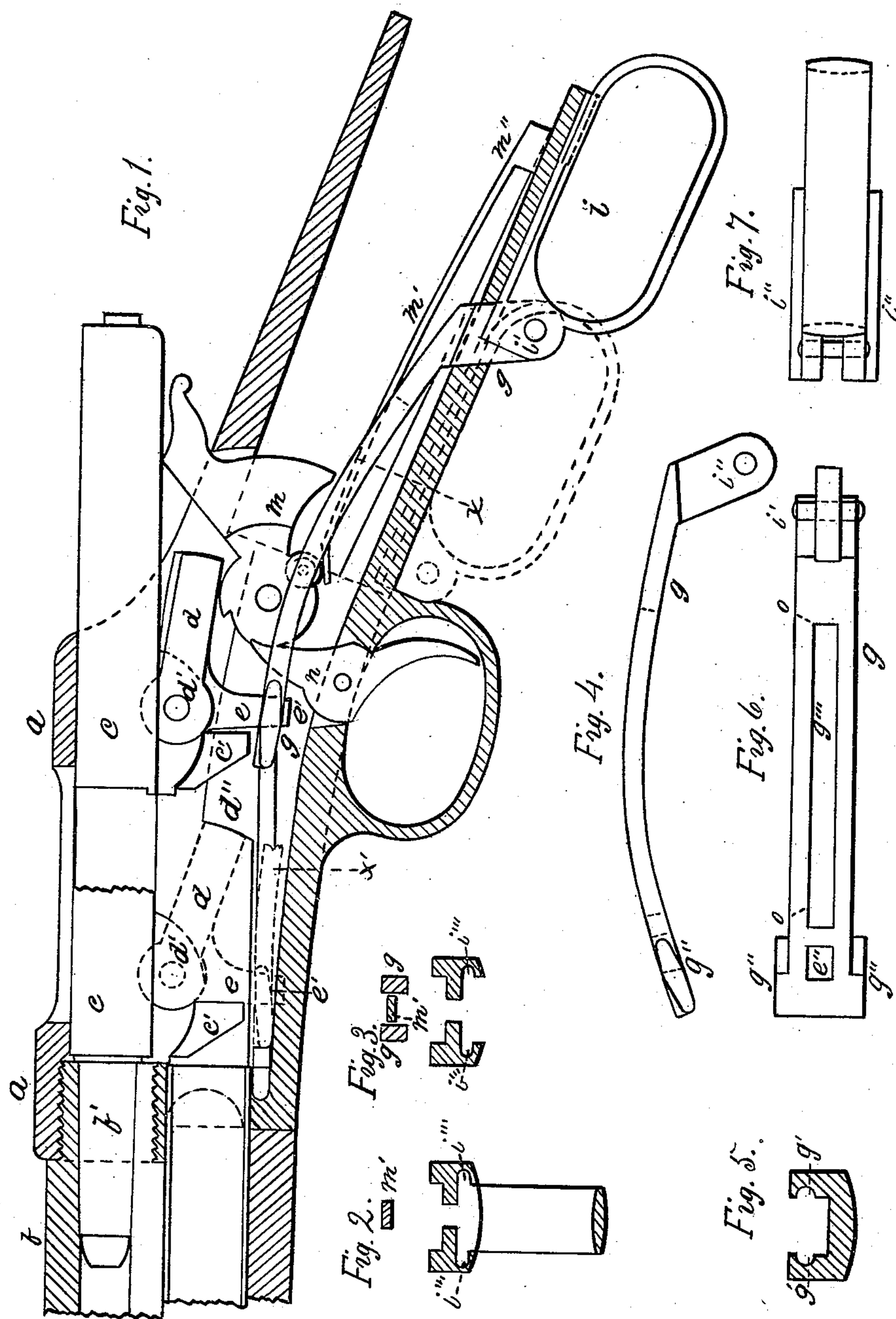


(No Model.)

W. H. ELLIOT.
MAGAZINE FIRE ARM.

No. 377,549.

Patented Feb. 7, 1888.



WITNESSES:

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WILLIAM H. ELLIOT, OF BROOKLYN, NEW YORK.

MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 377,549, dated February 7, 1888.

Application filed December 2, 1887. Serial No. 256,820. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ELLIOT, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Breech-Loading Fire-Arm, of which the following is a specification.

The object and nature of my invention may be described as follows:

The object of my invention is to provide a thoroughly practicable breech-loading fire-arm which shall be convenient and simple in its operation and manipulation; and the nature of my invention consists in the novel assemblage of certain co-operative devices, which are fully set forth in the following specification and claims. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the receiver and guard-strap of the arm, showing the limb-work in elevation. Fig. 2 is a vertical cross-section of the sliding or reciprocating handle, guard-strap, and mainspring at open lines *x*, Fig. 1, when the arm is closed. Fig. 3 is a vertical cross-section of the tang, connecting-strap, and mainspring at the same point when the arm is open. Fig. 4 is an elevation of the connecting-strap. Fig. 5 is a cross-section of the tang at open lines *x'*, Fig. 1. Fig. 6 is a bottom view of the connecting-strap. Fig. 7 is a bottom view of the sliding handle.

My invention is particularly applicable to the arm shown in my patent of December 30, 1884, and it also refers to the arm patented by me May 29, 1883, as a means of changing the manipulation of the arm shown in said last-mentioned patent from the use of a sliding or reciprocating handle forward of the receiver operated by the left hand to the use of a sliding or reciprocating handle under the wrist of the arm operated by the right hand.

With the exception of the sliding handle and connecting-strap, all parts of the arm may be used without alteration in changing the manipulation of the arm from the left to the right hand, and for a clearer understanding of my invention I desire to invite special attention to the two above-mentioned patents. As shown in both of said patents, my improved arm has a bolt, *c*, for opening and closing the

chamber, which moves in a line with the barrel, and is provided with a brace, *d*, for resisting the recoil, which is pivoted to the forward end of the bolt at *d'*. The rear end of this brace at the moment of the discharge rests against suitably-constructed recoil-shoulders *d''* within the receiver.

The brace is provided with an operating-arm, *e*, which extends downward and passes through or is otherwise joined to the forward end of the connecting-strap *g* at *e'*. This strap also has ribs *g''* at its forward end, which slide in grooves *g'* in the guard-strap or other convenient device, whereby the forward end of the connecting-strap is guided independently of the bolt. The rear end of the connecting-strap is pivoted at *i'* to the forward end of the sliding handle *i*. This handle is located in the rear of the stationary trigger-guard, and is provided with ribs *i''*, one on each side, which slide in grooves *i'''* in the rear portion of the guard-strap or other convenient device.

In my improved arm the connecting-strap at its rear end rises so high in its reciprocating movement, as seen in Fig. 1, that it becomes necessary, for the purpose of providing room for a full-sized practicable lock, to cut away the center, or the center and one side of the connecting-strap, to form a recess, in or through which the hammer *m* and the mainspring *m'* may perform their functions upon each other when the arm is open, while at the same time the trigger *n* passes up through said recess and acts upon the hammer above the connecting-strap.

The mainspring *m'* is screwed to the upper side of the lower tang at *m''*, in the usual way, and, extending forward, passes with the hammer down into or through the recess *g'''*, as shown in Fig. 1, these devices being somewhat reduced in thickness to avoid weakening the connecting-strap. By this arrangement of parts the hammer, mainspring, and trigger occupy their usual place in the center of the arm, and are provided with all necessary space for a practicable form of construction and for the movement of the several parts.

To form the recess *g'''* the central portion of the connecting-strap may be cut away, as shown in Fig. 6; or the central portion and the whole of one side may be removed to provide

the necessary space, as indicated by open lines *o*. Still the recess in and through which the hammer, mainspring, and trigger operate will remain, and the connecting-strap would then perform its functions of connecting the arm of the brace with the sliding handle equally well.

The joint or connection between the forward end of the connecting-strap and lower end of the arm *e'* is made simply by extending the arm loosely down through an opening of suitable size and shape, as seen at *e''* in the forward end of the strap, whereby both the bolt and connecting-strap are guided in their parallel movement by means independent of each other.

The sliding or reciprocating handle *i* being located on the under side of the wrist of the arm and guided in a direction substantially parallel therewith by suitable grooves, any force applied to the handle to open or close the arm has a tendency to lift or depress the forward end of the connecting-strap; but as this strap is guided in a direction substantially parallel with the barrel at its forward end by grooves *g'*, and is joined to the arm of the brace by the loose or slip joint before described, force applied to the handle to open or close the arm has no tendency to raise or depress the forward end of the bolt, whereby a large portion of the friction of manipulating the arm is avoided.

The operation of my improved arm is as follows: A backward movement of the handle first raises the rear end of the brace *d* above the recoil-shoulders, and then draws the bolt back, bringing all the parts to the open position shown in Fig. 1. The backward movement of the bolt brings the hammer to full-cock. The arm is now ready for the insertion of a cartridge either by hand or from the magazine, as shown in the before-mentioned patent of May 29, 1883. Reversing the movement of the handle carries the bolt forward and the cartridge into the chamber of the barrel. When the bolt ceases to move forward, the forward movement of the handle, being continued, brings the brace down in front of the recoil-shoulders and the reciprocating handle to its forward position, as indicated by open lines, Fig. 1. The arm is now ready to be fired.

Having described my invention, what I de-

sire to have secured to me by Letters Patent of the United States is—

1. In a breech-loading fire-arm, the combination of devices substantially as follows: a bolt for closing the chamber, a brace for locking said bolt, pivoted at its forward end to the bolt and provided with an operating-arm, a connecting-strap suitably guided at its forward end by means independent of the bolt in a right line substantially parallel with the barrel, and joined to the operating-arm of the brace by a loose joint constructed substantially as described, a stationary trigger-guard, and a sliding handle guided by suitable means in a right line substantially parallel with the wrist of the arm and pivotally joined at the forward to the rear end of the connecting-strap, as specified.

2. In a breech-loading fire arm, the combination of devices substantially as follows: a bolt for closing the chamber, a brace for locking said bolt, pivoted at its forward end to the bolt and provided with an operating-arm, a connecting-strap joined at its forward end to the free end of the operating-arm of the brace and at its rear end to the forward end of the reciprocating handle *i*, a hammer, a trigger, and a mainspring, said strap being constructed with a recess, *m'''*, into or through which the forward end of the mainspring and the lower portion of the hammer pass as the strap is drawn back in the process of opening the arm, substantially as and for the purpose set forth.

3. In a breech-loading fire arm, the combination of devices substantially as follows: a bolt for closing the chamber, a brace for locking said bolt, pivoted at its forward end to the bolt and provided with an operating-arm, a connecting-strap joined at its forward end to the free end of the operating-arm of the brace and at its rear end to the forward end of the reciprocating handle *i*, a hammer and mainspring which act upon each other at a point below the top of the connecting-strap when the arm is open, and a trigger which acts upon the hammer above the top of the connecting-strap, substantially as specified.

WM. H. ELLIOT.

Witnesses:

S. LOWELL ELLIOT,
M. S. ELLIOT.