W. H. ELLIOT.

Revolver.

No. 42,648. Patented May 10, 1864.

Fig. 1.

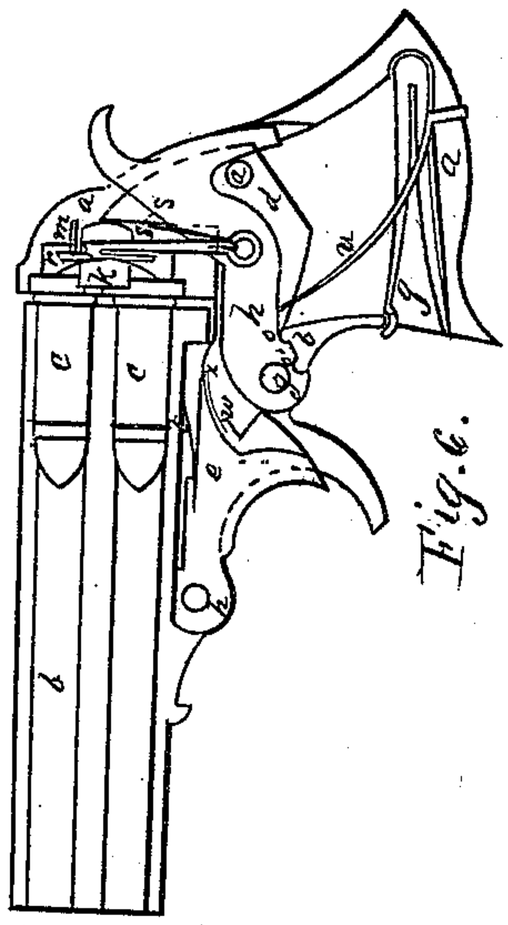

Fig. 2.

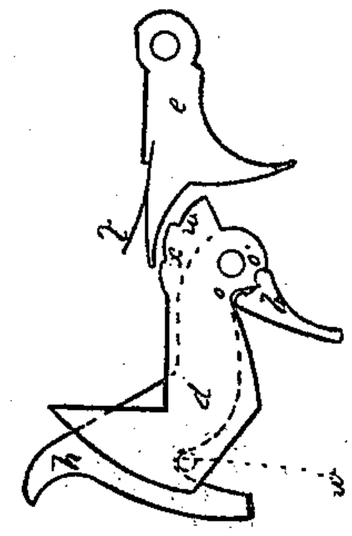

Fig. 3.

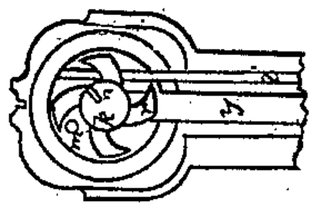

Fig. 4.

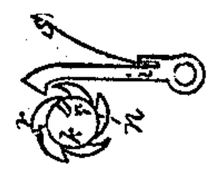

Fig. 5.

Fig. 6.

Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

WM. H. ELLIOT, OF PLATTSBURG, NEW YORK.

IMPROVEMENT IN MANY-BARRELED FIRE-ARMS.

Specification forming part of Letters Patent No. **42,648**, dated May 10, 1864.

To all whom it may concern:

Be it known that I, WM. H. ELLIOT, of Plattsburg, in the county of Clinton, in the State of New York, have invented a new and Improved Repeating-Pistol; 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 of reference indicate the same devices 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 so constructing the several parts of the lock that the hammer, after falling upon the priming, is thrown back a little and caught by the sear or trigger at half-cock.

It also consists in the employment of a lever for cocking the hammer and for revolving the firing-point, said lever being operated by a thumb-piece which is thrown out of the way of the hand after cocking by a spring; and it further consists in the employment of a stop-pin to prevent the ratch from being turned backward by the action of the revolving pawl.

Figure 1 is a vertical section of my improved pistol, showing the lock and revolving devices in elevation. Fig. 2 is an elevation of the hammer, lever, trigger, and stirrup, showing these devices in the exact position they occupy in relation to each other at the moment the firing-point explodes the charge. Fig. 3 is a section of the frame immediately behind the breech-plate, showing the firing-pin in its place. Fig. 4 is an elevation of a firing-pin and revolving pawl, showing a spur-ratch upon the pin. Fig. 5 is an elevation of a firing-pin spring. Fig. 6 is a side elevation of a firing-pin and spring.

a a are frames; *b*, barrels; *c*, cartridges; *d*, hammer; *e*, trigger; *f*, stirrup; *g*, mainspring; *h*, lever; *i*, revolving pawl; *i'*, cut in the frame for the revolving pawl; *k*, firing-pin; *l*, firing-pin spring; *m*, stop-pin; *n*, firing-point; *o*, main seat of the stirrup in the hammer; *o'*, stop-seat; *p*, pivot by which the barrel is jointed to the frame; *q*, pivot of hammer and lever; *r*, ratchet of firing-pin; *s*, revolving-pawl spring; *t*, trigger-spring; *u*, pin upon which the lever acts to depress the hammer; *v*, lever-spring; *w*, full-cock notch on tumbler; *x*, half-cock notch; *y*, cut in the frame for the hammer.

The operation of my improved repeating-pistol is as follows: By depressing lever *h* it comes in contact with pin *w* and carries the hammer with it till the sear or trigger falls into full-cock notch *w* and holds the hammer at full-cock. By releasing the lever from the pressure of the thumb the spring *v* causes it to return to the position represented in Fig. 1. The pistol is now cocked and ready to be fired. This is done by pressure upon the trigger in the usual way. At the moment the hammer falls upon the cartridge the stirrup ceases to act upon its main seat *o*, and the whole force of the mainspring, resting upon stop-seat *o'*, causes the hammer to fall back a little, as represented in Fig. 1, till both points of the stirrup find rest in their respective seats. In this position the sear readily falls into the half-cock notch *x* in the tumbler or hammer, and thus prevents the hammer from being driven forward by accident so as to explode a charge, and at the same time permits the firing-point to fall back from the head of the cartridge, so that either may be moved without interference from the other. Revolving pawl *i*, being attached to the lever, is carried down with it, thus causing the firing-pin to revolve one notch, bringing the firing-point over the next charge. As the firing-pin revolves the notches or teeth *r*, being suitably beveled off on the forward edge rise, and pass over the pin *m* and fall down behind it, being forced down by spring *l*. Then as the lever rises by the power of spring *v* the pawl *i* is carried up and takes hold of a new notch upon the firing-pin, which is prevented from being turned backward when the pawl passes upward by stop-pin *m*.

Fig. 4 represents a spur-ratch on the firing-pin with the pawl acting over the points of the teeth. In Fig. 1 the pawl acts upon the sides of the teeth. A spur-ratch may be used practically when five or more teeth are required.

The thumb-piece of the lever occupies the same position in relation to the handle of the pistol that it would if it were attached to the hammer; but being attached to the lever, it is not required to remain depressed while the hammer stands at full-cock, but is thrown up

out of the way of the hand as soon as released from the pressure of the thumb. Thus the employment of an independent lever for cocking which is thrown upward or forward by a spring is a very great advantage in pistols when a thumb-piece upon the hammer would interfere with the position of the hand.

In all pocket-pistols compactness is very much to be desired, and this end is attained in a very great degree by so constructing and arranging the hammer, as shown in the drawings, that it shall swing within the frame or under the hand while it is cocked by a lever, which is thrown forward out of the way of the hand while the hammer remains at full-cock. Even in pistols in which the hammer does not swing within the frame or under the hand, a much better hold may be obtained for the hand when the hammer is cocked by a lever which operates as before described. Less injury is done to the cocking-pawl in working the arm by attaching it to the cocking lever instead of the hammer, as the motion of the hammer is so rapid and it moves with so much force that the revolving devices are often injured by it, while the motion of the cocking-lever is governed by the thumb entirely.

By so constructing the lock that the hammer is thrown back after falling, so as to catch the sear into the half-cock notch, several important points are attained. When a hammer and sear so operating are employed with chambers that are bored through and charged at their rear end with fixed ammunition the cartridge-shell is relieved of the pressure of the firing-point, so that when the chamber is opened by moving it laterally away from the breech-plate the face of the firing-point is not dragged over the rear end of the cartridge, whether said firing-point is a part of the hammer or a separate piece, and in working those arms which have the hammer exposed, as is the case with nearly all arms, any pressure upon the hammer while in the act of opening the chamber could not interfere with that operation. A blow upon the hammer or dropping the arm could not discharge it, as the hammer, upon being snapped, at once assumes the half-cocked position, and rests in no other position except at full-cock. When a firing-pin is employed it is necessary, in order to obtain the full advantage of this invention, that the firing-pin have a spring to throw it back from the cartridge. This spring in my improved pistol serves the double purpose of throwing the ratch against the stop-pin *m* and of throwing the firing-point back from the head of the cartridge.

Having described my invention, what I desire to have secured to me by Letters Patent of the United States is—

1. So constructing and arranging the sear and tumbler in relation to each other that when the hammer is thrown back a little by the power of the lock after falling upon the charge the sear shall fall into the half-cock notch, as and for the purpose herein specified.

2. The employment of a cocking-lever, in combination with the hammer and firing-point, for the purpose of giving motion to the two latter devices, as specified.

3. The employment of spring *v* for throwing the lever out of the way of the hand while the hammer remains at full-cock, when said lever is so arranged that when it is depressed its thumb-piece occupies a portion of the handle of the pistol, as herein shown.

WM. H. ELLIOT.

Witnesses:
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C. ROCHE.