

E. L. SARGENT.

Breech-Loading Fire-Arm.

No. 100,455.

Patented March 1, 1870.

FIG. 1.

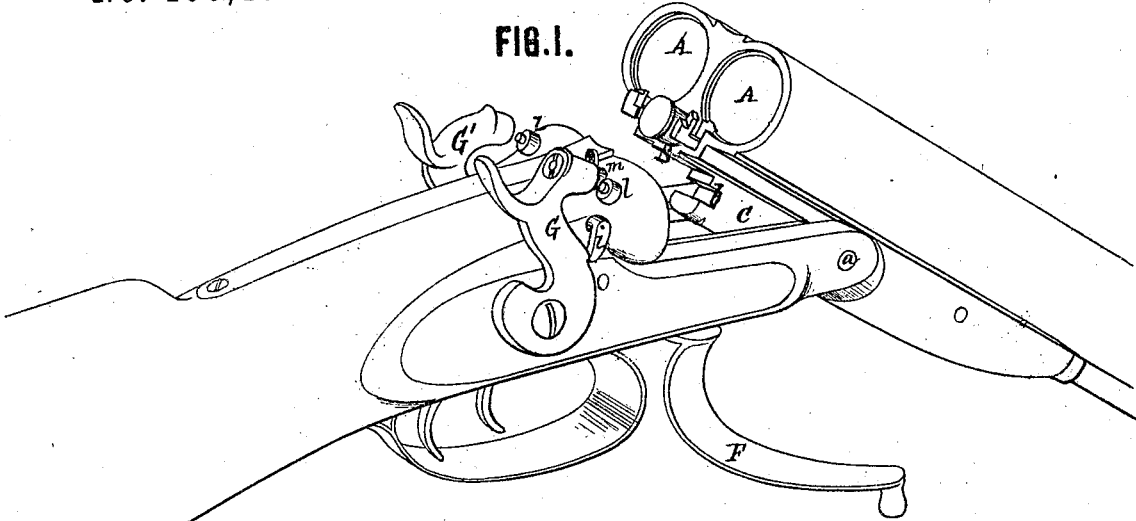


FIG. 2.

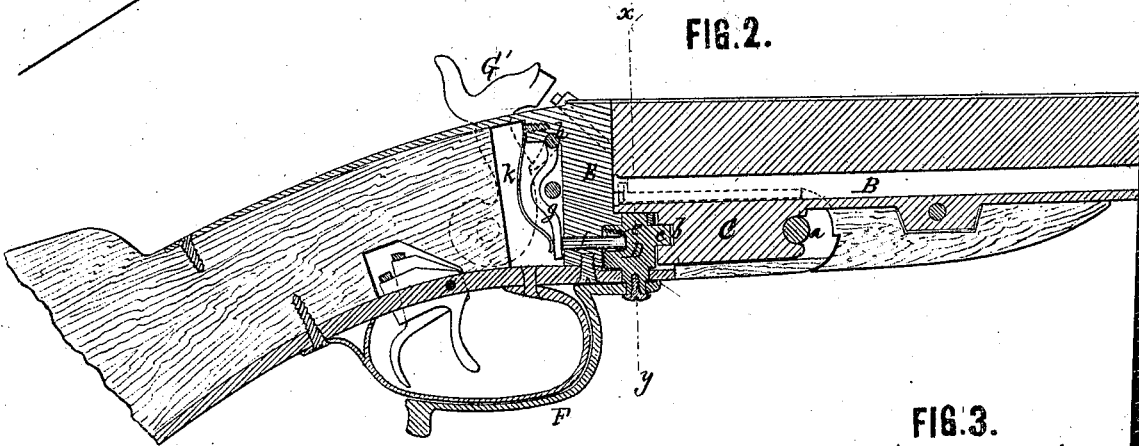


FIG. 4.

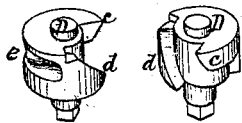


FIG. 5.

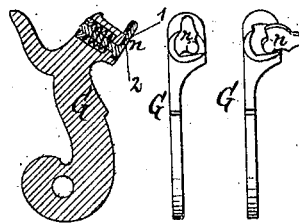
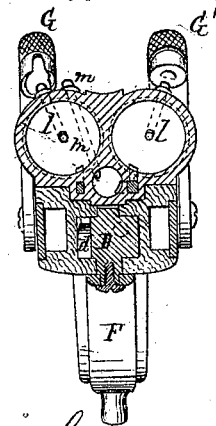


FIG. 3.



WITNESSES

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EDWARD LEVI SARGENT, OF WATERTOWN, NEW YORK.

Letters Patent No. 100,455, dated March 1, 1870.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWARD LEVI SARGENT, of Watertown, county of Jefferson, and State of New York, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing.

My invention relates to breech-loading fire-arms, particularly shot and other sporting guns, and it is designed to render such arms safer and more convenient for use than has been heretofore the case, dispensing entirely with spring catches or locking devices such as are ordinarily employed to hold in position the hinged barrels of a "break-down" gun.

My invention consists—

First, in the combination with the cam and locking-piece for the barrel or barrels of a device whereby when the cam is turned so as to unlock the barrel or barrels, the said device, through the instrumentality of the cam, may be caused to lift the hammer or hammers to half or quarter cock, and thus remove them from contact with the nipples or firing pins.

Second, in the construction and arrangement of the locking-piece and cam, the device for setting the hammers at half or quarter cock, and the hinged or pivoted head of the hammer for both the shot and the rifle barrel, as hereinafter specified.

The nature of my invention, and the manner in which the same is or may be carried into effect, will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of that portion of a "break-down" gun to which my improvements are applied.

Figure 2 is a longitudinal vertical central section of the same.

Figure 3 is a transverse vertical section of the same on the line $x y$, fig. 2.

Figure 4 represents in perspective the locking-piece and cam.

Figure 5 represents in perspective and in section the double hammer for the rifle and shot barrels.

The barrels A are hinged to the stock, as shown in figs. 1 and 2, so as to constitute what is generally known as a "break-down" gun. With the barrels are, of course, combined retractors, which are operated in any ordinary or suitable manner.

Below and between the two barrels A is a third and rifle barrel, B, which can be used whenever occasion requires, as will be presently described. The three barrels are solidly united, and move upon the same hinge or pivot.

The pivot or pin α upon which they turn is held in a block, C, attached to the barrels, and having its rear

end recessed out, as shown at b in the drawings, so as to receive the locking-lip or flange c of the rotary cam-piece D.

This piece is mounted upon a vertical axis in the stock, just under the rear end of the barrels, and is partially received in the breech B, so that only so much of it is exposed as is needed to either lock or tilt the barrels.

The locking is effected by the lip or flange c , which, when the barrels are in position, fits in the recess b of the block C, and holds the two portions of the gun firmly and immovably together.

On the other hand, when the piece D is rotated so as to remove the lip from the recess, and thus unlock the barrels, an incline, d , suitably located on the piece D, strikes the lower part of the block, the under side of which is made beveled to facilitate this operation, and elevates the block, thus starting the barrels, which then continue to tilt by reason of their own weight until their rear ends are fully exposed, as seen in fig. 1.

After the cartridges have been inserted in the barrels, or when it is desired to again bring the barrel into position, their rear ends are brought down, which causes the lower end of the block C to strike upon the cam surface or incline d , thus causing the locking-piece D to rotate as the block descends, until the lip or flange c again enters the recess b , so as to lock together the stock and barrels.

The movement of the piece D in unlocking the barrels is effected by means of the lever E, which is connected with the projecting end or journal of the piece D, and which is arranged so as to extend along the trigger-guard, or may, if desired, be used as the trigger-guard; a separate guard, in such case, being dispensed with.

It will be noticed that the locking of the barrels is effected by the cam and locking-piece D, whose movement is positive, and is not effected by means of a spring such as is ordinarily employed; and further, it will be seen that the piece D is arranged partly in the breech, so that only so much of it is exposed as is needed to operate in connection with the barrels, the remaining portion being covered and protected by the breech. This arrangement is also advantageous in another respect, for it enables me to use the locking and cam-piece D to directly operate mechanism for setting the hammers at half or quarter cock at the time the barrels are being tilted, this being a feature quite important and essential in fire-arms in which, as in the present instance, percussion-pins are employed.

To this end, I form in the back part of the rotating piece D a cam-groove or recess, e , in which is received one end of a pin, f , which passes through and is capable of sliding freely back and forth in the breech B. The other end of the pin passes back through the

breech, and is in contact with an arm, *g*, extending downward from a horizontal shaft or rod, *h*, which extends across and projects at each end from the stock, having mounted on each of its ends a radial finger, *i*, which is arranged in proximity to, or so as to bear against one of the hammers *G G*. Under this arrangement, when the cam and locking-piece *D* are rotated so as to unlock the barrels, the cam-groove *e* will force the pin *f* back.

The pin in turn will force back the arm *g*, and this movement of the latter will impart to the shaft *h* a rotary movement sufficient to cause its radial fingers *i* to force back the hammers *G* to quarter or half cock.

The cam-groove *e* is so located with respect to the locking-lip *c* and cam *d* that during the unlocking of the barrels, and before the cam *d* commences to act, the cam-groove will actuate the fingers *i* to force back the hammers, so that the latter will be lifted from the percussion-pins before the barrels can tilt; a spring *k* serves at all times to hold the arm *g* with a yielding pressure against the pin *f*.

The above-described arrangement of the devices specified for setting the hammers at half or quarter cock is simple and efficacious; but at the same time it is manifest that the arrangement, as well as the construction of the devices, may be greatly varied without interfering with the use of the cam-piece *D* for the purpose of operating them.

It will be noticed that, although the gun has three barrels, there are but two hammers, which are placed opposite the percussion-pins *l* of the shot barrels. It is my object to dispense entirely with any separate lock and hammer for the rifle barrel, and to do this, and at the same time to admit of the central barrel being fired whenever desired, I combine with one of the hammers, in this case the hammer *G*, a movable head, *n*, which can be turned so as to be opposite either the percussion-pin *l* of the shot barrel, or the pin *m* of the rifle barrel.

This movable head, as seen in fig. 5, is held to the upper part of the hammer by a spindle extending up into a recess in the hammer, and surrounded by a spring which bears at one end against the head of the spindle, and at the other against the bottom of the recess, so as to draw the head closely up against the face of the hammer.

A small projection, 1, is formed on the face of the hammer, and two depressions, 2, are formed in the

contiguous face of the head *n* in such position that when the head is turned so as to be opposite either of the pins *l* or *m* the projection 1 will enter one of the holes 2.

By pressing on the exposed end of the spindle, so as to force the head away from the hammer, and thus remove the projection 1 from the hole 2 in which it may happen to be, the movable head, by means of its thumb-piece *n*, can be turned to either of the positions seen in fig. 5. It is manifest that the projection and recesses 1 and 2 can be formed and arranged upon the head and hammer differently from what has been represented, and that the construction of the movable or rotary head can be varied to accord with the positions of the firing pins *l m*.

Having now described my invention, and the manner in which the same is or may be carried into effect, What I claim, and desire to secure by Letters Patent, is—

1. The combination with the cam and locking-piece for the barrel or barrels, of a cocking device actuated by said cam, substantially as described, whereby, when the cam is turned so as to unlock the barrel or barrels, the said cocking device may be caused to lift the hammer or hammers from the nipples or firing-pin, substantially as shown and set forth.

2. The combination with the cam and locking-piece of the fingers for lifting the hammers, the shaft upon which said fingers are mounted, and the arm, sliding rod and spring, by means of which said shaft is actuated, under the arrangement and for operation as set forth.

3. The combination with the recessed hammer for the shot and rifle barrels, of the movable head, its supporting spindle and spring, and devices for retaining it in position opposite either barrel, said parts being constructed and arranged substantially as set forth.

4. The clutch or locking-piece for the barrels, constructed with a cam or incline to tilt and start the barrels, and a cam to operate the device whereby the hammers are raised, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

EDWARD LEVI SARGENT.

Witnesses:

M. BAILEY,
EDM. F. BROWN.