

R. NENNINGER.

Breech Loading Fire Arm.

No. 113,194.

Patented March 28, 1871.

Fig. 1.

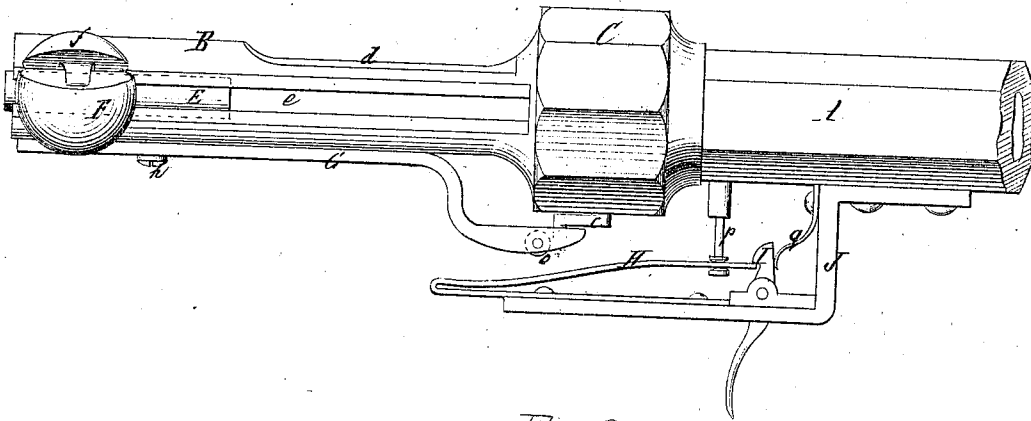


Fig. 2.

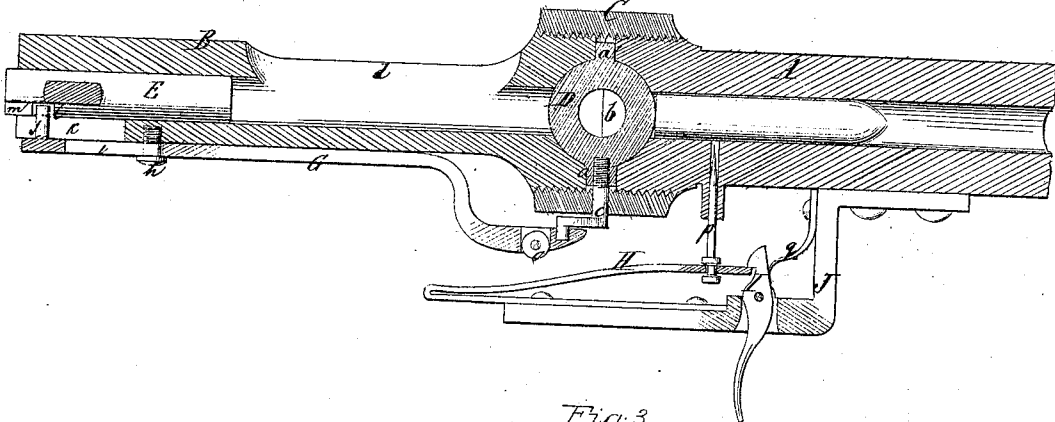
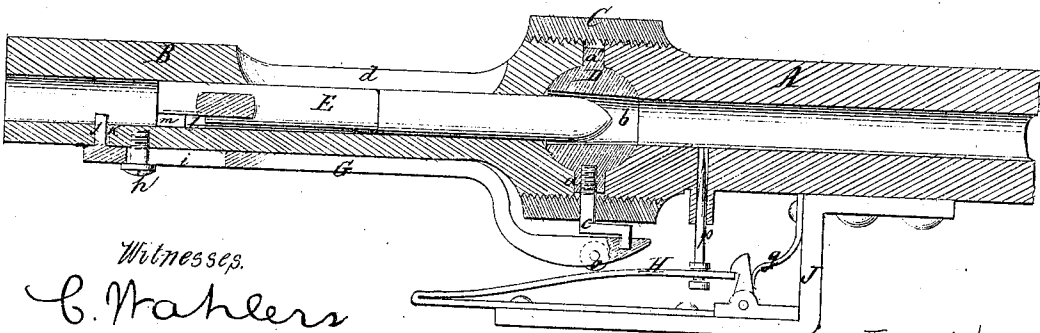


Fig. 3.



Witnesses.

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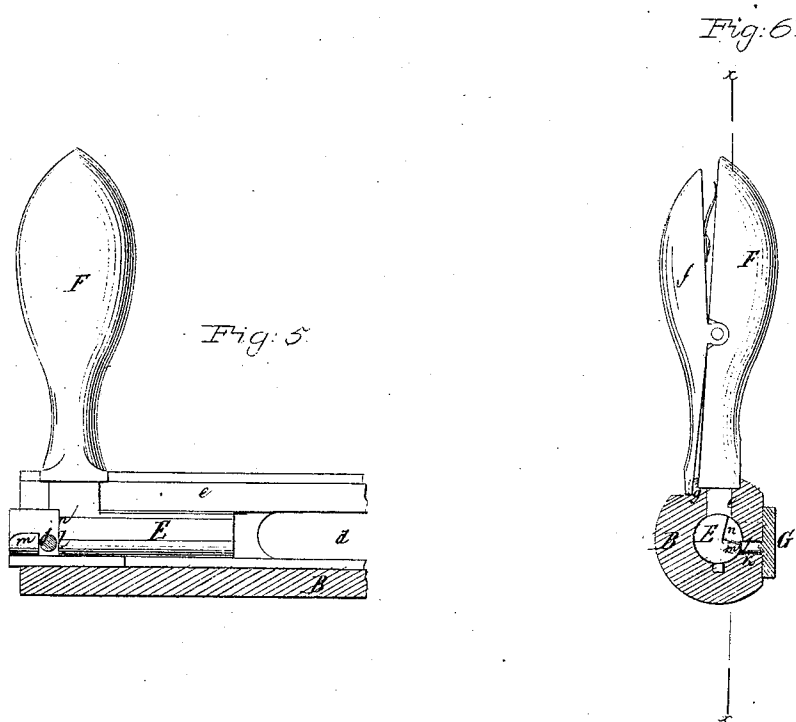
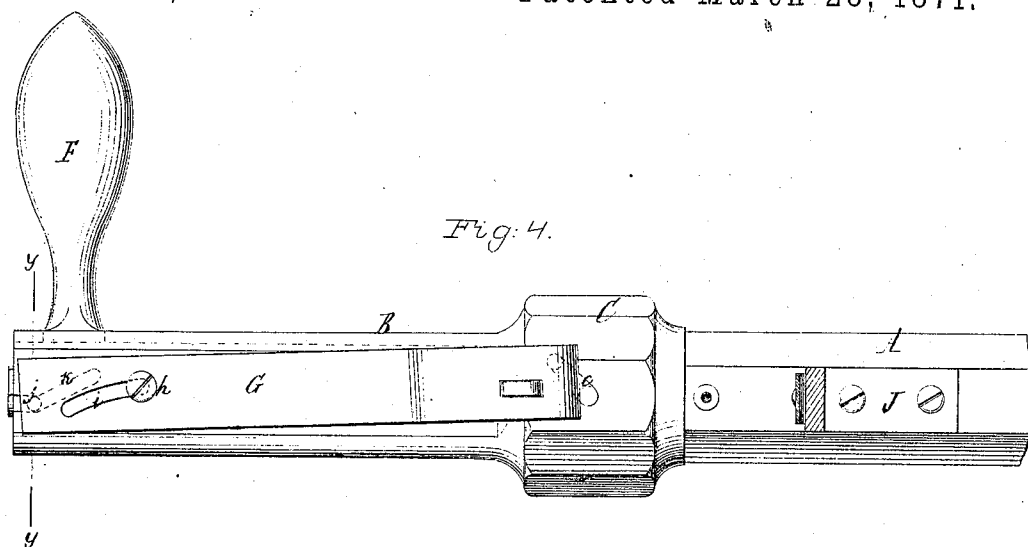
per Santwood & Hump
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ROBERT NENNINGER, OF NEWARK, NEW JERSEY.

Letters Patent No. 113,194, dated March 28, 1871.

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, ROBERT NENNINGER, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Breech-loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a side view of this invention.

Figure 2 is a longitudinal central section of the same when charged ready for fire.

Figure 3 is a similar section of the same in the act of being charged.

Figure 4 is an inverted plan of the same.

Figure 5 is a longitudinal section of the plunger-guide, the line *x-x*, fig. 6, indicating the plane of section.

Figure 6 is a transverse section of the same taken in the plane indicated by the line *y-y*, fig. 4.

Similar letters indicate corresponding parts.

This invention relates to a fire-arm the breech-block of which is perforated with a hole large enough to allow the passage of the cartridge, and with said breech-block is combined a plunger in such a manner that when the plunger is moved forward the hole of the breech-block is brought in line with the bore of the barrel and the cartridge is pushed into the chamber, and, by moving the plunger back, the hole in the breech-block is turned transversely to the bore of the barrel and the breech is closed.

The connection between the plunger and the breech-block is effected by a lever, provided at one end with a cam-slot and pin-catch, while its other end connects with a crank secured in the breech-block, and is armed with a friction-roller to act against the main-spring, to which the needle or firing-pin is connected in such a manner that, by the combined action of the pin-catch and cam-slot, the lever is turned and moved in a longitudinal direction, and thereby the hole in the breech-block is brought in line with the bore of the barrel, and, at the same time, the firing-pin and the main-spring are depressed, the latter being caught by the trigger, and, when the plunger has been moved back, the arm is ready for fire, only two motions being required to charge the arm.

In the drawing—

The letter A designates the barrel of my fire-arm, which connects with the plunger-guide B by a screw-coupling, C.

The breech of the barrel A is closed by a breech-block, D, which is, by preference, made in the form of a sphere, but which may be made in the form of a

cylinder, and which is ground nicely in a corresponding seat formed partly in the front end of the plunger-guide and partly in the rear end of the barrel.

Said breech-block is provided with two gudgeons, *a* *a'*, and it is perforated with a hole, *b*, large enough to allow the passage of the cartridge.

In one of the gudgeons *a* is secured a lever or crank, *c*, which extends out through the coupling C; and, by turning this crank, the hole in the breech-block can be brought in line with the bore, as shown in fig. 3; or it can be turned crosswise to said bore, as shown, in fig. 2.

The guide B is bored out to receive the plunger E, and it is provided with an aperture, *d*, through which the cartridge may be introduced when the plunger is in its backward position.

From the plunger extends a handle, F, the neck of which moves in a slot, *e*, in the guide B, so that, by taking hold of said handle, the plunger can be made to slide backward and forward in its guide.

With the handle is connected a spring-catch, *f*, (see figs. 1 and 6,) and if the plunger is moved clear back this catch drops behind a shoulder, *g*, in the plunger-guide, and the plunger, with the parts connected to it, are locked in position.

Said spring-catch is made in such a shape that it forms an integral part of the handle F, and that, by grasping said handle, the spring-catch is readily made to release the shoulder *g*.

To the under surface of the plunger-guide is secured a lever, G, which has its fulcrum on a pivot, *h*, passing through a cam-slot, *i*, in the lever, so that said lever is allowed to swing and also to slide in the direction of said cam-slot.

From the rear end of the lever G projects a pin, *j*, through an oblique slot, *k*, (see figs. 4 and 6, and also 2,) in the bottom of the plunger-guide; and, if the plunger is drawn clear back, said pin catches in a recess, *l*, behind a nose, *m*, at the rear end of the plunger, (see figs. 2, 5, and 6.)

The front end of the lever G connects with the crank *c* of the breech-block, and if the plunger is pushed forward the lever G slides along with it as far as the slot *i* will allow, and at the same time it is slightly turned, and thereby the breech-block is revolved so as to bring its hole in the position shown in fig. 3, the swinging motion being imparted to the lever G by the action of the oblique slot *k* on the pin *j*. At the same time, as the pin *j* is carried along in the oblique slot *k* it is thrown out of the recess *l* in the plunger, and the motion of the plunger can be continued, while the lever G remains stationary. By imparting to the plunger a sufficient forward motion, therefore, the cartridge is forced through the hole in the breech-block into the barrel.

When the plunger is moved back the shoulder *n*, fig. 5, near its rear end, strikes the pin *j* of the lever *G*, and said lever is carried back to the position shown in figs. 1, 2, and 4, and by this motion of the lever the breech-block is turned to the position shown in fig. 2 and the breech is closed. By this backward motion of the plunger the pin *j* is carried back in the recess *l*, and the spring-catch of the handle drops behind the shoulder *g* of the plunger-guide, and thereby the breech-block is locked in position so that it cannot turn spontaneously or by the force of the explosion.

To the front end of the lever *G* is secured a friction-roller, *o*, and as said lever is moved forward this roller acts on the main-spring *H*, which carries the firing-pin *p*, and as the main-spring, together with the firing-pin, is depressed by the action of the roller *o*, the end of said main-spring is caught by the trigger *I* and retained in the position shown in figs. 1 and 2, and as soon as the plunger has been moved back the arm is ready for fire.

The main-spring is supported by a bracket, *J*, which is secured to the barrel *A*, and which also forms the bearings for the fulcrum of the trigger *I*. The trigger is subject to the action of a weak spring, *q*. By these means the arm can be charged and made ready for fire by two motions, viz., the forward motion of the plunger, whereby the breech-block is turned, the car-

tridge carried into the barrel, and the firing-pin set; and then the backward motion of the plunger, whereby the breech-block is turned back and the breech closed.

It must be remarked that the connection between the breech-block and the plunger can be changed in various ways, and I do not wish to confine myself to the precise mechanism shown in the drawing.

What I claim as new, and desire to secure by Letters Patent, is—

1. The perforated revolving breech-block, in combination with a plunger which serves to open the breech-block to carry the cartridge home, and to close the breech-block, substantially in the manner herein shown and described.

2. The lever *G*, crank *c*, pin *j*, and slot *k*, in combination with the plunger *E* and breech-block *B*, substantially as and for the purpose set forth.

3. The recess *l* in the plunger, in combination with the lever *G*, substantially as specified.

4. The combination of the lever *G*, plunger *E*, breech-block *D*, main-spring *H*, and firing-pin *p*, substantially in the manner herein described.

ROBERT NENNINGER.

Witnesses:

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