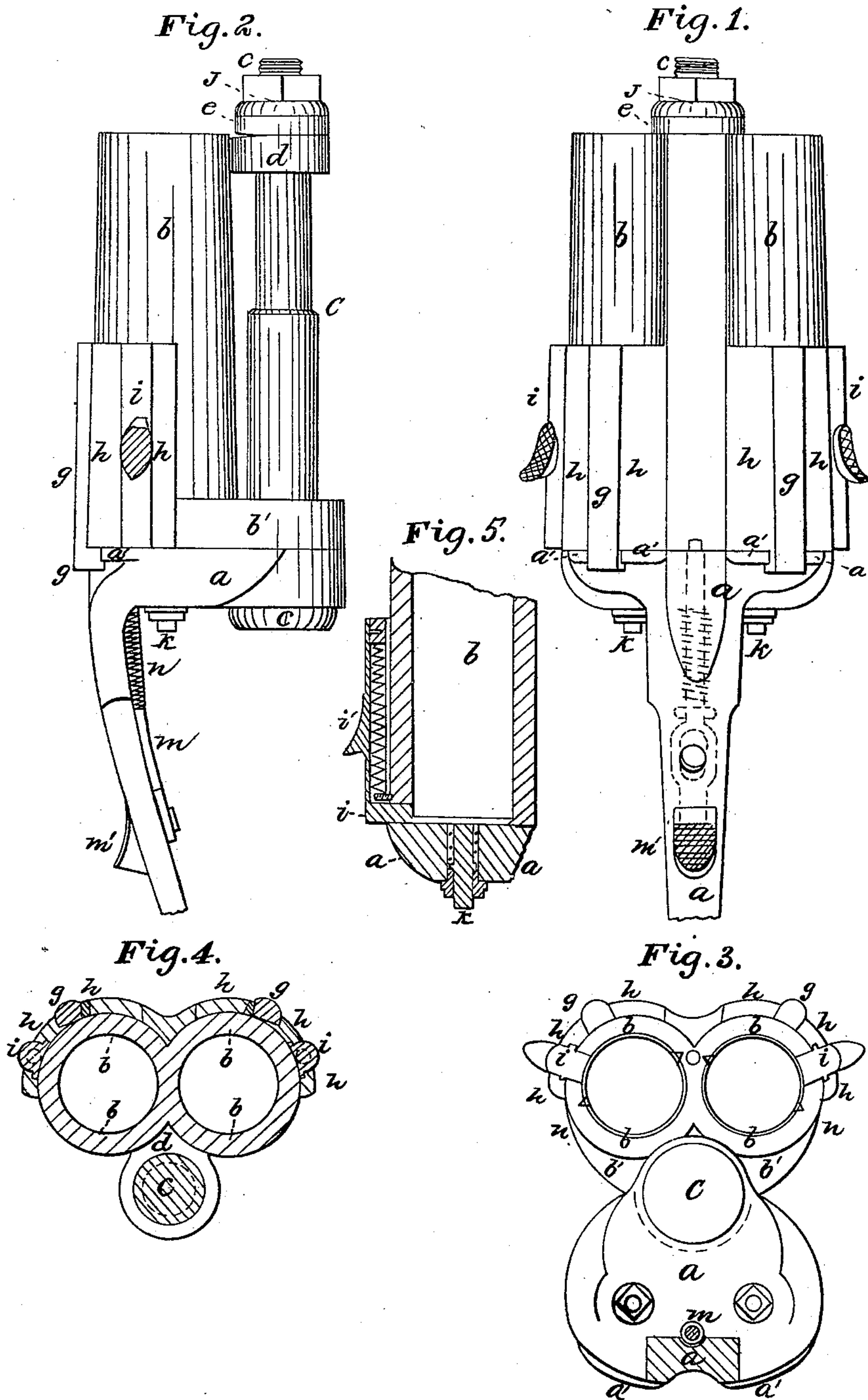


Breech Loading Fire Arm.

No. 88,540.

Patented April 6, 1869



Witnesses:

G. B. Maynardier
A. C. Parker.

Inventors:

Francis P. Boyd.
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Chas. F. Fleeper. Atty.



FRANCIS E. BOYD AND P. SHELTON TYLER, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 88,540, dated April 6, 1869.

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 we, FRANCIS E. BOYD and P. SHELTON TYLER, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of a portion of our fire-arm;

Figure 2 is a side view of the same;

Figure 3 is an end view; and

Figures 4 and 5 are sections.

Our invention consists in certain improvements upon the double-barrelled fire-arm invented by us, and patented on the 21st day of January, 1868.

In the drawings, the several parts are represented by letters, as follows, viz:

b b represent the barrels of a double-barrelled gun.

a represents the breech-plate,

g g are clamps attached to the barrels, and fitted in the plates *h h*.

a' a' are lips upon the breech-plate, over which the clamps *g g* lock.

d b' are bearing-plates attached to the barrels, the plate *d* having upon it cams, toward the washer *e*.

c, a spindle passing through the bearing-plates, and secured to the breech-plate *a*.

e, a washer upon the spindle, with cams against the bearing-plate *d*.

f, a nut to hold and adjust the washer.

h h are metal plates upon the barrels, to afford a surface to receive the cartridge-retractors *i i* and clamps *g g*.

i i are cartridge-retractors, fitted to slide in grooves in the plates *h h*, with flanges upon their rear ends, fitted to the form of the ends of the barrels.

k k are strikers with retracting-springs, attached to and passing through the breech-plate.

m is a spring-catch attached to the breech-plate, and operated by the thumb-piece *m'*.

n n are bevels, which allow the breech-plate to be brought into place after loading, without touching the thumb-piece, in order to retract the spring-catch.

The operation of loading our fire-arm is essentially the same as that of the patented fire-arm above referred to, and may be briefly described as follows:

When the gun is held by the barrels, and the spring-catch *m* is drawn back and released from its hold, the stock can be turned round, to either the right or left of the barrels, uncovering their ends, so that the shell of the exploded cartridge may be withdrawn by means of the retractors *i i*.

Cartridges are then inserted, and the stock turned back to its former position, when the cams upon the washer *e*, and upon the lips *a' a'*, engage respectively

with the bearing-plate *d*, and the clamps *g g*, closing together the barrels and breech-plate, while the spring-catch is pressed back by the bevels, and held in that position by the cartridge until it engages with its socket.

The strikers *k k* extend through the breech-plate, and are so placed, that when the barrels are held by the spring-catch, they will be directly opposite that part of the cartridge upon which they are designed to strike, when driven in by the hammer.

We place upon the rear end of each of the barrels, a plate, in which can be fitted the clamps *g g*.

These plates we usually braze upon the barrels, but they may be forged, in the manufacture of the barrels.

The clamps *g* are fitted closely in grooves, and securely fastened by means of screws or pins.

We prefer to make these grooves and clamps of such a form as to prevent all motion of the clamp, except in an endwise direction, and rely upon the pin or screw only, for the purpose of preventing this last motion, but we do not wish to confine ourselves to any particular form of groove and clamp.

By means of these plates, we also make the operation of the retractor more sure and easy, as we are enabled to use a tube flanged at its sides, with the flanges fitting in grooves, instead of the flat dovetailed retractor, in common use, a change which prevents the retractor from sticking in its ways, as the dovetailed form is very apt to do.

The retractors have a flange each side, as shown, and a slot along their length, so as to allow them to play over a stationary pin, against which a spring bears. This spring is secured at the other end by means of a plug, as shown in fig. 5.

The stock is secured to the breech-plate and barrels in the usual manner, but made, of course, in two portions, the front portion being cut away sufficiently to receive the spindle and its plates.

Our improvements consist—

First, in the metal plates;

Second, in the retractors; and

Third, in the combination, with a spindle-gun, of a breech-piece, through which the hammer acts to explode the cartridge.

In this latter respect, our gun is an improvement upon the spindle-gun patented to R. S. Lawrence, January 6, 1852.

In that gun, the cartridge is exploded by the flame from the cap, which passes through a small hole bored through the breech-piece; and our improvement upon it consists in the substitution of a breech-piece, through which the hammer acts upon the cartridge, instead of Lawrence's breech-piece, through which flame passes.

We prefer to use strikers, as the means by which the hammer acts through the breech-plate, but it is obvious that the equally well-known way, of apertures

through the breech-piece, of the proper size and shape to allow a portion of the hammer to pass through, so that the end of the hammer shall act directly to explode the cartridge, may be substituted for the strikers.

We are aware that a similar breech-piece is in use in other guns, some of which have a series of barrels, or chambers, which revolve about a pin, or spindle; but in all these guns, each barrel is brought into position to be fired, as in the ordinary breech-loading revolver, while in our gun, and in all spindle-guns, as we use that term, the barrels are never turned upon the spindle in order to bring each one successively into position for firing, but each is in position when held by the spring-catch.

We disclaim, therefore, each of the parts of the combination stated in our third claim, when used separately, and also when used in combination with barrels, which, although they revolve upon a spindle, require to be brought successively into position to be fired.

We do claim—

1. The barrels, with metal plates at their rear ends, in combination with the clamps, when the latter are inserted and suitably secured in grooves in the former.

2. The flanged tubular retractor *i*, containing a spring, when arranged to operate substantially as shown and described.

3. The combination of a breech-piece, through which the hammer acts, substantially as above described, with a barrel or barrels, arranged to turn upon a spindle, substantially as above described, and a spring-catch, all so arranged that the spring-catch will hold the barrel or barrels in their correct relation to the hammer, so that the latter may act, through the breech-piece, to explode the cartridge, substantially as and for the purpose specified.

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Witnesses:

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