(No Model.)

2 Sheets—Sheet 1.

# W. H. DAVENPORT.

## COCKING MECHANISM FOR BREECH LOADING GUNS.

No. 334,570. Patented Jan. 19, 1886.

FIG. 2.

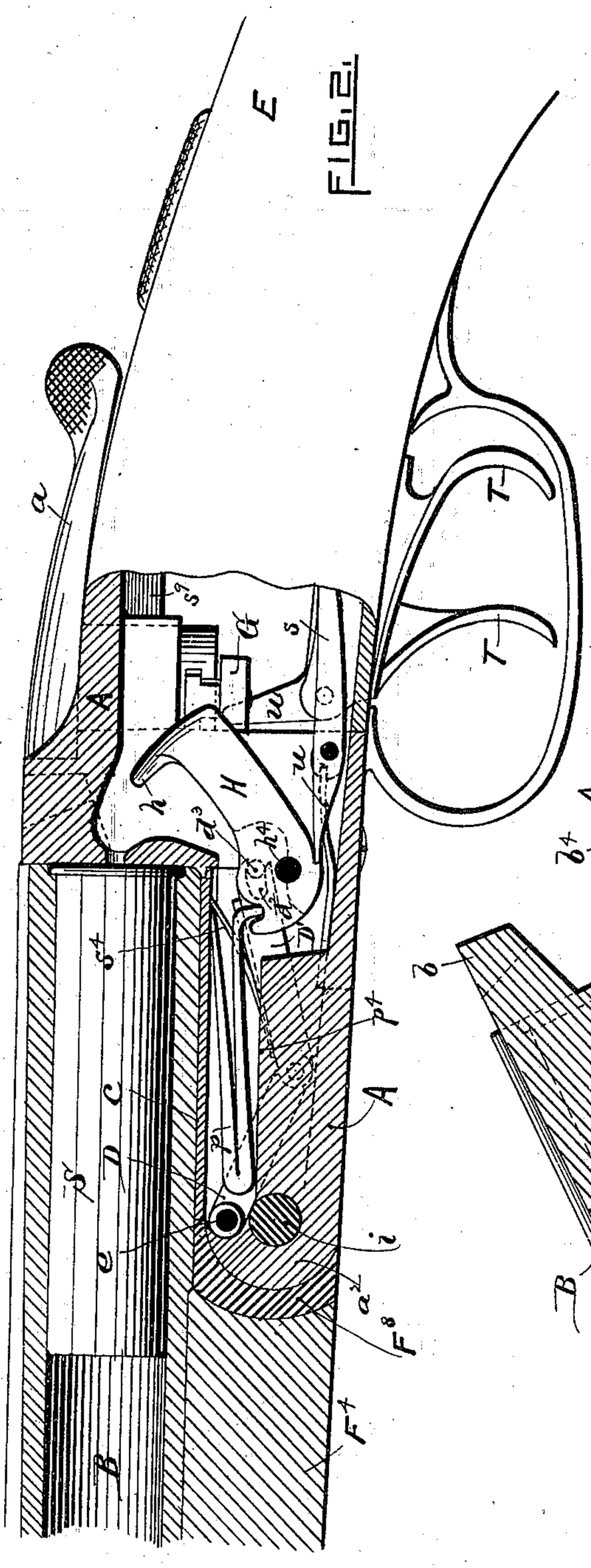
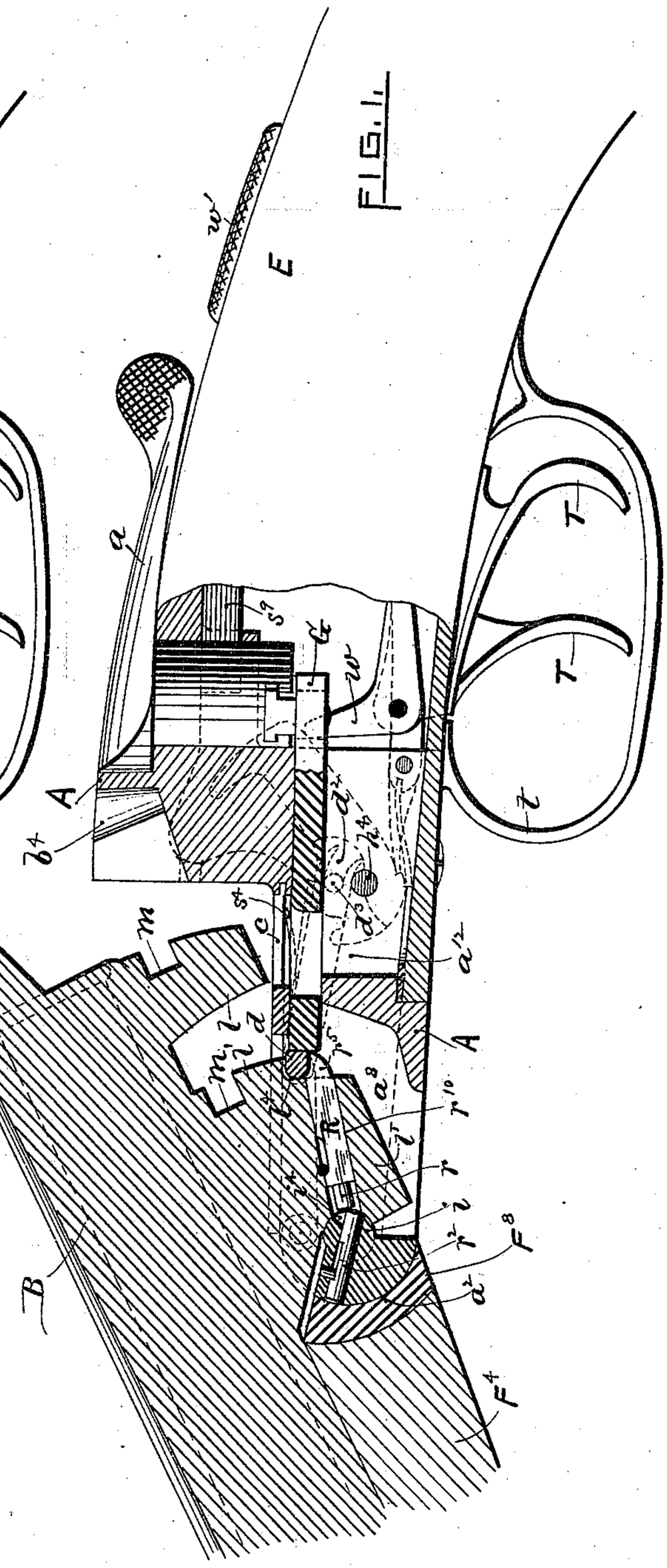



FIG. 1.




WITNESSES.

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(No Model.) 2 Sheets—Sheet 2.

# W. H. DAVENPORT.

## COCKING MECHANISM FOR BREECH LOADING GUNS.

No. 334,570. Patented Jan. 19, 1886.

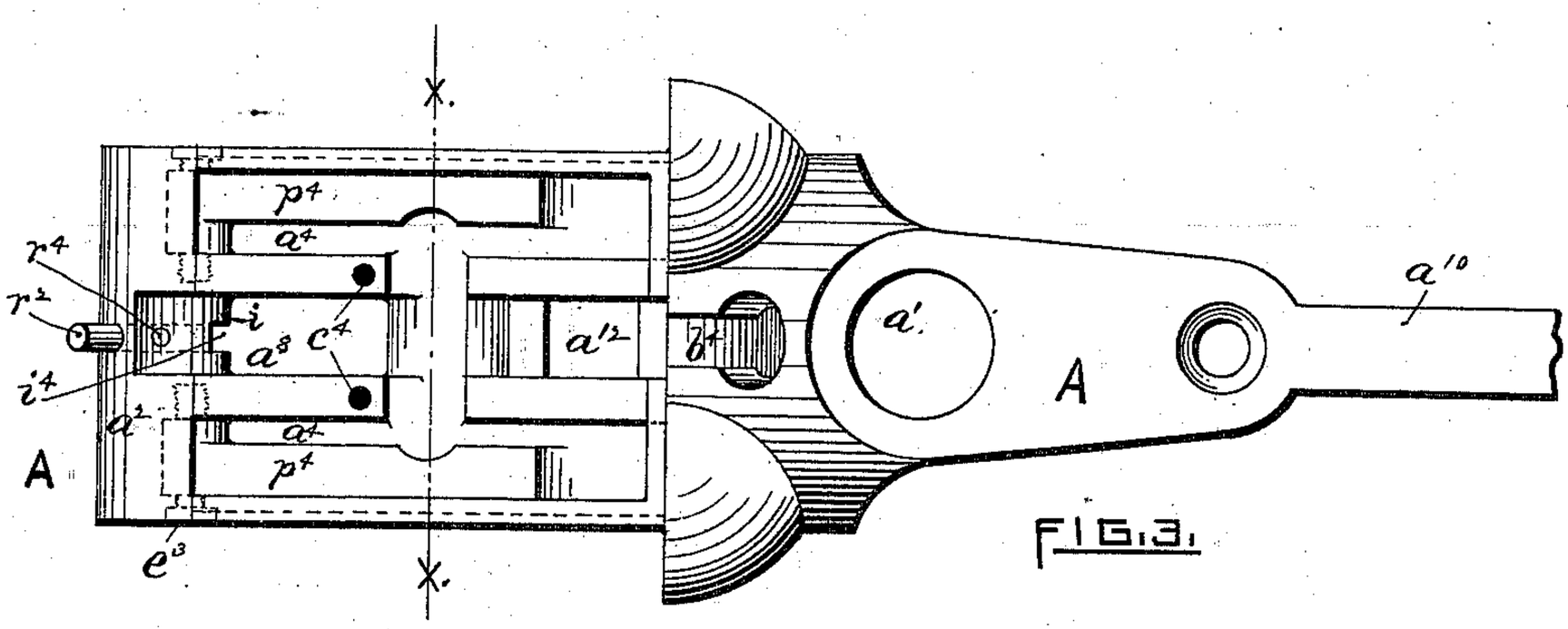


FIG. 3.

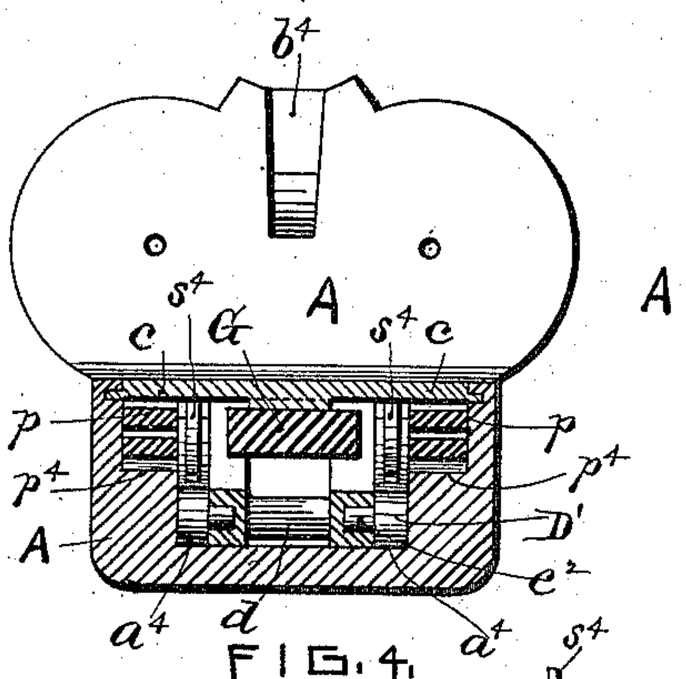


FIG. 4.

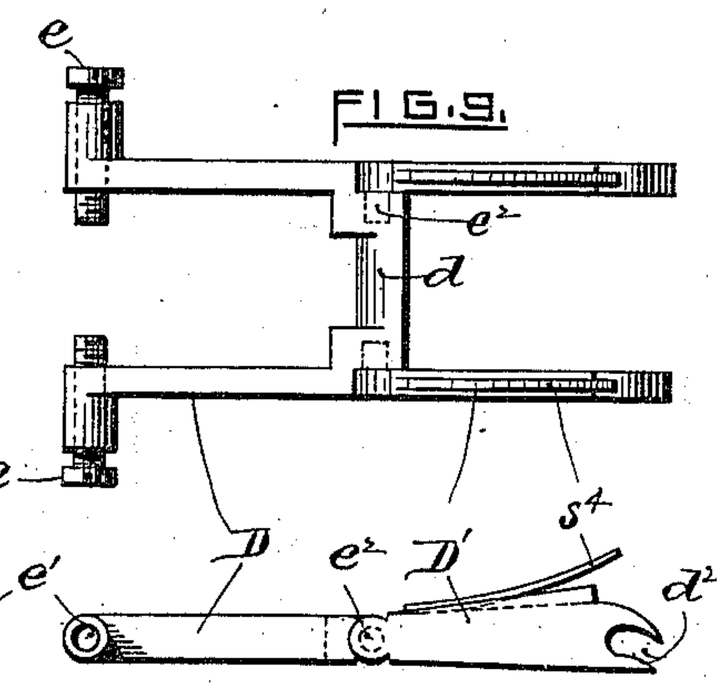


FIG. 7.

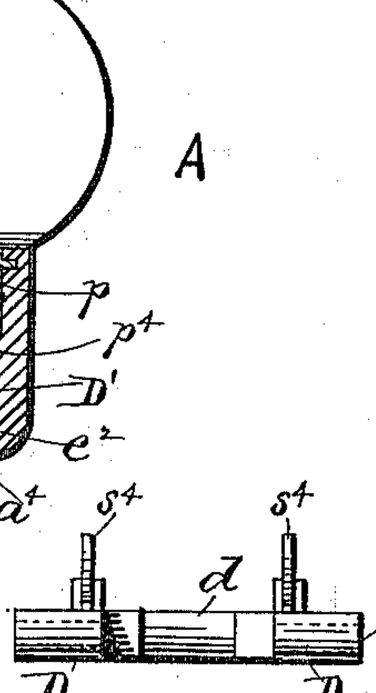


FIG. 8.

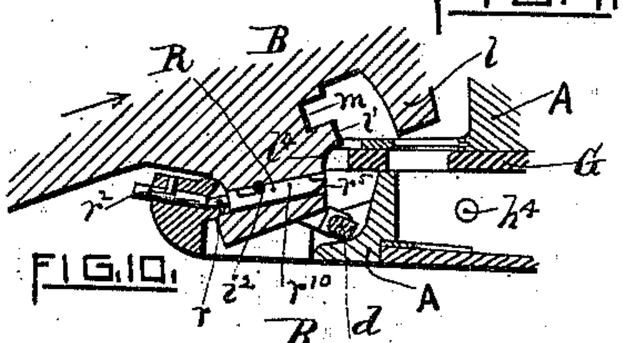


FIG. 10.

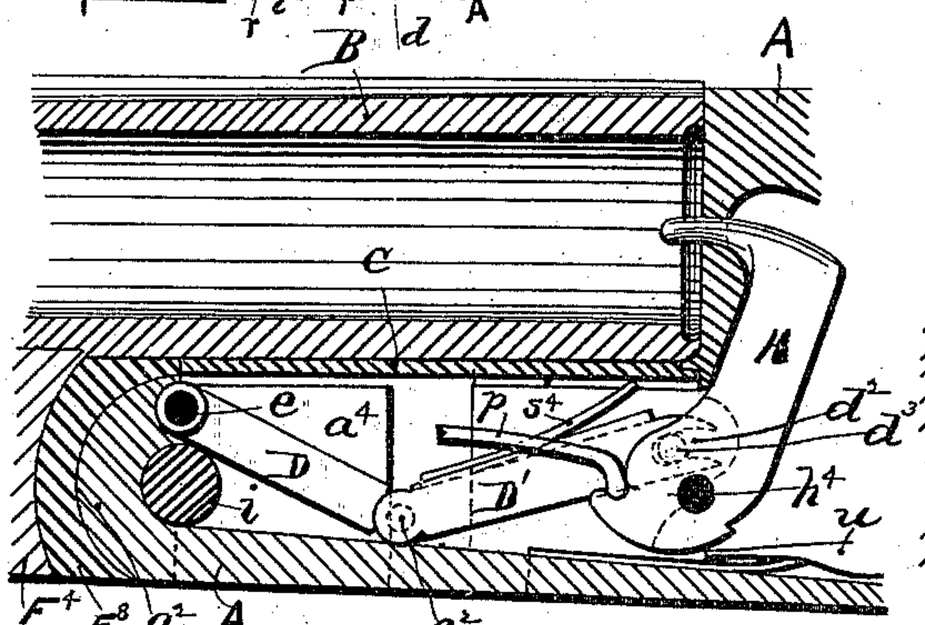


FIG. 5.

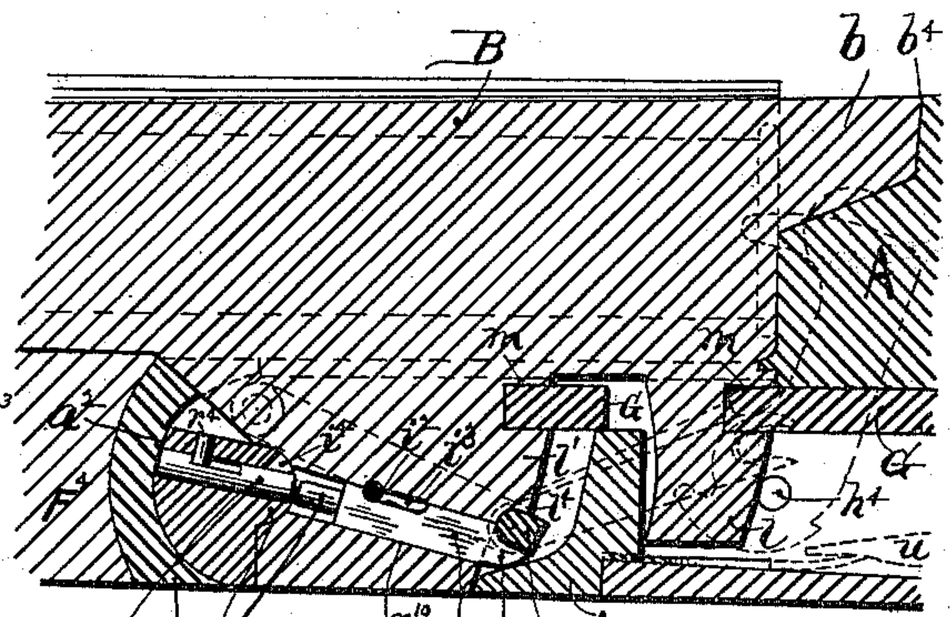


FIG. 6.

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# UNITED STATES PATENT OFFICE.

WILLIAM H. DAVENPORT, OF UXBRIDGE, MASSACHUSETTS.

## COCKING MECHANISM FOR BREECH-LOADING GUNS.

SPECIFICATION forming part of Letters Patent No. 334,570, dated January 19, 1886.

Application filed October 7, 1885. Serial No. 179,184. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. DAVENPORT, a citizen of the United States, residing at Uxbridge, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Cocking Mechanism for Breech-Loading Guns; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to the cocking mechanism of "breakdown" guns or fire-arms; and it consists, essentially, of a jointed link having one end thereof pivoted above the joint-pin to the stationary breech-frame, the other end being slotted and connected with the hammer, in combination with a sliding pin mounted in one of the locking-lugs of the barrel adjacent to said joint-pin, whereby in opening the gun the sliding pin engages with the link, thus causing the jointed portion to rise vertically and force the hammer or hammers back to the "full-cock" position, the action of said link being upon the principle of the well-known "toggle-joint" lever. By means of this device the cocking mechanism is greatly simplified, thus reducing the cost, and also adapting the gun to be more easily and rapidly operated, all as will be more fully hereinafter set forth and claimed.

In the two accompanying sheets of drawings, which I have prepared to illustrate my invention, I have embodied the device in a top snap-lever double hammerless gun, having concealed hammers, although it may be applied to single guns by slightly modifying the parts, in which—

Figure 1, Sheet 1, represents a vertical central sectional view through the rear portion of the barrel and its operating mechanism, the barrel being open to receive a shell, the hammers and its cocking device (shown in dotted lines) being in full-cock position. Fig. 2 is a vertical sectional view taken through the center of the left-hand barrel, the gun being closed and provided with a shell, the hammers cocked as in the preceding figure, and the jointed or cocking link returned to its normal position. Fig. 3, Sheet 2, is a plan view of the breech-frame with the barrels, cocking mechanism, &c., removed. Fig. 4 is a transverse sectional view through line $x\ x$, Fig. 3, showing in addition the relative arrangement of the parts forming the cocking device. Fig. 5 is a partial vertical central sectional view taken through the rear of the barrels, showing the hammer down. Fig. 6 is a partial vertical central sectional view taken through the longitudinal axis of the gun, showing the pin which connects with and actuates the cocking-link, said parts corresponding to the position represented in the preceding figure. Figs. 7 and 8 are side and end views, respectively, of the jointed link or toggle-connection detached from the gun. Fig. 9 is a plan view of the same, and Fig. 10 is a reduced sectional view showing the fore-wood strap removed, the actuating or sliding pin in its extreme forward position, thus permitting the barrels to be readily detached from the breech portion.

The following is a more detailed description of the invention: B, again referring to the drawings, designates the rear portion of the barrels of a double gun provided with lugs $l\ l'$, formed on the center of the under side thereof, said lugs each having a notch, $m$, formed therein, adapted to receive the locking-bolt G, by means of which the parts are secured together as usual in guns of this class.

A indicates the breech-frame, to which the barrels B are pivoted at $i$, said frame being also adapted to receive the operating mechanism about to be described.

In Fig. 3, $a^{10}$ designates a rearward extension of the top of the frame, which is adapted to connect with the breech or stock portion A, $a'$ being an opening formed therein adapted to receive the top snap-lever, $a$, which latter connects with and operates the locking-bolt G, all thus far being as usually constructed and common.

$b$ is an extension-rib formed at the top rear center of the barrels, having its shape corresponding to the opening $b^4$, formed in the

frame A, Figs. 1 and 3, for the purpose of locking the said parts together, also as common.

$a^8$ $a^{12}$ indicate openings formed in the frame A, Fig. 3, adapted to receive the said lugs $l$ $l'$.

$a^4$ $a^4$ represent long and narrow recesses or pockets, also formed in the frame under each barrel, for the purpose of containing the cocking mechanism.

H indicates the "hammers," so-called, each pivoted at $h^4$ to the frame A, and provided with spring-sears $u$, triggers T, &c., as usual. Upon the inner side or face of each hammer above the pivot is secured the short pin $d^3$, which engages the slotted or forked end of the cocking-links or toggle-connection D D', said link being double and connected together at or near the joint by means of the tie $d$, Fig. 9, the front end of the link D having an eye therein adapted to receive screws $e$, which are tapped into the frame A, immediately over the joint-pin $i$, as fully shown in Figs. 2 and 5. The link portions D' are pivoted at $e^2$ to the rear end of the arms D, the rear end of the former, D', being slotted, as shown at $d^2$. Each hammer is provided with a spring, $p$, which rests upon the ledge $p^4$ of the frame, said springs being retained in position vertically by means of the removable cap or plate $c$, the latter being mounted in the side grooves formed in the frame and secured therein by screws $c^4$, as indicated in Figs. 3 and 4.

The forward end of the frame A is rounded off true at $a^2$, thus forming a joint around which the rear end, $F^8$, of the fore-wood strap $F^4$ is fitted, said strap being detachably secured to the barrels as common, the whole forming or serving as a pivot upon which the barrels are adapted to swing when "breaking down" or opening the gun.

A longitudinal opening, $r^{10}$, is formed in the lower portion of the forward lug, $l'$, at a slight angle to the axis of the barrels, in which a pin, R, is loosely fitted, the rear end, $r^5$, of said pin being adapted to engage with the tie $d$ of the cocking-links, a stop, $i^2$, secured to the lug, in connection with the cut-away portion $i^3$ of the pin, Fig. 6, serving to prevent the latter from dropping out when the barrels are detached from the frame. The forward end of the pin R is reduced in diameter at $r$, as shown. A small hole is drilled transversely through the joint portion $a^2$ of the frame, substantially in line with the pin R, within which a pin, $r^2$, is loosely fitted, the same just filling the hole longitudinally, as shown in Figs. 1 and 6. This latter pin is also cut away or slotted to engage a stop, $r^4$, secured to the frame, said stop serving to limit the movement of the pin as well as preventing axial rotation. The rear portion of the lug $l'$ is cut away at $l^4$ to fit the upper portion of the tie $d$, which, in connection with the pin R, at $r^5$, serves to vertically move the jointed portion of the cocking-links whenever the gun is opened and closed.

The manner of operating or cocking the hammers of a gun provided with my improved device is substantially as follows: The top snap-lever, $a$, is grasped in the right hand and moved toward the right, which movement withdraws the locking-bolt G from the notches $m$ of the lugs $l$ $l'$. The forward portion of the barrels is then forced downwardly by the other hand, which at the same time causes the rear portion of the barrels back of the joint-pin to swing upward, as shown in Fig. 1. This latter movement, by reason of the engagement of the tie $d$ with the lug $l'$ and the end portion, $r^5$, of the pin R, forces the jointed links D D' upwardly and presses the hammers back to the full-cock position, the latter being effected by means of the engagement of the pins $d^3$ of the hammers with the bottom of the slots or openings $d^2$.

It will be noticed that as the links are fulcrumed at $e$, any upward movement thereof will result in forcing the free or slotted ends D' rearwardly, the leverage increasing as the links approach or become in line with each other, thus easily counteracting the tension of the springs $p$ at the full-cock position, and by passing the center, as shown in dotted lines in Fig. 1, all strain or resistance of said springs upon the barrels and links is entirely removed, an advantage possessed, so far as I am aware, by no other breakdown gun. Incidental to this arrangement, by means of the rapid movement of the hammers during the first of the cocking operation, I am enabled to prevent the striking portion $h$ of the hammers from locking or remaining in contact with the shell or primer, as the said portion $h$ is caused to move rearwardly more rapidly than the upward movement of the barrels. The barrels now being open, the empty shells are removed and loaded shells S placed in the counterbore of the barrels, after which the the gun is closed, this latter movement forcing tie $d$ and its links downwardly to the normal position shown in Figs. 2, 5, and 6, the hammers, however, remaining in the full-cock position, as shown in Fig. 2. At the instant of closing, the main bolt G springs into place, thus securely locking the barrels. The sear $u$ is now tripped by means of the trigger T, the spring $p$ at the same time forcibly swinging the hammer forward to explode the shell, the parts then being in the position shown in Figs. 5, 6, the pins $d^3$ resting in the bottom of the slots $d^2$.

It is obvious that either barrel may be fired at will, as the links were both withdrawn to the normal position in closing the gun.

In order to detach the barrels from the breech portion the fore-wood strap $f^4$ is first removed and the gun opened, as just described. The end $r$ of the pin R, Fig. 10, then slides into the opening or cut-away portion $i^4$, thus pushing the pin $r^2$ beyond the surface $a^2$ of the front end of the frame A, the rear end of the pin R then being flush with the under

portion of the lug $l'$, by means of which the tie $d$ is disengaged from the lug, thereby permitting the barrels to be readily removed. To connect the barrels and frame together again, the former is hooked over the joint-pin $i$ of the latter, the pin R meanwhile remaining in the position just stated and the gun closed. The fore-wood strap is then replaced, which operation forces the pin $r^2$ back into its opening, its rear end at the same time coming in contact with the forward end of the sliding pin R, and in turn forcing the latter rearwardly under the tie $d$, as shown in Fig. 6.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a breakdown gun provided with mechanism for opening, closing, and locking the same, the jointed link pivoted to the breech-frame above the barrel joint or hinge, and the hammer provided with a pin engaging the slotted or free end of the link, in combination with the link-operating pin loosely mounted in the lug or under side of the barrel, and the retaining-pin loosely mounted in the joint-pin, substantially as hereinbefore described, and for the purpose set forth.

2. The cocking device for breakdown guns, hereinbefore described, consisting of the jointed link adapted to be pivoted to the breech-frame above the joint-pin, the opposite or free end of said link having a slot or groove formed therein adapted to engage a pin secured to the hammer above its pivot, and the loosely-mounted pin carried by the lug adapted to engage with the link for operating the same, the whole combined and arranged within the forward portion of the breech-frame below the barrels, substantially as shown and set forth.

3. In a breech-loading fire-arm provided with mechanism for opening, closing, and locking the same, the combination, with the hammer provided with a pin, $d^3$, spring $p$, for firing the shell, the spring-sear $u$, and trigger T, of the double or jointed link D D', pivoted to the breech-frame and engaging the said pin $d^3$ of the hammer, and the pin R, loosely mounted in the barrel-lug, said pin being adapted to engage a tie, $d$, of the link for the purpose of vertically moving the same, substantially as shown and set forth.

4. In a breakdown gun, the combination, with the jointed and slotted links D D' pivoted to the breech-frame and connected with the hammer, of the link-operating pin R, loosely mounted in the under side of the barrel, and the pin $r^2$, mounted transversely of the joint-pin $i$, substantially as shown, and for the purposes hereinbefore set forth.

5. In a double breakdown gun having its hammers each provided with a pin, $d^3$, the combination therewith of the double link D, pivoted to the breech-frame, and connected at its rear end by the tie $d$, slotted links D', pivoted to said link D, and the pin R, loosely mounted in the barrel-lug $l'$, the whole arranged whereby in opening the gun the hammers are forced to the full-cock position, substantially as shown and set forth.

6. The improved cocking device hereinbefore described, consisting of the link D, pivoted to the breech-frame, slotted link D', pivoted to said link, its free or slotted end connected with the hammer H, the pin R, loosely mounted in the barrel-lug $l'$, and the pin $r^2$, loosely mounted in the joint-pin $i$, the whole combined and arranged substantially as shown, and for the purposes set forth.

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

WILLIAM H. DAVENPORT.

Witnesses:
GEO. H. REMINGTON,
CHARLES HANNIGAN.