

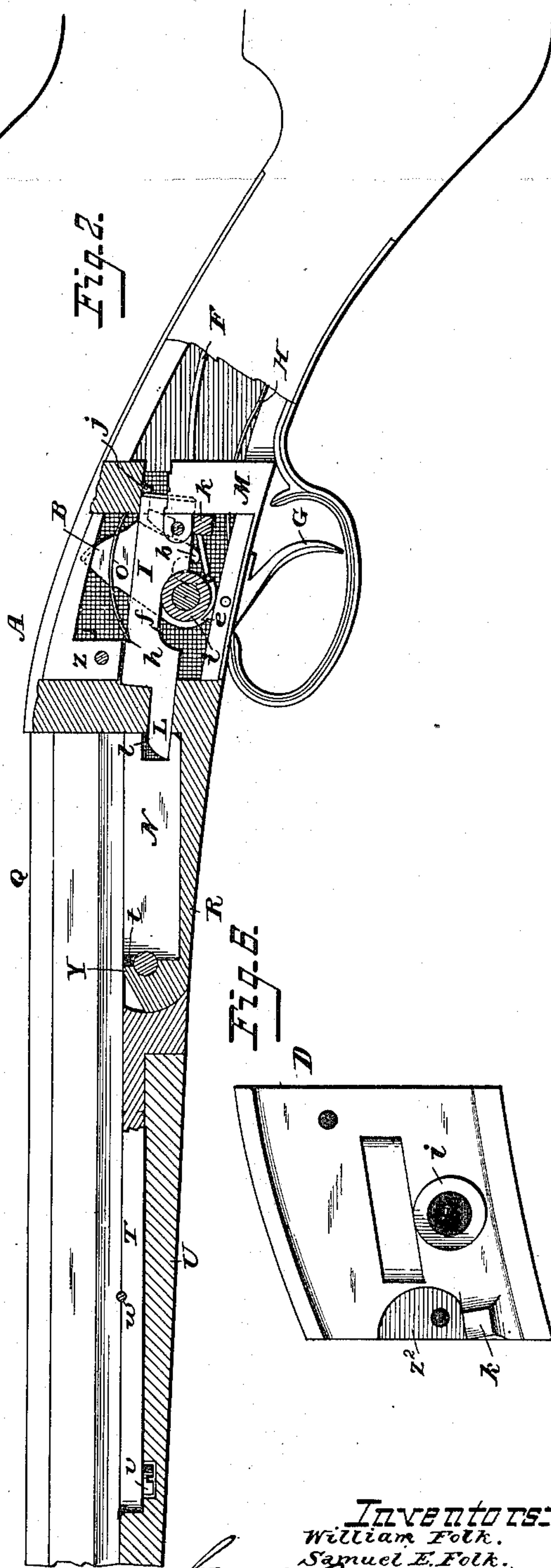
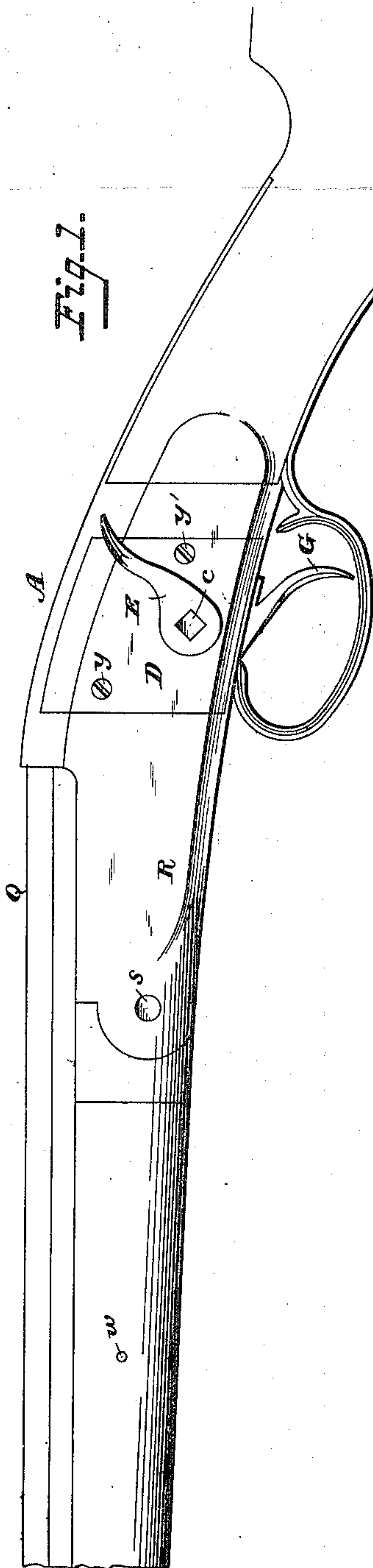
(Model.)

2 Sheets—Sheet 1.

W. & S. E. FOLK.
BREECH LOADING FIRE ARM.

No. 308,482.

Patented Nov. 25, 1884.



Attest:-

Count A. Cooper.
J. C. Wildman.

Inventors:-
William Folk.
Samuel E. Folk.

William Folk.
Samuel E. Folk.
by J. G. Henderson,
Attorney.

(Model.)

2 Sheets—Sheet 2.

W. & S. E. FOLK.
BREECH LOADING FIRE ARM.

No. 308,482.

Patented Nov. 25, 1884.

Fig. 3.

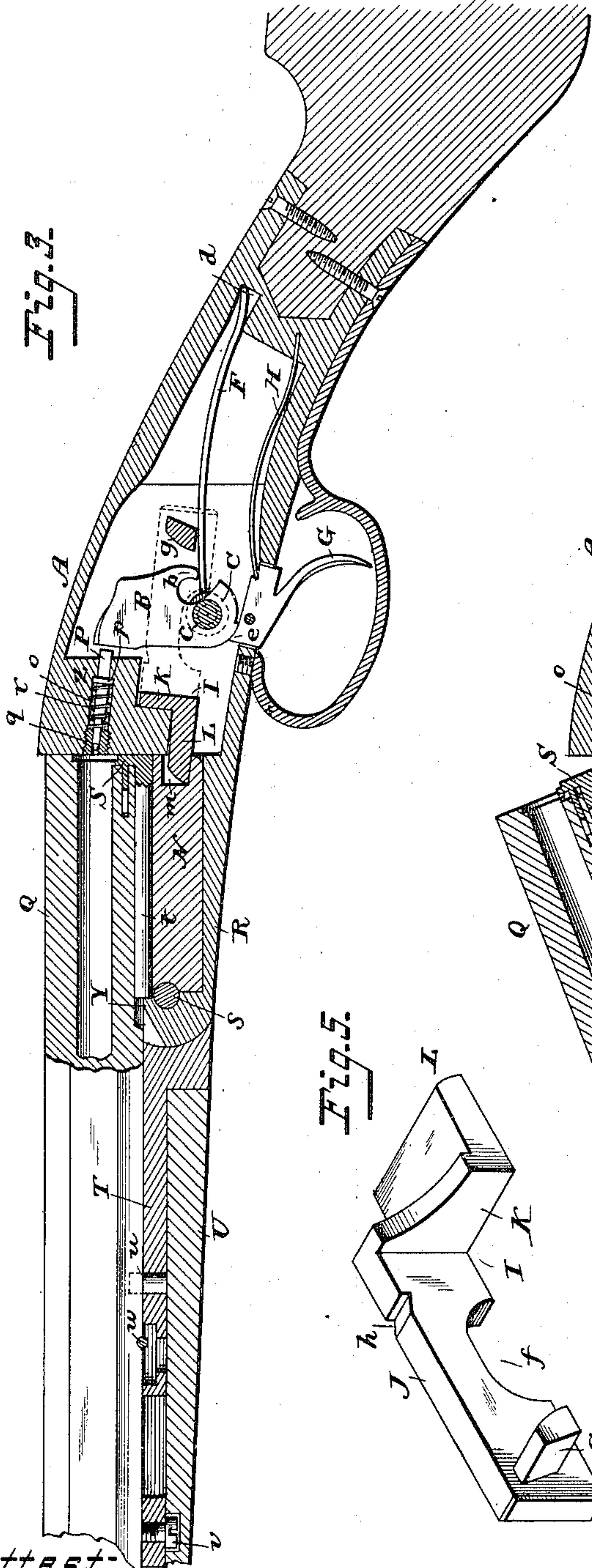


Fig. 4.

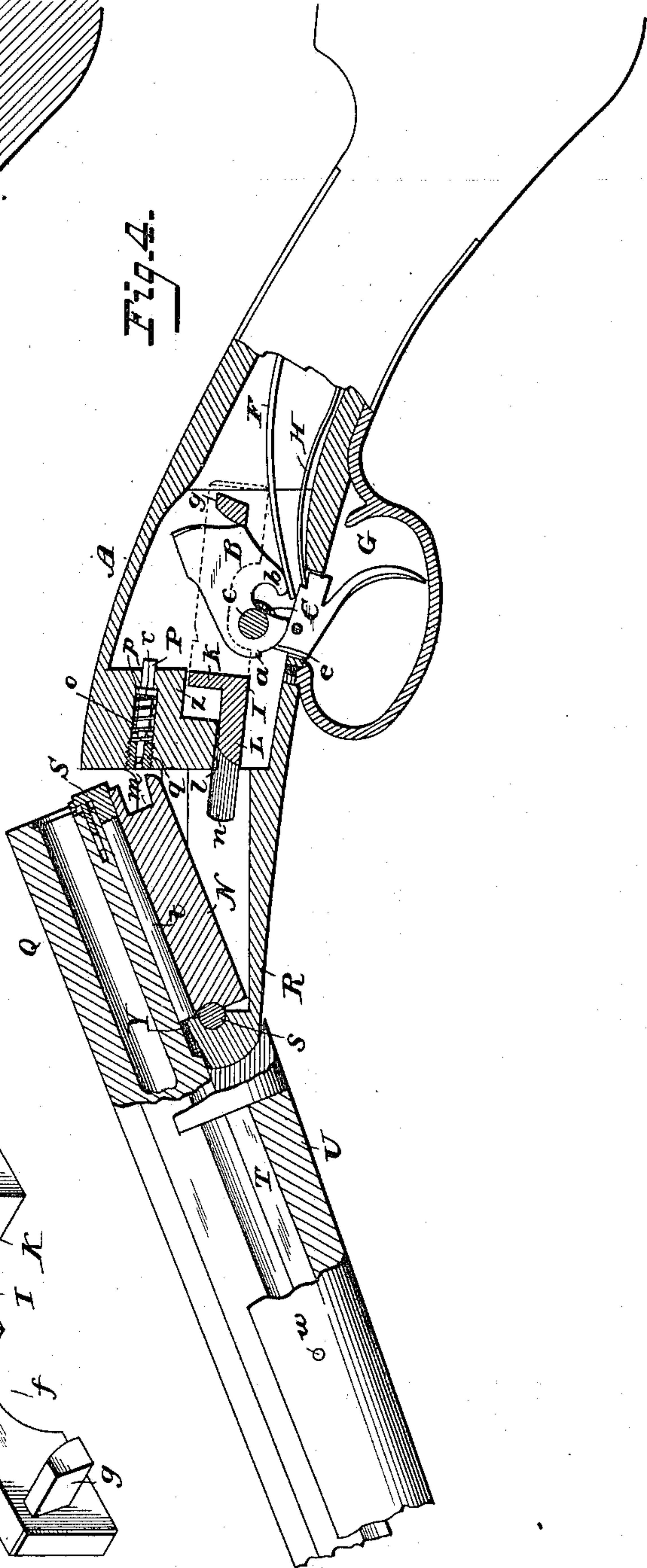
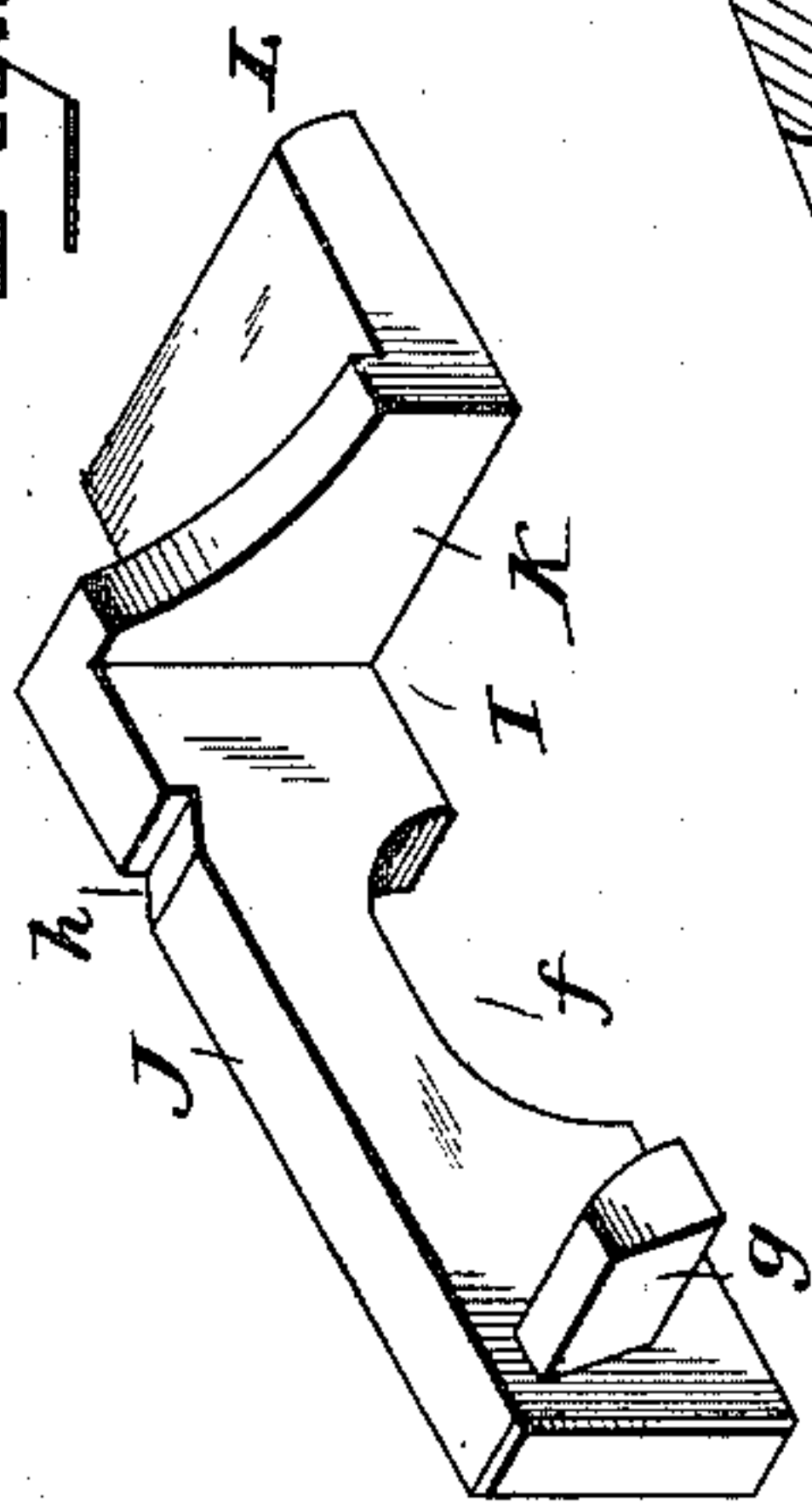


Fig. 5.



Attest:

Count A. Cooper,
J. C. Mildman

Inventors:

William Folk.
Samuel E. Folk.

by *W. H. Henderson*
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM FOLK AND SAMUEL E. FOLK, OF BRYAN, OHIO.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 308,482, dated November 25, 1884.

Application filed May 23, 1884. (Model.)

To all whom it may concern:

Be it known that we, WILLIAM FOLK and SAMUEL E. FOLK, citizens of the United States, residing at Bryan, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and we 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.

Our invention relates to breech-loading guns, and has for its objects to simplify and cheapen their construction generally; to render the action of the extractor positive and dependent solely on the movement of the barrel independent of any spring; to render the cocking of the hammer and breaking of the barrel controllable by a single lever movable in one direction for effecting both ends, and to guard against the accidental discharge of the cartridge by permitting the firing-pin to come in contact with the cartridge only when the gun is to be fired; and to the foregoing ends it consists in the means hereinafter particularly described, and then specifically pointed out by the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a gun as it appears with our improvements applied thereto. Fig. 2 is a side view, partly in section, showing the hammer cocked and ready for firing. Fig. 3 is a longitudinal section showing the parts when the hammer is down. Fig. 4 is a side view, partly in section, showing the barrel tipped and the position of the hammer at the time of breaking and tipping the barrel. Fig. 5 is a perspective of the locking-bolt detached from the gun. Fig. 6 is a side view looking at the inside of the removable plate of the lock-case.

In the drawings the letter A designates the lock-case, in which is fitted the hammer B, the same being formed on its lower edge with a notch, *a*, on its rear edge below its center with a heel, *b*, and on opposite sides near its lower end with a pin, *c*, the pin on one side fitting in a boss, C, formed on the inside of one side of the case, and on the opposite side passing through the removable plate D of the case, and at that end formed with an angular shoulder for the attachment thereto of a thumb-le-

ver, E, by which the hammer is moved for cocking the same and for retracting the bolt which locks the barrel to the breech. The top and rear edges of the hammer are preferably of the form shown, but it is not meant to limit them to such form. The hammer is held in its normal position (seen in Fig. 3) by a mainspring, F, the rear end of which fits into a notch, *d*, at the rear of the metallic portion of the stock, as seen in the same figure, while its forward end bears under and against the heel *b* of the hammer, the said spring being depressed when the hammer is thrown back, so that it will impel the hammer forward when the latter is released from engagement with the trigger G, the nose *e* of which fits into the notch *a* of the hammer when the latter is cocked to hold it at such position, as seen in Fig. 2, and forward thereof when not cocked, as seen in Fig. 3, the trigger being acted upon by a spring, H, as usual, one end fitting into a notch in the trigger and the other into a recess in the rear part of the metallic portion of the stock, as seen in Fig. 3. The barrel is locked to the breech by means of a sliding bolt, I, which is preferably composed of a bar, J, formed with a recess, *f*, on its under face to permit it to fit and slide over the journaling-pin of the hammer, or over the boss in which the pin fits on the side of the removable plate, and provided at its rear on the side next to the hammer with a lug, *g*, having an inclined or beveled face, as seen in Fig. 5, for the rear edge of the hammer to bear against when it is moved backward, as seen in Figs. 2 and 4, and at its forward end formed with a laterally-extending arm, K, from which there extends in the direction of the length of the bar and from its lower portion a tongue, L, while the top edge of the bar, near its forward end, is formed with a notch, *h*. Such is the preferred construction of the locking-bolt, but it is not meant to restrict it to such form when other constructions will operate in substantially the same way. This bolt is fitted in the lock-case, with the recessed portion over the boss *i* on the plate D, through which the journal-pin of the hammer passes, and with its rear end between the inside face of the cross-bar M and a lug, *j*, depending from the upper wall of the lock-case, and a lug, *k*, on the inside of the

removable plate beneath the bar, by which means the bar is guided and steadied in its sliding movement, while its tongue L protrudes through a slot, *l*, made in the front wall of the case, so as to enter a notch or groove, *m*, in the end of a lug or bar, N, on the under side of the barrel, the sides of the tongue preferably entering ways *n* in the sides of the metallic portion of the stock, while the shoulder formed by the upper part of the bar above the tongue strikes against the front wall of the case, as seen in Fig. 3, so as to prevent the bolt from moving too far forward. The bolt is held forward in the notch of the lug, so as to lock the barrel to the breech by a spring, O, one end of which fits into the notch *h* of the bar I and the other end into a notch formed in the rear wall of the case, or in the lug *j*, as seen in Fig. 2. The upper edge of the tongue and lower edge of the lug to the barrel are beveled, so that when the barrel is thrown down against the tongue the bolt will readily slide backward till the barrel is returned to its seat, when the spring O will project the bolt forward to lock the barrel to its place. The firing-pin P fits within a chamber, *o*, formed in the breech, as seen in Figs. 2 and 4, and is formed with a collar, *p*, near its rear end, to prevent it from slipping backward from out of the chamber, and is reduced in diameter near its forward end, in order that it may freely slide through an opening in the screw *q*, which holds it within the chamber and permits its withdrawal therefrom when necessary, and also in order to form a shoulder to strike against the end of the screw to prevent it from being propelled out of its chamber. The rear end of the pin normally projects back of the breech, while the forward end and point is held back within the chamber or channel of the screw by a coiled spring, *r*, encircling the pin, as seen in Figs. 3 and 4, so as to hold back the pin from contact with the cartridge, thereby guarding against accidental discharge of the cartridge by any jarring of the gun. The barrel Q is hinged to the stock R by a pin at *s*, as seen in Figs. 2, 3, and 4, the stock projecting slightly above the pin to form a shoulder, Y, as shown, and beveled on its upper face to permit the barrel to be tipped, as indicated. The rod *t* of the cartridge-extractor S extends beneath the barrel, between it and the lug N, as far as the hinging-pin, so that its end will bear against the shoulder or fixed projection formed by the stock, so that when the barrel is broken by the withdrawal of the locking-bolt and tipped, as shown, the extractor will be pressed outward from the end of the barrel by reason of its end bearing against the fixed projection at the hinged joint of the barrel and stock. When the barrel is restored to its normal position, as seen in Fig. 3, the end of the extractor next to the breech strikes against the latter, and by it is pressed inward to the position shown in Fig. 3. It will thus be seen that the action of the extractor is rendered

positive with the breaking and closing of the barrel without the aid of any spring or sliding blocks or other extraneous means than the fixed projection at the end of the rod. The barrel may be fastened to the part T and to the wooden portion U of the stock by pin *u* and screw *v* and pin *w* in the usual way. The plate D is secured to the side of the lock-case by screws *y* and *y'* passed, respectively, through the plate into the wall *z* and ear *z'* of the case, the plate being formed with a recess, *z''*, to receive the ear *z'*. The hammer is cocked by pressing on the lever E with the thumb until it is heard to click, and then by pulling on the trigger the nose thereof is disengaged from the notch of the hammer and the latter impelled forward by the mainspring, when it strikes the projecting end of the firing-pin and propels it forward sufficiently for the point thereof to protrude beyond its chamber and strike the cartridge with force enough to explode the same. The mainspring bears against the hammer below its heel when the hammer is uncocked, and holds the same back from the end of the firing-pin, so that just as soon as the pin has fired the cartridge it is retracted by the coiled spring far enough to bring it back within the same and away from contact with the fresh cartridge which may be introduced. To remove the fired cartridge, the thumb-lever is depressed to the point where the trigger-nose and hammer-notch are engaged, which brings the hammer to the position shown in Fig. 2, with the rear edge of the hammer against the lug on the side of the locking-bolt, and then, continuing the same pressure, the hammer is thrown back to the position shown in Fig. 4, and presses back the bolt, so as to draw its tongue out of the notch in the barrel-lug and leave the barrel free to be broken by tipping the same, as seen in Fig. 4, by a slight pressure of the hand. The moment the barrel is tipped and the pressure taken from off the thumb-lever the mainspring carries the hammer back to the position shown in Fig. 2, with the notch thereof in engagement with the trigger-nose, and the spring O to the bolt forces the latter forward to its normal position ready to slide back when struck by the lug on the barrel and engaged with the notch therein, to securely lock the same to the breech. The moment that the barrel is tipped far enough to bring the end of the cartridge-extractor against the fixed projection beyond its end, the continuing pressure of the rod against such projection causes the extractor to move outward from the barrel and carry with it the empty shell, so that it may be easily withdrawn by the fingers and a cartridge substituted therefor. The barrel is now free to be closed by throwing its breech end down, and the moment the extractor slides against the breech it is pressed in by such contact, together with the cartridge, and as soon as the bolt engages with the barrel the gun is ready for firing. If it

should not be desired to fire the gun, the thumb may be placed against the thumb-lever, so as to let the hammer down easy when released by the trigger, when the several parts will appear as seen in Fig. 3, together with Fig. 1, without the gun being liable to be accidentally discharged by falling or jarring.

The parts to the gun have not only the advantage of being few in number, but also that of being simple in construction, and consequently easy and cheap of application, and not apt to get out of working order, and at the same time very positive in their action.

It is obvious that more notches than one may be formed on the hammer, so as to hold the hammer at half-cock or any other point desired. The mainspring not only actuates the hammer, but it also serves to keep the sliding bolt in position and assist in rendering its action positive.

Having described our invention and set forth its merits, what we claim is—

1. In a breech-loading fire-arm, the combination, with the barrel, of a bolt to lock the same, a pivoted hammer acting on said bolt to retract the same to unlock the barrel, and a lever for cocking the hammer and retracting the bolt by movement in one direction, substantially as described.

2. In a breech-loading fire-arm, the combination, with the barrel, of a bolt to lock the same, a pivoted hammer acting on said bolt to retract the same to unlock the barrel, a lever for cocking the hammer and retracting the bolt by movement in one direction, and a spring for restoring the bolt to position after being retracted, substantially as and for the purpose set forth.

3. In a breech-loading fire-arm, the combination, with the barrel, of a bolt to engage therewith to lock the same closed, provided with a lug on its side, a hammer adapted to be brought into contact with said lug, a lever for bringing the hammer against said lug to retract the bolt, and a spring for restoring the bolt to its former position, substantially as described.

4. In a breech-loading fire arm, the combination

of a break barrel, the sliding bolt provided with a lug on its side and fitting at its rear end between lugs on the inside of the lock-case and at its forward end engaging with a notched lug on the barrel, the pivoted hammer formed with a heel at its rear edge, a mainspring bearing against the said hammer on the under side of its heel and beneath the lug on the bolt, a lever connected with a pin on the hammer for moving the hammer backward against the lug on the side of the bolt and retracting thereby the bolt, and a spring acting on the bolt to restore it to its former position, substantially as and for the purpose set forth.

5. In a breech-loading fire-arm, the combination of a break barrel, the hammer formed with side pins journaled in bosses formed on opposite sides of the lock-case, the sliding bolt having its under edge recessed to fit over a boss on one side of the lock-case, and formed with a lug on its side at its rear end, and at its forward end provided with a tongue fitting into a notch formed in a lug attached to the barrel, a mainspring bearing against the hammer, a lever connected with the hammer to cock the same and press it against the lug on the side of the bolt to retract the latter, and a spring for restoring the bolt to its former position, substantially as described.

6. In a breech-loading fire-arm, the combination of the barrel provided with the bar N, the frame R, provided with the shoulder Y, extended above the hinging-pin s, which hinges the barrel to the frame, and the extractor S, having its rod t inclosed by the bar N, with one end bearing against the shoulder Y, so as to be operated thereby in breaking the barrel to extract the cartridge, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM FOLK.
SAMUEL E. FOLK.

Witnesses:

E. E. BUHTOL;
WM. D. BILLINGS.