J. SCHUDT.

BREECH-LOADING FIRE-ARM.

No. 191,721. Patented June 5, 1877.

Fig: 1

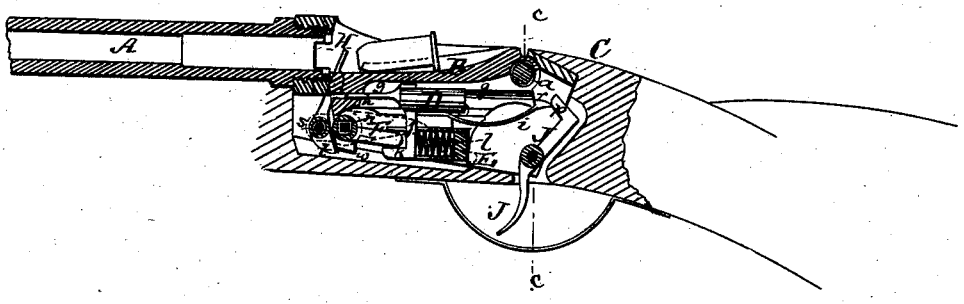


Fig: 2

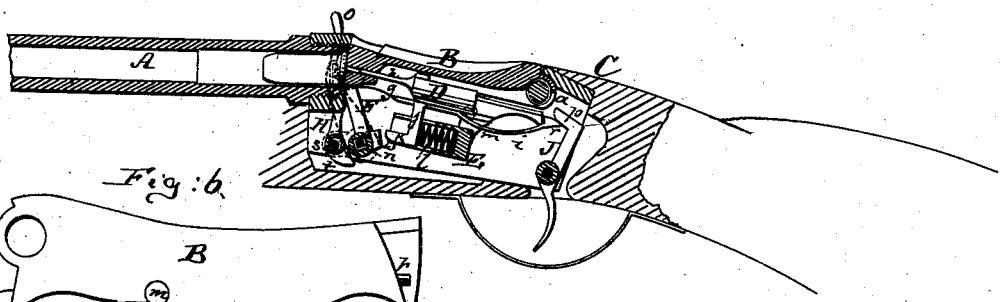


Fig: 6

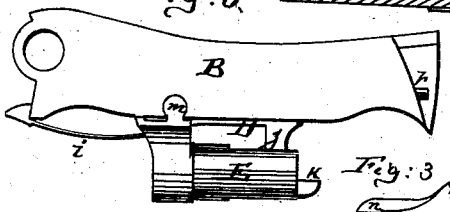


Fig: 3

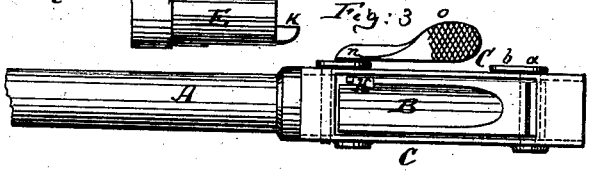


Fig: 4

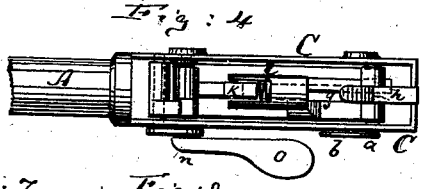


Fig: 7

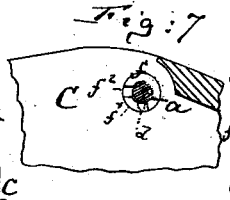


Fig: 8

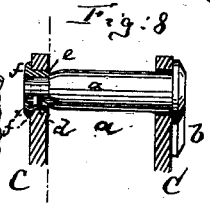
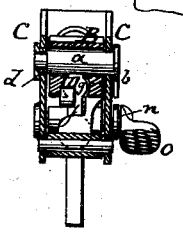


Fig: 5



Witnesses:

A. Moraga.

J. Turk.

Inventor

John Schudt

by his attorney

A. V. Briesen

UNITED STATES PATENT OFFICE.

JOHN SCHUDT, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND CHARLES SEEGER, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **191,721**, dated June 5, 1877; application filed November 24, 1876.

To all whom it may concern:

Be it known that I, JOHN SCHUDT, of New York city, in the county and State of New York, have invented a new and useful Improvement in Breech-Loading Fire-Arms, of which the following is a specification:

Figure 1 is a vertical longitudinal section of the lock portion of my improved breech loading fire-arm, showing it in the loading position. Fig. 2 is a similar view thereof, showing it in the position ready to fire. Fig. 3 is a top view, and Fig. 4 a bottom view, of said lock portion. Fig. 5 is a vertical transverse section of the same, on the line *c c*, Fig. 1. Fig. 6 is a detail side view, on an enlarged scale, of the breech-block. Figs. 7 and 8 are detail sectional views, showing the mode of fastening the pivot-pin of the breech-block.

Similar letters of reference indicate corresponding parts in all the figures.

This invention is a new lock mechanism for breech-loading fire-arms, its object being to adapt the same to military purposes, and to enable soldiers without the use of additional tools to take the lock apart and to put it together.

A in the drawing represents the barrel of the gun, the same being rigidly secured to the stock. B is the breech-block, pivoted at its upper rear portion by a pin, *a*, and capable of vibrating on said pin, in manner similar to the Martini gun. The pin *a* has a handle, *b*, at one end, and a small feather, *d*, at its reduced other end. This feather is placed about midway between the shoulder *e* and the end of the pin, as indicated in Fig. 8. In one cheek of the stock C of the gun is secured a perforated thimble, *f*, having a segmental groove, $f^{\times}$, in the periphery of its aperture, as shown in Figs. 7 and 8, and a notch, f^2, on the inner face, to admit the feather *d* to said groove. When the pin *a* is inserted through the cheeks of the stock, and through the upper rear portion of the breech-block, the feather *d* enters in line with the groove $f^{\times}$, and thereupon the pin is turned by its handle *b* to bring the feather well into the groove, thereby locking the pin *a* in position. When afterward the pin is again turned to bring the feather in line with the notch f^2, it is free to be withdrawn, and to admit the withdrawal of the breech-block with all its appendages.

In practice, it is not convenient to cut the groove $f^{\times}$ and notch f^2 directly into the cheek or side of the stock, and I therefore have devised the thimble *f*, which is first perforated, next provided with the notch f^2, which extends from the outer edge of the thimble to the central aperture, and thereby gives convenient access to the latter for the purpose of cutting the segmental groove $f^{\times}$.

The breech-block B contains a longitudinal channel, *g*, which, in front, terminates in the aperture through which the firing-pin reaches the cartridge. The firing-pin *h* is rigidly connected with a block, D, that slides in the channel *g*, and to which the trigger-spring *i* is also rigidly secured. The sliding block D carries also a downwardly-projecting arm, *j*, that has at its lower end a forwardly-projecting lug, *k*. The firing-spring *l* is a spiral spring or cushion, placed in a slotted barrel, E, that admits in its slot the arm *j* during its backward movement. This slotted barrel E has a projecting shank, *m*, which enters a lateral groove of the breech-block, as in Fig. 6, and holds said barrel properly united to the breech-block; but after the latter has been removed from the stock of the gun, the barrel E can be readily withdrawn by drawing its dovetailed or rounded shank *m* out of the groove of the breech-block.

The parts described complete the lock of the gun. They are operated by a crank, F, whose shaft *n* is hung in the stock beneath the front part of the breech-block. A handle, *o*, on the outer end of the shaft *n* permits the vibration of the said shaft and of its crank F. I also use a trigger, J, which carries a lug, *p*, in such relation to the spring *i* that it may disengage the catch *r* at the end of said spring from the breech-block. The spring *i* carries said catch for locking the firing-pin in the position ready for firing, as indicated. Now, when the gun has been fired, which is caused by the spring *l*, as soon as the spring *i* is released by the trigger from the position shown in Fig. 2, it is only necessary to swing back

the crank F, whereby the firing-pin is again cocked, and the block B swung down into the position shown in Fig. 1. For the crank F, striking the arm *j*, first crowds said arm and with it the entire slide D back, and compresses the spring *l* until the catch *r* of the spring *i* catches over the rear end of the block B, and thereby holds the firing-pin cocked. The crank F next reaches the lug *k*, and by pressing upon it draws the entire block B down into the position shown in Fig. 1, exposing thereby the breech end of the barrel. The same motion of the crank F serves also to vibrate the cartridge-shell extractor H, which is swung backward to throw out the shell, as indicated in Fig. 1. This extractor is in form of a crank, a projection, *t*, on whose shaft *s* is at the proper time struck by a projection, *w*, on the shaft *n*, and vibrated in the proper manner.

The body of the shaft *n* is, by preference, made hollow, and fitted over a square inner pin that carries the handle *o*. This pin is preferably fastened in place by feather and segmental groove the same as the pin *a*, and with like effect. The shaft *s* of the extractor is, by preference, provided with a handle or outer projection, through which the inner pin of the shaft *n* passes to hold it in place as long as the shaft *n* is in place. Yet both shafts are readily removable and with them the devices which they carry.

In introducing a new cartridge, its flange carries the extractor home to its normal position. The crank F is thereupon swung up and forward, and raises the breech-block B into the position behind the cartridge, which is indicated in Fig. 2. A touch upon the trigger will throw the firing-pin forward, and cause the explosition of the charge.

I claim as my invention—

1. The combination of the pivoted breech-block B with the pivot-pin *a*, which has the handle *b*, and feather *d*, and with the stock containing the notch f^2 and segmental groove $f^\times$, substantially as herein shown and described.

2. The thimble *f*, constructed with a central aperture, a notch, f^2, extending from said aperture to the edge, and with a segmental groove, $f^\times$, for the purpose of securing the pin *a*, having feather *d*, substantially as herein shown and described.

3. The sliding block D, rigidly connected with the firing-pin *h*, trigger spring *i*, arm *j*, and lug *k*, and combined with the breech-block of a fire-arm, substantially as herein shown and described.

4. The combination of the breech-block B with the slide D, and with the slotted barrel E, containing the spring *l*, substantially as herein shown and described.

5. The slotted barrel E, made with the transverse shank *m*, and combined with the breech-block B, which is laterally grooved for the reception of said shank, substantially as herein shown and described.

6. The combination of the extractor H and its shaft *s*, having the projection *t*, with the crank F, shaft *n*, projection *w*, and vibrating breech-block, substantially as herein shown and described.

JOHN SCHUDT.

Witnesses:

ERNEST C. WEBB,

F. V. BRIESEN.