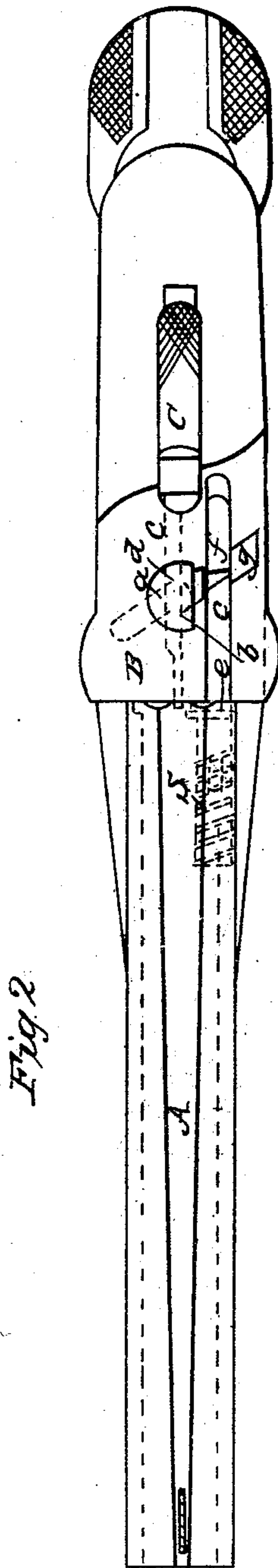
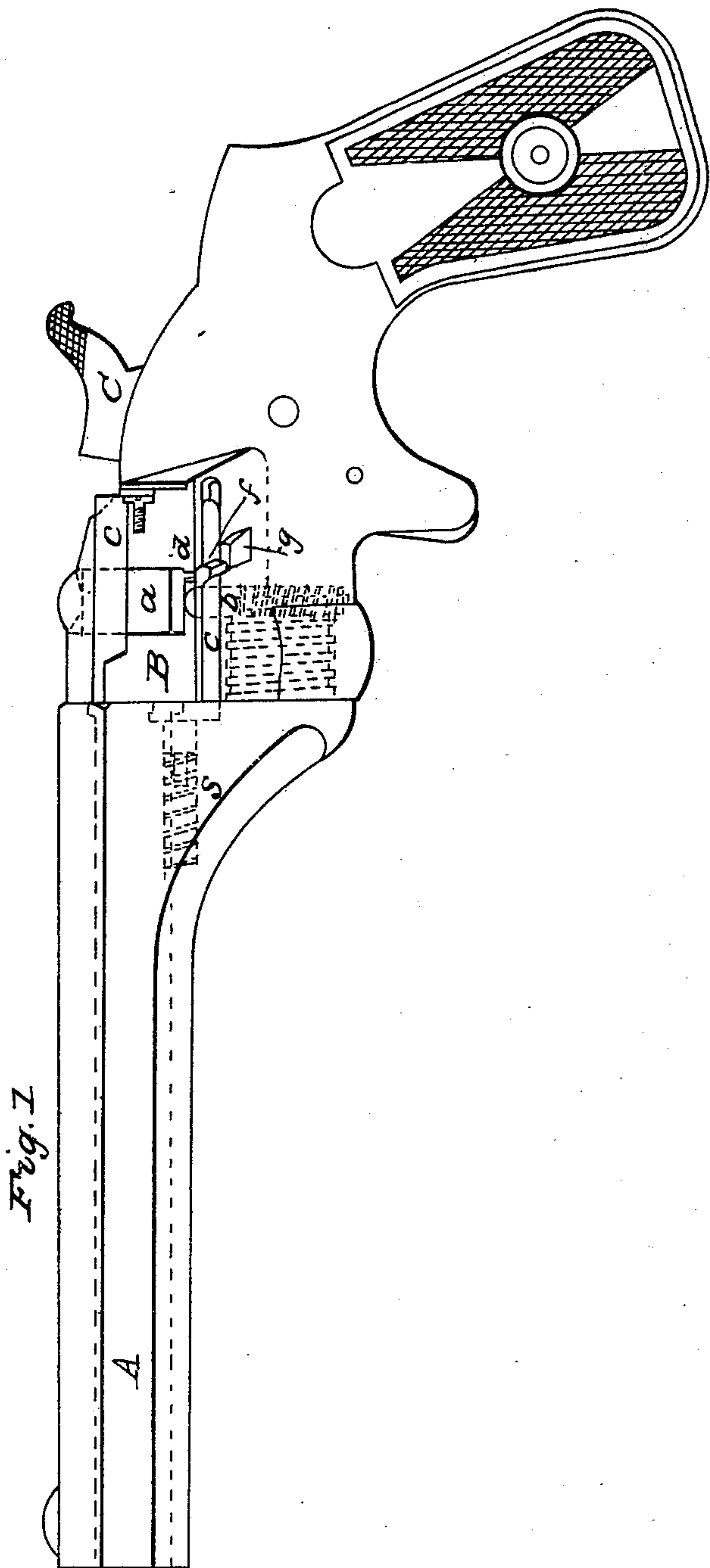


H. HAMMOND.

Cartridge Ejector for Fire Arms.

No. 72,849.

Patented Dec. 31, 1867.



Witnesses

W. H. Ellis
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HENRY HAMMOND, OF HARTFORD, CONNECTICUT.

Letters Patent No. 72,849, dated December 31, 1867.

IMPROVEMENT IN CARTRIDGE-EJECTOR FOR 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, HENRY HAMMOND, of Hartford, in the county of Hartford, and State of Connecticut, have invented a new and improved Shell-Extractor for Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side view of a pistol, showing the improved shell-extractor.

Figure 2 is a top view of the same.

The arm shown is my patent breech-loader, for which Letters Patent were issued to me October 25, 1864, and in the figures part of the breech-block is removed, the better to show the parts of the extractor.

Like letters in the two figures indicate like parts.

A is the barrel. B is the breech-block, which turns to the left, as the arm is usually held when in use, to expose the bore of the barrel. C is the hammer, and *c* the firing-pin, which passes through the breech-block and through an opening in the unlocking-bolt *a*. *a* is the unlocking-bolt, operating the locking-pin *b*, and also having a stud, *d*, for operating the extractor. *e* is the extractor, working in a groove in the frame parallel to the line of the barrel. The extractor has a notch, *f*, through which the stud *d* passes when the barrel is opened. The frame is cut away at *g* to allow the stud free passage. *s* is a spiral spring, operating against the extractor, to keep it constantly pressed backward from the end of the barrel. The breech of the arm is opened by pressing the unlocking-bolt *a*, which presses down the locking-pin *b* against a spring, and releases the breech-block. The pin *b* passes into a groove in the breech-block, which guides its motion in such a manner that it recedes from the barrel as it turns to the left to open the breech.

My invention consists in so constructing the extractor that the motion of the breech-block, in operating the breech, shall, by a positive motion, independent of the spring, withdraw the extractor a certain distance to loosen the shell in the barrel of the arm, and then release it suddenly, so that the force of the spring, operating upon the extractor, shall throw the shell clear of the arm.

The construction of the parts is as follows: The extractor consists of a straight bar, *e*, moving in a slot or groove in the frame, having the end *e'* next the barrel enlarged and turned at right angles to the bar, and of suitable form to take hold of the cartridge-shell. This part is recessed into the end of the barrel, as shown in the drawings, and is enclosed between the barrel and breech-block when the breech is closed. The spring *s* also presses against this part of the extractor, tending to force it away from the end of the barrel. The bar part of the extractor is provided with a notch, *f*, of such a form and angle, relative to the bar, that the stud *d*, in passing through it when the breech is opened, will withdraw the extractor part of the distance that the breech-block moves to the rear.

The operation of my invention is as follows: When the breech is opened by pressing upon the unlocking-bolt *a*, and turning the breech-block to the left, the stud *d* enters the notch *f*, and, moving through it, withdraws the extractor, and with it the shell, by a positive motion independent of the pressure of the spring *s*. When the breech is fully opened, the stud *d* leaves the notch *f* and the extractor being relieved from the stud, the shell is thrown out by the pressure of the spring shooting the extractor back a short distance allowed by the length of the groove in the frame. When the breech is closed, the stud *d* passes over the top of the extractor-bar, which is pushed back into the end of the barrel by the face of the breech-block operating upon the part *e'*.

In the application of my improvement to breech-loading fire-arms, I do not confine myself to the particular arm shown in the drawings.

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

The combination of the unlocking-bolt *a* and the stud *d* with the extracting-bar *e*, its notch *f*, and the ejecting-spring *s*, constructed and operating substantially as herein described.

HENRY HAMMOND.

Witnesses:

W. G. FITCH,

THEO. G. ELLIS.