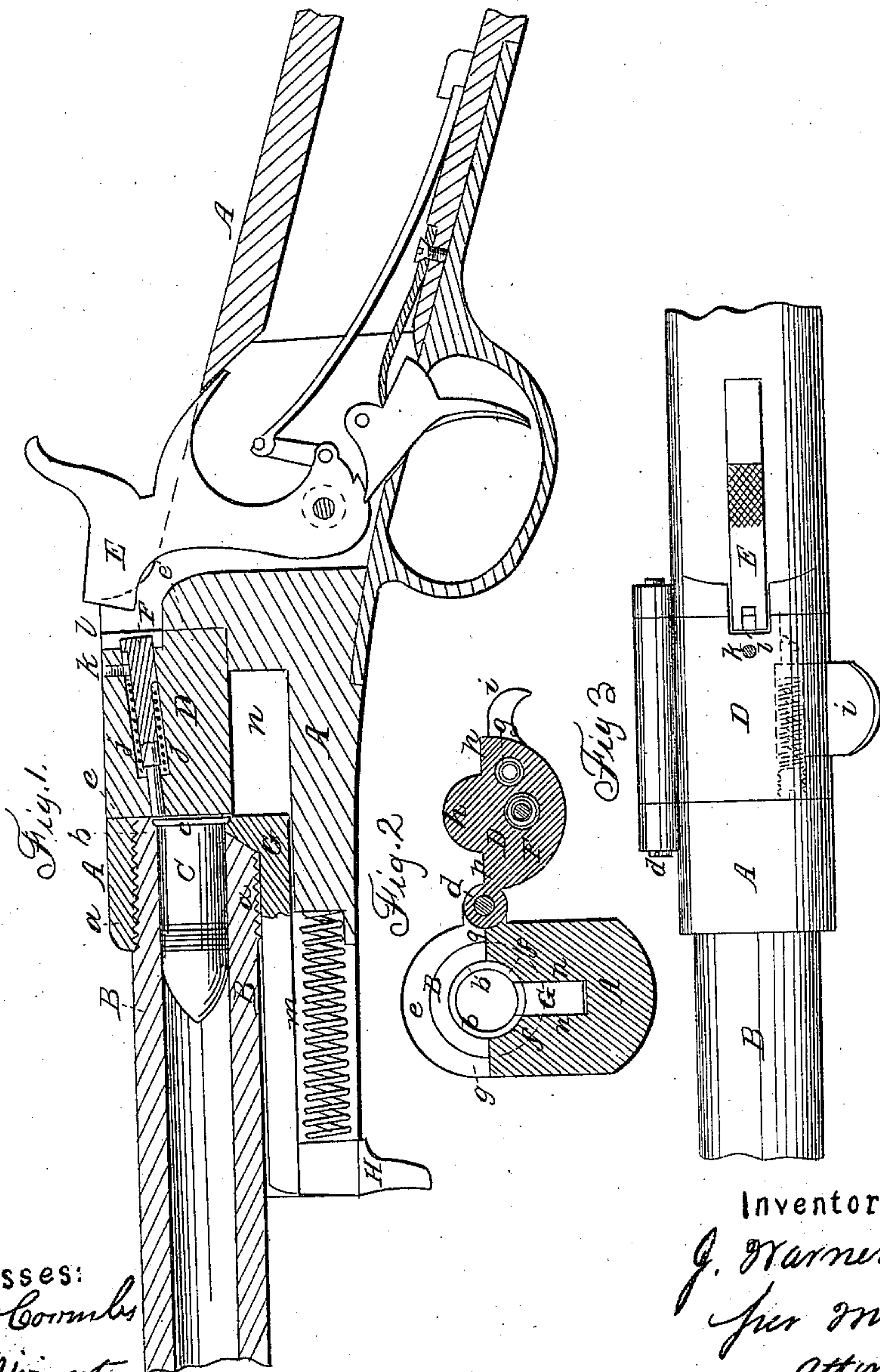


J. WARNER.

Breech-Loading Fire-Arm.

No 41,732.

Patented Feb. 23, 1864.



Witnesses:

Geo Combs
M Livingston

Inventor:

J. Warner
per J. Warner & Co
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UNITED STATES PATENT OFFICE.

JAMES WARNER, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 41,732, dated February 23, 1864.

To all whom it may concern:

Be it known that I, JAMES WARNER, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central longitudinal section of the frame, the breech, and part of the barrel of a fire-arm with my improvement. Fig. 2 is a transverse section of the frame and breech. Fig. 3 is a top view corresponding with Fig. 1.

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

This invention relates to that construction of breech-loading fire-arms in which the breech opens with a swinging movement about an axis situated at one side of the frame and parallel with the bore of the barrel.

It consists, first, in a novel construction of such breech, and of that part of the frame of the "arm" which receives it, whereby, while the strength of the frame is retained in the greatest possible degree, great convenience is afforded for loading with fixed ammunition. In order to provide for the firing, the breech is fitted—like the breeches of some other breech-loading arms—with a sliding pin, upon which the hammer strikes to drive it against that portion of the shell of the ammunition which contains the priming; and a second feature of the invention consists in a certain arrangement and combination of the said sliding pin, the hammer, and a recess in the back of the breech, whereby, when the breech is closed and the hammer down, the hammer is made to lock the breech securely.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the frame of the arm, having the barrel B screwed into it at *a a*, and having the chamber within the barrel, the rear end of which is countersunk, as shown at *b b*, to receive the flange *c* of the shell C of the fixed ammunition.

D is the breech, connected by a hinge-joint, *d d*, with the right side of the frame, the axis of the said hinge being parallel with the bore of the barrel. This breech closes into an opening, *e e' f g g*, in the frame, and its back and

the back of the said opening are made slightly taper toward the bottom, as shown at *e'* in Fig. 1, in order that the breech may close tightly, but open without friction. The said opening is long enough to receive the fixed ammunition. The bottom *f* of the said opening is made of a semi-cylindrical form, and of a width sufficient to receive the flanged portion of the shell of the fixed ammunition, and it is parallel to the bore of the barrel, as shown in Fig. 2, so as to be equivalent to a continuation of the lower part of the chamber. Above the semi-cylindrical bottom *f* the said opening extends all across the frame, as shown at *g g* in Fig. 2. The breech is made to fit the opening in the frame having at its bottom a semi-cylindrical projection, *h*, which fits snugly into the semi-cylindrical bottom of said opening, and having shoulders *p p* on each side to fit the parts *g g* of the said opening, and its exterior conforms to the upper part of the frame A, so that when closed it is flush therewith. By this construction of the frame and breech peculiar facility is afforded for loading, as the bottom *f* of the opening forms a channel to guide the ammunition into the chamber of the gun, and the frame is not unnecessarily weakened, as it would be by making the bottom of the opening of larger size, as is the case in many other fire-arms, and the breech fitting to said opening is held very firmly in its place.

E is the hammer arranged within the frame in rear of the breech, and operated in the usual manner.

F is the sliding pin inserted through a hole in the breech to be struck by the hammer, and thereby driven forward against the flange of the shell C to explode the fulminate priming and fire the charge. This pin has applied to it a spiral spring, *j*, Fig. 1, to draw it back within the breech, and a stop-screw, *k*, to prevent it from being drawn back by the spring farther than is necessary. The said pin is made shorter than the breech, and a recess, *l*, wide and deep enough for the reception of the hammer, is provided in the rear end of the breech for the hammer to enter to strike the said pin for the purpose of firing the arm, and this recess also constitutes the means of locking the breech in a closed condition by means of the nose of the hammer, for the hammer, when let down while the breech is closed, is permitted by the shortness of the pin F to enter

the said recess, and so prevent the possibility of moving the breech sidewise until it (the hammer) has been pulled back.

G is a slide for withdrawing the discharged shells of the ammunition from the chamber, working through a groove, *n*, in the frame, operated by means of a trigger, H, and moved forward again by a spring, *m*, after the shell has been withdrawn and the trigger has been liberated.

I do not claim, broadly, the invention or use of a hinged breech; but

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

The construction of the semi-cylindrical recess *f*, of a diameter corresponding to that of the flange of the metallic cartridge, in combination with the semi-cylindrical breech-piece

projection *h*, the recess *l*, and the hammer E, as herein shown and described, so that when the breech-piece is open the cartridge-case will be guided in an exact line with the barrel, both in loading and withdrawing the case, and when the breech-piece is closed the solid portion thereof or semi-cylindrical projection will press against the rear of the cartridge-shell, while the fall of the hammer will lock the breech-piece, and prevent it from being blown open by the accidental rearward bursting of the shell, the premature discharge or striking of the hammer upon the cartridge-pin being also avoided, all as set forth.

JAMES WARNER.

Witnesses:

M. M. LIVINGSTON,
HENRY MORRIS.