M. SELLEN.

Fire-Arms.

No. 158,988. Patented Jan. 19, 1875.

Fig 1

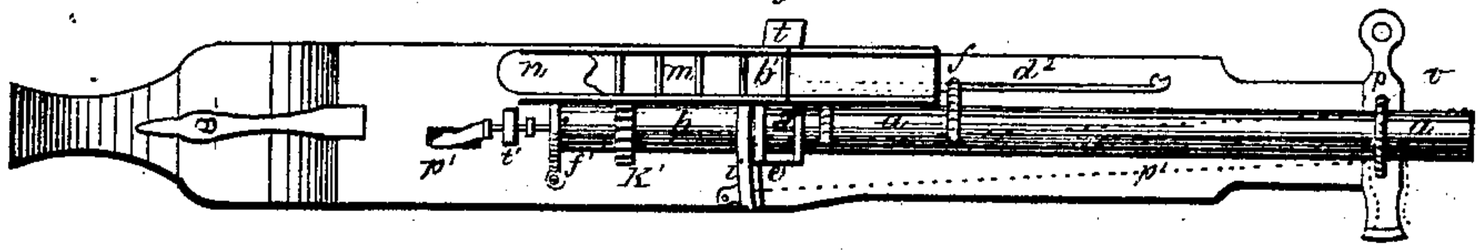


Fig 2.

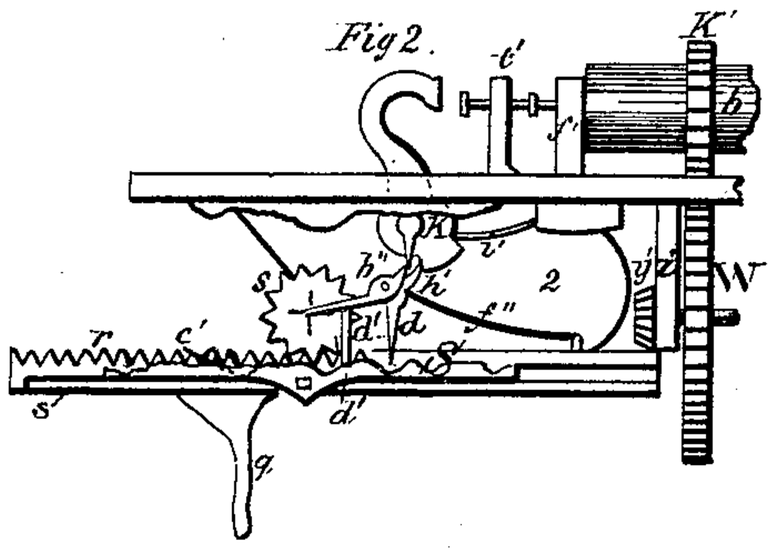


Fig 4

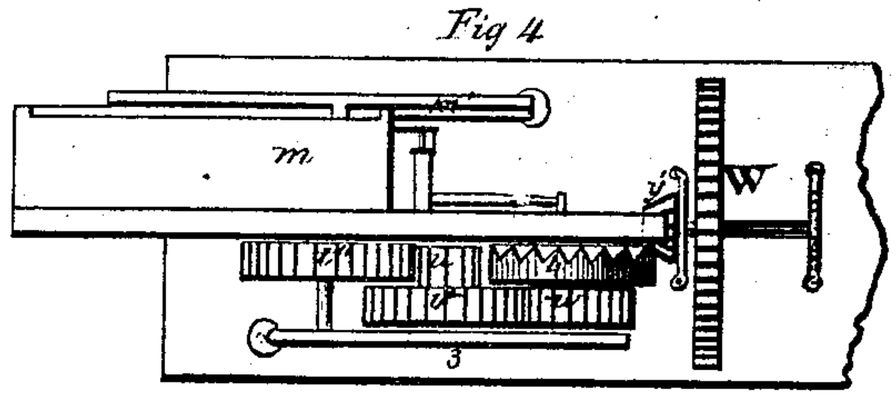


Fig 3.

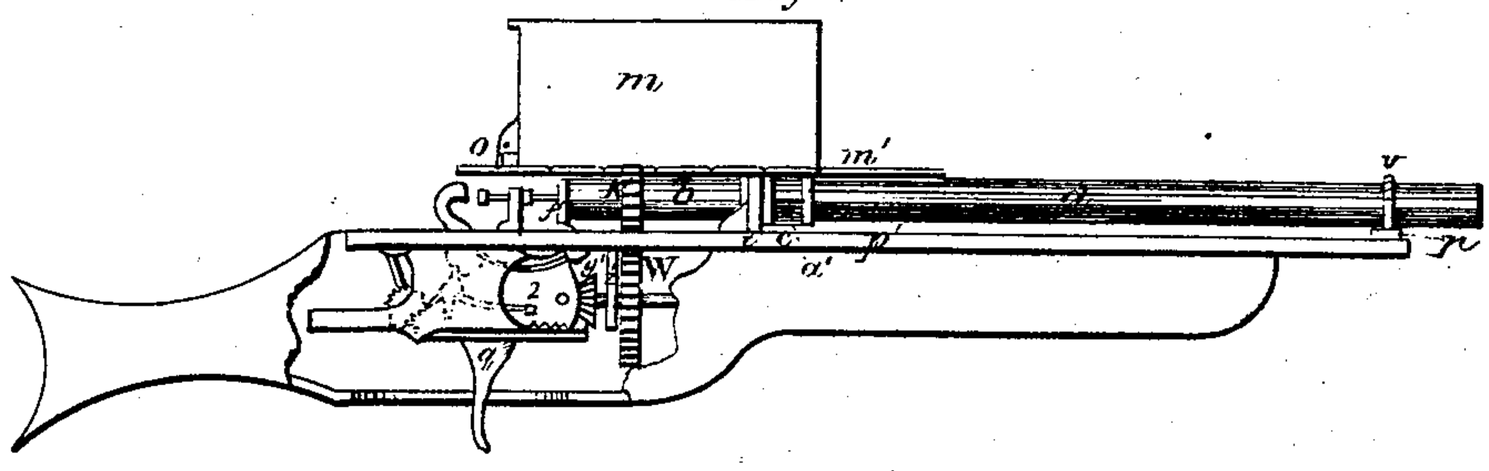


Fig 7.

Fig 5.

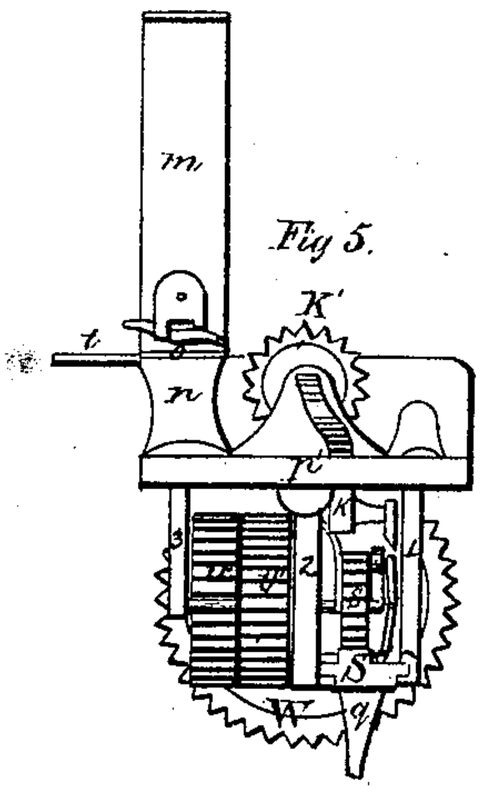
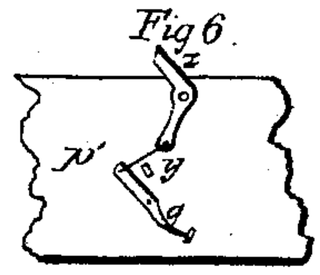


Fig 6.



WITNESSES.

J. Wm. Garner,
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INVENTOR.

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UNITED STATES PATENT OFFICE.

MICHAEL SELLEN, OF BRIGHTON, WISCONSIN.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. **158,988**, dated January 19, 1875; application filed October 23, 1874.

To all whom it may concern:

Be it known that I, MICHAEL SELLEN, of Brighton, in the county of Kenosha and State of Wisconsin, have invented certain new and useful Improvements in Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in breech-loading needle-guns; and consists in imparting to the projectile a rotary motion by means of a revolving breech or cylinder, as will be more fully described hereafter. This improvement may be applied to all kinds of guns, on board ship as well as on land.

The accompanying drawings represent my invention.

Figure 1 is a plan view of the gun, complete. Fig. 2 is an enlarged view of the trigger mechanism. Fig. 3 is a side elevation of the gun with part of the stock removed. Fig. 4 is an inverted view of the mechanism for rotating breech. Fig. 5 is an end view of the same. Figs. 6 and 7 are detail views.

a represents a smooth-bore barrel, held near its muzzle by a ring or other fastening, *v*, attached to a plate, *p*, which plate is pivoted at one end, and moves in a slot at the other, so as to allow the rear end of the barrel to swing from side to side. The barrel *a* is disconnected from the breech *b*, and has at its rear end a re-enforcement or jacket, *a'*, to the side of which is attached an open cylindrical box, *b'*, or cartridge-carrier, of the same width as the bore of the cylinder *b*. This carrier or box *b'* has on the outside, and level with its rim, a small table or plate, *t*, and being fastened to the barrel, moves with it to the right or left. Under the barrel *a*, and attached to its jacket *a'*, is a projection, *c*, which catches under a recess formed in a flange on the lower edge of plate *i*, to prevent the barrel from moving vertically. Opposite to the carrier *b'*, and parallel with the barrel *a*, is the rammer d^2, supported at *f*. At or near the middle of the barrel is a spring, *g*, which presses against a pin, *y*, to hold the barrel in position, and which spring has its inner end connected to a lever, *z*, by which it is moved back out of contact with the pin. At the rear end of the barrel *a*, but not connected therewith, is the breech or cylinder *b*, having a wheel, K', placed around it, to be acted upon as will be described hereafter. Placed between the ends of the barrel and cylinder is a plate, *i*, through which the end of the cylinder passes, so as to nearly touch the rear end of the barrel. The other end of the cylinder *b* is supported at *f'* in a journal, and behind this is a support, *t'*, for the needle. At the side of the cylinder *b*, and parallel with it, stands the sliding cartridge-box *m*, upon a slightly-elevated platform, *n*, and upon the top of this platform is placed a guide, *m'*, having a number of notches cut in its edges, and a dovetailed groove in its face, in which groove the lower edge of the cartridge-box is held in such a manner that it may be moved back and forth. At the rear end of the cartridge-box is a spring-catch, *o*, which, upon entering one of the notches on the top of the guide, stops the motion of the cartridge-box, and holds it in place. The cartridge-box *m* is divided into compartments of such dimensions as will best suit the size of the cartridges to be placed therein, and of a depth to conform to the number of cartridges to be placed in them. There is no bottom to the compartments, but the cartridges are held by the platform upon which the box slides, and when the box is pushed forward sufficiently to pass beyond the end of the platform, the cartridges, one by one, will, through the opening at the lower end of the compartment, be discharged into the carrier *b'* underneath. Secured to the under side of plate *p'* are three vertical hangers or supports, 1, 2, and 3. In the lower edges of 1 and 2 is placed the slide S, to the under side of which is rigidly attached trigger *q*. The upper side of the slide S is divided into two equal widths, of which one is a rack, *r*, which gears with pinion *s*, journaled in the hangers 2 and 3. Upon the same shaft as the pinion *s* is the gear-wheel *t''*, which meshes with a second pinion, *u*, placed upon the same shaft with the wheel *v'*. This wheel *v'* gears with a pinion, *w*, placed upon the same shaft as the crown-wheel 4, which crown-wheel operates a pinion, *y'*, placed upon the same shaft as the large wheel W,

which wheel meshes with the wheel K′ upon the circumference of the breech. All the wheels and pinions have their bearings upon the supports 2 and 3, excepting the large wheel W and the pinion y', which have their own bearings at z'. Upon that part of the slide S not occupied by the rack r, and near its forward end, is the pin d^1, which passes, when the slide is moved backward, under the shaft of the lever b'', and raises its longer arm, the effect of which will be explained hereafter. On the slide S, on a line half-way between the pin d^1 and the rack r, at an equal distance from both ends of the slide, is the spring c', fastened by one end to the slide, and having the other end sufficiently elevated to push lever d, placed just above and in front of it, so as to act upon the lever at the moment the slide may be moved backward. Fixed upon the same shaft with levers b'' d is the spring f'', bent down and forward, its lower end fastened to the side of the hanger 2. Between the spring f'' and the hanger 2 is the pawl h', entering the tumbler of the hammer. The spring i^1, bearing upon a projection of the tumbler, presses downward and holds it in place. Lever K projects downward from the shaft on which the hammer turns, for the purpose of recocking the hammer.

The operation is as follows: The barrel and breech being in line, the rear end of the barrel is moved to the right, which brings the carrier b', with its cartridge, from underneath the cartridge-box, into line with muzzle of the breech b, the table t, attached to the carrier, serving to close the bottom of the box, to prevent the other cartridges from falling out. The cartridge is driven home by means of the rammer, and the barrel again moved into line, where it will be firmly held by the spring g under the barrel. All that now remains to be done is to aim and draw the slide S backward by means of the rigid trigger. As the slide begins to move, it communicates a rotary motion to the breech, through the train of wheels, as, or just before, it trips the hammer.

Having thus described my invention, I claim—

1. The rotary breech b, having cogs upon its periphery, in combination with the wheel W and operating mechanism, substantially as set forth.

2. The combination of the movable swinging barrel with a cartridge-carrier that is rigidly attached thereto, substantially as described.

3. The combination of the swinging barrel, having the rammer attached to its side, so as to move with it, a cartridge-carrier, and a separate chambered breech, substantially as set forth.

4. The combination of the slide S, rigid trigger or handle, and connecting mechanism, substantially as described, whereby the hammer is tripped and again cocked by the same movement of the slide.

5. The combination of the breech or chamber b, and barrel a, pivoted near the muzzle, whereby the rear end of the barrel may be moved to one side to open the chamber for loading, substantially as shown.

6. A cartridge-carrier that serves to convey the cartridges to the muzzle of the chambered breech when the barrel is swung laterally to open said breech, and which is adapted to close the bottom of the cartridge box or magazine when the barrel is swung back, substantially as specified.

In testimony that I claim the foregoing, I have hereunto set my hand this 10th day of October, 1874.

MICHAEL SELLEN.

Witnesses:
JOHN BAKER,
PAUL OSSWEILER.