

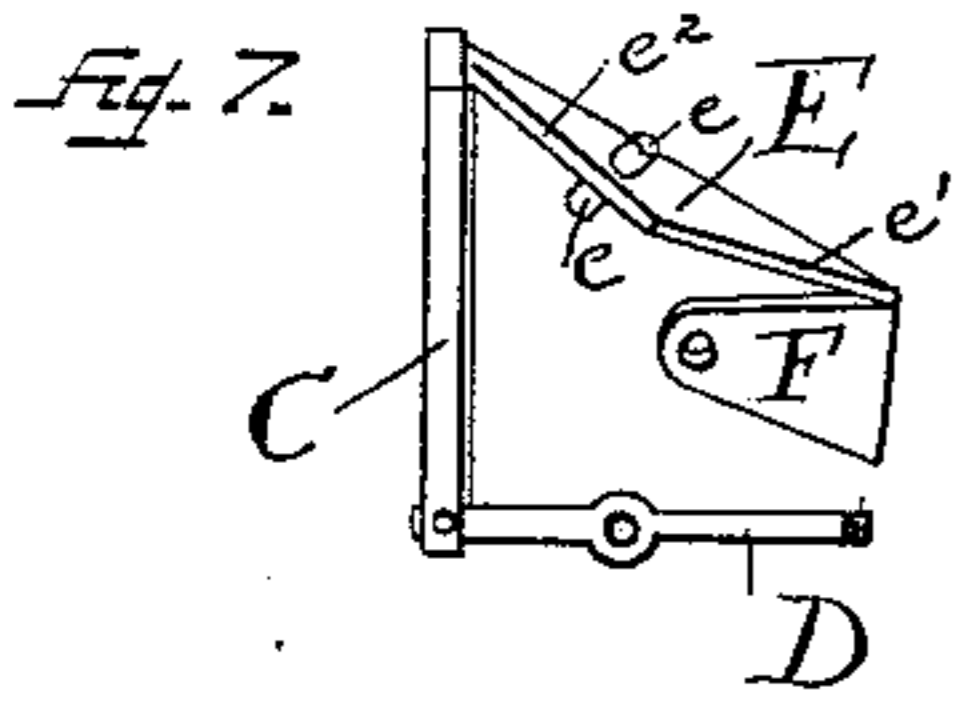
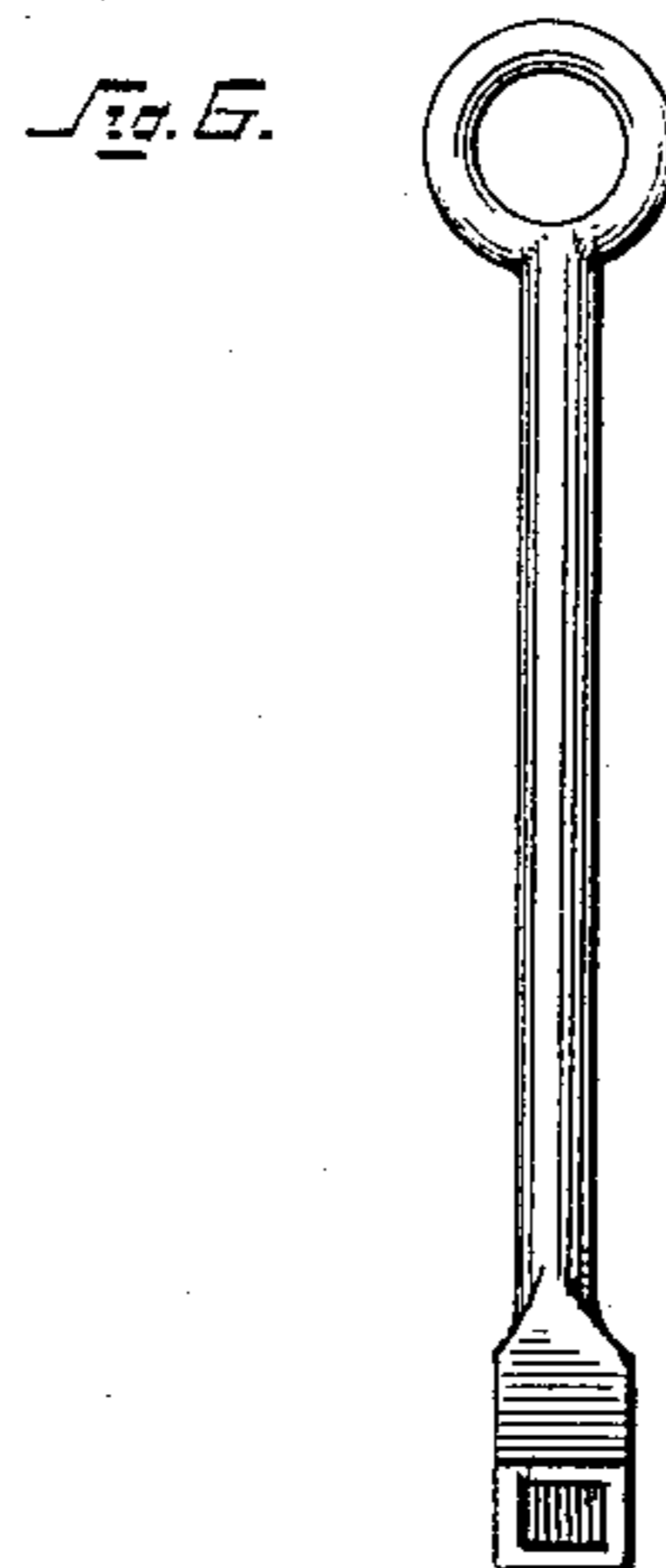
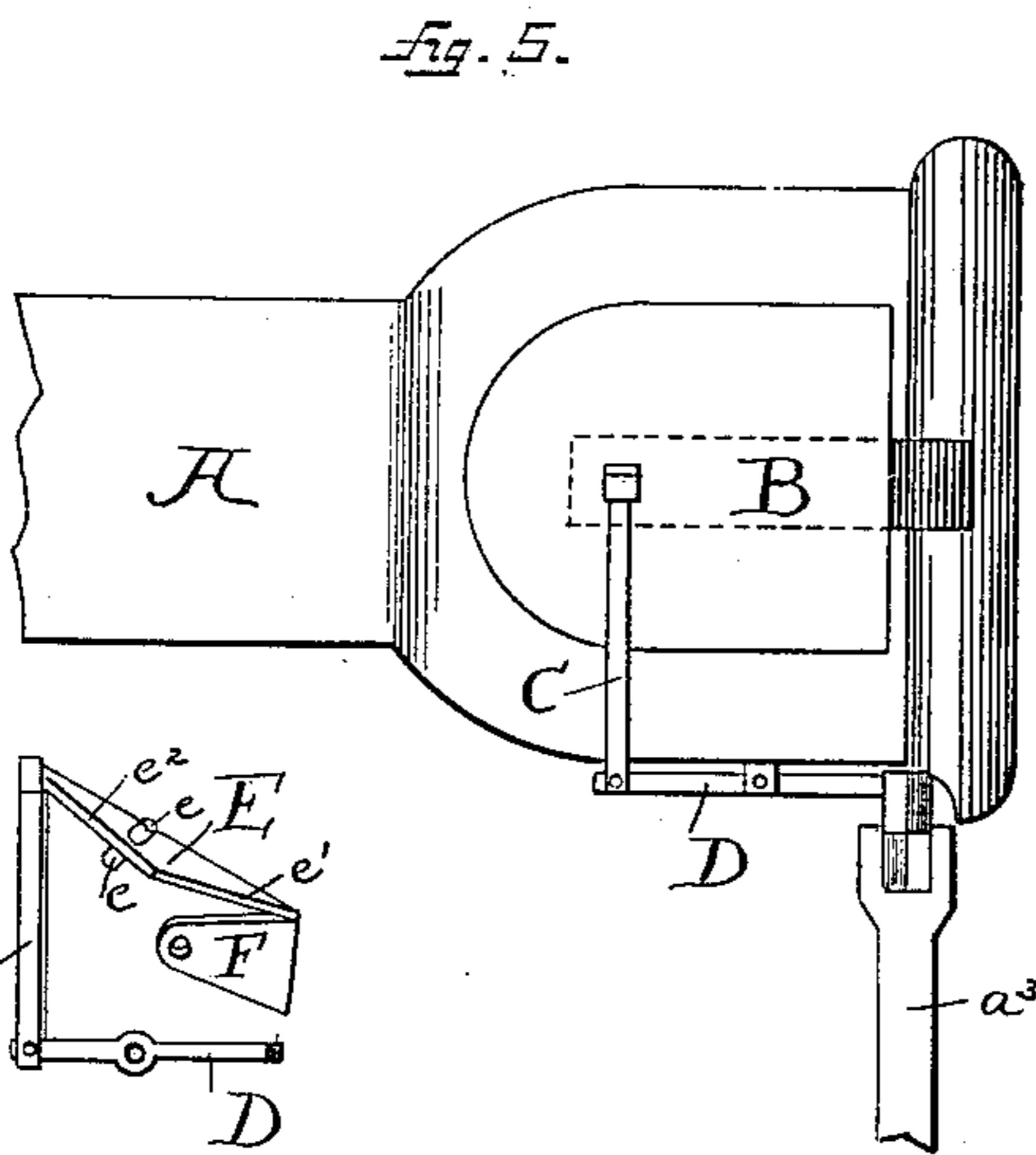
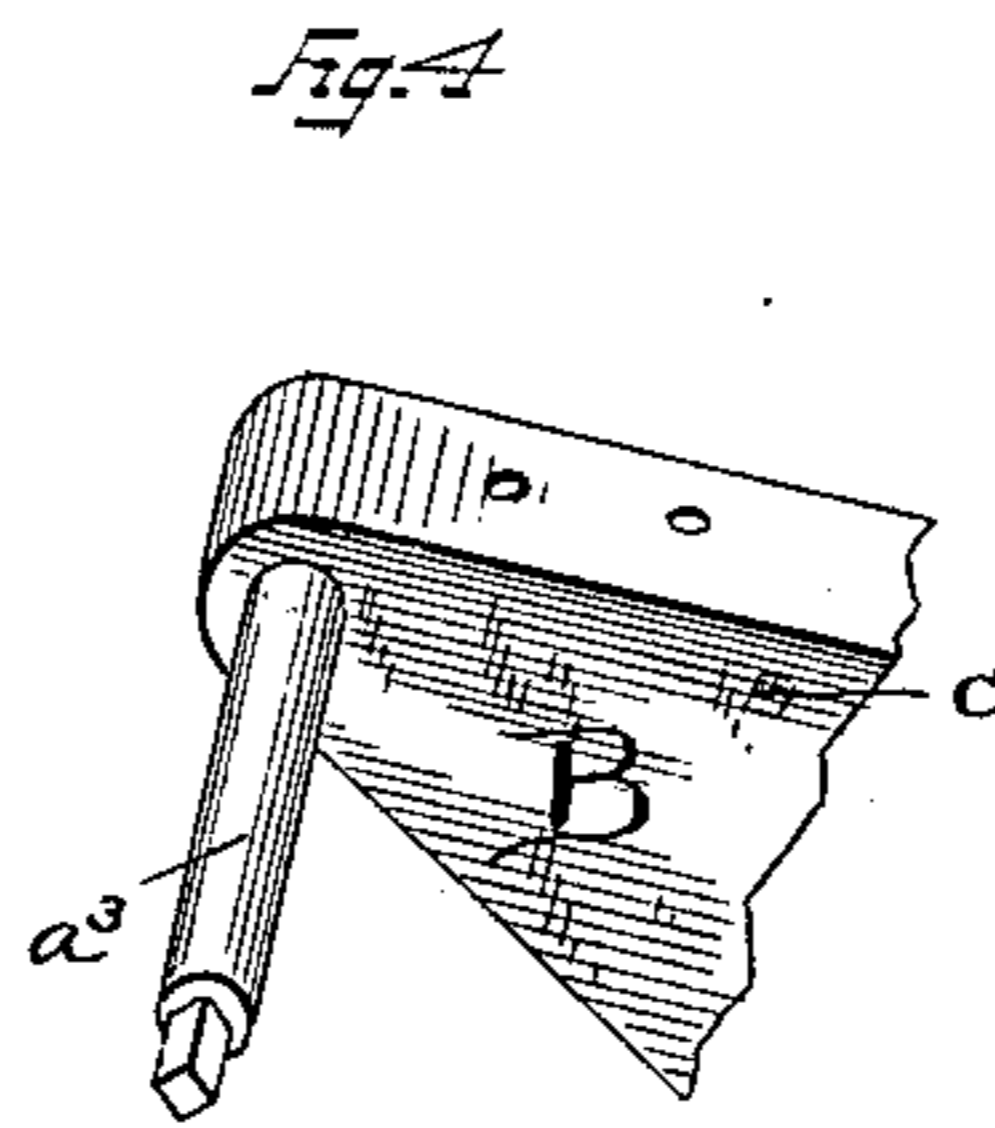
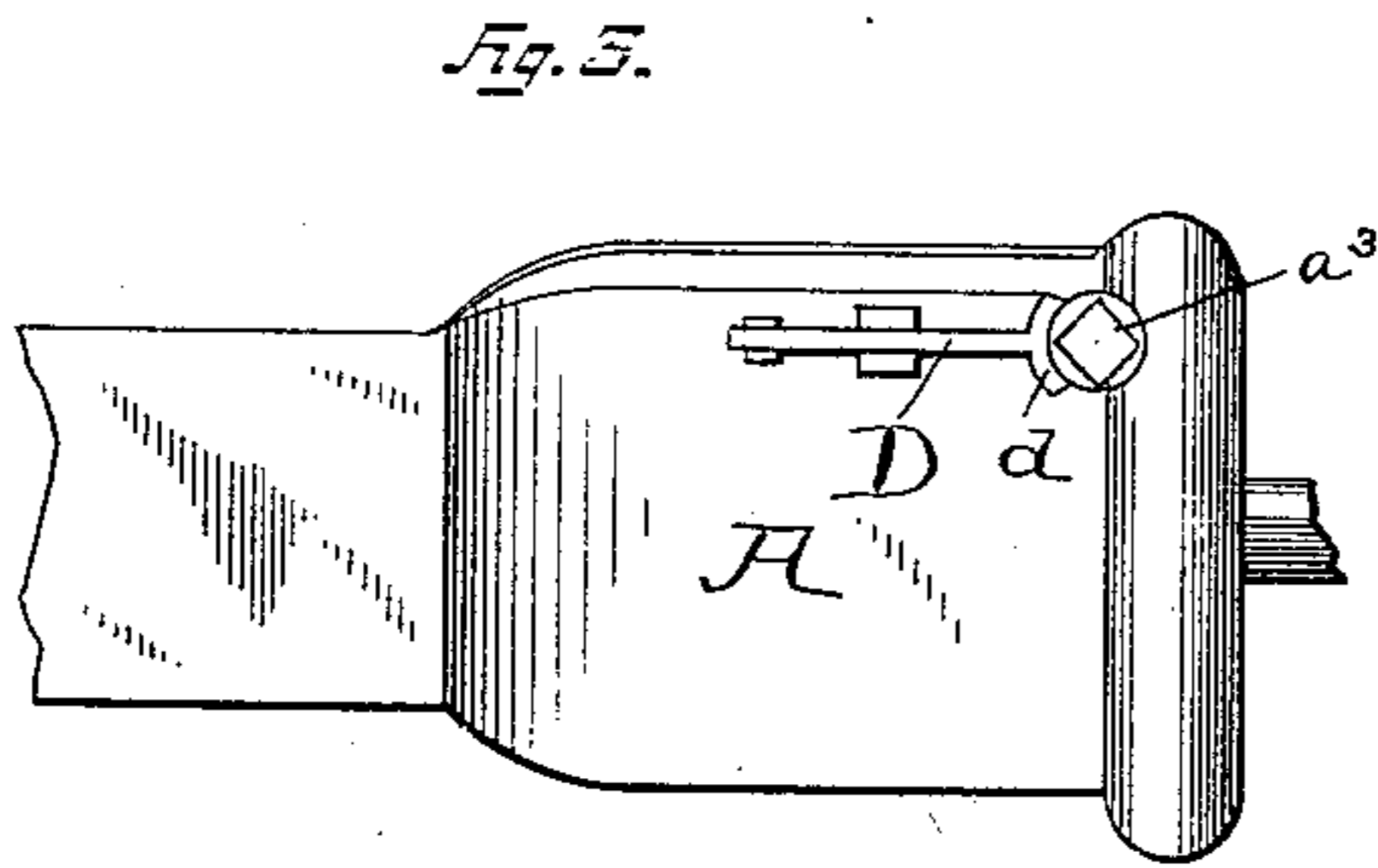
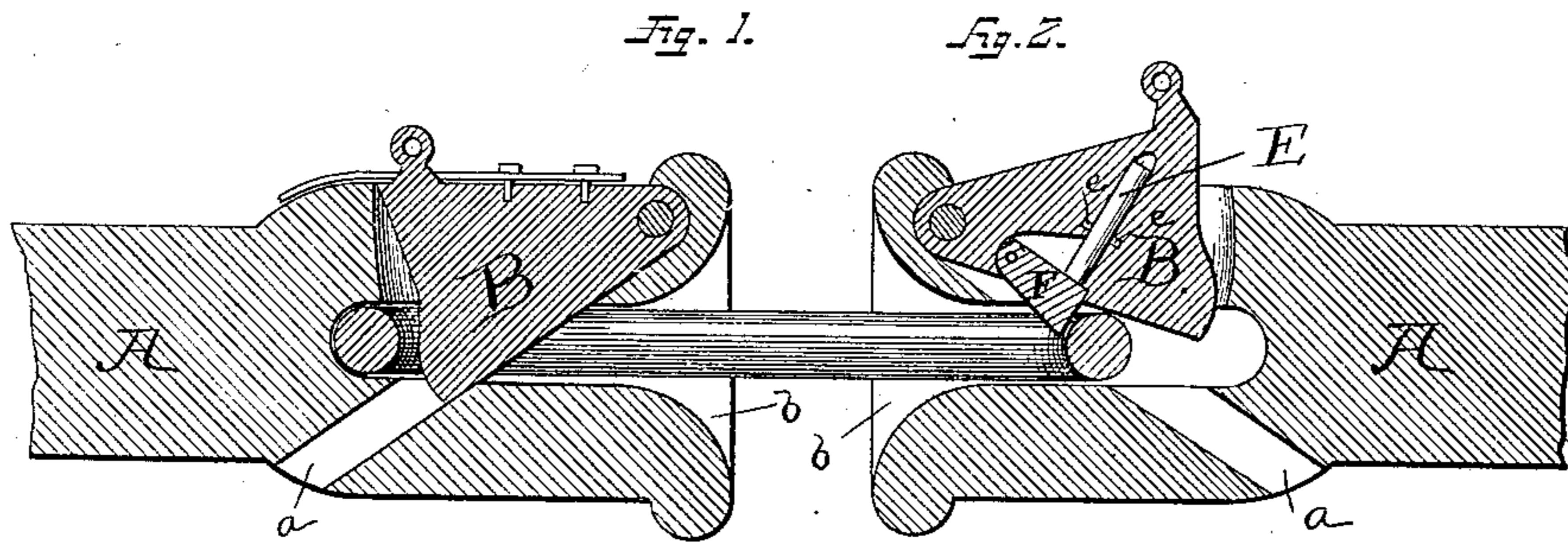
(No Model.)

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CAR COUPLING.

No. 336,091.

Patented Feb. 16, 1886.



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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 336,091, dated February 16, 1886.

Application filed July 9, 1884. Serial No. 137,207. (No model.)

To all whom it may concern:

Be it known that we, ROSCOE COON, JOHN H. HEDGES, and WILLIAM M. BERNARD, citizens of the United States, residing in the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

Our invention relates to car-couplings, and has for its object to provide the same with a pivoted latch-bolt and means for locking the same to prevent it from lifting when the link is in engagement therewith, and further to provide improved means for automatically unlocking the latch-bolt to allow it to be raised, so that the link may pass the same.

The invention consists in the improved construction and combination of parts hereinafter fully described, and pointed out in the claims. In the drawings, Figure 1 is a longitudinal vertical section of one form of draw-head, showing the latter provided with a pivoted latch-bolt having a cap, and an opening in the draw-head to allow the escape of water, &c. Fig. 2 is a longitudinal vertical section of another form of draw-head. Fig. 3 is a side elevation of the draw-head shown in Fig. 2. Fig. 4 is a detail view of the latch-bolt. Fig. 5 is a plan view. Fig. 6 is a detail view of the key for raising the latch-bolt, and Fig. 7 is a detail view of the parts for locking and automatically unlocking the latch-bolt.

A represents the draw-head, which is provided with an inclined passage or opening, *a*, near its rear end for the passage of water, and *b* is the usual link-opening.

B represents the latch-bolt, which is pivoted in the upper forward end of the draw-head, and which, when lowered, rests upon the bottom of the latter. As shown, this latch-bolt is adapted to be raised through an opening in the upperside of the draw-head; and to effectually close the joints when the latch-bolt is lowered we have secured a cap to the upper side of the latch-bolt, which cap is extended beyond the sides of the latch-bolt, and serves to effectually close the joints. The draw-head shown in Fig. 1 has its latch-bolt provided with an eye or ring for the attachment of a rope or chain, so that the bolt may be raised to allow the link to be removed.

The latch-bolt shown in Figs. 2, 3, 4, and 5 has one of its journals, *a*³, extended beyond or through the side of the draw-head, and this journal is provided with a squared outer end, which is adapted to be engaged by a key having a squared seat, whereby the latch-bolt may be raised without the necessity of going between the cars.

The latch-bolt is provided on one of its sides, near the upper rear end thereof, with an opening, *c*, which is adapted to be engaged by a catch-bar, C, which extends through an opening in the side of the draw-head. It will thus be seen that when the latch-bolt is in engagement with the link and the catch-bar engaged with the opening in the latch-bolt all possibility of the latch-bolt jumping will be prevented.

Pivoted in a bracket secured to the outer side of the draw-head is a lever, D, which is pivoted at one end to the outer end of the catch-bar, its other end having a segmental or arc-shaped head, *d*, which partially incloses the extended journal of the latch-bolt, so that when the cars are to be uncoupled the end of the key will bear against the arc-shaped head of the lever, and through the agency of said lever remove the end of the catch-bar from engagement with the opening of the latch-bolt, and thus allow the latter to be raised by the key.

To automatically unlock the catch-bar from the latch-bolt when the cars are to be coupled, we have provided a releasing-lever, E, which slides in an opening in the latch-bolt, and is provided with guide-pins *e*, which engage grooves in the latch-bolt, and thus hold it steady. This releasing-lever E is provided with inclined faces *e'* *e*², and the opening in the latch-bolt is sufficiently large to allow the releasing-lever a slight lateral movement, the guide-pins acting as pivots. The upper end of this releasing-lever is located adjacent to the end of the catch-bar, and it will be seen that if its lower end be moved laterally its upper end will be forced against the catch-bar and force the same from engagement with the opening in the latch-bolt.

F represents a pivoted latch, against which the releasing-lever bears. When the cars come together, the link strikes the latch F, which

bears against the inclined face e' of the releasing-lever, and forces it laterally, which action causes the releasing-lever to bear against the catch-bar and remove it from the opening 5 in the latch-bolt and allow said latch-bolt to be raised, so that the link may engage the same when the bolt drops.

Having thus described our invention, what we claim is—

10 1. The combination, with a draw-head having an opening in its upper side, of a pivoted latch-bolt having a cap secured to its upper side and projecting beyond the edges of the opening, whereby when the latch-bolt is lowered a close joint will be formed, said draw-head having an inclined passage, a , as set forth. 15

2. The combination, with a draw-head, of a pivoted latch-bolt having an opening in its 20 side, a sliding catch-bar working in an opening in the draw-head, and a pivoted lever pivotally connected with the catch-bar and having a head, said latch-bolt having an extended journal, which is adapted to be engaged by a 25 key operating substantially as described, and for the purpose set forth.

3. The combination, with a draw-head, of a pivoted latch-bolt having one of its journals extended beyond the side of the draw-head, 30 a key to engage said extended journal, and means for holding the latch-bolt locked, and

adapted to be operated to unlock the latch-bolt when the key is placed upon the journal of the same, as set forth.

4. The combination, with a draw-head, of a 35 pivoted latch-bolt having an opening in its side, a sliding catch-bar to engage said opening, and means, substantially as described, adapted to be operated by the link to force the catch-bar from engagement with said 40 opening, substantially as set forth.

5. The combination, with a draw-head, of a sliding catch-bar to engage an opening in the side of the latch-bolt, a releasing-lever sliding 45 in an opening in the latch-bolt, and a pivoted latch to engage the releasing-lever, substantially as set forth.

6. The combination, with a draw-head, of a pivoted latch-bolt having an opening in its 50 side, a sliding catch-bar to engage said opening, a releasing-lever sliding in an opening in the latch-bolt and having inclined faces, and the latch to engage the lower inclined face of the releasing-lever, substantially as set forth.

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