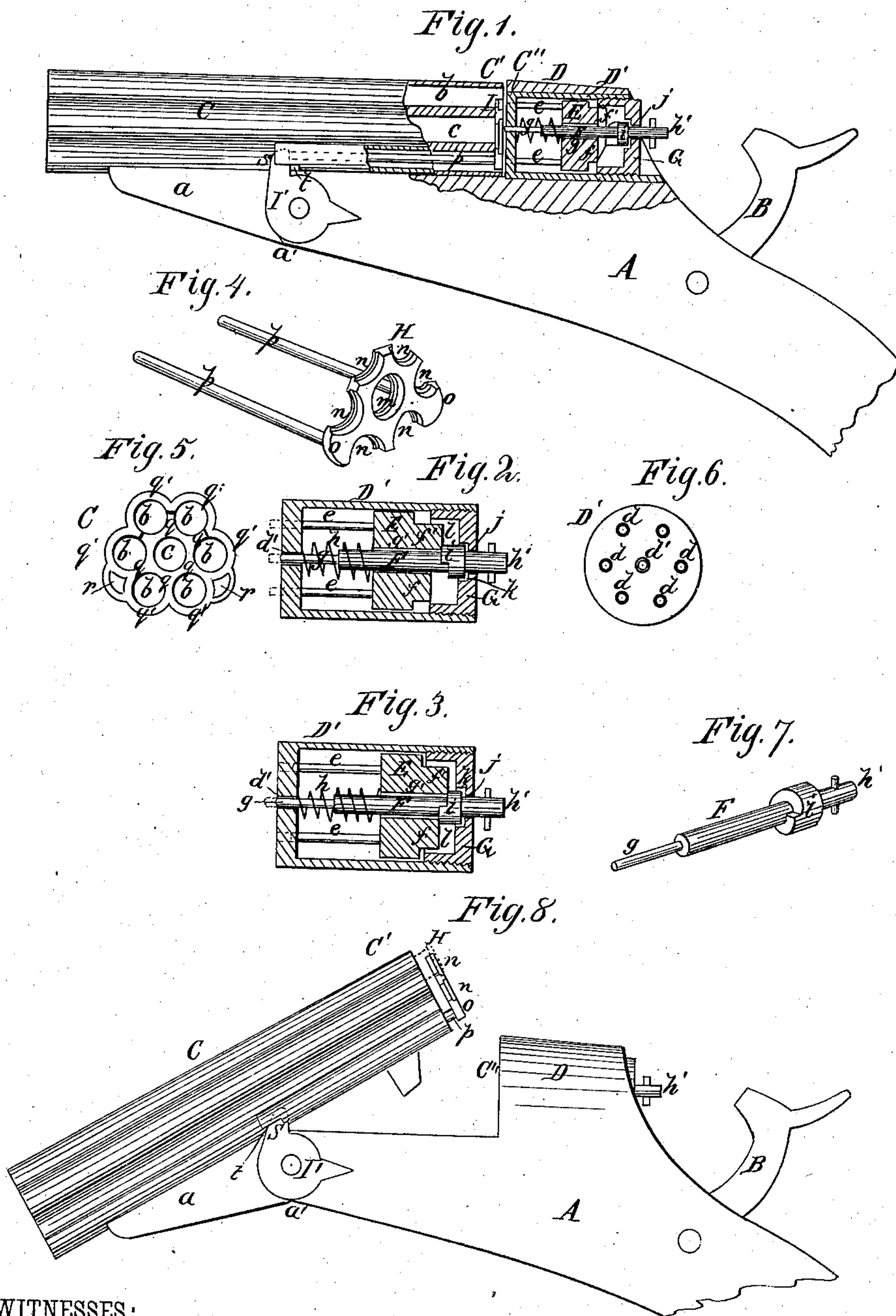


G. H. FAY.
Breech-Loading Fire-Arm.

No. 226,505.

Patented April 13, 1880.



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GEORGE H. FAY, OF MORRISON, ILLINOIS, ASSIGNOR TO HIMSELF AND
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BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 226,505, dated April 13, 1880.

Application filed October 2, 1879.

To all whom it may concern:

Be it known that I, GEORGE H. FAY, of Morrison, in the county of Whiteside and State of Illinois, have invented a new and Improved Fire-Arm, of which the following is a specification.

My invention relates to improvements in fire-arms composed of a number of fixed barrels, and to the mode of firing the said arm; and the object of my said invention is to give a wider range to the said arm, and thus increase its effectiveness; also to arrange the firing devices so that all of the barrels may be fired simultaneously, or but one alone may be fired.

In the accompanying drawings, Figure 1 is a sectional side elevation of my improvement. Fig. 2 is a longitudinal section of the breech with the firing-pins arranged to discharge all of the barrels. Fig. 3 is a similar view of the breech arranged to discharge the central barrel. Fig. 4 is a perspective view of the cartridge-shell extractor. Fig. 5 is a rear end elevation of the barrels. Fig. 6 is a front end elevation of the breech. Fig. 7 is a perspective view of the center firing-pin; and Fig. 8 is a side elevation of my improved fire-arm with the breech end of the barrels in position for loading.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A is the stock of the gun. B is the hammer, and C represents the group of barrels attached to the short piece of stock *a*, and said piece *a* is hinged to the stock A at *a'*, so that the rear or breech end, C', of the barrels will tip up above the breech to expose the open ends of the barrels and allow the cartridges to be inserted and the gun loaded. The group of barrels C consists of a number of barrels, *b*, arranged around a central barrel, *c*, in such a manner as to diverge from the breech end C' toward the muzzle.

D is the breech, in which is set a metal cylinder, D', between the hammer B and barrel C, immediately in line with the latter, so that when the arm is thrown into position for firing the end C' of the barrel will abut squarely against the adjacent end of the breech and

cylinder D D', and in close contact therewith, as shown in Fig. 1.

In the end of breech-cylinder D' next to the barrels are perforations *d*, in line with the bore of the barrels *b* and in position for center or rim firing, accordingly as one or the other kind of cartridges is used with the gun.

E is a circular block, from the face whereof project pins *e*, in line with the outer ring of perforations *d*, so that the end of pins *e* are incased in the perforations *d* when the block is inserted in the breech-cylinder D'. On the back of block E is a projection, *f*, one side, *f'*, whereof extends beyond the other side, as shown.

The center firing-pin *g* projects from a larger rod, F, into the central perforation, *d'*, while the rod F is passed through a hole, *g'*, in the block E. A spiral spring, *h*, is wrapped around the pin and rod between the block E and the perforated end of the cylinder D', and serves to throw the block and firing-pins back after firing, as will be presently described.

Rod F can be rotated freely on its axis, and when it is turned so as to place the cam *i* against projection *f'*, as in Figs. 1 and 2, the rod F, with pin *g*, and block E, with pins *e*, all move forward together when the end *h'* of rod F is struck by the hammer B. In this way all the pins *e g* are moved out of or unsheathed from the perforations *d'* and *d* and driven against the cartridges in barrels *b c*, discharging them together. When, however, rod F is turned so as to throw the cam out of engagement with *f'*, block E is moved back by spring *h*, so that pins *e* are drawn back in perforations *d*, pin *g* remaining in the same position, as shown in Fig. 3. Now, when end *h'* is struck by the hammer B the block and rod F are driven forward, as before, but pin *g* only is unsheathed, and, coming in contact with the cartridge in barrel *c*, discharges this barrel alone, leaving the other barrels *b* undischarged.

G is a plug, with a central opening, *j*, for rod F, a recess, *k*, concentric thereto, for the cam *i*, and a larger recess, *l*, for the projecting parts *f f'* of the block E. This plug is screwed into the rear end of cylinder D', holding the firing-pin rod F and block E in the cylinder and

in their proper relative positions, while the recesses furnish space for the backward movement of the block E and cam *i*, and the end *h'* of rod F, projecting through the hole *j* in plug G, is in position to be struck by the hammer, as shown in Fig. 1.

The cartridge-shell extractor (shown in perspective in Fig. 4) is composed of a skeleton frame, H, having a central counterbored hole, *m*, and outside semicircular chamfered recesses, *n*. From two projecting arms, *o o*, extend rods *p p* at right angles to frame H. A seat, I, Fig. 1, for frame H is formed in the breech end C' of barrels C by cutting away (to a depth equal to the thickness of frame H) the inside walls, *q*, of barrels *b c*, and leaving the outside walls, *q'*, of barrels *b* the full length, so that they will form a close joint with the adjacent end C'' of breech D, as shown in Figs. 1 and 8.

On each side of barrels C are sockets *r r*, extending from the end C' to the joint *a'* in the stock A; and on each side of the stock A, at joint *a'*, is fixed a plate, I', having a finger, *s*, extending up through a slot, *t*, into socket *r*.

To apply the extractor the rods *p p* are thrust into sockets *r r* until the frame H is in seat I, when the frame H bears against the inside walls of barrels *b c* and central counterbored hole, *m*, coincides with barrel *c*, while the edges of curved recesses *n* are in line with barrels *b*. The ends of rods *p* bear against the fingers *s* when the frame H is pressed into its seat I.

When the cartridges are placed in the barrels *b c* their flanges bear on the edges of holes *m* and recess *n*. After firing the end C' is thrown up into the position it occupies in Fig. 8. As it moves up the fingers *s*, bearing against the ends of rods *p*, throw the extractor back

from the seat I, and, the edges of hole *m* and recesses *n* being under the flanges of the cartridges, draw the cartridge-shells out, whereby the barrels are put in condition to receive new cartridges.

This arrangement, as will be readily understood from the foregoing description, enables me to adapt the number of discharges and the effectiveness of the gun to the object or objects fired upon, so that when shooting at a single large object, one shot being sufficient, the central barrel alone may be used; but in case of shooting into a flock—say of ducks—all of the barrels being discharged simultaneously, greater execution is done, and this is rendered all the greater and a wider range is obtained by the divergence of the barrels from the breech toward the muzzle, which causes the shot from these barrels to scatter over a great space.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with barrels and breech, substantially as described, of the cylinder D' G, arranged in the breech between the hammer and barrels, the block E, having projection *f* and hole *g'*, and the spring-rod F, having a reduced part that forms the pin *g*, as and for the purpose set forth.

2. The combination, with the rotary rod F, having cam *i*, of the block E, having projection *f'*, and pins *e*, arranged as and for the purpose specified.

GEO. H. FAY.

Witnesses:

JAS. MCCOY,

ED. A. WORRELL.