

No. 109,255.

Fig. 1

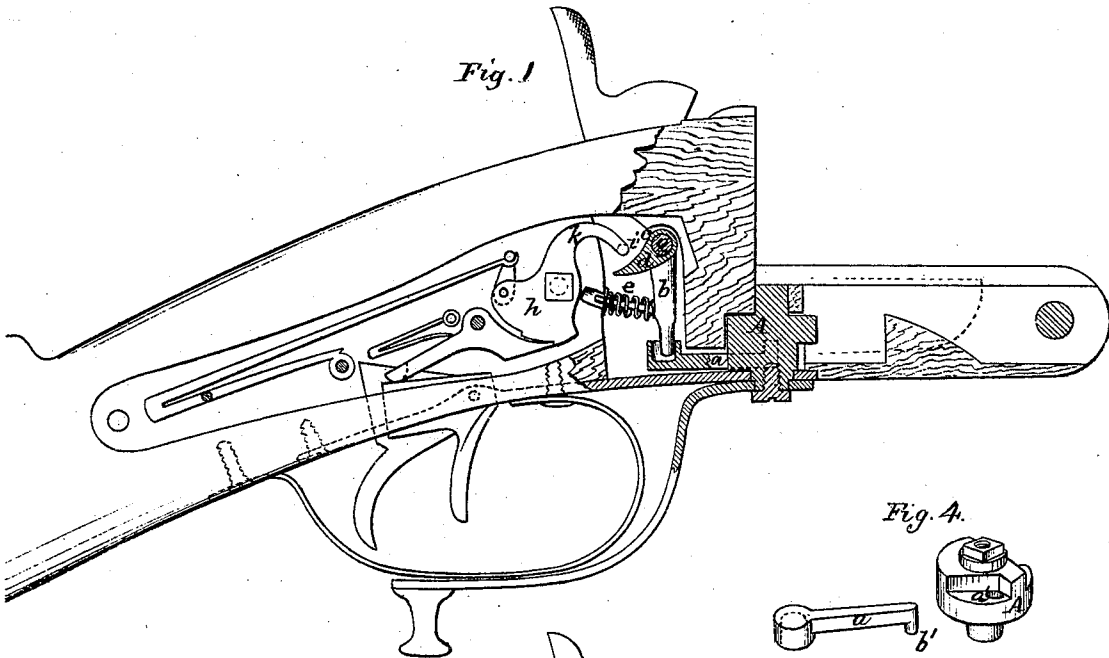


Fig. 4.

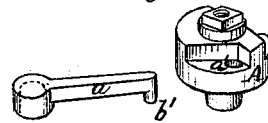


Fig 2.

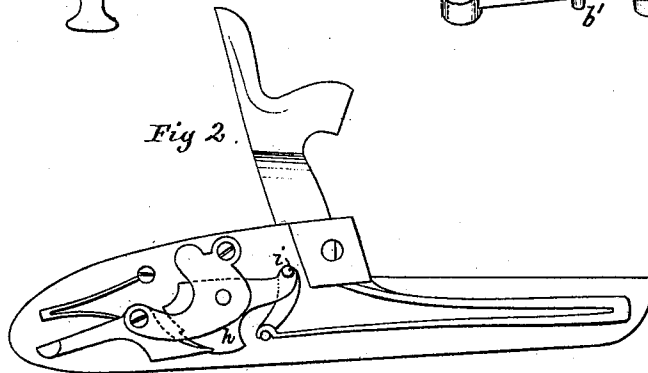


Fig 3.

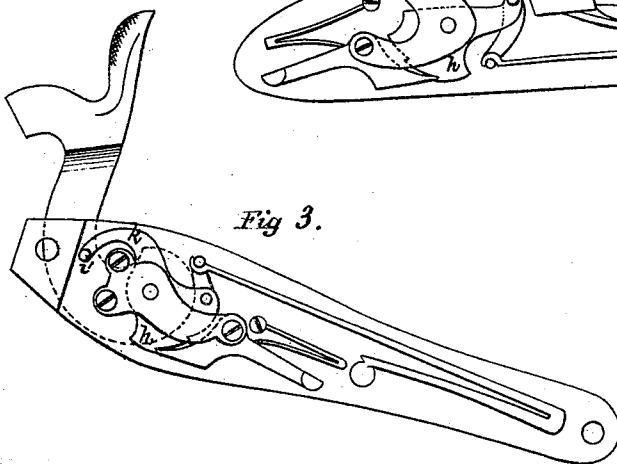
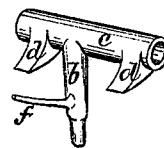


Fig 5.



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EDWARD L. SARGENT, OF WATERTOWN, NEW YORK.

Letters Patent No. 109,255, dated November 15, 1870.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

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

To whom it may concern:

Be it known that I, EDWARD L. SARGENT, of Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Breech-loading Fire-Arms, of which the following is a specification.

My invention relates to that class of breech-loading fire-arms having one or more hinged or tilting barrels, and mechanism for locking the same, combined with mechanism for setting the hammers at quarter or half-cock in such manner that, when the barrels are unlocked, the hammers will be lifted away from the nipples or firing-pins upon which they rest.

In Letters Patent No. 100,455, dated March 1, 1870, I have described a gun having the above-mentioned characteristics, and in Letters Patent No. 104,502, dated June 21, 1870, I have described certain modifications or improvements upon the mechanism claimed in the Letters Patent first above-mentioned.

My present invention may be considered, to some extent, as an improvement upon my former invention, and its main object is to so construct the locks and arrange the cocking mechanism that the latter may all be contained within the stock or breech of the gun, so as to operate upon the interior of the locks for the purpose of setting the hammers at quarter or half-cock.

The invention consists—

First, in the arrangement of the lifting-fingers of the cocking device within the stocks or breech of the gun in such manner that said fingers will engage with the tumblers of the locks, so as to throw back the tumblers, and, consequently, lift the hammers when the barrels are unlocked.

Second, in mounting the tubular shaft which carries the lifting-fingers upon the transverse pin or screw which holds together the two locks of the gun.

Third, in the construction of the tumblers of the locks in the manner hereinafter described, whereby they are adapted to engage with the lifting-fingers of the cocking mechanism.

To enable those skilled in the art to understand and use my invention, I will now proceed to describe the manner in which the same is or may be carried into effect, by reference to the accompanying drawing, in which—

Figure 1 is a side elevation, partly in section, of that part of a double-barreled "break-down" gun, to which my invention is applied.

The face-plate of the right-hand lock is removed, leaving the operative parts of the lock in the position they assume when at "half-cock."

Figure 2 is a side elevation of the left-hand lock removed from the gun, and at half-cock.

The lock, in this instance, is a "forward-action" lock; that is to say, the main spring is forward of the tumbler.

Figure 3 is a like view of the right-hand lock.

This lock, in order to illustrate the manner in which my invention can be applied to locks of different construction, is a "back-action" lock, the main-spring being in rear of the tumbler.

Figure 4 represents a perspective view of the locking-cam, turned bottom upward, and the bar which connects it with the radial arm which extends from the lifting-finger shaft.

Figure 5 is a like view of the lifting-finger shaft and its radial arm.

A represents the locking-cam for the barrels, which is connected by the bar *a* with the radial arm *b*, extending from the lifting-finger shaft *c*.

In this instance the bar *a* has a pin, *b'*, at one end, which enters a hole, *a'*, cut for it in the bottom of the cam *A*, so that the bar is compelled to follow the movement of the cam; and the other end of the bar is provided with a cup-like socket which the lower end of the arm *b* enters, motion being thus communicated from the cam to the shaft *c*. But connection may be made between the bar and cam and arm in the manner described in my former patents, or in any other suitable manner.

In this instance, in order to facilitate the recoil of the arm *b*, and, consequently, of the finger-shaft *c* and fingers *d*, I employ a coil spring; *e*, which is mounted upon a pin, *f*, projecting from the rear of the arm, and bears, at its rear, against the stock or other immovable part of the gun. This spring may be inclosed in a tube, if preferred, and, if desired, it may be located between the rear end of the bar *a* and the stock, instead of upon the arm *b*; or, in case the mechanism be arranged substantially as described in my patent of June 21, 1870, above referred to, the spring may be entirely dispensed with.

The finger-shaft *c* may be supported in the breech or stock in any suitable manner; but I prefer, on some accounts, to construct and arrange it as shown in the drawing.

As there represented, the shaft is tubular, and it fits and is adapted to swing upon the screw *g*, which passes through the stock from side to side and holds the two locks together. This arrangement of the screw is the one ordinarily employed to bind the locks together, and my invention, in this respect, consists only in using the said screw as the support and axis of oscillation of the tubular shaft *c*.

Heretofore, I have placed the cocking-fingers *d* outside of the stock, so that they might bear directly against the hammers; but now, for the purpose of giving a better appearance to the gun, and of protecting the cocking devices, I bring the fingers within the stock or breech, all of this portion of the mechanism being located between the two locks.

To enable the fingers to lift the hammers, I cause

them to engage with the tumblers *h*, upon the axes of which the hammers are mounted. The fingers may be made to engage with the tumblers in various ways, but for this purpose I prefer to construct the tumblers as shown in the drawing.

The tumbler of the forward-action lock, in fig. 2, has a pin, *i*, projecting laterally from it near the point where the main-spring is fastened to it. In a tumbler of this construction all that is necessary is to add the pin.

The tumbler of the back-action lock, shown in fig. 3, is somewhat different. Owing to its construction, and the manner in which it is held to the lock-plate, it must be provided with a curved overhanging arm, *k*, which extends down a proper distance, and is provided with a laterally-projecting pin, *i*.

The fingers *d* lie directly under and in contact with the tumbler-pins when the hammers are down, so that when the finger-shaft is turned back by the movement of the cam in unlocking the barrels, the fingers will engage with the pins, causing a partial rotation of the tumblers, and a corresponding movement of the hammers, which are set at quarter or half-cock, as desired.

I have shown two kinds of locks in order to illustrate the manner in which my invention may be carried into effect; but it will be understood that both locks of the gun may have the same action if desired, and it will also be understood that my invention is applicable as well to guns having a single barrel as to those having two or more.

Tumblers constructed as herein described may be used with different locking devices, all that is neces-

sary being that, when the gun is unlocked, they should be set at quarter or half-cock by fingers communicating with or receiving motion from the locking and unlocking devices.

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 of one or more cocking or lifting-fingers, arranged upon a vibratory shaft within the stock or breech of the gun, and operated by the device for locking and unlocking the barrels, substantially as described, with the lock-tumbler or tumblers arranged to engage with said fingers so as to lift the hammers from the firing-pins and throw them back to quarter or half-cock when the gun is unlocked, as set forth.

2. The tubular lifting-finger shaft, mounted upon the transverse screw which binds the two locks of the gun together, substantially as shown and set forth.

3. In a fire-arm substantially such as described, the construction of the tumblers of back or forward-action locks with laterally-projecting pins or studs upon the portion of the tumbler extending in front of its pivot or axis, so as to readily engage with the lifting-fingers when the hammers are down, as shown and set forth.

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

EDWARD L. SARGENT.

Witnesses:

JNO. C. McCARTIN,
WALTER S. LAMB.