W. H. ELLIOT.

Revolver.

No. 51,440. Patented Dec. 12, 1865.

Fig: 1

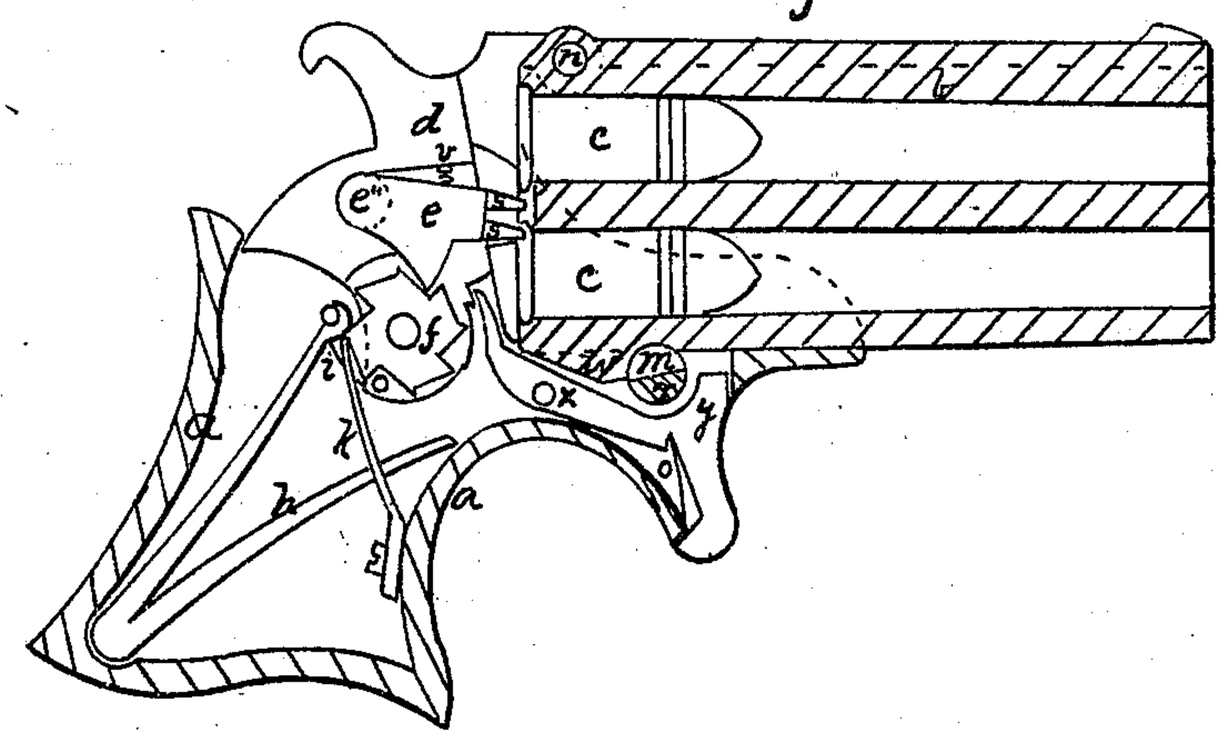


Fig: 2

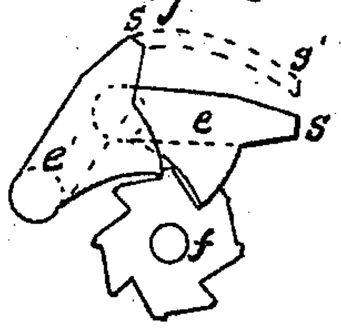


Fig: 3.

Fig: 4

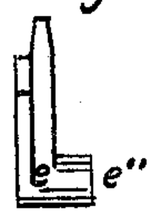
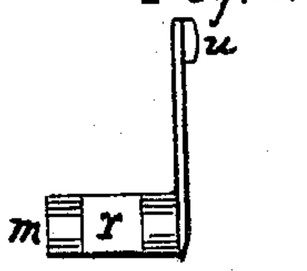


Fig: 5.



Witnesses.

Tho.s Richardson

R. In. Myers

Inventor.

W. H. Elliot

UNITED STATES PATENT OFFICE.

W. H. ELLIOT, OF ILION, NEW YORK.

IMPROVEMENT IN MANY-BARRELED FIRE-ARMS.

Specification forming part of Letters Patent No. **51,440**, dated December 12, 1865.

To all whom it may concern:

Be it known that I, W. H. ELLIOT, of Ilion, Herkimer county, and State of New York, have invented a new and Improved Method of Firing Repeating-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Similar letters indicate the same parts in all the figures.

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

The nature of my invention consists in causing the firing-point of a breech-loading arm to oscillate, so as to move it from one chamber or charge to the other, or to move it away from before a chamber and back again; and in so constructing the cam and firing-pin of said arm that they may also serve the purpose of ratchet and pawl to revolve the cam.

Figure 1 is a vertical section of my improved arm, showing the lock in elevation. Fig. 2 is an elevation of a cam and firing-pin, showing the latter device in two positions relative to the former. Fig. 3 is an elevation of the cam. Fig. 4 is an elevation of the firing-pin. Fig. 5 is an elevation of the key.

a is the frame; *b*, barrel; *c*, chambers with cartridges in them; *d*, hammer; *e*, firing-pin; *f*, cam; *g*, trigger; *h*, mainspring; *i*, stirrup; *k*, stop-spring of the cam; *m*, key for locking the barrel; *n*, joint which attaches the barrel to the frame; *o*, trigger-spring; *r*, portion of the key *m* cut away to allow the projection *w* on the barrel to pass the key; *s*, firing-point; *u*, arm of the key; *v*, spiral spring which forces the firing-pin against the cam; *x*, pivot of the trigger.

My invention relates to that kind of arm in which copper-shelled cartridges with fulminate in a projecting rim are employed, and its object is to provide a more practical way of giving motion to the firing-points.

In my improved arm the firing-pin and cam are placed in the side of the hammer, in suitable cuts provided for their reception, and the operation of the several parts is as follows: As the hammer is drawn back for the purpose of cocking, the stop-spring *k* catches upon one of the notches of the cam and prevents it from turning with the hammer, by which means the firing-pin is drawn backward over the cam till it falls into the next notch, as represented in Fig. 2. *e* represents the position of the firing-pin at the moment of firing the lower barrel, and *e'* represents it on being drawn to full-cock.

It may be observed that each alternate notch on the cam is a deep one, and that each other alternate notch is a shallow one. And when the firing-pin moves forward, resting in a deep notch, it strikes the lower charge, and when it moves forward in a shallow notch it is raised so as to strike the upper charge. In this way the firing-point is made to strike an upper and lower charge alternately. The dotted lines *s'* show the track of the firing-point when it moves forward, supported by a shallow notch.

When the hammer falls a projection on the lower side of the firing-pin acts as a pawl, catches a notch on the cam, and causes it to turn with the hammer upon the same pivot.

The firing-pin is pivoted to the hammer at *e''*, and is caused to oscillate vertically, so as to carry the firing-point from one chamber to another, or so as to carry it away from a chamber and back again.

When a firing-point for each barrel is employed, as represented in Fig. 1, it is necessary to give said points only a slight motion, whatever the distance between the two cartridges may be.

By employing a firing-pin on each side of the hammer four barrels may be fired, instead of the two herein shown; in that case both pins may be operated by one cam, touching it at different points, or two cams, one upon each side of the hammer, may be employed. These must be fastened together through the center, so as to revolve together.

To open the chambers for the purpose of charging, the round key, Fig. 5, is revolved, by means of the arm *w*, till its flat side *r* is turned toward the barrel, when the projection on the lower side of the barrel will pass through the cut *r*. The barrel may then be turned upon the hinge *n*, for the purpose of opening the breech. When the arm has been charged and the breech closed the barrel may be fastened by turning the key *m* so as to bring its round side before the projection *w*.

Having described my improved arm, what

I claim as my invention, and desire to have secured to me by Letters Patent of the United States, is—

1. An oscillating firing-pin, when pivoted to the hammer and operated by a cam, substantially as shown and described.

2. So constructing and operating the cam and firing-pin that they shall serve the purpose of ratchet and pawl, substantially as and for the purpose herein described.

W. H. ELLIOT.

Witnesses:
THOS. RICHARDSON,
R. M. MYERS.