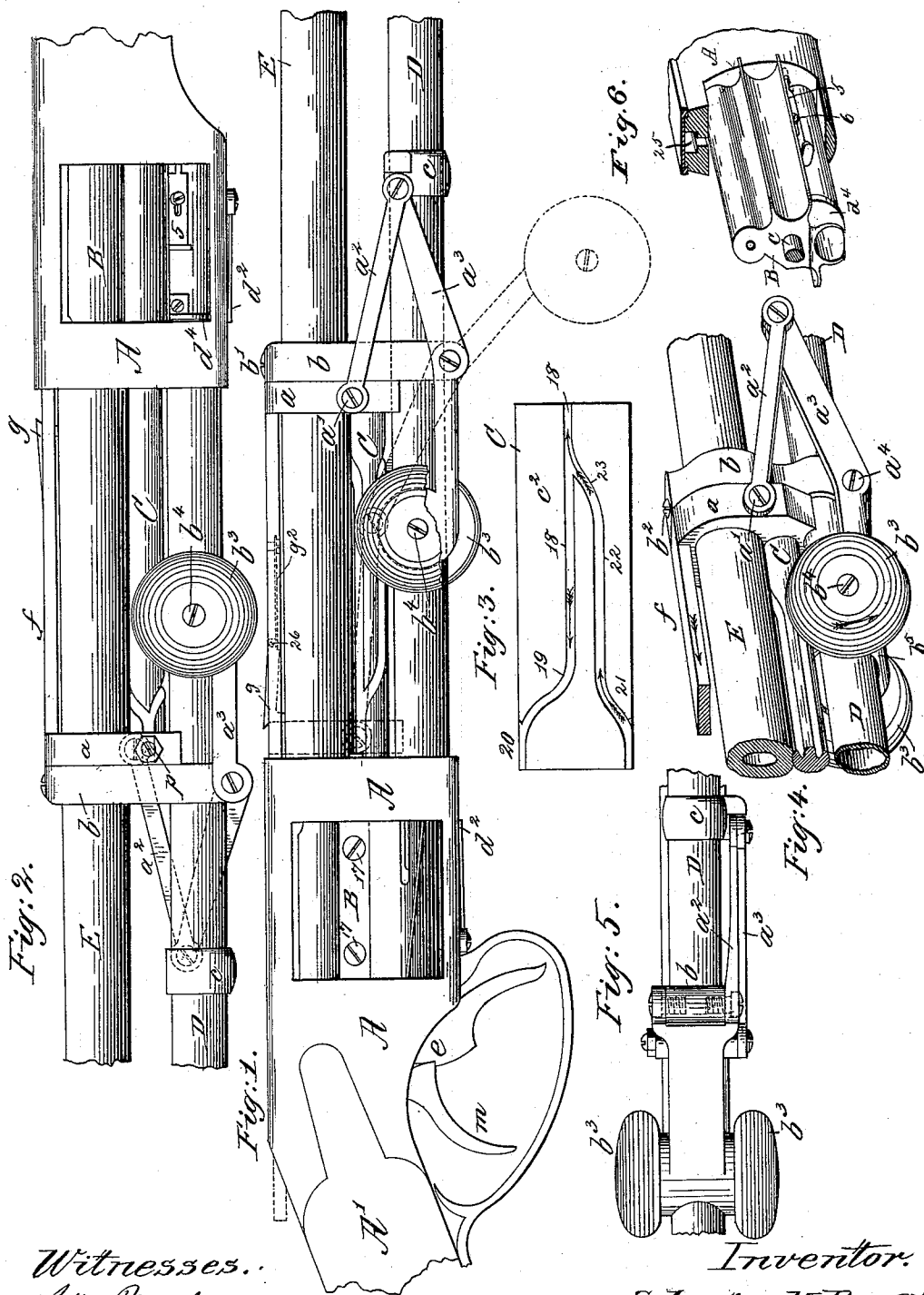


(No Model.)

S. H. ROPER.
MAGAZINE GUN.

No. 409,429.

Patented Aug. 20, 1889.



Witnesses.
Arthur J. P. P. P.
John F. C. P. P.

Inventor.
Sylvester H. Roper
by Leroy H. Gregory

UNITED STATES PATENT OFFICE.

SYLVESTER H. ROPER, OF BOSTON, MASSACHUSETTS.

MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 409,429, dated August 20, 1889.

Application filed March 18, 1886. Serial No. 195,667. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER H. ROPER, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Fire-Arms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In another application, Serial No. 195,668, filed March 18, 1886, I have shown a carrier connected to an intermittingly-rotating cam-rod deriving its motion from a pin or stud attached to a saddle having secured to it a hand-piece which partially embraces the magazine, and is moved in a straight line parallel to the barrel and magazine. In this my present invention I have dispensed with the saddle shaped as shown in the said application, and in its place have employed a loop which surrounds the barrel, and is adapted to slide thereon, the said loop, guided by the barrel, having attached to it a single slide-bar, upon which, as in the said application, is mounted a latch-like device, which serves the purpose of a cartridge-inserting device and extractor, and also, as preferred, the said device acts to set the hammer. The loop referred to carries a pin or stud, which enters the cam-shaped groove of the cam-rod to rotate it intermittingly, as in the said application; but instead of the hand-piece such as therein shown I have employed a lever of the first order, which, by a link, is joined to and causes the loop to slide on the barrel. The lever referred to has preferably loose knobs or buttons to insure ease and quickness of movement without friction in the hand, and permitting it to be firmly clasped by the hand.

My invention consists, essentially, in a carrier and a cam-rod and a loop having a pin or stud to engage the cam-rod, combined with a lever operatively connected to and to move the said loop, substantially as will be described.

Other features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 in side elevation represents a sufficient portion of a magazine-gun which will enable one to readily understand my present improvements, the dotted lines showing the

lever with its knobs fully forward; Fig. 2, a partial opposite side elevation thereof. Fig. 3 shows the cam-rod as split open and spread out as a flat surface, chiefly to indicate the shape of the grooves or cam-surfaces of the said rod. Fig. 4 is a perspective detail showing the lever closed. Fig. 5 is an under side view of Fig. 4. Fig. 6 is a perspective view of the carrier and the rear part of the receiver, the latter being shown partly in section.

The receiver A of proper shape to contain the carrier B is attached to the stock A' of any usual shape or material. The receiver A is cut through to receive the carrier B, rigidly attached to one end of a cam-rod C. (Partially shown in Figs. 1, 2, and 4.) The said carrier is so shaped as to present a compartment for the reception of a cartridge from the magazine D, (see Figs. 1 and 2,) and to present a compartment containing a suitable firing-pin, the outer end of the compartment also serving as a recoil-block. Between these compartments is a third compartment or open space, so shaped as to uncover the bore of the barrel E when the shell is to be extracted therefrom, and substantially opposite to this compartment is a space employed when charging the magazine D. The receiver has upon it a spring-latch d^2 , the free end of which is normally held in such position as to retain in the magazine the last cartridge inserted therein, this latch being, however, moved to release the cartridge and permit it to be ejected into the carrier whenever the cam projection d^4 (see Fig. 2) of the carrier in the movement of the latter meets the said latch. The cam-rod C is grooved, as best shown in Fig. 3, in such manner as to give the proper intermittingly-rotating movement to the carrier B, and the form of such grooves may be varied to suit the desired movement of the carrier. The said groove is entered by an adjustable stud p , extended through a loop a , hereinafter to be described. The loop a has attached thereto a bar f , extended lengthwise of the barrel E, (see Fig. 2,) the free end of which enters a recess in the receiver A, the said bar having pivoted upon it at the combined inserter and extractor, (shown as a finger g ,) normally pressed toward the center

of the barrel E by a spring g^2 . (Shown in dotted lines, Fig. 1.) The loop a is fitted to and slides on the barrel E as its guide. This loop has pivoted to it at a' a link a^2 , which, as herein shown, is pivoted upon one end of a lever a^3 of the first order, pivoted at a^4 on the bracket b , secured to the barrel by screw b^2 . The lever a^3 at its end not connected with the link or loop is provided with two buttons b^3 , preferably attached thereto loosely by screws b^4 , so as to be free to rotate on the lever as the latter, grasped firmly in the hand of the operator, is moved backward and forward.

In my application, Serial No. 195,668, to hold the carrier in position for firing, the hand-piece must be held in its position farthest from the receiver, and at such time there is a tendency to push the gun from the shoulder, and the tendency has to be overcome by the other hand; but with the lever herein described when the carrier is in firing position the lever occupies the full-line position shown, and all the strain exerted by the operator is exerted in a direction to keep the gun close to the shoulder.

The magazine is provided with a protector or guard c , to protect the end of the lever a^3 , where it is attached to the link a^2 , and prevent it from being thrown out of place.

The lever a^3 , as herein shown, is concaved between the buttons and the fulcrum of the lever, so as to partially surround the magazine, the screw shown as serving as pivots for the buttons being so located with relation to the said lever as to bring the peripheries of the said buttons well up at the sides of the magazine where they are the most out of the way, such location of the buttons with relation to the lever also insuring better action of the lever when in its outward or dotted-line position, at which time the hammer is being set.

The screws 17 (see Fig. 1) serve to attach the cam-rod C rigidly to the carrier B. The shape of the cam-groove c^2 is well represented in Fig. 3, where the said rod is supposed to be split at one side and laid out flat on a plane surface, and by referring to the said figure it will be seen that the said groove from near the inner end of the rod, or nearest the receiver, is made parallel to the axis of the said rod, as at 18, is then curved, as at 19, and again made straight, as at 20; but in the development of the rod, as shown in Fig. 3, it will be seen that the straight part 20 referred to is cut longitudinally in two parts. The part 20 is joined to the straight part 22 by a curved part 21, the part 22 connecting with the part 18 by the curved part 23. The hammer e , Fig. 1, is provided at its rear side with a notch, which is engaged by the trigger m , and the said hammer may be set by hand, if desired, but preferably it is set automatically by the finger-piece g act-

ing upon its upper end. (Not shown.) The bracket b occupies the same position as does the block h in the said application; but the bracket b is longer and embraces both the barrel and magazine.

The movement of the lever from its full into its dotted line position, Fig. 1, causes the movement of the loop a along on the barrel, carrying with it the bar f , and the stud p , resting in the groove of the cam-rod, effects its partial rotation, and with it the carrier B, the cam-rod and its connected parts being yet further rotated as the lever a^3 is moved in the opposite direction, the intermittent rotation of the carrier B being such that the shell is extracted from the barrel, a cartridge thereafter inserted therein, and the hammer raised in position for firing, while a fresh cartridge enters the carrier from the magazine.

I claim—

1. In a magazine fire-arm, the rotatable carrier B and its rigidly-attached cam-rod C, and the sliding guided loop or block and stud p therein to engage the cam-rod, combined with a link pivoted to the said block and with a lever to effect the intermittent rotation of the cam-rod and carrier by the longitudinal movement of the said loop or block, substantially as described.

2. The rotatable carrier, its rigidly-attached cam-rod, the longitudinally-movable guided loop a , having a stud p co-operating with the said cam-rod, and the pivoted link a^2 , attached to the said loop, combined with the lever a^3 , connected to the link at one end, and provided with loose buttons at its unconnected end, substantially as described.

3. The rotatable cam-rod, a longitudinally-sliding block or loop thereon, having a stud to engage said cam-rod, a rotatable carrier rigidly attached to the cam-rod, and the fixed bracket b , combined with the lever a^3 , fulcrumed upon said bracket and concaved at b^5 , and a link connecting the said loop or block and lever, whereby movement of the lever imparts a longitudinal movement to the said loop or block, substantially as described.

4. In a magazine fire-arm, the rotatable carrier, its rigidly-attached cam-rod, the loop or block thereon, and the magazine having the lever-guard c attached thereto, combined with the bracket b and lever a^3 , pivoted upon the lower end thereof and connected with the said loop or block, the guard preventing displacement of the lever a^3 , substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SYLVESTER H. ROPER.

Witnesses:

GEO. W. GREGORY,
T. S. EMERY.