

L. B. TIEBEL.

Breech-Loading Fire-Arm.

No. 89,955.

Patented May 11, 1869.

Fig. 1

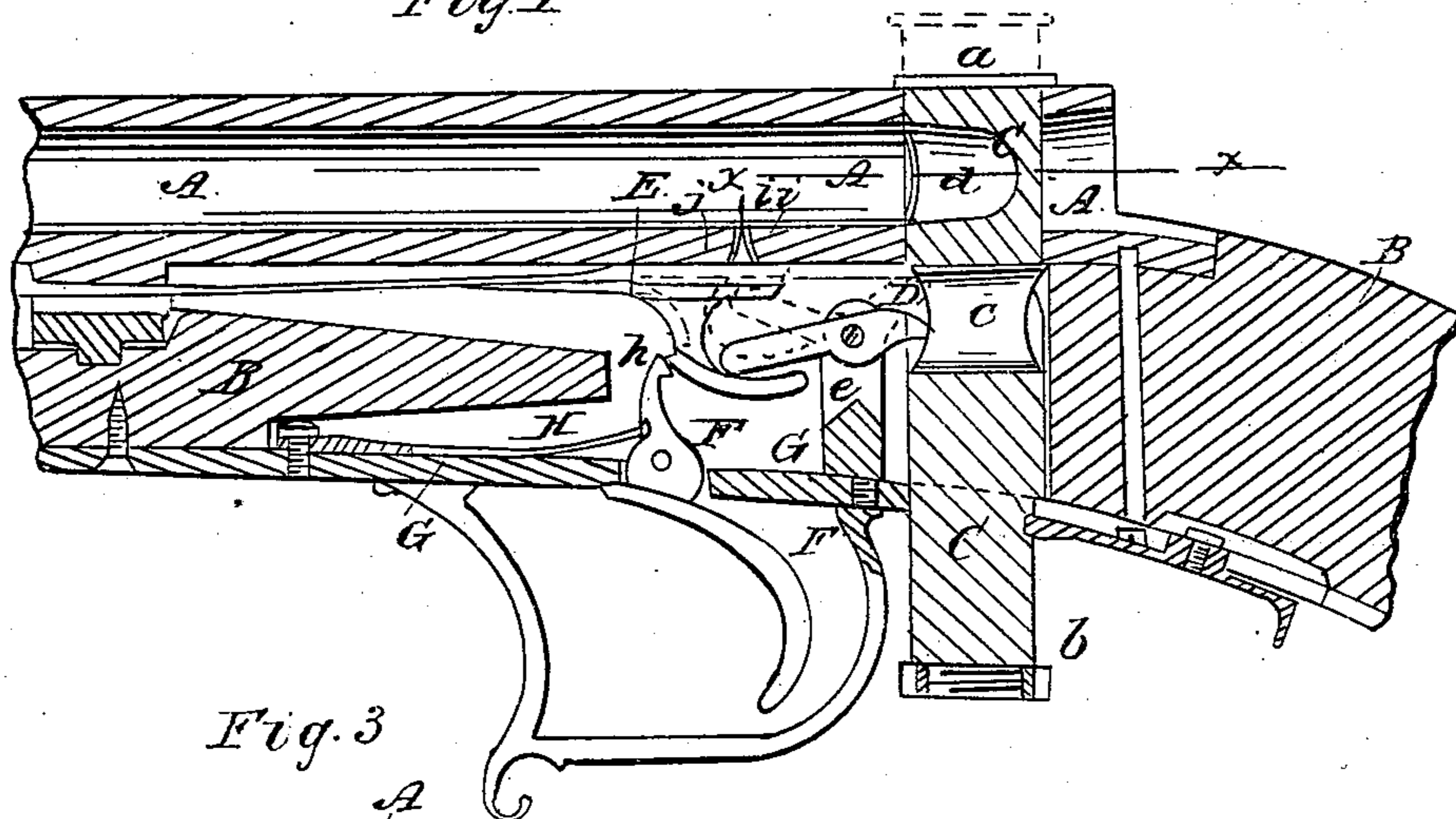


Fig. 3

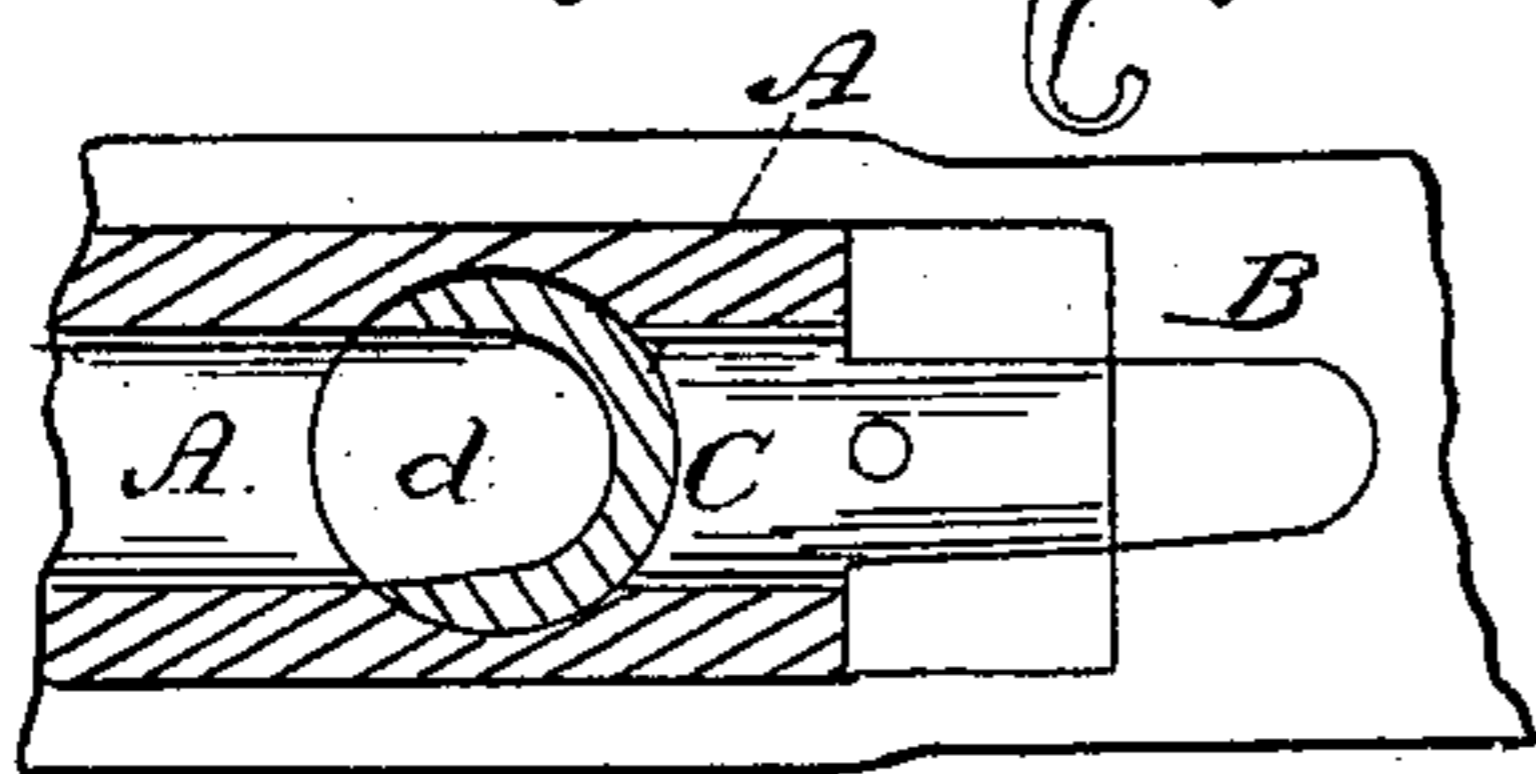
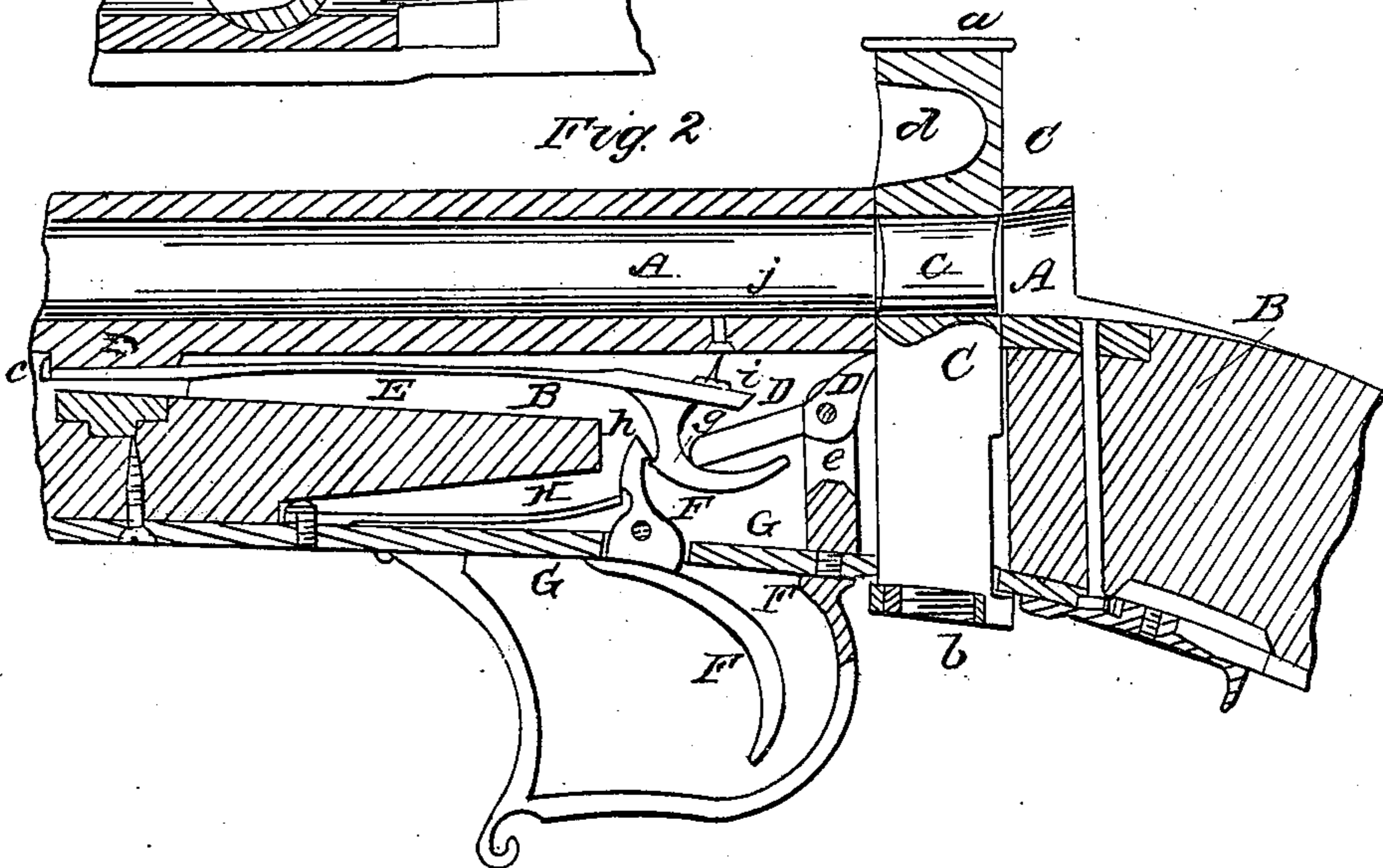


Fig. 2



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# United States Patent Office.

LOUIS B. TIEBEL, OF HUDSON CITY, NEW JERSEY, ASSIGNOR TO HIMSELF AND CHARLES MATTERN, OF SAME PLACE.

Letters Patent No. 89,955, dated May 11, 1869.

## IMPROVEMENT IN BREECH-LOADING 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, LOUIS B. TIEBEL, of Hudson City, in the county of Hudson, and State of New Jersey, 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 thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figures 1 and 2 represent longitudinal sectional views of my invention, showing the parts in different positions.

Figure 3 is a horizontal sectional view of the same, the plane of section being indicated by the line *xx*, fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new portable breech-loading fire-arm, in which a new arrangement for opening the breech is employed, and in which a needle is forced through the rim of the cartridge, and not through the head of the same, as is done at present in all breech-loading needle-arms.

The invention consists, first, in the use of a vertically-sliding breech-pin, which is perforated, so that the cartridge can be inserted when the pin is moved upward, the hole in the pin being then in line with the bore of the barrel.

The invention consists, second, in arranging a cavity in the breech-pin, which will be in line with the barrel when the pin is down, *i. e.*, ready for firing. The object of this cavity is to supply the charge of powder with a sufficient quantity of air to enable the instantaneous explosion of the powder.

The invention consists, third, in the connection between the hammer or discharge-device and the aforesaid sliding breech-pin and the trigger, said connection being so arranged, that by moving the breech-pins up, for loading, and by then pushing it down, the gun will be cocked.

The invention finally consists in forcing the needle through or into the rim of the cartridge, instead of into the head of the same, whereby the use of a much shorter needle is permitted.

A represents the barrel of a breech-loading fire-arm, the said barrel being open at both ends, and secured upon a suitable stock, B, in any suitable manner.

The barrel may be grooved on the inside, or smooth, as may be desired.

O represents a cylindrical block, fitted vertically through the breech-end of the barrel, and through the stock, and provided with heads, *a* and *b*, on its upper and lower ends, respectively, as is clearly shown in figs. 1 and 2.

This block O is perforated, as shown at *c* in the drawing, the hole through the pin being in the same

direction as the bore of the barrel, and of about the same diameter. Thus, when the block O is pushed up, as in fig. 2, so that its shoulder *b* strikes against the under side of the stock B, the hole *c* will be in line with the bore of the barrel, and the cartridge can be inserted. When, then, the block O is forced down, so as to be suspended from its head *a*, as in fig. 1, the hole *c* will no longer be in line with the bore of the barrel, and the gun will be ready for firing.

A recess, *d*, is arranged in the block O, which will be in line with, or, rather, a continuation of the bore of the barrel when the block O is in the position last mentioned, *i. e.*, ready for firing.

This recess is for the purpose of arranging an air-chamber behind the cartridge.

In ordinary fire-arms, the air confined in the cartridge, between the particles of the powder, is insufficient to allow the instantaneous ignition of the powder, and, therefore, that portion of the powder which is not ignited at the moment of firing, is ignited in the more forward portion of the barrel, so that frequently the fire can be seen coming out of the barrel of a gun. It is evident that thereby much of the power of the charge is lost, to avoid which the recess *d* is arranged. The same contains enough air to allow the instantaneous explosion of the whole charge of powder. Thereby, with the use of a smaller charge, a better effect will be obtained than by the usual manner of keeping the cartridge close to the breech-end of the barrel.

D is a lever, pivoted to a stationary arm, *e*, said arm being arranged within the stock of the gun, as shown.

One end of the lever D is always in contact with the block O. The other end is always between two arms formed on the free end of a powerful spring, E, said spring being secured in the stock B, at the end or side of the barrel A, as shown.

On the lower arm, *f*, of the spring E, is formed a hook, *g*, by which the spring can be connected with a hook, *h*, on the trigger F.

The trigger is arranged, as usual, in the lower plate, O, of the lock, and is thrown forward by a spring, H, as shown.

Upon the surface or upper side of the spring E is secured a pin or needle, *i*, which, when the free end of the spring is forced against the barrel, fits, through a hole, *j*, in the barrel, into the rim of the cartridge, the fulminate being arranged around the cartridge, instead of in the head of the same.

The operation is as follows:

When the arm has been fired, the block O is pushed down, the spring E is thrown up, the pin *i* projects into the cartridge. All the parts are in the position shown in fig. 1. The back arm of the lever D fits into the cavity, *d*, of the block O, as shown. The block O is then pushed up, and, as it is being pushed, the lower edge of the cavity *d* carries the back arm of the lever



D up, lowering thereby the front arm of the same. The said front arm thereby comes against the lower arm, *f*, of the spring E, and forces the spring down, (see red lines in figure,) and thus, when the block O is pushed quite up, the spring E will be sufficiently depressed, that the hooks *g* and *h* may connect it to the trigger, as shown in fig. 2. The hole *c* in the block will then be in line with the bore of the barrel, and the gun will be ready for loading.

When it is loaded, the block O is pushed down, and thereby the forward arm of the lever D is taken off the lower arm, *f*, of the spring E, so that, when the trigger is touched, the spring E may fly up, and drive the pin *i*, through the hole *j*, into the cartridge.

While the block O is up, it is held in that position by the back arm of the lever D, the said back arm being tightly pressed against the block by the lower arm, *f*, of the spring E.

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

The sliding block O, when arranged as shown, and when connected with the hinged lever D, spring E, needle *i*, and trigger F, all made and operating substantially as herein shown and described.

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Witnesses:

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