B. F. JOSLYN.

Breech-Loading Fire-Arm.

No. 109,218. Patented Nov. 15, 1870.

Fig. 1.

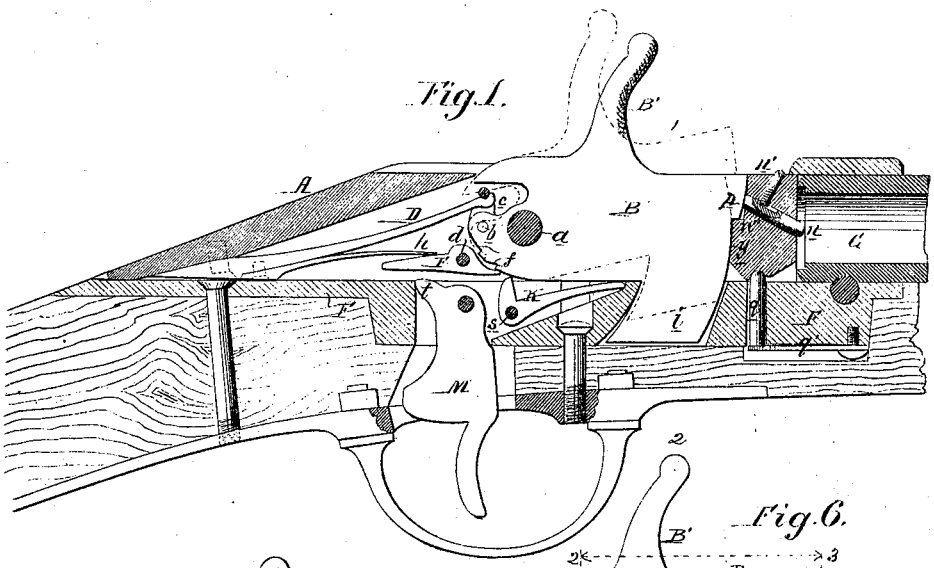


Fig. 6.

Fig. 2.

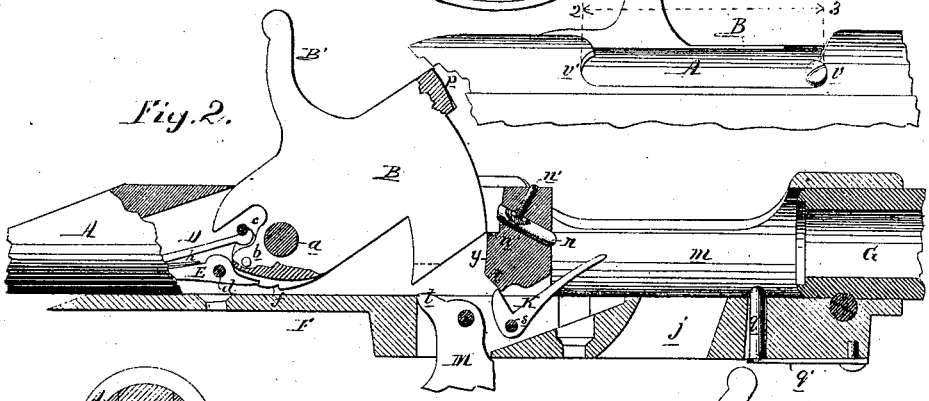


Fig. 4.

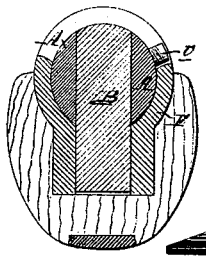


Fig. 5.

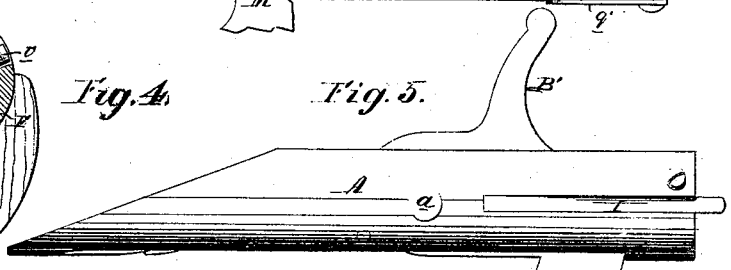
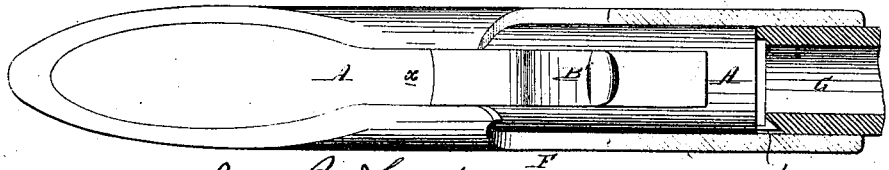


Fig. 3.



Witnesses { Jno. B. Harding. John Parker Jr.

B. F. Joslyn By his attys Howson Bro.

United States Patent Office.

BENJAMIN FRANKLIN JOSLYN, OF NEW YORK, N. Y.

Letters Patent No. 109,218, dated November 15, 1870.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

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

I, BENJAMIN FRANKLIN JOSLYN, of New York, county of New York, State of New York, have invented an Improved Breech-Loading Fire-Arm, of which the following is a specification.

Nature and Object of the Invention.

My invention consists of an improved breech-loading fire-arm, too fully explained hereafter to need preliminary explanation, which, on account of its simplicity, both in construction and operation, can be loaded and fired with the greatest rapidity.

Description of the Accompanying Drawing.

Figure 1 is a vertical section of my improved breech-loading fire-arm, showing the breech-piece at the limit of its forward movement, and the hammer down.

Figure 2, the same as fig. 1, with the breech-piece moved back, and the hammer elevated.

Figure 3, a plan view of fig. 1.

Figure 4, a transverse vertical section on the line 1 2, fig. 1.

Figure 5, a side view of the breech-piece detached from the fire-arm.

Figure 6, an exterior side view of part of the weapon.

General Description.

The most prominent features of my invention may be briefly alluded to in the outset, as follows:

First, a sliding breech carries the hammer, the spring for operating the same, and the catch for retaining and releasing the hammer.

Second, the hammer serves to lock and release the sliding breech, and also serves as a medium for operating the same.

The sliding breech, a detached view of which is shown in fig. 5, consists of a cylinder A, beveled at the rear to conform to the inclination of the stock of the fire-arm.

Extending through this cylindrical breech is a vertical slot for the reception of the hammer B, main-spring D, and retaining and releasing-catch E, the hammer being connected to the breech-piece by a pin, *a*, and the outer end of the spring D being connected to the arm *b* of the hammer by the usual link *c*, the rear of the spring being secured in any suitable manner.

The catch E is hung to a pin *d*, its short arm being adapted to notches, *f*, in the edge of the hammer, and the long arm being acted on by a spring, *h*.

The breech, with the appliances described, is arranged to slide in a tubular socket, *m*, formed on and constituting a part of the frame F, which is secured to the wooden stock by any of the usual appliances, and to the front end of which is secured the rear end of the barrel G, or, if desired, the frame with its tubular socket may be made in one piece with the barrel.

The socket is open at the top, the hammer fitting snugly, but so as to slide freely in the contracted portion *x* of the opening, fig. 3, which prevents the sliding breech from running in the socket, and the opening of the latter being enlarged between the points 2 and 3, fig. 6, for the free admission of the cartridge when the breech has been moved back.

A segmental projection, *i*, on the under edge of and forming part of the hammer B, is adapted to an opening, *j*, in the frame F, both edges of this projection being formed on a circle of which the pin *a* is the center, and the end *y*, fig. 1, of the sliding breech is made to coincide with the front segmental edge of the hammer and its projection *i*.

It is this projection which effectually locks the sliding breech to the frame when the hammer is down, or when it is at half rest, as will more fully appear hereafter.

The cartridges which I propose to use in connection with the fire-arm are such as have metallic cases and a center fire, the ignition being effected by the hammer through the medium of an inclined pin, *n*, arranged to have a sliding movement, restricted by a screw-pin, *n'*, in the sliding breech. When the hammer falls its slightly inclined projection *p* strikes the inner end of the pin; this outer end is thus caused to ignite the detonate by sudden impact.

Through the frame F passes a vertical pin, *q*, attached to a spring, *q'*, which is secured to the said frame, the spring having a tendency to retain the upper rounded end of this pin in a notch in the under side of the sliding breech. It should be understood that while this spring-pin *q* will serve to retain the sliding breech when the latter has been moved to the limit of its forward movement, the retention is not a positive one, as the pin will readily yield when the requisite force is applied to pull the sliding breech back.

In a recess in one side of the sliding breech is secured a spring, I, the projecting end of which is hooked so as to catch on the flange of the metallic cartridge-case.

On a pin, *s*, in the frame F, is hung a bell-crank lever, K, the long arm of which rests, when undisturbed, in a recess in the frame, as seen in fig. 1. On pulling the sliding breech back, however, the inclined portion, *t*, fig. 2, will strike the short arm of the lever, thereby suddenly raising the long arm, and discharging through the open top of the tubular socket of the frame the spent cartridge-case, which had been previously drawn from the barrel by the spring-extractor I.

A trigger, M, is hung to a pin in the frame F, and

is so arranged that when pulled back its projection *t*, will elevate the long arm of the catch E and thereby release the hammer, the long arm being restricted in its fall by its projection *p* coming in contact with a shoulder, *n''*, on the sliding breech.

Operation.

We will suppose that the movable parts of the arm are in the position shown in fig. 1, that a load has just been discharged, and that a new cartridge has to be introduced into the rear of the barrel. The operator places the stock of the fire-arm against his shoulder, and seizing the projection B' of the hammer pulls it smartly in a direction parallel, or nearly so, with the barrel.

The first effect of the force, thus applied, will be to elevate the hammer to the full-cock position shown in fig. 2, thereby withdrawing the projection *i* of the hammer from the opening of the frame, thereby releasing the sliding breech. The next effect of the pull will be the drawing of the sliding breech back until its pin *v*, fig. 5, strikes the shoulder *v'* on the frame.

In thus drawing the breech back, however, the case of the spent cartridge must follow it, and when the breech has nearly reached the limit of its rearward movement the case, now free from the barrel, is kicked clear of the fire-arm by the long arm of the lever K, the short arm of which has been suddenly struck by the retreating breech.

It will be thus seen that the operator, without releasing the hammer, and by one movement, unlocks the breech, cocks the hammer, draws back the breech, extracts the spent cartridge-case, and kicks it away.

After a new cartridge has been introduced into the rear of the barrel, and it is desirable to at once discharge the same, all that the operator has to do is to thrust forward the sliding breech until the spring-pin *q* enters the notch and then pull the trigger; thus load after load may be discharged at the rate of thirty per minute.

It will be observed that no premature discharge can take place, as the hammer cannot fall and ignite the detonate until the breech has been locked by the segmental projection *i* of the hammer, the detonate being exploded during the last portion of the downward movement of the hammer.

When it is not desirable to explode the cartridge immediately after its introduction into the barrel, the hammer, after the breech has been moved forward, may be lowered to the position of half-cock, shown by dotted lines in fig. 1, from which position it may be moved at any time to full cock without drawing back the breech, the spring-pin *q* being a sufficient retaining medium to resist the slight effort required to cock the hammer.

Claims.

1. In a breech-loading fire-arm a sliding breech and a hammer, carried by and sliding with the breech, and serving the two fold purpose of locking the breech and discharging the cartridge, substantially in the manner described.

2. The hammer B, with its mainspring and catch, arranged on and carried by the sliding breech, and locking the latter, substantially as described, so that the breech may be unlocked, the hammer cocked, and the breech drawn back by one manipulation of the hammer, as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

B. F. JOSLYN.

Witnesses:

WM. A. STEEL,

FRANK B. RICHARDS.