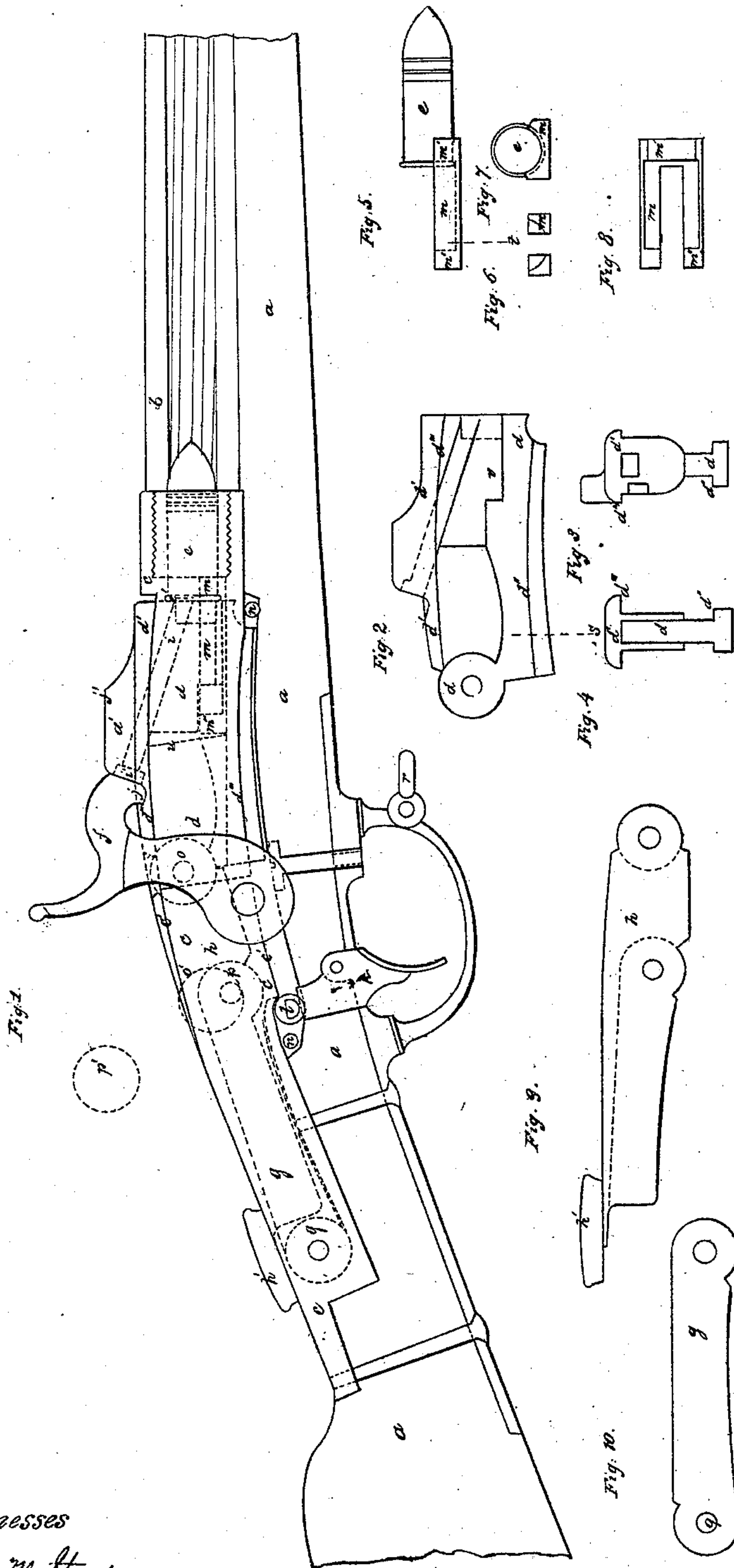


W. H. ELLIOT.  
Breech-Loading Fire-Arm.

No 39,136

Patented July 7 1863.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 39,136, dated July 7, 1863; antedated January 23, 1863.

*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 Breech-Loading Fire-Arm; 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 the employment, combination, and arrangement of certain devices by which I produce a breech-loading fire-arm which is more efficient, more convenient, more compact, and cheaper than any heretofore used, and by which I can conveniently alter a common muzzle-loading arm to a breech-loader.

Figure 1 represents my improved arm and shows the stock and barrel in section, and the breech-piece with the moving parts in elevation. Fig. 2 is a side elevation of the sliding breech. Fig. 3 is an end elevation of the same. Fig. 4 is a section of the same at S. Fig. 5 is a side elevation of the clutch and cartridge. Fig. 6 is a section of the same at t. Fig. 7 is an end elevation of the same. Fig. 8 is a top view of the same. Fig. 9 is a side elevation of the lever. Fig. 10 is a side elevation of the link.

*a* is the stock; *b*, barrel; *c*, breech-piece; *c'*, curved edges; *d*, sliding breech; *d'*, cap of the same; *d''*, shoulder bearing upon the lower curved edge of the breech-piece; *d'''*, lower side of cap bearing upon the upper curved edge of the breech-pin; *e*, cartridge; *e'*, rim of the same; *f*, hammer; *g*, link; *h*, lever; *h'*, knob of the same; *i*, firing-pin; *j*, point upon the hammer, which rests upon the cap *d* at *j'* while placing the cartridge in the loading-chamber; *k*, trigger; *l*, arm of sear; *m*, clutch for drawing the cartridge; *m'*, catch on the same, which takes hold of the rim of the cartridge; *n*, holes for lock-screws; *o*, joint attaching the sliding breech to the lever; *o'*, position of the same when the

lever is raised; *p*, joint attaching the lever to the link; *p'*, position of the same when the lever is raised; *q*, joint attaching the same to the breech-piece; *r*, swivel; *u*, dotted line showing the position of the forward end of the sliding breech when drawn back for the purpose of charging the arm; *m''*, projection upon the upper side of the clutch; *v*, projection upon the lower side of cap *d'*. By raising the lever till the joint *o* comes to *o'* and joint *p* to *p'*, the front of the sliding breech is drawn back to dotted line *u*, thus leaving an open space in the breech-piece between this line and the head of the cartridge. This open space I call the "loading-chamber," as the cartridge is first laid into it before it is pushed forward into the barrel-chamber, where it is exploded.

The process of loading and firing this arm is as follows: Take hold of knob *h'* between the thumb and finger of the right hand and raise the lever till the loading-chamber is fully opened. Place a cartridge in it, and then bring the lever back to the position represented in the drawings, Fig. 1, by which process the cartridge will be driven into the barrel-chamber. As the sliding breech is drawn backward by the lever, the hammer is carried back also, till its nose rises above the top of cap *d'*, when it slides along upon the top of this cap and rests upon it at *j'*, holding all the parts stationary while the shell is thrown out and a new cartridge placed in the loading-chamber. As the sliding breech is pushed forward again, the hammer draws off from the top of the cap *d'* and falls a little till it catches upon the half-cock notch of the tumbler of the lock. By this operation the hammer is left after loading in the safest position to be carried and in the most convenient position to be fired. After loading, the arm may be cocked and fired in the same manner that other arms are.

By reference to the drawings, it may be seen that the breech-piece between the barrel-chamber and the arm of the sear, at *l*, is curved sufficiently to conform to the shape of the breech of the arm, and that the shoulders *d''* and *d'''* are also curved to fit the breech-piece. These shoulders slide upon the upper and lower side of the breech-piece at *c'*. By employing this curved form of the breech piece



the joint *o* or rear end of the sliding breech moves in a direction almost parallel to a line drawn through the center of the joints *o*, *p*, and *q*, so that the action of the lever upon the sliding breech is direct, or nearly so, which would not be the case if the sliding breech moved back and forward in a direction parallel with the bore of the barrel.

The lever is pivoted to the sliding breech at *o* and to the link at *p*, being arranged between and pivoted to both the sliding breech and link, and the link is pivoted to the lever at *p* and to the breech-piece at *q*, being located between the lever and breech-piece by this arrangement of the sliding breech, lever, link, and breech-piece in relation to each other and their position in relation to the arm.

Some important advantages are gained, such as placing the lever and link directly in the rear of the sliding breech upon the top of the arm, and placing the knob upon and raising the rear end of the lever instead of the forward end; and when these devices so arranged are employed in connection with a sliding breech which moves back and forward on a curve, as before specified, still further advantages are gained, as the sliding breech is confined within the contour of the arm. It is therefore less exposed to injury, and the arm is less distorted while loading, and the moving parts are more compact and stronger than they could be made if the sliding breech moved in a line parallel to the bore of the barrel.

Projection *v* upon the lower side of cap *d'*, when it is drawn back, strikes against projection *m''*, upon the upper side of the clutch *m*, and carries it back. When the cap or sliding breech passes forward again, it strikes the forward end of the clutch and carries it forward, as represented in Fig. 1. By this means the clutch is made to move back and forth with the sliding breech; but as projection *v* is not long enough to fill the space

between *m''* and *m'*, the clutch does not move so far as the sliding breech; still it moves far enough forward to throw the catch *m'* into the barrel-chamber, so as to form a part of the bore of the same, and not so far back but that the rim of the cartridge is sure to fall behind the clutch instead of upon it or forward of it, yet far enough back to draw the cartridge-shell from the barrel-chamber. The catch *m'* is a raised portion of the clutch, which partly surrounds the cartridge immediately forward of the rim, and when the clutch is drawn backward by projection *v* the catch takes hold of the rim of the cartridge-shell and draws it out of the barrel-chamber into the loading-chamber, from which it is thrown out by turning the arm upon one side. When the arm is charged, the cartridge is laid into the catch, which so far encompasses the cartridge-shell that, in being drawn out of the chamber, it cannot rise sufficiently to get clear of the catch, thus making the drawing of the shell a perfectly sure one.

Having fully described my invention, what I wish to have secured to me by Letters Patent is, viz:

1. The use of the sliding breech *d*, lever *h*, and link *g*, when these devices are arranged and employed substantially as herein specified in relation to each other and to the rest of the arm.

2. The use of the sliding breech *d*, lever *h*, and link *g*, when these devices are arranged and employed substantially as specified in relation to each other, and when the sliding breech moves back and forward upon shoulders or guides, which are so curved as to conform to the shape of the arm, as set forth.

WM. H. ELLIOT.

Witnesses:

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