2 Sheets—Sheet 1.

# A. H. ROWE.

## Breech-Loading Fire-Arm.

No. 42,227. Patented Apr 5, 1864.

Fig. 1

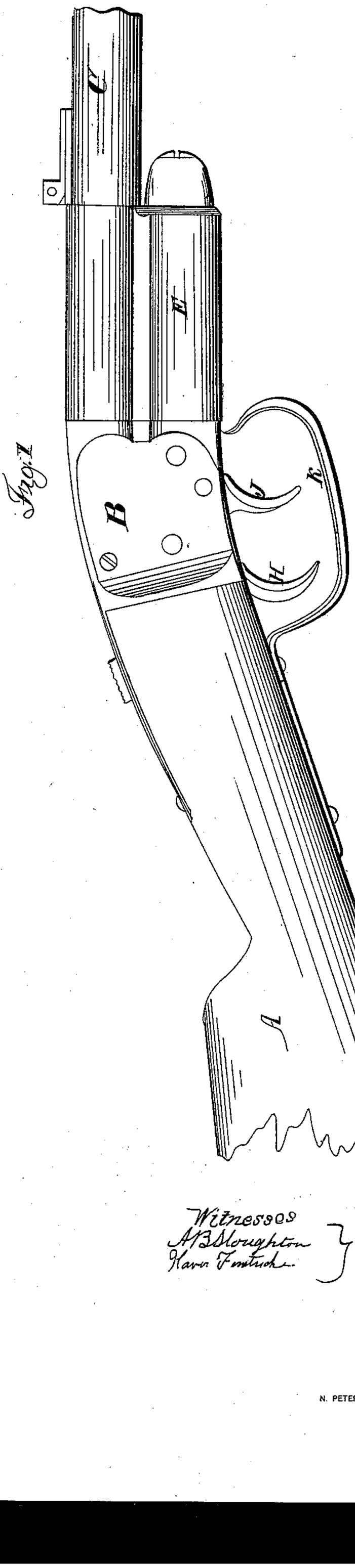



Fig. 3

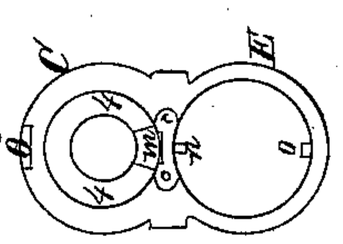



Fig. 4


Fig. 7


Fig. 5


Fig. 6

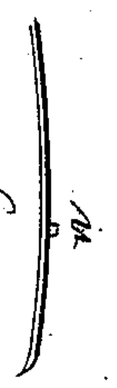
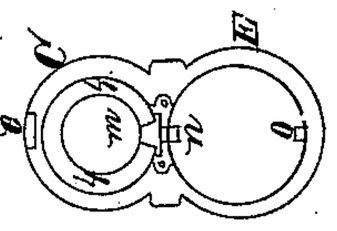



Fig. 2.




Witnesses
A B Stoughton
Harm Fentsche

A. H. Rowe

2 Sheets—Sheet 2.

# A. H. ROWE.

## Breech-Loading Fire-Arm.

No. 42,227. Patented Apr. 5, 1864.

Fig. 9.

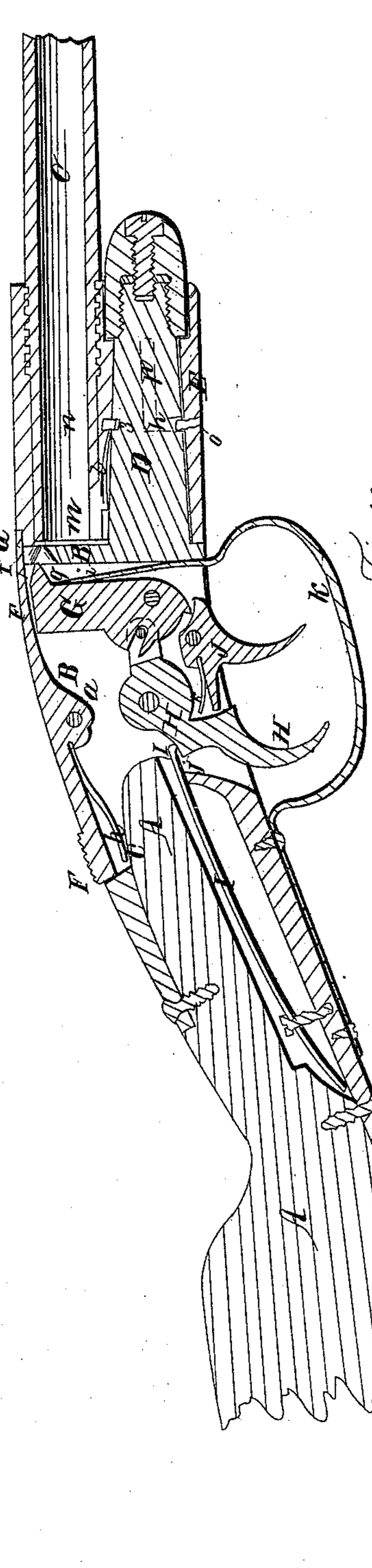



Fig. 9.




Fig. 10.

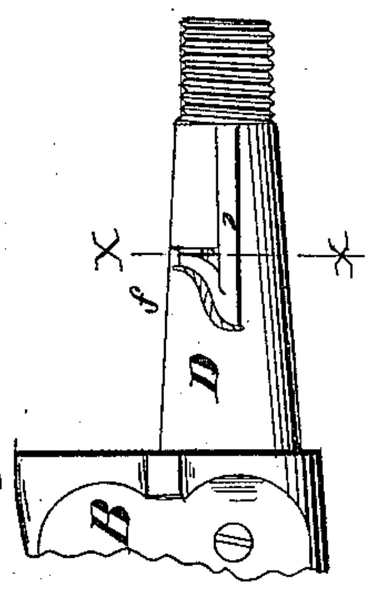
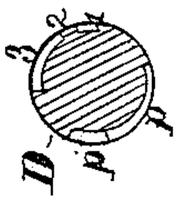



Fig. 11.



# UNITED STATES PATENT OFFICE.

A. H. ROWE, OF HARTFORD, CONNECTICUT.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **42,227**, dated April 5, 1864.

*To all whom it may concern:*

Be it known that I, A. H. ROWE, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side view of the material portion of the gun. Figs. 2 and 3 represent the rear end of the barrel and sleeve. Fig. 4 represents the device for ejecting the cartridge-case in the act of opening up the barrel to be recharged. Figs. 5 and 6 represent modifications of the device for ejecting the empty case. Fig. 7 represents a modification of the projecting end of the cartridge-case ejector. Fig. 8 represents the barrel as swung over into the position in which the cartridge is inserted in its bore. Fig. 9 represents a longitudinal section through the fire-arm, showing the interior arrangement. Fig. 10 represents the axle upon which the sleeve and barrel turn, and showing the cam-switch for operating the cartridge-case ejector. Fig. 11 represents a section through the red line *x x* of Fig. 10.

Similar letters of reference, where they occur in the separate figures, denote like parts of the gun in all the drawings.

The general characteristics of my fire-arm are like those represented in the patent granted to William Johnston on the 13th of May, 1862. I have, however, added one important and new feature to the gun, and modified another feature, whereby I have rendered the gun much more available and desirable, and much more valuable and efficient.

My invention consists, first, in the peculiar construction and operation of the cartridge-case ejector, it not depending upon the action of a spring for its movements, but being thrown out by a cam-switch in which a projection on the ejector works, or by which it is worked; and, secondly, in making the spring, which throws back the hammer after the discharge, on and a part of the trigger-guard.

To enable others skilled in the art to make and use this invention, I will proceed to describe the same with reference to the drawings.

A represents the stock of the gun, and B the metallic breech-piece that unites the stock and barrel C.

To the breech-piece B there is fastened a journal or axle D of conical form, on which is secured, but so as to turn freely, a sleeve, E, which is united to and made in one piece with the barrel C.

On top of the breech-piece B, at *a*, there is pivoted a locking thumb-lever, F, the rear end of which is thrown up by a spring, *b*, fastened to itself, and the free end of which rests upon the stock at *c*. The forward end of this locking-lever has a projection, *d*, upon it, which, when the barrel is turned or swung up into the proper position for firing, takes into a recess, *e*, Figs. 3, 9, and locks it in such position. By pressing upon the rear of the locking-lever, the barrel is released, and may be turned or swung around so that another charge may be inserted in the rear of its bore.

G is the hammer, the point or nose *f* of which passes through the opening *g* in the breech-piece to strike the cartridge and explode its fulminate or priming.

H is a lever for cocking the hammer by, and I is the mainspring for throwing the hammer when released by the trigger J.

K is the trigger-guard, the forward and upward portion, *i*, of which acts as a spring to slightly recoil the hammer G after it has been thrown forward by the mainspring I, so that its point *f* may not interfere with the swinging of the barrel. The making of this prolongation of the trigger-guard serve the purpose of the spring to throw back the hammer constitutes one of the features of my claim, and is important, as it simplifies the construction of the gun, and is much more reliable than a simple spring fastened to the hammer or to the breech-piece B.

Instead of allowing the mainspring to be checked and held by a set-screw, I allow it to drop upon the frame of the gun, as at *j*, which makes a more permanent, endurable, and reliable check or stop than the screw-point, and avoids the necessity of a screw entirely. There is free space above the point *j* for the spring to rise in as the hammer is set or cocked.

The trigger-spring *k* is a simple piece slightly curved, and is let into or fastened to the trigger by being forced into a slot. This saves the use of a screw, and, further, saves the expense of a fold-over spring, and aids, with the other modifications, to make the gun more compact and occupy less space through that portion in which the lock, hammer, and their several appliances are located.

The contrivance for ejecting the empty cartridge-case is shown in place in Fig. 9; but its detail is shown more particularly in Figs. 2, 3, 4, 5, 10, and 11. The ejector itself is of the form shown at *l*, Figs. 4 and 5, having a portion, *m*, which slides in a groove in the under side of the bore of the gun, as seen in Figs. 2, 3, and at its opposite end a projection, *n*, that works in the straight groove 1, Fig. 10, and over the switch 2, and thence into the cam-slot 3, by which, when the barrel is turned to reload, it is forced rearward, and, catching against the flange of the cartridge-case, which occupies the recess 4, ejects it from the bore of the gun. In putting in the cartridge the ejector is moved along into the straight slot or groove 1, and when the barrel is turned to bring it into position to be fired the projection *n* rides up through and over the switch 2, which has a slight plane and shoulder formed in it sufficient to prevent the projection *n*, when the motion of the barrel is reversed, from taking the switch-path again, but compels it to follow the cam-groove 3, which carries the ejector out of the rear of the bore of the barrel and throws out the cartridge-shell. The ejectors, as shown in Figs. 4 and 5, scarcely differ at all, except in mere location, and that but immaterial. The one at Fig. 4 slides in a slot in the barrel, as shown in Fig. 3, and the other (shown at Fig. 5) slides underneath the barrel, as shown at Fig. 2. There is still another form of ejector, (but operated in the same manner,) as shown in Fig. 6, which may be entirely outside of the barrel and of the length, about, of the sleeve.

Diametrically opposite the groove 1 in the journal D there is another longitudinal groove, *p*, Fig. 9, and a second one at right angles thereto, or circumferential to the journal, in which grooves a pin, *o*, in the sleeve E traverses when the sleeve is run onto the journal and turned thereon.

I have represented the end *m* of the ejector as being quite small, and as having but a small contact-surface with the cartridge-case; but, if found essential, its end may be shaped like that shown at Fig. 7, so that it would have contact with or take one-half of the diameter of the cartridge, and this circular—or, rather, semicircular—end to the ejector might lie in the circular groove 4, around the rear of the bore of the barrel, without interfering with the action of the gun.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the switch-groove 2 and its projection connecting the two grooves 1 and 3 and operating therewith and with the ejector *l m n*, as herein described and represented, for throwing out the empty cartridge-case in the act of turning the barrel to reload it, as set forth.

2. The prolongation of the trigger-guard, as shown at *i*, for the purpose of forming and inserting it as a spring between the hammer and breech-piece, to start back the hammer after the discharge, in the manner and for the purpose described.

A. H. ROWE.

Witnesses:
A. B. STOUGHTON,
EDM. F. BROWN.