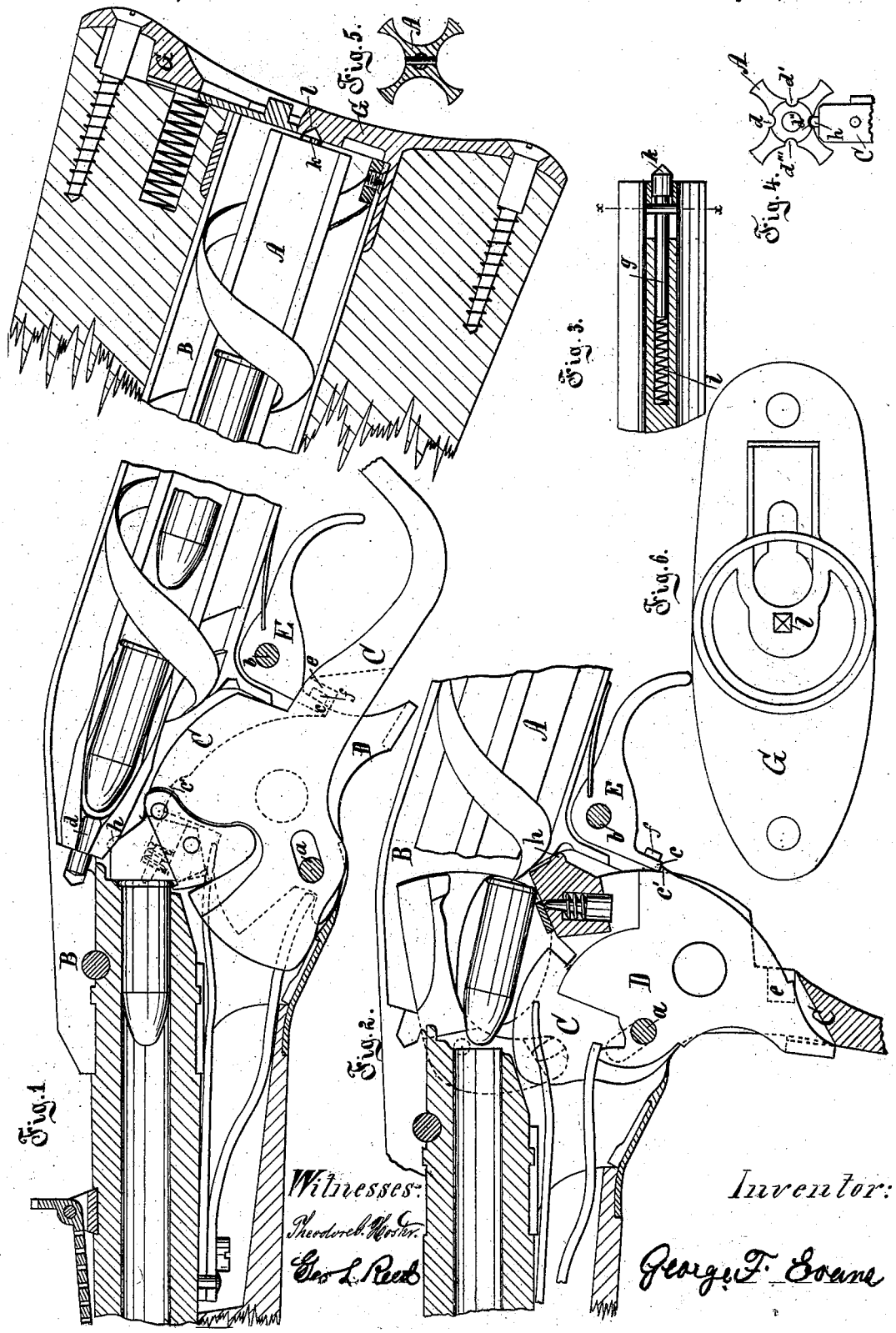
G. F. EVANS.

MAGAZINE FIRE-ARMS.

No. 192,749. Patented July 3, 1877.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE F. EVANS, OF MECHANICS FALLS, MAINE.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **192,749**, dated July 3, 1877; application filed April 17, 1877.

To all whom it may concern:

Be it known that I, GEORGE F. EVANS, of Mechanics Falls, Androscoggin county, State of Maine, have invented certain Improvements in Magazine Fire-Arms, of which the following is a specification, reference being had to the accompanying drawing, forming part of the same.

Figure 1 is a vertical section of the stock, lock, and breech end of the barrel of the fire-arm containing my improvement. Fig. 2 is a similar view, showing the breech-block and connected parts in a different position. Fig. 3 is a central longitudinal section of the rear end of the grooved or fluted cylinder that is fitted to revolve within the cartridge chamber or magazine in the stock, by means of which, in conjunction with a spiral coil surrounding the cylinder, the cartridges are moved forward from the butt of the stock to the breech of the barrel. Fig. 4 is a forward-end view of the said grooved cylinder, and a detached upper portion of the breech-block. Fig. 5 is a cross-section of said cylinder on line *x x*, Fig. 3. Fig. 6 is a face view of the butt-end of the stock.

This invention relates to a magazine fire-arm, for certain parts of which Letters Patent have heretofore been granted to Warren A. Evans—namely, Patent No. 119,020, dated September 19, 1871, and No. 84,685, dated December 8, 1868.

In the fire-arm covered by the patents referred to, the cartridges are held in a magazine or chamber in the stock. They are introduced into said chamber through an opening in the butt of the stock, and received in grooves formed in a cylinder fitted to revolve within said chamber, and are carried forward to the barrel by a fixed spiral coil, within which the said cylinder revolves. This cylinder and spiral are the subjects of the before-named Patent No. 84,685. Certain peculiarities of the lock form the subject-matter of the said Patent No. 119,020. The devices and combinations herein described and claimed are improvements upon those described in the said patents.

These improvements relate specially, first, to devices for locking the revolving fluted cylinder in position when the breech of the gun is closed; second, to devices whereby the downward and forward movement of the breech-block (with its contained hammer) in opening the breech is stopped just where the trigger falls into the cocking-notch of the hammer.

A is the fluted cylinder, fitted to revolve within the chamber or magazine B in the gun-stock. C is the swinging breech-block, and D the hammer, which works in a recess in the breech-block, and swings upon a pin, *a*, therein. E is the trigger, pivoted at *b* to the stock, and C′ is the cocking-notch in the hammer, and *c* is the nose of the trigger, which engages the said notch. This nose of the trigger passes into the rear end of the recess in the breech-block, in the rear wall of which there is a notch, *e*, as shown in dotted lines in Fig. 1. Upon the rear face of the nose of the trigger is a stud or projection, *f*, which, when the trigger is in its normal position, will just clear the rear wall of the recess in the breech-block, when the latter is swung up in the act of closing the breech. Then, the breech being closed, when the trigger is pulled, the said stud *f* passes back into the notch *e*, and thus effectually locks the breech-block in position at the instant of firing. If an attempt is made to pull the trigger before the breech-block is carried up, so as to close the gun, the stud *f* will strike against the end of the recess above the notch *e*, and thereby be prevented from leaving the cocking-notch in the hammer.

The above-described construction of the hammer, breech-block, and trigger, whereby the firing of the arm is prevented before the breech is securely closed, is recommended, as it prevents premature discharge of the arm.

d d′ d″ d‴ are notches made in the core of the fluted cylinder A, just at its forward end, as shown in Fig. 4, and *h* is a projection on the upper surface of the forward end of the breech-block, which, when the said block is in position to close the gun, as shown in Fig. 1, engages with the one of said notches *d* which at the moment is on the under side of the cylinder A, and thereby the said cylinder is locked in position whenever the gun is closed. At the rear end of this cylinder there is also a locking or detaining device, consisting of a sliding pin, *g*, Fig. 3, inserted in a

recess in the cylinder A, and pressed outward by a spiral spring, *i*, as seen plainly in Fig. 3. This pin is prevented from turning in its recess by a pin or feather working in a slot or slots, or by any other suitable device. The rear end *k* of the pin is square and tapered pyramidally bluntly to a point, the tapering portion projecting beyond the end of the cylinder into a correspondingly-shaped cavity, *l*, made in the heel-plate G, Fig. 6. When force is applied to the fluted cylinder to revolve it this pin, as is evident, acts to resist such motion; but if the force is sufficient the pressure of the faces of the tapering end of the pin *g'* against the inclined surfaces of the cavity *l* will force the pin back out of the cavity against the pressure of the spiral spring *i*, and thus permit the cylinder to revolve a quarter-turn, when the pin will again be thrown out into the cavity *l*, and detain the cylinder until force to revolve it is again employed.

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

1. The combination, in a magazine-gun, of the cylinder A, provided with the notches *d d' d'' d'''*, and the breech-block C, provided with the projection *h*, constructed to operate as and for the purpose described.

2. The cylinder A, the pin *g*, provided with the square tapering end *k*, and the square tapering recess *l* in the heel-plate G, all constructed and combined to operate as and for the purposes described.

Witness my hand this 9th day of April, 1877.

GEORGE FRANKLIN EVANS.

Witnesses:
GEO. L. REED,
C. M. CRAM.