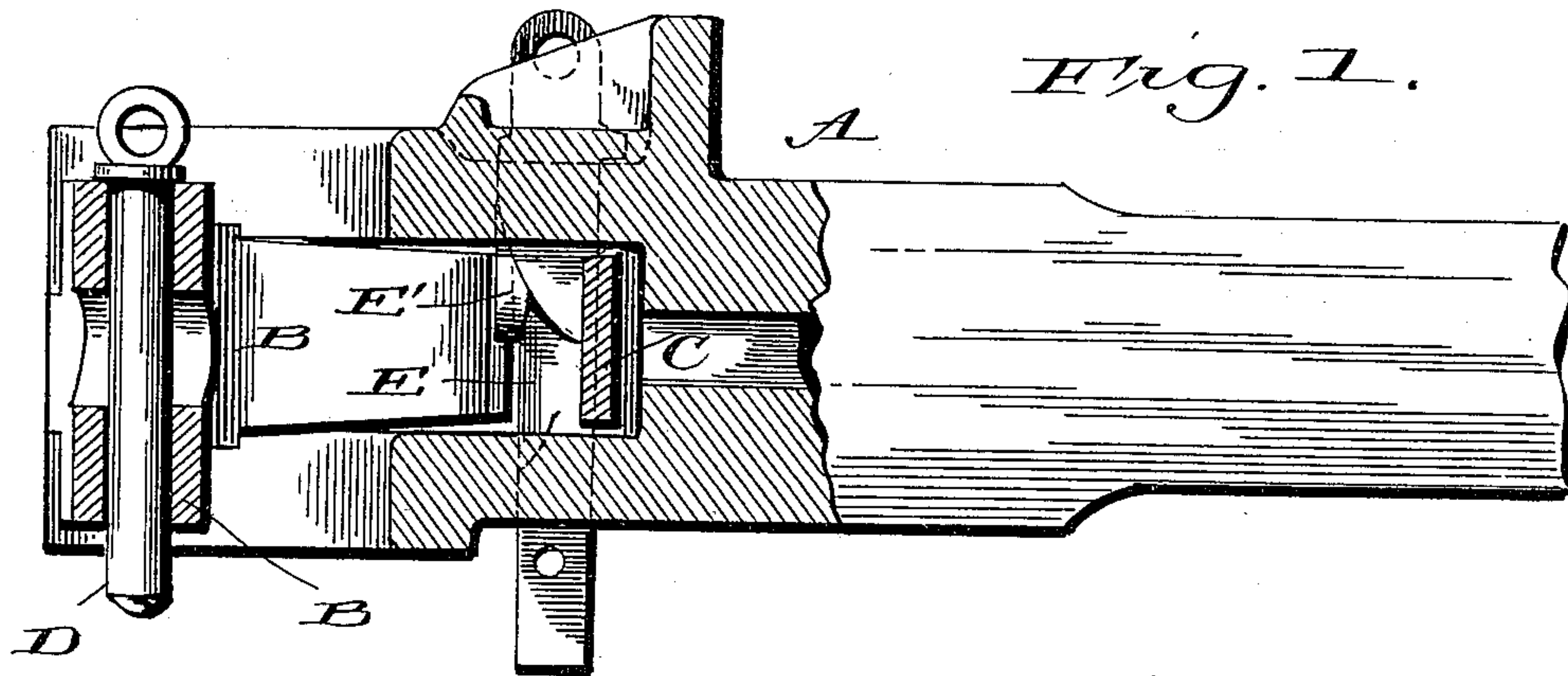
Patented July 19, 1898.

W. K. NOLAND.

CAR COUPLING.

(Application filed Apr. 4, 1898.)

(No Model.)



Witnesses

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By his Attorney

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UNITED STATES PATENT OFFICE.

WILBERT KIRBY NOLAND, OF COUPON, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 607,763, dated July 19, 1898.

Application filed April 4, 1898. Serial No. 676,444. (No model.)

To all whom it may concern:

Be it known that I, WILBERT KIRBY NOLAND, a citizen of the United States, residing at Coupon, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in car-couplers, and particularly to the Janney type, whereby a gravity-pin is utilized to lock the swinging knuckles of the jaws of the coupler in a locked relation, the coupling being effected automatically by the inner swinging ends of the knuckle and pivoted guard-arm contacting against a beveled pin, which is raised to allow the ends of the knuckle and pivoted guard-arm to swing back within the draw-head and then drop in front of the ends, thus securely holding the same in a locked position until the pin is raised out of the path of the swinging inner ends of the knuckle and pivoted guard-arm.

The invention relates, further, by generally improving upon this class of couplers, in the simplifying of the construction of a coupler of this type to render the working of the parts free and easy, to permit the swinging jaws ample movement, to insure the quick and efficient uncoupling of the cars, and to produce a car-coupling which shall be effectual in all respects in the performance of its functions and one in which the frictional resistance between the working parts will be reduced to a minimum.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described, and then specifically defined in the appended claim.

My invention is clearly illustrated in the accompanying drawings, which, with the let-

ters of reference marked thereon, form a part of this application, and in which drawings—

Figure 1 is a vertical sectional view through my improved coupler, showing the swinging inner ends of the knuckle and pivoted guard-arm locked within the draw-head. Fig. 2 is a horizontal section through the coupler, showing the manner of engagement of the inner ends of the knuckle and pivoted guard-arm with the retaining-pin. Fig. 3 is a detail view of the locking-pin. Fig. 4 is a side elevation of the coupling-pin.

Reference now being had to the details of the drawings by letter, A designates the draw-head of the coupler, which may be of the usual construction, and pivoted to the outer bifurcated portion thereof are the swinging knuckle and pivoted guard-arm B C, the former of which, B, is provided with apertured arms adapted to receive a pin D, whereby a link-coupler may be connected to the said knuckle and guard-arm, if desired. The rear inwardly-swinging ends of the said knuckle and guard-arm are made preferably of the shape illustrated, being brought to a tapered edge, and when swung back within the draw-head to their farthest limit they are adapted to rest in a location at one side or corner of the recessed end of the draw-head, at which location a gravity-pin E is adapted to be held and slides vertically in the slots or apertures in the draw-head. This pin has a shouldered portion at its upper end adapted to hold it from falling through the apertures in the jaw, and to the upper end may be connected a chain or rod for raising the pin without going between the cars when it is desired to uncouple the same. This pin is preferably four-sided and at a location a suitable distance from the lower end of the corners is cut away, and a semicircular surface is formed on the pin, covering a sufficient space equal to the width of the ends of the swinging knuckle and guard-arm and against which the said knuckle and guard-arm come in contact when it is desired to effect a coupling of the cars. The enlarged upper end of the pin is grooved away, as at E', and converges outward and terminates at points e. The lower end of this enlarged portion, which is grooved or cut away

from the outer edges to a common ridge, extends a slight distance below the upper wall of the recessed portion of the draw-head, and the swinging inner ends of the knuckle and pivoted guard-arm are adapted to strike on the opposite edges of the said beveled or grooved portion, whereby as the knuckle and guard-arm are swung back within the draw-head the ends thereof striking against the bevels will cause the pin to be raised, and being raised a slight distance the ends of the knuckle and pivoted guard-arm will pass behind or past the enlarged beveled or grooved portion of the pin, and the pin will drop by gravity, locking the swinging knuckle and pivoted guard-arm within the draw-head by means of the corners of the pin being disposed in the path of the swinging ends of the said knuckle, as illustrated in the horizontal sectional view in the drawings.

When it is desired to uncouple the cars, it is simply accomplished by raising the pin, so that the swinging ends of the knuckle and pivoted guard-arm will swing free of the shoulders of the pin, after which the pin will fall by gravity into its normal position.

I am aware that it is common in the art to construct gravity pin-couplers in which a beveled pin is employed, against which the swinging end of the knuckle is adapted to

bear for the purpose of raising the same to effect a coupling automatically. Hence I make no claim for such construction.

What I claim to be new, and desire to secure by Letters Patent, is—

In a car-coupler, the draw-head with recessed end, the knuckle and pivoted guard-arm pivoted in the said draw-head, the inner ends of which knuckle and arm are tapered, and adapted to swing within the recessed end of the draw-head, the inner ends of which knuckle and guard-arm when in a locking position, being disposed near one corner of the said recessed portion, combined with the pin, which has a shoulder at its upper end and an enlarged portion, which has a double beveled portion merging into one of the edges of the enlarged portion, a semicircular portion immediately beneath the said beveled portion, and against which beveled surfaces the ends of the knuckle and pivoted guard-arm are adapted to swing, to raise the pin when the coupling is effected, substantially as shown and described.

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

WILBERT KIRBY NOLAND.

Witnesses:

GEORGE H. WINTERS,
GEO. J. SAGER.