

P. SCHULER.
BREECH LOADING FIREARM.

No. 108,836.

Patented Nov. 1, 1870.

Fig. 1

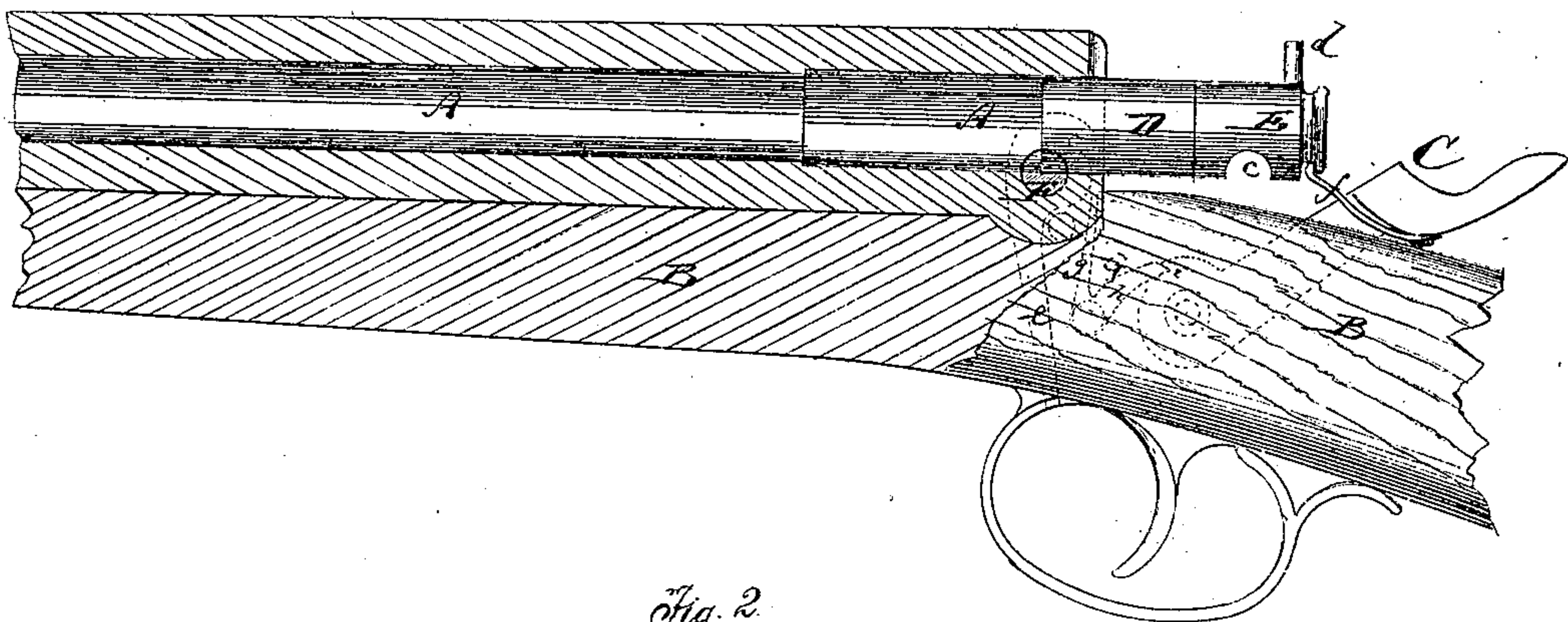


Fig. 2

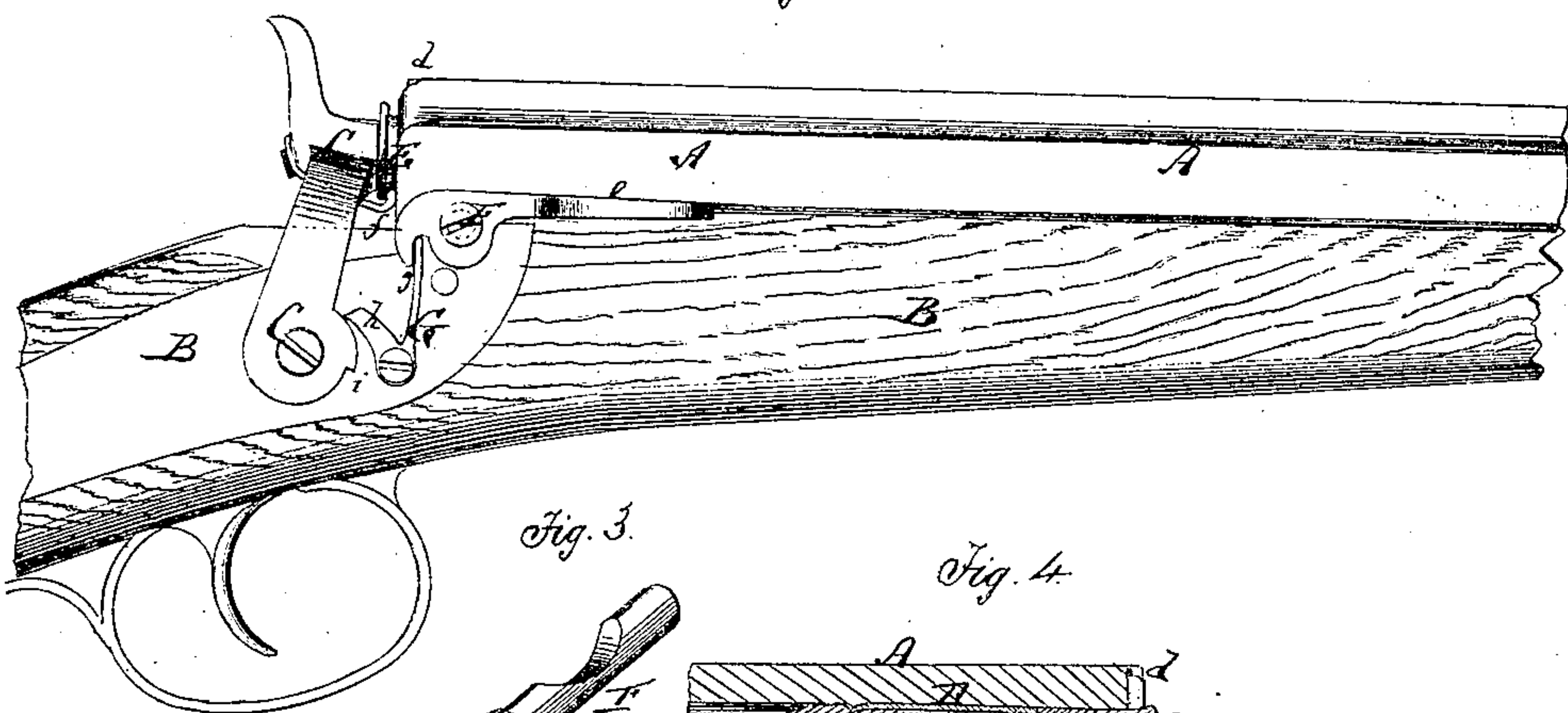


Fig. 3

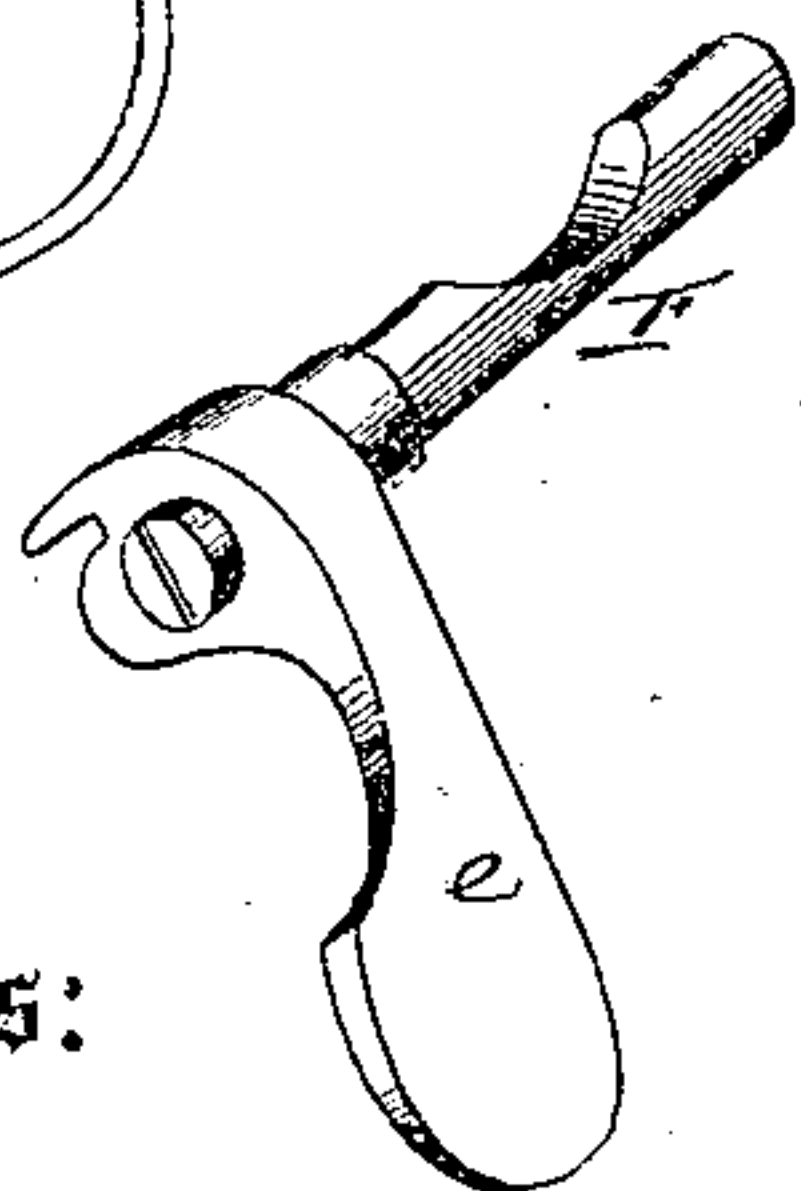
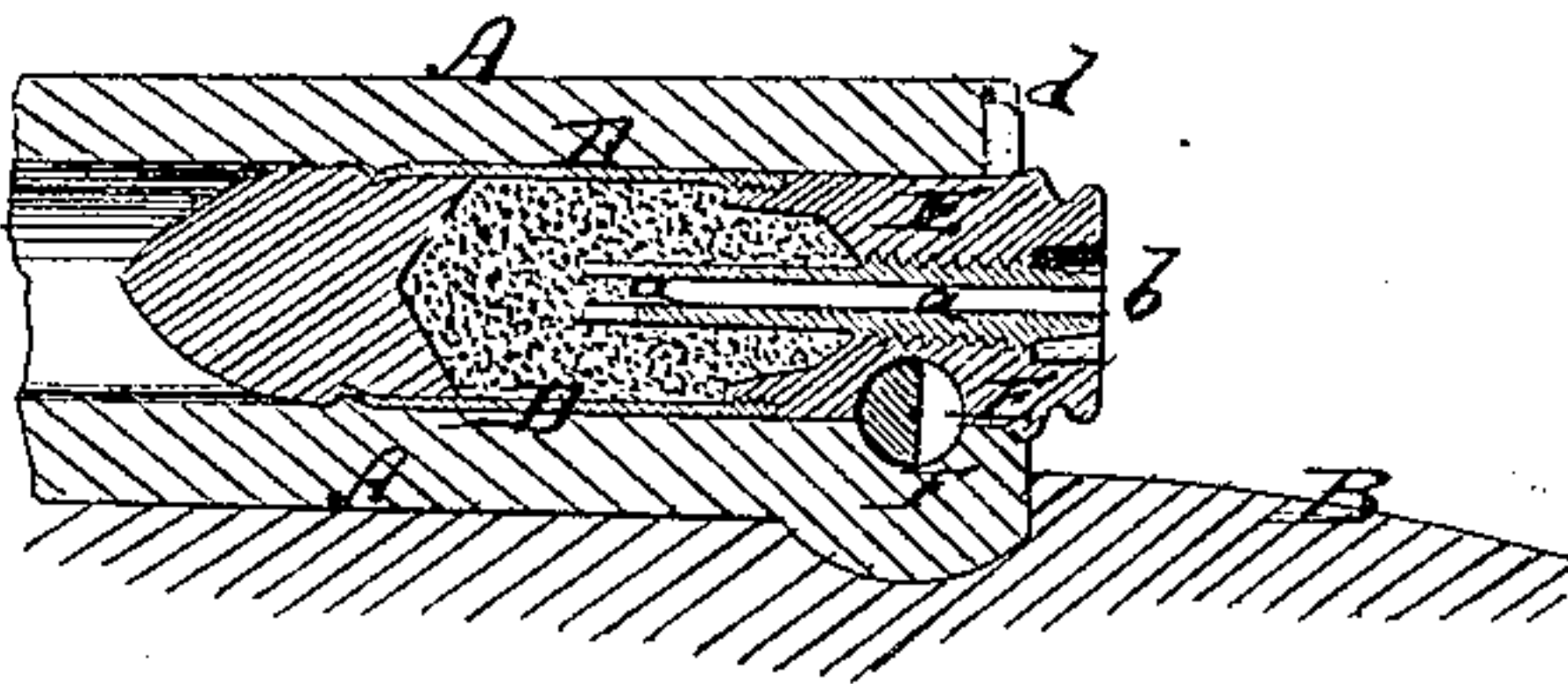


Fig. 4



Witnesses:

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PETER SCHULER, OF MORRIS, INDIANA.

Letters Patent No. 108,836, dated November 1, 1870.

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, PETER SCHULER, of Morris, in the county of Ripley and State of Indiana, have invented a new and useful Improvement in Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a side view, partly in section, of my invention, showing the parts in position after firing and extracting the cartridge-shell.

Figure 2 is a side view of the same, showing the parts in position immediately after firing.

Figure 3 is a detail perspective view of the hook and arbor for locking the cartridge.

Figure 4 is a longitudinal section of the cartridge in the barrel.

Similar letters of reference indicate corresponding parts.

This invention relates to certain new improvements in breech-loading fire-arms and cartridge-shells, and has for its object to simplify the construction of the breech ends of barrels, and economize cartridge-shells.

The invention consists chiefly in doing away with a breech-block for the barrel, and in substituting therefor the head of the cartridge-shell, which is locked to the barrel by a cam or arbor.

The invention consists also in a novel construction of said cartridge-shell and head, the latter being provided with a groove for the locking-cam.

The invention consists also in the use of a spring-dog for holding the hammer cocked.

A in the drawing represents the barrel of the fire-arm.

B is the stock,

C, the hammer.

The barrel is open at the breech end to receive the cartridge.

The cartridge-shell D is made of metal, with a female screw-thread cut into its rear end, so that it can be screwed upon the front end of the head E.

This cartridge-shell head is cast of iron or other strong material, and has a small tube, *a*, fitted longitudinally through it.

The backwardly-projecting end *b* of the tube *a* constitutes the nipple for receiving the percussion-cap.

The front part of the tube *a* projects forward into the shell D, so that it will carry the spark to the front of the powder, letting the same burn backward, as in the Prussian needle-gun.

The lower side of the head E has a lateral groove, *c*, cut into it for the reception of the locking-cam.

From the rear end of the head projects upward a pin, *d*, which strikes against the breech end of the barrel into a notch formed therein and defining the position of the cartridge.

Near the breech end of the barrel is fitted, through the lower part of the same, a transverse arbor, F, which has a handle, *e*, at one end.

This arbor has a portion cut out, as in fig. 3, which, when the handle is turned down, as in fig. 1, will be flush with the bore of the barrel, to not impede the insertion and removal of the cartridge.

When the cartridge has been put in, the groove *c* of the head will be immediately above the arbor F, and then the latter is so turned as to fit into said groove and thereby lock the cartridge, as is clearly shown in fig. 4.

The cartridge-head will thus constitute the breech-block of the barrel, no other breech-block being required, the cam or arbor F serving to lock the cartridge-head so secure that it cannot be forced back by the expansive gases produced by the combustion of the powder.

The hammer C contains a forward-projecting spring hook, *f*, which, when the hammer is forced down for firing, catches into a groove of the cartridge-head, and serves to withdraw the head and shell while the hammer is being cocked.

G is a V-shaped spring-dog, pivoted at its point to the side of the arm, and fitting, with one arm, *g*, into a notch of the handle *e*, while the other arm, *h*, fits against the lower part of the hammer, which has a notch or shoulder, *i*.

When the hammer is cocked and the handle *e* let down, as in fig. 1, so that the cartridge can be removed or put in, the arm *h* catches into the notch *i* and holds the hammer cocked, preventing it from being thrown down as long as the cartridge has not been properly secured.

When, however, the handle *e* is swung into a horizontal position, it engages the end of the arm *g* with its notched part, as in fig. 2, and draws thereby the arm *h* off the hammer, allowing the same to be let down for firing.

The operation is as follows:

When the hammer is cocked, the handle *e* is let down and a cartridge inserted into the barrel. The handle *e* is then swung up to lock the cartridge.

After the piece has been fired, the handle *e* is first swung down, and then the hammer is cocked, thereby withdrawing the cartridge-shell and head, which can be used again for further charges. The shell constitutes an exact measure for the explosive material.

The invention is intended especially for fowling-pieces and hunting-guns, and is applicable to single as well as double-barreled fire-arms.

Having thus described my invention,

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

1. The combination, with the open breech end of the barrel A, of the cam-arbor F, provided with the handle *e*, and the solid head E of the cartridge-shell

D, having the transverse groove *c*, all arranged as shown and described, and for the purpose specified.

2. The spring-dog *G g h*, and handle *e* and hammer *C i*, each of said parts being constructed and all of them arranged specifically as shown and described, and operating as specified.

3. The groove *c*, provided in the solid head of a

cartridge for the reception of a cam or arbor, whereby the cartridge is locked to the barrel, as set forth.

The above specification of my invention signed by me this 15th day of August, 1870.

Witnesses:

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