L. A. MERRIAM.

Magazine Fire-Arm.

No. 212,105. Patented Feb. 11. 1879.

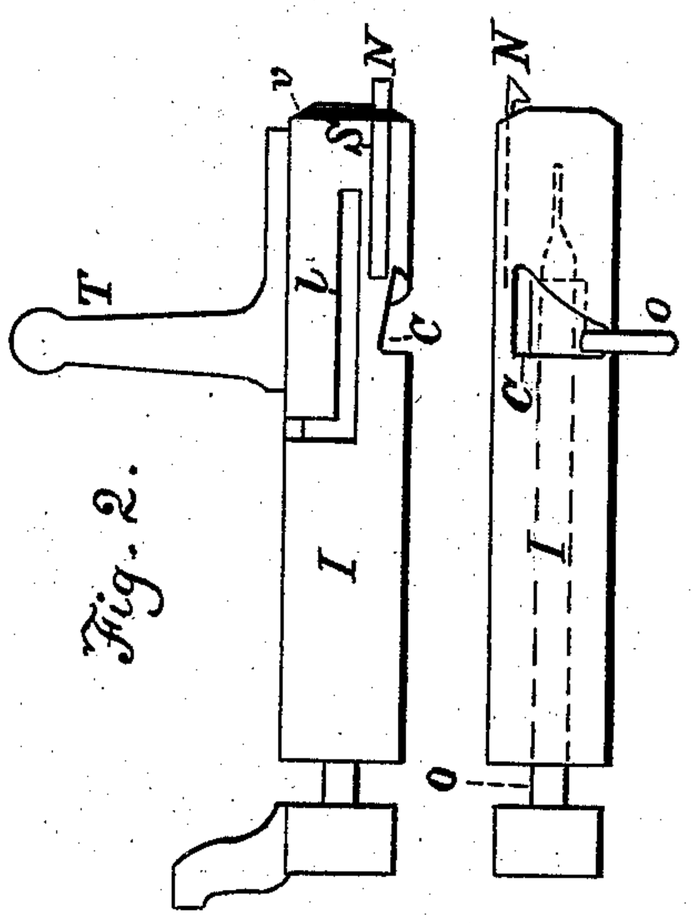

Fig. 2.

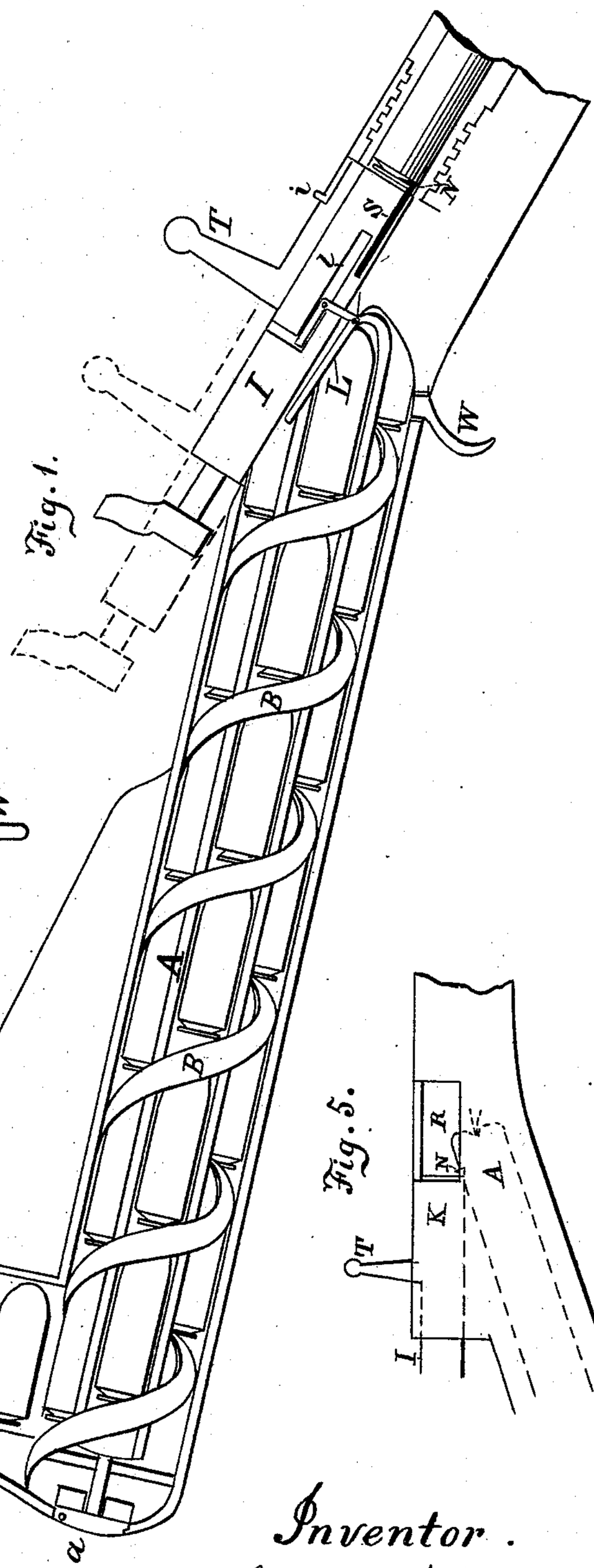

Fig. 1.

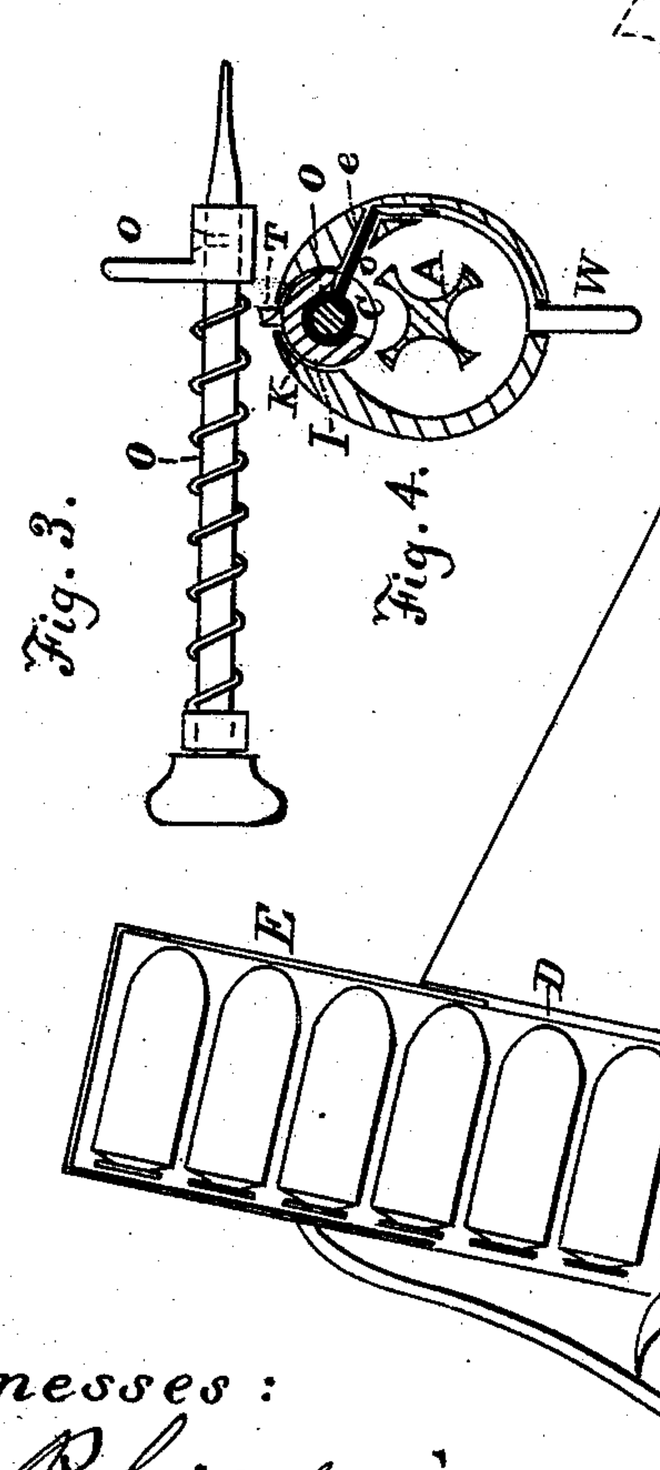

Fig. 3.

Fig. 4.

Fig. 5.

Witnesses:

E. P. Goodwin

Henry A. Daniels.

Inventor.

Lincoln A. Merriam

UNITED STATES PATENT OFFICE.

LINCOLN A. MERRIAM, OF NEW YORK, N. Y.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **212,105,** dated February 11, 1879; application filed November 26, 1878.

To all whom it may concern:

Be it known that I, LINCOLN A. MERRIAM, of the city, county, and State of New York, have invented new and useful Improvements in Magazine-Guns, of which the following is a specification:

After emptying the magazine, such guns have heretofore been subject to long interruptions in their discharges by the delay in reloading—a defect too obvious to require more than a statement here.

The object of my invention is, by a simple, cheaply-constructed, and reliable apparatus, to make the discharge practically continuous.

I am aware that in what is known as the Roper gun, patent granted April 10, 1866, and the Evans gun, patent granted August 27, 1878, fluted magazine-shafts, with their axis below the axis of the barrel, are rotated so as to bring the cartridges placed in them in front of a piston, by which they are inserted in their chamber.

Figure 1 is a general view, in section, of the fixed parts of the gun, and, in perspective, of the working parts. Fig. 2 presents side views in different positions of the piston I, including the striker O and sear-stud *o*, the mortise C, the slot *l*, and the gas-check *v*, of rubber or other suitable material. Fig. 3 is a side view of the striker, sear-stud, and spring. Fig. 4 is a transverse section, showing the mortise C in the piston I, the sear-stud *o*, and the slot *e* in the receiver K. Fig. 5 is a side view of the receiver K, notched at R, the hook N of the extractor S′, and the carrier A.

I construct a magazine-gun with the carrier A, having its axis inclined at an angle with the axis of the barrel. By rotating this carrier A within a cylindrical case having the internal spiral guide B, the cartridges are fed from the mortise D in the butt-stock of the gun one by one to the front of the piston I, to be by it inserted in the chamber, and the top groove in the front end of A forms the movable guide for the cartridges.

An endless-chain carrier, passing over drums and actuated by appropriate and well-known appliances, may be used to feed the cartridges from the mortise D to their chamber in lieu of the rotating shaft hereinbefore described.

The mortise D, closed with a spring, sliding, hinged, or other suitable valve, may, with the feed apparatus, constitute the magazine; or its capacity may be increased by inserting in its orifice internally-opening cases E of cartridges, operating either by gravity or a spring, and removable, when empty, to be replaced with full ones; or the supply may be provided for in any other suitable manner. This mortise D through the feed-case may be at any other point in the top, sides, or bottom of the butt-stock, and it may serve only as an opening through which to feed the cartridges, without affording them an independent lodgment.

A device, *a*, operating independently of the lock mechanism, may be used to rotate the carrier for the purpose of stocking the feed with cartridges, or to remove those already there.

The receiver K, at the rear end of and attached to the barrel, is a tubular opening, in which the piston I has a reciprocating and rotary movement, as operated by the handle T, which also locks the piston by being turned downward into a recess, R, where it rests against a shoulder in a well-known manner. This position of the handle T may be maintained, when desirable, by a hook or sliding pin, *i*.

The piston I incloses the spring, striker O, and firing-pin. The striker O has a stud, *o*, composed of a sleeve with a projection, and secured by a screw, or in other suitable manner, to take the sear, and it extends through the triangular opening C in the side of the piston I into the groove *e* in the receiver K. By a cam movement, when the handle T is raised, the striker O is brought back and held from driving the firing-pin to the primer to explode the cartridge before the handle T is brought down, locking the piston or breech-block I in position. The piston I has also an L-shaped slot, *l*, with shoulders to operate the L-shaped spring-lever L, which is pivoted at its angle and takes a movement at right angles to the piston, and, actuated directly or through a link, turns the carrier A, as described.

The extractor S rests in a slot in the piston I, with its hook N projecting beyond the end of the piston, and, by springing outward, passes over the flange of the cartridge. When the piston is rotated in locking and unlocking

the piston, this hook moves in the rear of or within the cartridge-chamber, having sprung into a groove in the rear end of the cartridge, sunk for the purpose of receiving it, and, withdrawing the piston, withdraws the shell until until it is clear of the chamber, when the flange of the rotating carrier A throws it through the opening R in the receiver K.

What I claim is—

1. The magazine-gun having the butt-stock mortised at D, in combination with the rotating carrier A and the spiral guide B, as specified.

2. In magazine-guns, the butt-stock mortised at D, as described, in combination with the cartridge-case E and the rotating feed mechanism described.

3. In a magazine-gun, a rotating fluted carrier, A, combined with a spiral guide, B, and provided at its rear end with a key or equivalent means for rotating the carrier independently of the breech mechanism, as and for the purposes described.

4. In a magazine-gun, a rotating feed, such as described, a longitudinally-reciprocating breech-bolt, and an angular lever, L, pivoted in the frame of the arm, one end of said lever operated by suitable shoulders on the bolt, and the other end engaging with the fluted carrier to rotate it by the movement of the bolt, all combined and operating in the manner set forth.

5. In breech-loading fire-arms, the combination of a barrel, a rotating breech-bolt, and a hook-extractor attached to and moving with said bolt, and arranged so that its projecting head will move within the line of the chamber, as and for the purposes described.

6. The piston provided with a triangular mortise, C, through its side, in combination with the striker O, provided with the stud *o*, and the receiver K, having a longitudinal groove, *e*, to receive the end of the stud *o* and prevent the striker from turning, the parts operating as and for the uses and purposes described.

7. In a magazine-gun, the receiver K, notched at R, in combination with the extractor S and the flange on the forward end of the rotating carrier A, operated by the piston I, constructed and operating in the manner and for the uses set forth.

LINCOLN A. MERRIAM.

Witnesses:

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S. E. CARPENTER.