2 Sheets—Sheet 1.

A. E. BARTHEL.

Lock for Fire-Arms.

No. 220,785. Patented Oct. 21, 1879.

Fig. 1.

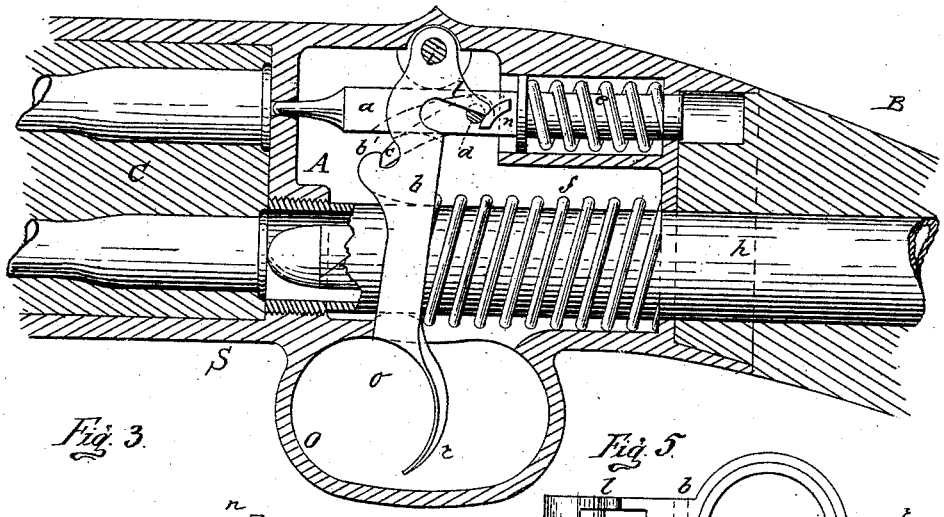


Fig. 3.

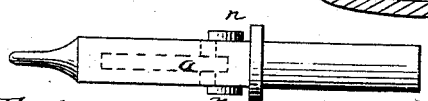


Fig. 4.

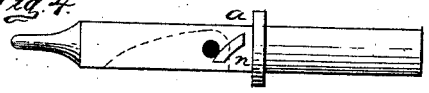


Fig. 5.

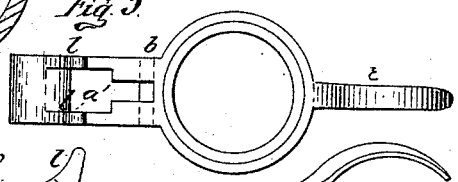


Fig. 6.

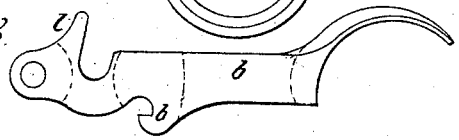
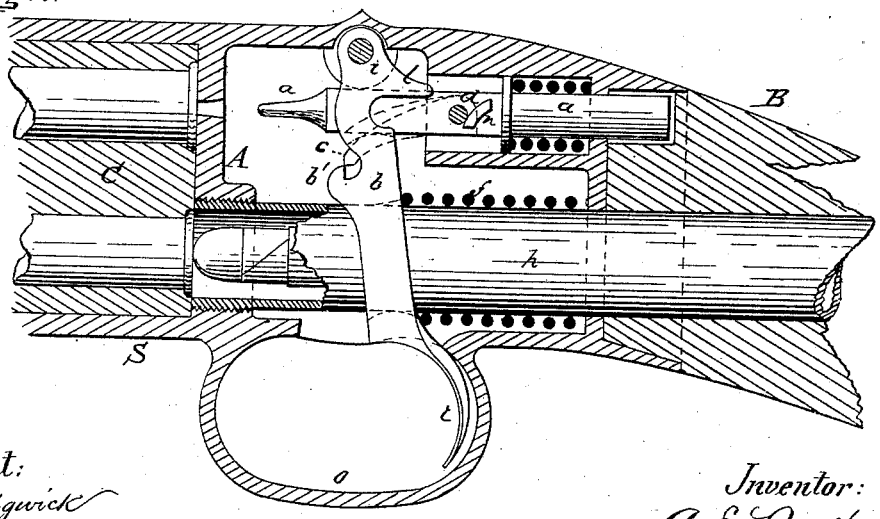


Fig. 2.



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2 Sheets—Sheet 2.

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Lock for Fire-Arms.

No. 220,785. Patented Oct. 21, 1879.

Fig. 7.

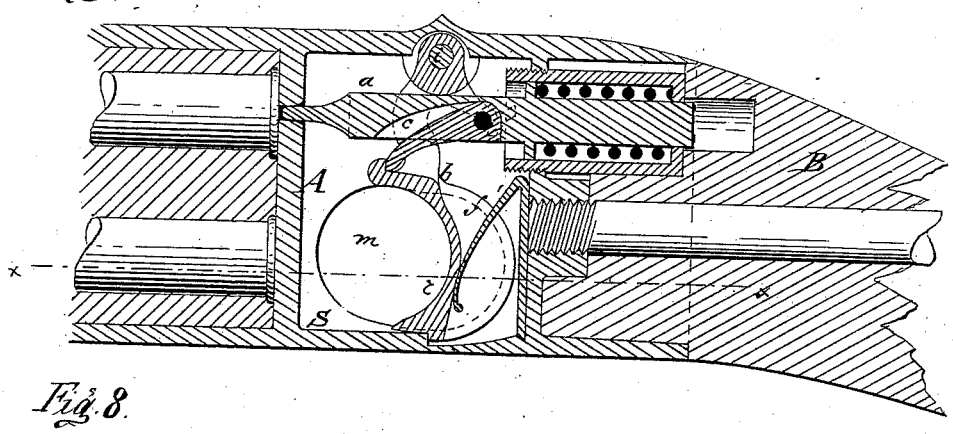


Fig. 8.

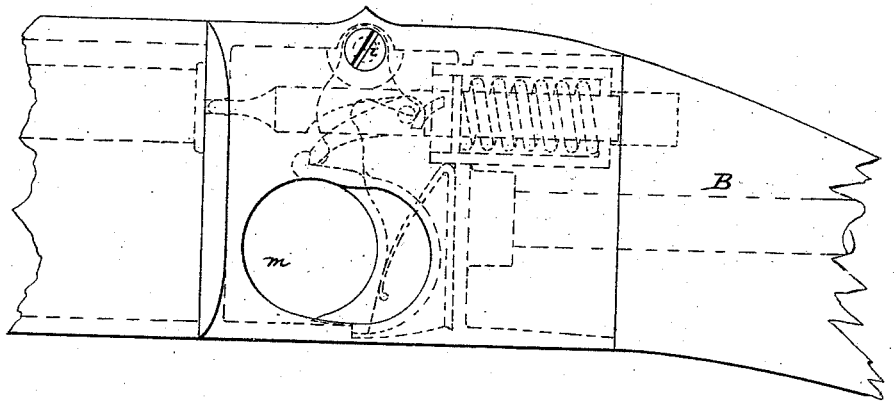
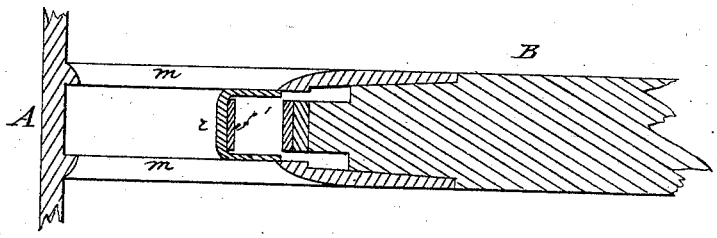


Fig. 9.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LOCKS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **220,785**, dated October 21, 1879; application filed February 17, 1879.

To all whom it may concern:

Be it known that I, ALBRECHT EDWARD BARTHEL, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Revolving Fire-Arms, of which the following is a specification.

My invention relates to a hammerless self-cocking and rebounding fire-arm, the improvements being applicable to shot-guns, rifles, or revolvers, either single-loaders or magazine-arms.

The object of my invention is to simplify the construction, to dispense with the usual projecting parts, and to obtain rapidity of firing; and the invention consists in certain novel features of construction, set forth hereinafter, and shown in the accompanying drawings, wherein—

Figure 1 is a section lengthwise of the stock, showing the firing mechanism in elevation and in its normal position. Fig. 2 is a similar view with the firing-pin retracted. Figs. 3, 4, 5, and 6 are detail views of the parts of the firing mechanism. Figs. 7 and 8 are, respectively, a longitudinal section and elevation of the gun in modified form. Fig. 9 is a sectional plan on line *x x* of Fig. 7.

Similar letters of reference indicate corresponding parts.

Referring to Figs. 1 and 2, B is the stock, and C the revolving barrel-piece, of a shot-gun or rifle. A is a fixed breech plate or block behind the barrels.

The firing mechanism is contained within a cavity in stock B, behind plate A, and the lower side of the cavity is closed by the trigger-plate *s*, that is formed with a trigger-guard, *o*, as usual.

The firing-pin *a* is fitted to slide in the breech-cavity, and is projected by a spring, *e*. A trigger-lever, *b*, is fulcrumed at *i*, and is formed at its lower end as a trigger, *r*. This lever *b* is mortised at *a'* (see Fig. 5) for the firing-pin *a* to pass through it, and also passes at each side of the magazine-tube *h*. The firing-pin *a* is mortised to receive a pawl or dog, *c*, that is hung loosely on cross-pin *d*, so that the moving end of dog *c* projects below pin *a*, and engages with the shoulder *b'* of lever *b* when the parts are in a normal position.

The magazine-tube *h* is inserted lengthwise through stock B, and its inner end screws into the breech-plate A, the tube thereby serving as a means for securing the parts together.

The tube may be made use of as a magazine from which the cartridges will be projected into the barrels as they come opposite tube *h* in succession.

Around tube *h* is a spiral spring, *f*, that bears upon lever *b*, and returns the lever to position after firing.

The parts described operate as follows: By drawing the trigger and lever *b* back, the shoulder *b'* of lever *b* acts upon dog *c*, and the dog not being capable of further downward movement, the pin *a* is forced back to the position shown in Fig. 2, and its spring *e* is compressed. In the first-named position, the point of contact between *b'* and *c* is in advance of the fulcrum *i*, and as lever *b* moves the shoulder *b'* drops downward until it clears *c*, and permits pin *a* to spring forward to fire the cartridge. Upon releasing lever *b* after firing, it is thrown forward by its spring *f*, the shoulder *b'* raises dog *c*, which latter drops to place as soon as the shoulder has passed. The pin *a* is caused to rebound from contact with the cartridge by means of the fingers *l l*, formed on lever *b* (see Figs. 1, 5, and 6) and projecting upon pin *a*. The pin *a* has curved side lugs or projections, *n*, (see Figs. 1, 3, and 4,) that are acted upon by fingers *l* on the return movement of lever *b*, and the pin *a* thereby forced back slightly.

In Figs. 7, 8, and 9 a modification is shown, whereby I dispense with the projecting trigger-guard *o*. In this construction the tube *h* is not used, the trigger *r* is within the breech-cavity, and access is had to the trigger through apertures *m*, formed in the side plates of the breech. The trigger-lever *b* is returned to position by a plate-spring, *f'*.

By the above-described construction I obtain the required movements with simple

mechanism having but few parts. The sides of the stock are smooth, having no projecting portions to catch in the clothing or bushes.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a fire-arm, the combination and arrangement of firing-pin *a*, provided with a dog, *c*, the trigger-lever *b*, having a shoulder, *b'*, and the springs *e f*, substantially as described and shown, and for the purposes set forth.

2. The combination of the firing-pin *a*, provided with lugs *n*, and trigger-lever *b*, having fingers *l*, whereby a retraction of the firing-pin is caused by the return movement of the lever, as set forth.

ALBRECHT EDWARD BARTHEL.

Witnesses:
ALBERT M. HENRY,
HORACE H. JONES.