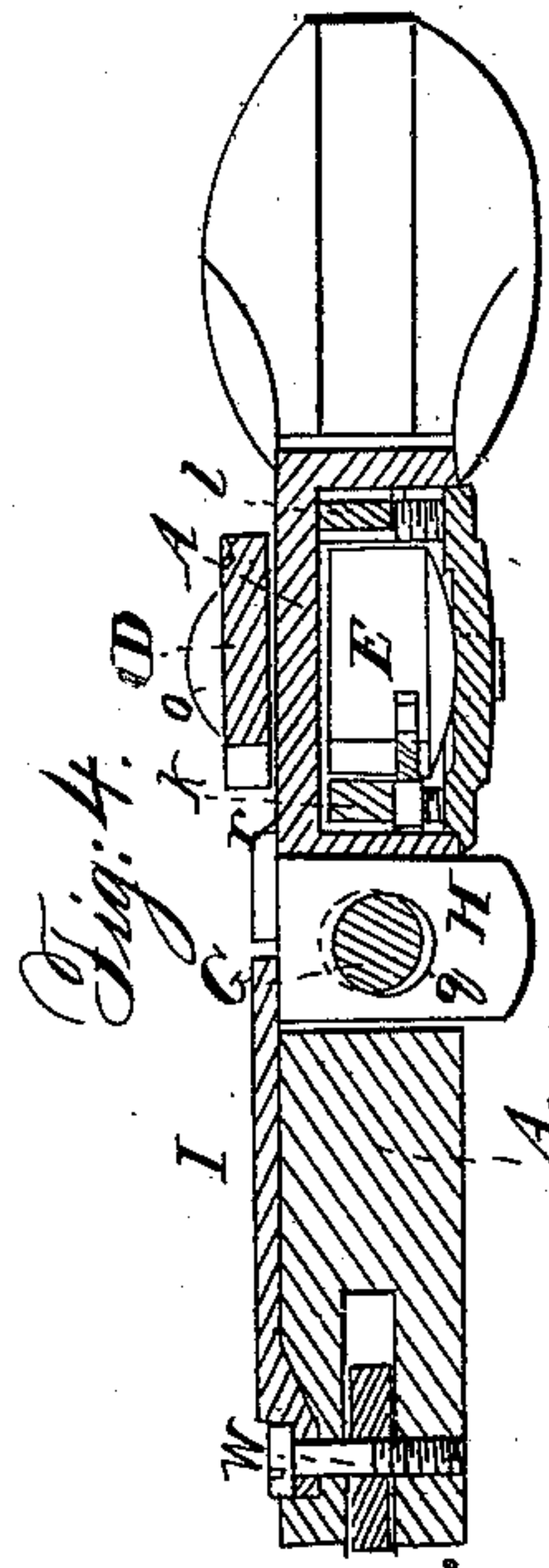
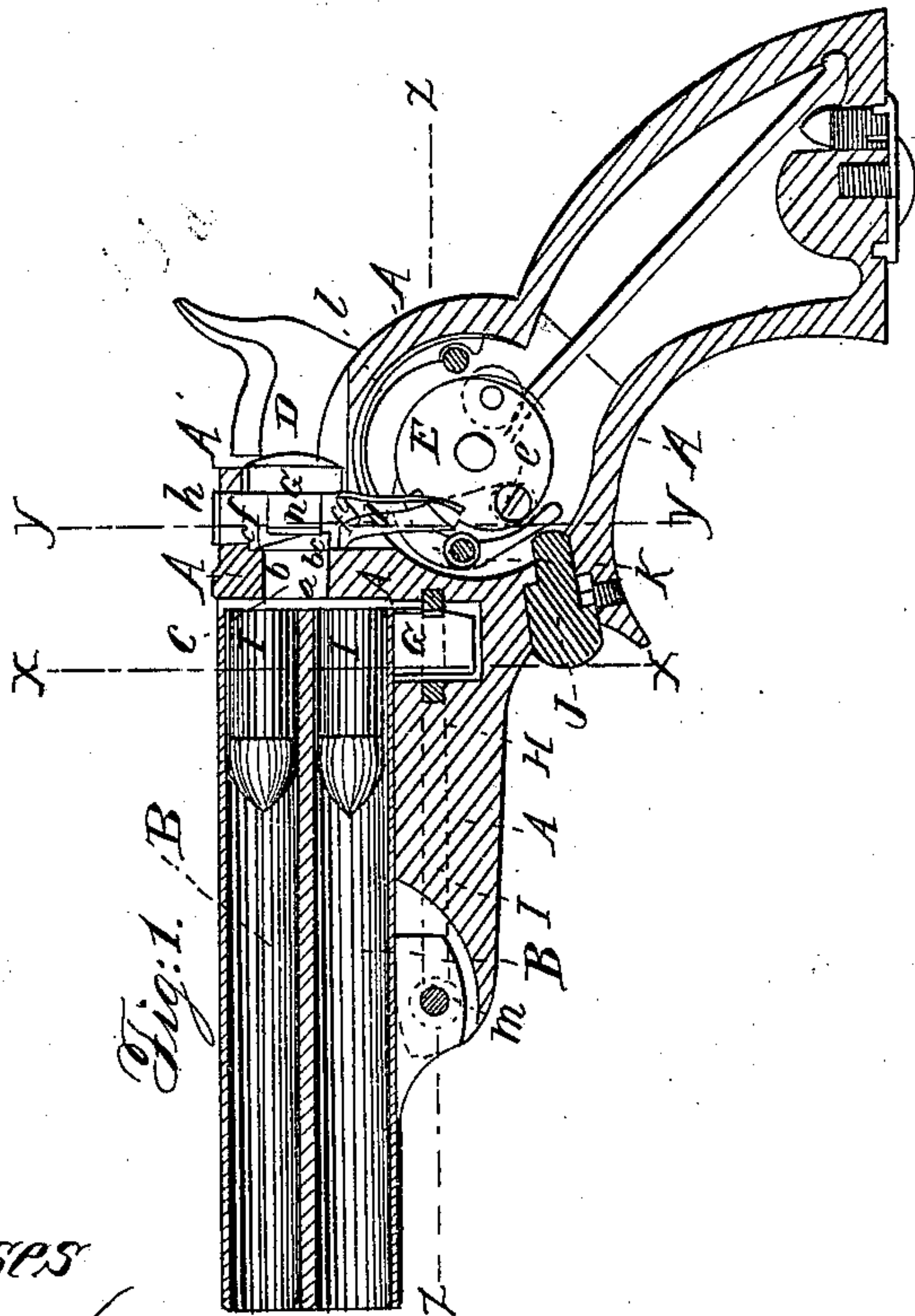
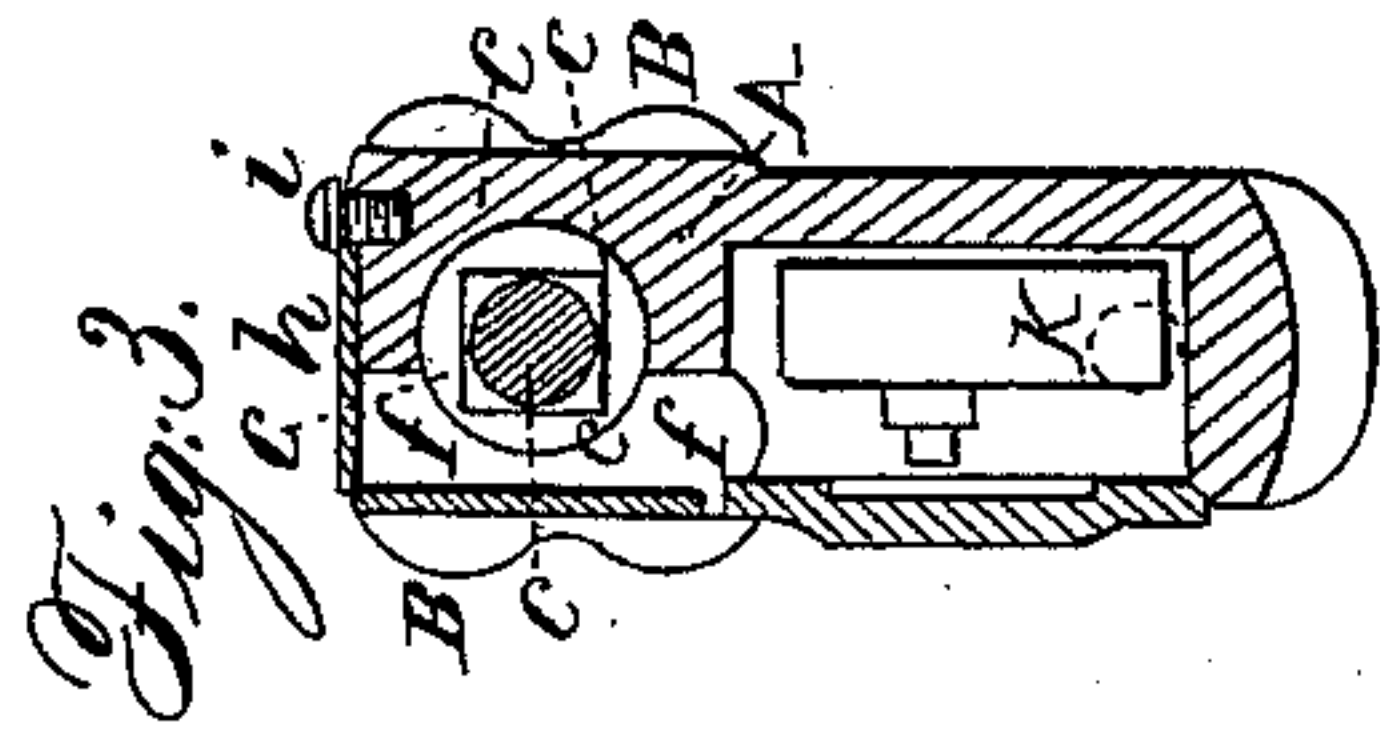


E. T. STARR.

Revolver.

No. 42,698.

Patented May 10, 1864.

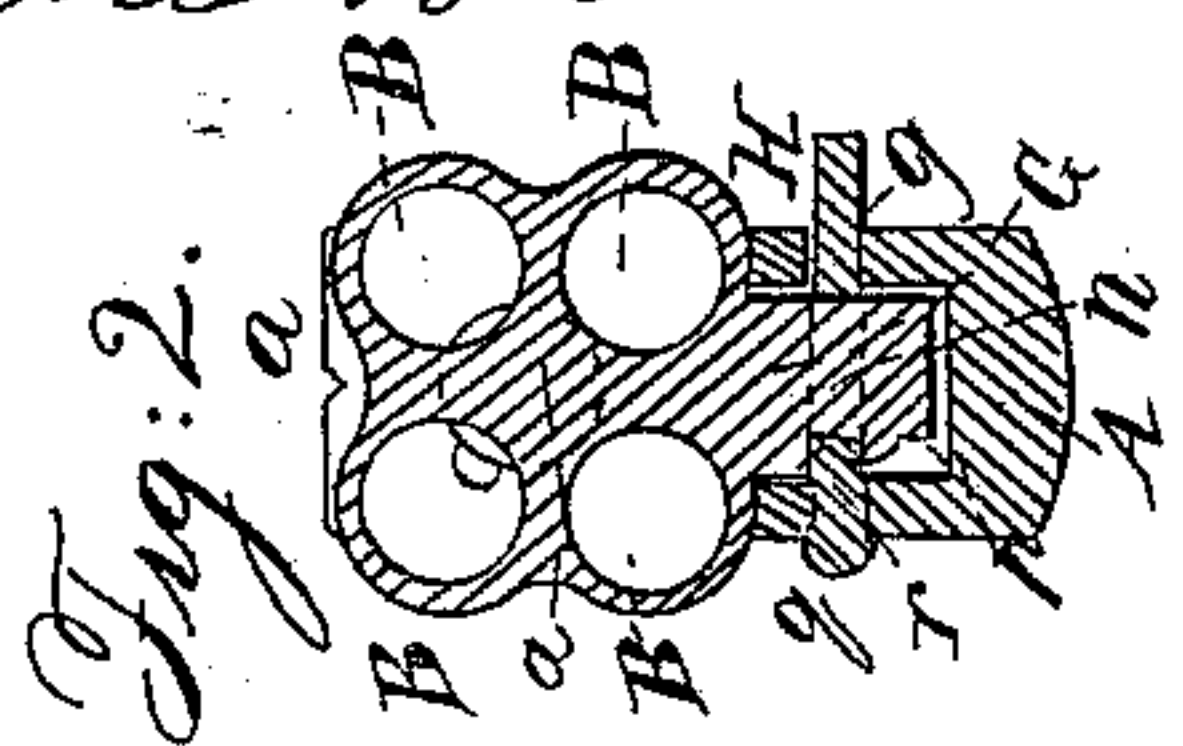


Witnesses

W. S. Parkidge
Lancelotti

Inventor

E. T. Starr



UNITED STATES PATENT OFFICE.

EBEN T. STARR, OF NEW YORK, N. Y.

IMPROVEMENT IN REPEATING FIRE-ARMS.

Specification forming part of Letters Patent No. 42,698, dated May 10, 1864.

To all whom it may concern:

Be it known that I, EBEN T. STARR, of the city, county, and State of New York, have invented certain new and useful Improvements in Fire-Arms; and I 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 central longitudinal vertical section of a pistol constructed according to my invention. Fig. 2 is a transverse vertical section of the same in the plane indicated by the line *x x* of Fig. 1. Fig. 3 is a transverse vertical section of the same in the plane indicated by the line *y y* of Fig. 1. Fig. 4 is a horizontal section of the same in the plane indicated by the line *z z* of Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The object of the first part of this invention is to enable the charges in several fixed barrels to be fired one at a time in succession by means of a single hammer without giving the hammer any other movements than those necessary for cocking and striking; and to this end it consists in the employment of a revolving and sliding plunger interposed between the hammer and the barrels to transmit the impact of the blow of the hammer to the percussion-priming employed for firing the charges.

It also consists in so combining the said revolving plunger with the hammer of the fire-arm that the necessary revolution of the said plunger may be effected by the act of cocking the hammer.

In carrying out the above feature of my invention it is desirable to load the several barrels at the breech with the kind of cartridges known as "fixed ammunition;" and to provide for this method of loading I attach the series of barrels to the stock or frame of the arm by a pin or hinge joint, which enables their rear ends to be raised up above the breech for the reception of the charges; and my invention further consists in an improved fastening for securing the barrels in the necessary fixed position for firing and for releasing them to permit of their being loaded.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A A' is the frame of the arm, and B B the barrels, of which there may be any suitable number arranged at equal distances from a common center and at equal distances apart, and either all bored out of the same piece of metal or made separately and firmly and securely connected together, but preferably made of one piece. The part A' of the frame in rear of the barrel, which constitutes the breech, is made thick enough to form a suitable bearing for the plunger C, which is interposed between the barrels and the hammer D. This plunger is so fitted to the said bearing that it is capable of revolving therein, as well as of sliding to a limited extent toward and from the barrels, and the said bearing is so arranged that the axis of the said plunger is parallel with the bores of the barrels when the latter are in position for firing, and is also nearly in line with the common center or axis around which the several barrels are arranged. The front end of the said plunger is made flat, with the exception of its having provided upon it a radially-arranged sharp-edged projecting nose, *a*, which is capable of being brought into contact with the projecting flange of the cartridge I in any one of the barrels by turning the plunger to a proper position, but incapable of striking more than one cartridge at a time. The said plunger is made with a shoulder, *b*, to prevent it from dropping through the front of the breech when the rear ends of the barrels are raised up for loading. A short distance in rear of the said shoulder there is provided upon the said plunger a circular concentric series of ratchet-teeth, *c c*, corresponding in number with the barrels, and in rear of these ratchet-teeth there is turned in it a recess or groove, *n*, for the reception of the pawl or dog *d*, which is connected with the tumbler E of the lock for the purpose of acting upon the said teeth to produce the revolution of the plunger by the act of cocking the hammer. The length of the plunger is such that when its face is flush with the face of the breech A' its rear end protrudes but slightly through the rear thereof, as shown in Fig. 1, and the rear end of the plunger is rounded, so that the hammer may strike directly upon its center.

The hammer D may be constructed and applied like almost any of the hammers used in either single-shot or revolving-cylinder fire-arms. The drawings represent what is known

as an "outside" hammer, and its head is bent over the top of the post of the frame in rear of the breech to strike upon the center of the plunger. The pawl *d* is fitted to a plunger in the tumbler, and connected therewith by a pin, *e*. To provide for the insertion and removal of the said dog, there is drilled vertically through the breech a hole, *f*, which partly intersects the opening bored horizontally through the breech to constitute the bearing for the plunger. This hole *f* (shown in Figs. 1 and 2) receives the upper part of the pawl *d* and of the spring *g*, which presses the said pawl toward the ratchet-teeth on the plunger, the said spring being attached to the back of the said dog and bearing against the back of the hole *f*. The said hole is covered up at the top by a plate, *h*, which is secured to the breech by a screw, *i*. The pawl *g* and its spring serve to hold the plunger in place, so that it may not drop out when the hammer is cocked.

The tumbler *E* may have any ordinary or suitable arrangement of trigger, sear, and sear-spring applied in connection with it.

The trigger *j*, sear *k*, and sear-spring *l* represented constitute parts of a separate invention of mine, and need no particular description here.

In cocking the hammer the pawl *d* is caused to act upon one of the ratchet-teeth and produce the revolution of the plunger to a sufficient extent to move the nose *a* of the latter from a position opposite one to a position opposite the next barrel, and when the hammer is let off by pressing the trigger it strikes upon the plunger and drives it forward against the cartridge in last-mentioned barrel, and so causes it to be fired, and by the repeated cocking and letting off of the hammer the plunger is caused to revolve from one barrel to another, and so to cause them to be severally fired in regular succession.

It is obvious that by a proper formation of the nose *a* on the hammer it may be adapted to the firing of percussion-caps applied to nipples on the rear ends of barrels constructed to load at the muzzle, and to the firing of any kind of percussion-primers that may be used in breech or muzzle loading fire-arms. I prefer, however, to construct the barrels for loading at the breech with fixed ammunition, and to provide for this mode of loading arrange them to work on a transverse pin, *m*, which attaches them to the front part of the frame *A*.

The mode of locking the barrels opposite to the breech in position for firing and unlocking them to permit their rear ends to be raised above the breech for loading is illustrated in Figs. 1, 2, and 4, and will now be described.

G is a stud secured to or formed in the same piece with the barrels at the bottom, and near the rear end thereof, and projecting downward perpendicular to the bores. This stud has a notch, *n*, in its right side for the reception of a portion of a flat bolt, *H*, which is arranged

to slide transversely through a slot in the frame, and the said stud is beveled on the same side, as shown at *p*, Fig. 2, to enable it to slip easily into a hole, *q*, provided in the said slot for its reception. I will here remark that in Fig. 2 the arm is reversed, the view being taken looking from the front. The said bolt *H* is provided on the right side of the frame *A* with a shoulder, *r*, to prevent it from slipping through the opposite side of the frame farther than is necessary to enable it to be pressed back by the thumb of the right hand while grasping the stock in that hand, and a spring, *I*, is secured to the right side of the frame to push the bolt in as far as permitted by the shoulder *r*. The hole *q* in the bolt is just large enough to permit the stud *G* to pass easily through it, and the said hole has its upper edge beveled, as shown at *q'* in Figs. 2 and 4, to correspond with the bevel *p* on the right-hand side of the stud.

To the right-hand side of the frame there is attached by the screw *m* a spring, *I*, which presses the bolt into the notch *n* of the stud *G* to lock the barrels in position for firing.

To prepare for loading, the bolt *H* is pressed back out of the notch *n* by the pressure of the thumb of the right hand, and the rear ends of the barrels are lifted up. The cartridges are then inserted in the barrels and the rear ends of the barrels are pressed down again into the frame, and the stud *G*, passing through the eye *q* of the bolt *H*, pushes the said bolt aside until the notch *n* arrives opposite to it, when the said bolt is pushed by the spring *I* into the said notch and caused to lock the barrels.

The advantage of this mode of locking the barrels consists in its arrangement to be operated by the thumb of the right hand while the arm is grasped in that hand in the manner in which it is held for firing.

The same mode of locking the barrels is applicable to a single-barreled breech-loading arm.

The bolt *H* may be made of the same piece with or otherwise attached to the spring *I*.

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

1. The sliding and rotating plunger *C*, provided with a nose *a*, ratchet-teeth *c*, and annular recess *n*, and fitted to work in the frame *A'*, in combination with the hole *f*, pawl *d*, spring *g*, tumbler *E*, and hammer *D*, when arranged to operate in the manner described.

2. The notched stud *G*, formed on the under side of the barrel *B*, at its rear end, sliding bolt *H*, and spring *I*, in combination with the tilting four-chambered barrel *B*, when arranged to operate in the manner and for the purposes described.

EBEN T. STARR.

Witnesses:

M. S. PARTRIDGE,
DANIEL ROBERTSON.