

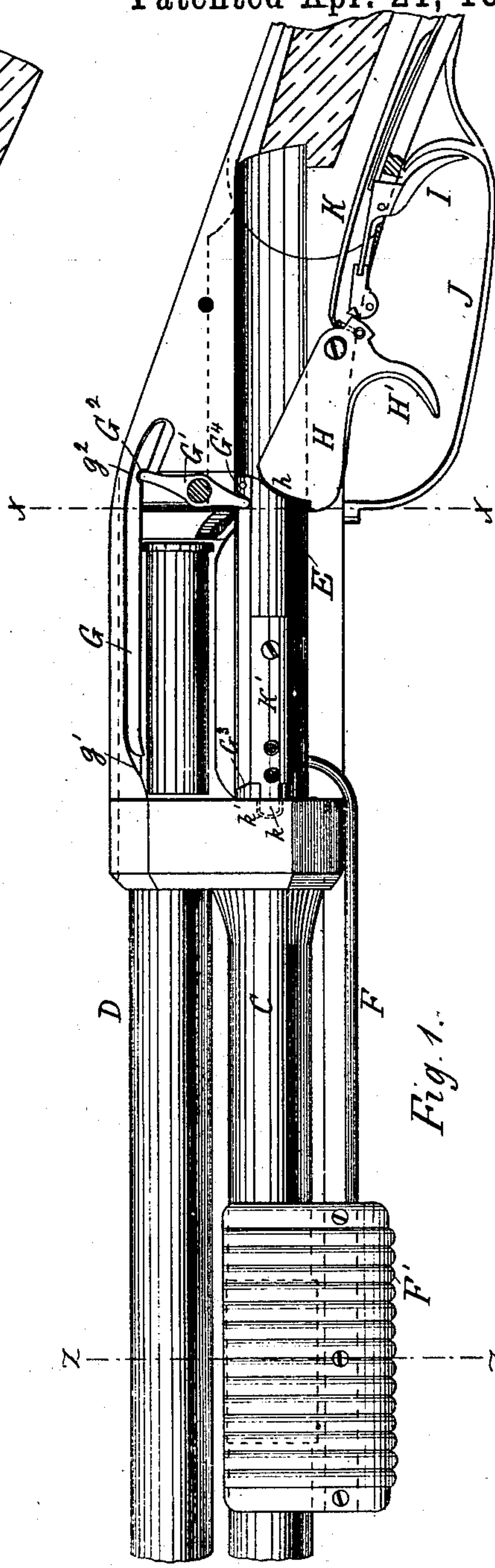
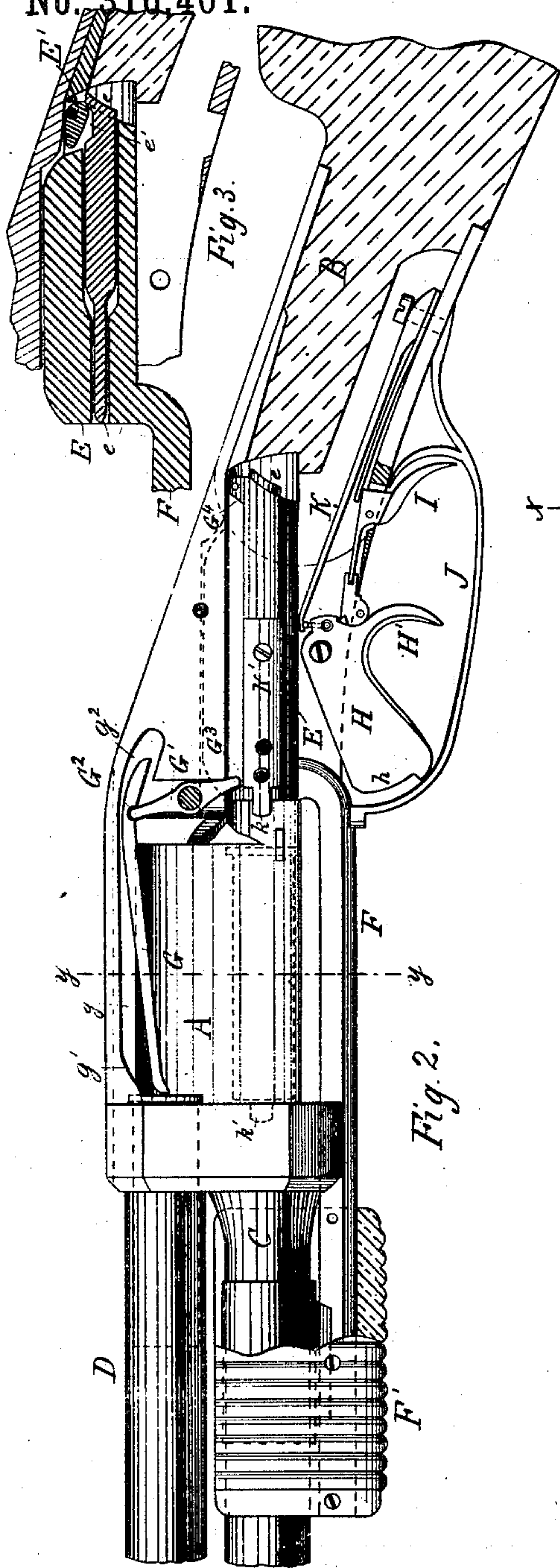
(No Model.)

2 Sheets—Sheet 1.

S. H. ROPER  
MAGAZINE FIRE ARM.

No. 316,401.

Patented Apr. 21, 1885.



WITNESSES

Wm. A. Lowe  
R. L. Howes

INVENTOR

Sylvester H. Roper  
Per Edw. C. Quincy.

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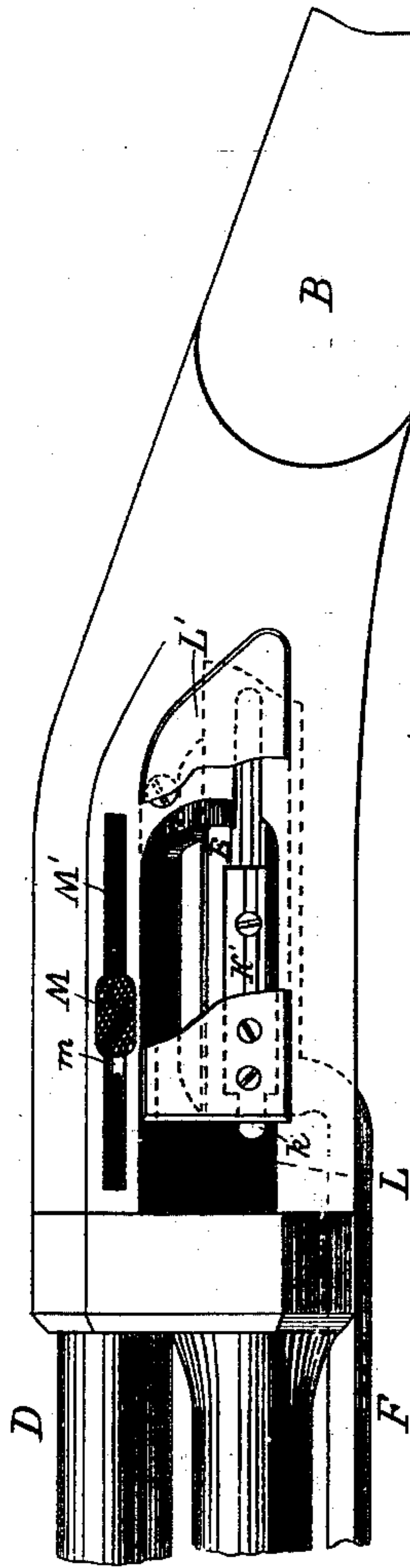


Fig. 4.

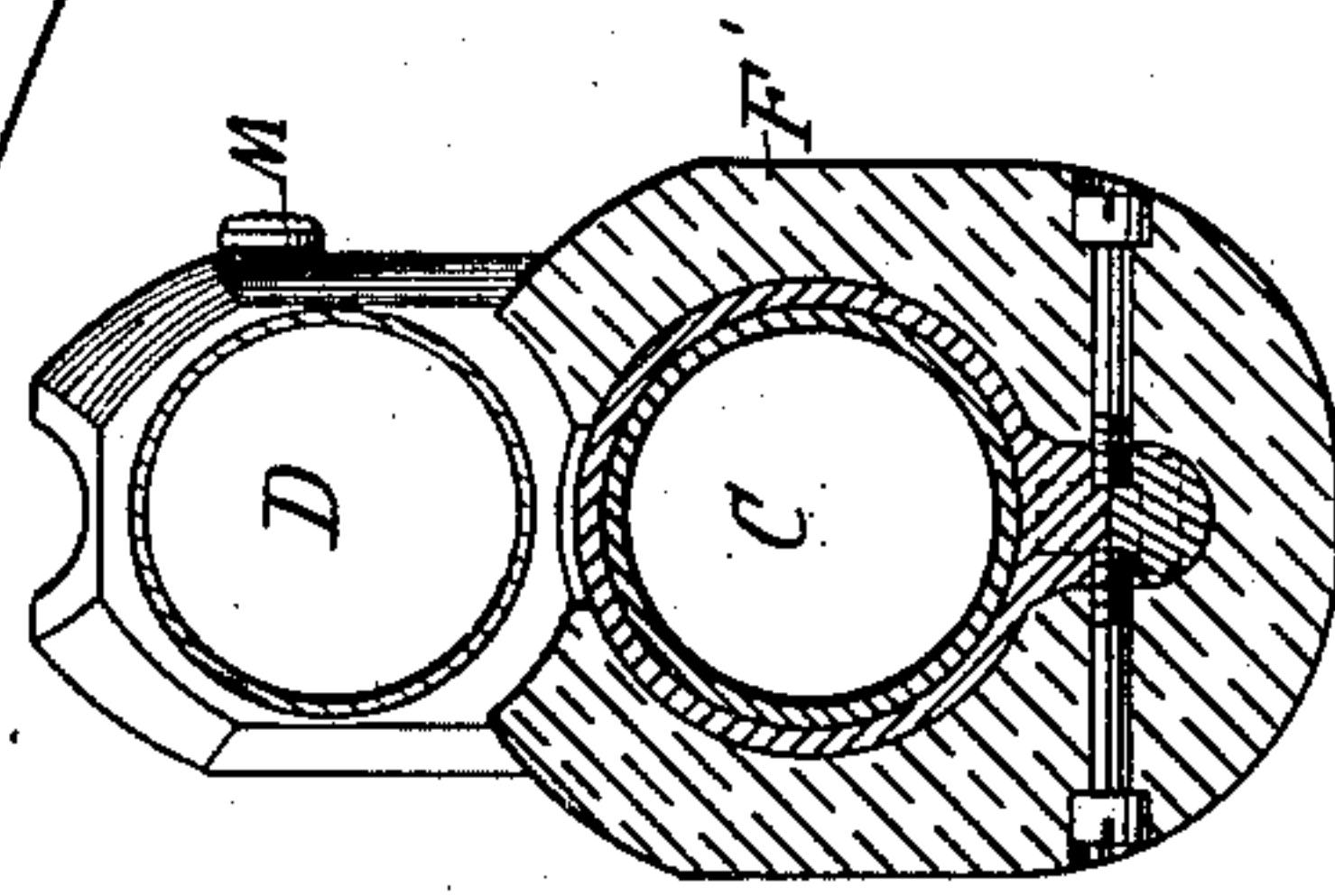


Fig. 7.

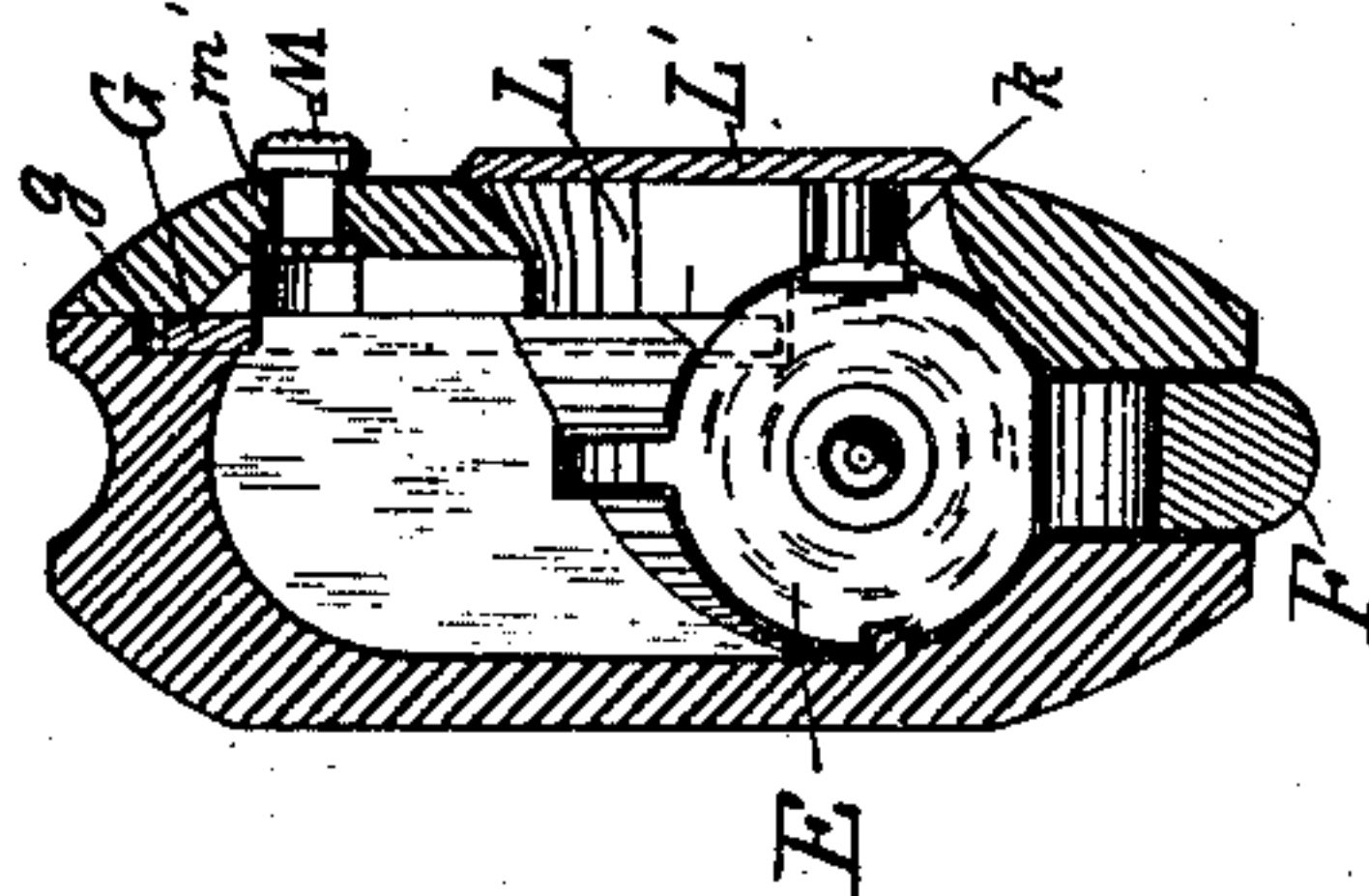


Fig. 6.

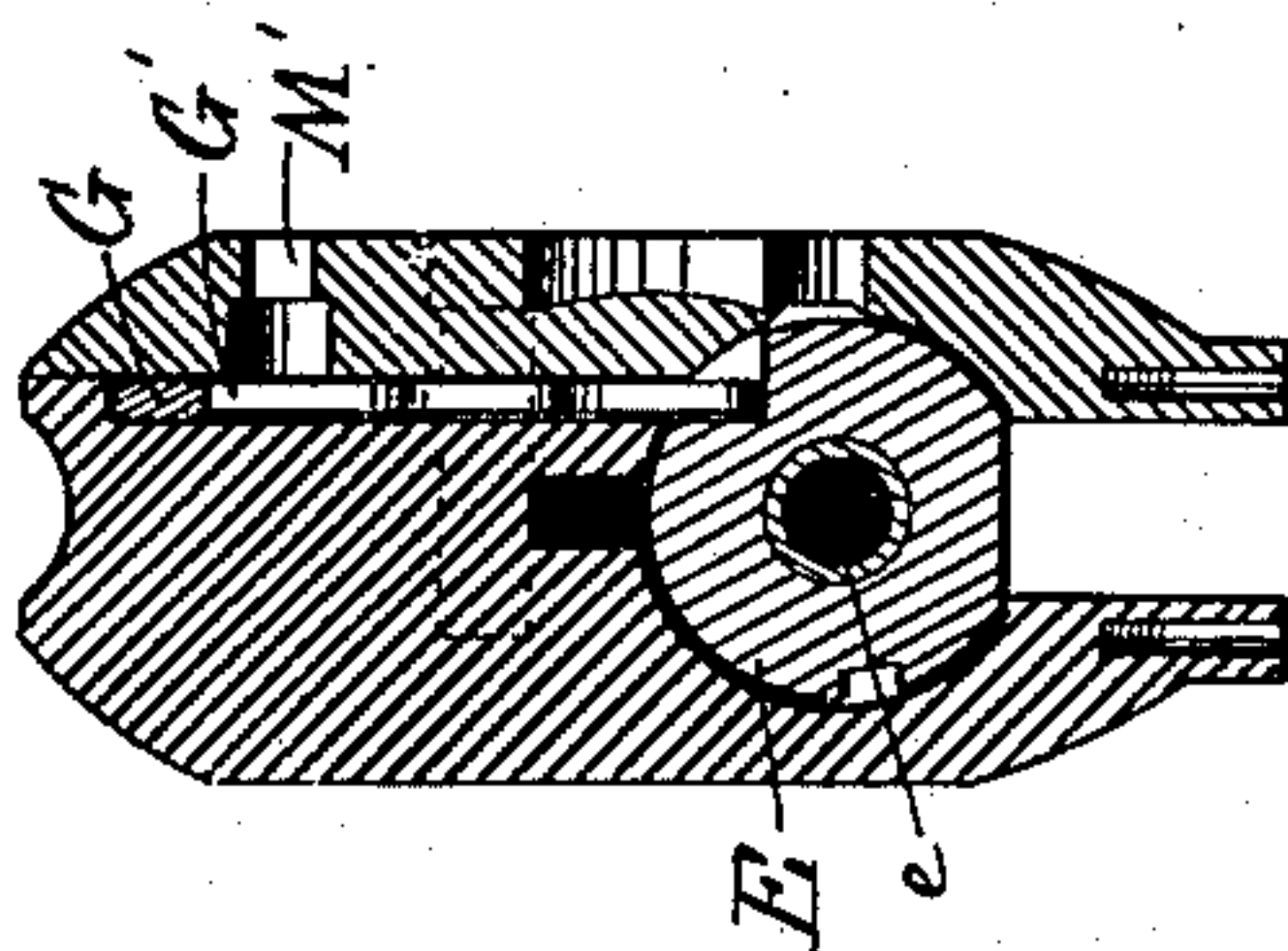


Fig. 5.

WITNESSES

Wm. A. Lowe  
R. L. Howes.

INVENTOR

Sylvester H. Roper  
Per Edw. E. Quincy  
Atty.



# UNITED STATES PATENT OFFICE.

SYLVESTER H. ROPER, OF BOSTON, MASSACHUSETTS.

## MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 316,401, dated April 21, 1885.

Application filed August 11, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVESTER H. ROPER, of Boston, Massachusetts, have invented certain Improvements in Magazine Fire-Arms, of which the following is a specification.

My invention consists, mainly, in the combination, in a magazine fire-arm, of a piston-breech with an actuating-slide provided with a hand-piece arranged beneath the barrel and acting as a support therefor, and adapted to be grasped by one hand and reciprocated in a line parallel with the axial line of the barrel, while the other hand is employed in holding the stock of the gun against the shoulder of the person using it.

The accompanying drawings, representing the receiver and adjoining parts of the stock and of the magazine and barrel of a magazine-gun illustrating my invention, are as follows:

Figure 1 is a left-hand side elevation with the wall of the receiver removed, showing the piston-breech in its firing position. Fig. 2 is a similar elevation showing the piston-breech drawn back. Fig. 3 is a longitudinal vertical section of the piston-breech and its seat at the end of its backward excursion. Fig. 4 is a left-hand side elevation, the middle portion of the door covering the opening in the wall of the receiver being represented as being broken away. Fig. 5 is a transverse section through the line *xx* on Fig. 2. Fig. 6 is a transverse section through the line *yy* on Fig. 1; and Fig. 7 is a transverse section through the line *zz* on Fig. 2.

The drawings represent the receiver A and adjoining portions of the stock B, and of the barrel C, surmounted by the magazine D.

The magazine D is provided with the usual ejecting spring-piston, by the action of which the cartridges are successively discharged from the mouth of the magazine into the upper part of the receiver A. The piston-breech E is connected with and operated by the reciprocating slide-bar F, provided with the handle F'. This handle F' not only affords means for reciprocating the slide-bar F, but also constitutes a means whereby the barrel may be supported. The handle therefore constitutes a support for the barrel.

At the end of the backward excursion of the piston-breech the cartridge, which has

been ejected from the magazine into the upper part of the receiver, is relieved from the backward thrust of the magazine-spring and permitted to drop upon the floor of the receiver between the front end of the piston-breech E and the rear end of the chamber. This is effected by means of the stop-finger G, which is downwardly curved at its ends, and is seated in the correspondingly-curved recess *g*, formed in the top of the receiver. The finger G has an endwise-reciprocating movement imparted to it by the pivoted rocker G', the upper end of which is seated in a notch, G<sup>2</sup>, formed in underside of the finger G, while its lower end is acted upon alternately by the shoulders G<sup>3</sup> and G<sup>4</sup> at the opposite extremities of a longitudinal recess formed in the surface of the piston-breech. When, by the backward movement of the piston-breech, the shoulder G<sup>3</sup> is brought into collision with the lower end of the rocker G', the upper end is rocked forward, carrying forward the finger G and causing its curved forward end to ride down the incline *g'* and strike against the base of the cartridge lying in the mouth of the magazine and push that cartridge slightly forward, thus removing it from contact with the forward end of the cartridge in the top of the receiver, and permitting the latter to fall upon the bottom of the receiver. It will be seen, therefore, that the finger G forms a means whereby the cartridges, as they are ejected from the magazine, will severally be caused to pass from a position opposite the magazine to a position opposite the barrel.

By the latter portion of the forward excursion of the piston-breech the shoulder G<sup>4</sup> is brought into collision with the lower end of the rocker G', and the finger G is consequently pushed backward, its rear end riding against the incline *g''*, by which its forward end is tilted upward so that the next cartridge can be ejected from the mouth of the magazine.

By the forward excursion of the slide-bar F the cartridge lying in front of the piston-breech is pushed into the chamber, wherein it is firmly held at the moment of firing by the pressure upon the rear end of the piston-breech of the eccentric edge *h* of the segmentally-shaped pivoted hammer H, actuated when the trigger I is pulled by the mainspring K of the lock. The hammer is provided with



the curved arm H', which projects downward into the forward part of the space within the trigger-guard J, in convenient position to be caught by a finger of the hand grasping the stock and pulled backward in order to cock the hammer, and also in order to swing the hammer H away from the rear end of the piston-breech E, to allow the piston-breech to be pulled back by the actuating slide-bar F, as shown in Fig. 2.

The piston-breech E is provided with the usual firing-pin, *e*, having a notch, *e'*, near its inner end engaging a rocker, E', pivoted to the breech. The rocker E', when the piston-breech is moved back, strikes against the top of the recess, which receives the rear end of the breech and is tilted forward, and thus throws the firing-pin backward, as shown in Fig. 3.

The rear end of the firing-pin is beveled, and when the piston-breech has been thrown forward is in position to be engaged and wedged forward by the eccentric edge of the hammer when the trigger I is pulled.

It will be seen that the piston-breech E is connected to the rear end of the actuating slide-bar F, and that the bottom of the receiver is slotted longitudinally to admit the slide-bar F. During the backward excursion of the slide-bar F the jaw *k* of the extractor K', which occupies the usual recess, *k'*, in the rear end of the chamber, and which bears against the forward side of the flange of the shell in the chamber, is moved back, thus withdrawing the shell from the chamber.

For the discharge of the empty shell from the receiver, there is provided the opening L in the left-hand side wall of the receiver, and this opening, when the piston is forward, is covered by the sliding door L', affixed to and moving with the slide-bar F. By the backward movement of the slide-bar F the door L' is carried backward, thus leaving the opening L free for the discharge of the shell withdrawn from the chamber. The opening L in the side wall of the receiver also facilitates the refilling of the magazine D. To refill the magazine D, the slide-bar F is moved back, thus withdrawing the door L' from the opening L, and the gun is then turned upside down, bringing the magazine underneath the barrel, so that a cartridge inserted through the hole L will drop down into the space within the receiver in the rear of the mouth of the magazine. From this position the cartridge is pushed into the magazine by means of the slide M, which is adapted to be reciprocated in the slot M', extending across the upper portion of the side wall of the receiver. The slide M is provided with the triangular ear *m*, the forward face of which is adapted to bear upon the base of the cartridge. Having pushed the slide forward, and thereby carried the cartridge into the magazine, another cartridge is dropped through the hole L and falls into the space within the receiver immediately behind the base of the cartridge which has been previously inserted in the magazine. The

slide M is then pulled back, the inclined face *m'* of the ear *m* riding over the base of the cartridge last dropped in the receiver, and the forward face of the ear *m* having thus acquired contact with the base of the second cartridge, the slide is again pushed forward and the second cartridge pushed into the magazine. This operation is repeated until the magazine is filled.

What I claim as my invention is—

1. In a magazine fire-arm, a piston-breech suitably connected to and in combination with an actuating sliding handle situated forward of the receiver and serving as a means for supporting the barrel, and provided with a path of reciprocation in a line parallel with the axial line of the barrel.

2. In a magazine fire-arm, the combination of a piston-breech, a supporting-handle forward of the receiver and movable in the direction of the length of the barrel, means connecting the handle and piston-breech, and means whereby the piston-breech will be held in position during firing, substantially as specified.

3. In a magazine fire-arm, the combination of a piston-breech, a supporting-handle forward of the receiver, and means connecting the piston-breech and supporting-handle, so that when the supporting-handle is used the piston-breech will be moved in the same direction, substantially as specified.

4. In a magazine fire-arm, the combination of a piston-breech, a supporting-handle forward of the receiver movable in the direction of the length of the barrel, and means whereby, when the said supporting-handle is moved back and forth, motion will be transmitted to the piston-breech so as to cause the latter to move back and forth, substantially as specified.

5. In a magazine fire-arm, the combination, with a barrel and a tubular magazine, of a piston-breech, a device whereby the passage of a cartridge from a point opposite the magazine to a point opposite the barrel will be effected, and a supporting-handle forward of the receiver adapted to move in the direction of the length of the barrel to operate the piston-breech and to operate the device whereby the passage of a cartridge from the magazine to a point opposite the barrel is effected, substantially as specified.

6. In a magazine fire-arm, the combination, with a barrel, a superposed magazine, and a receiver, of a piston-breech, a finger whereby a cartridge ejected from the magazine will be caused to descend to the bottom of the receiver opposite the barrel, and a supporting-handle forward of the receiver adapted to move in the direction of the length of the barrel, substantially as specified.

7. The combination, with a barrel and magazine, of the piston-breech E, a supporting-handle, F', for reciprocating the same, situated forward of the receiver, the rocker G', deriving motion from the piston-breech, and the finger G, serving to relieve a cartridge which has been ejected from the magazine from the



thrust of the magazine-spring, substantially as set forth.

5 8. In a magazine fire-arm, the combination, with a barrel and magazine, of a piston-breech, a supporting-handle situated forward of the receiver, for reciprocating the piston-breech in the direction of the length of the barrel, and a device operated by the piston-breech and serving to cause the passage of a cartridge  
10 from a point opposite the magazine to a point opposite the barrel, substantially as specified.

15 9. In a magazine fire-arm, the combination, with a barrel, a magazine, and a receiver, of a piston-breech, a supporting-handle situated forward of the receiver and adapted to reciprocate the piston-breech in the direction of the length of the barrel, and a cover for the receiver operated by the movement of the piston-breech, substantially as specified.

10. The combination, with the barrel C, 20 magazine D, and receiver A, of the piston-breech E, a supporting-handle situated forward of the receiver and adapted to reciprocate the piston-breech in the direction of the length of the barrel, and the cover L, substan- 25 tially as specified.

11. The combination of the piston-breech E, the firing-pin *e*, provided with the notch *e'*, the rocker *E'*, and the recess in the stock, which receives the rear end of the piston-breech at 30 the conclusion of its backward excursion, substantially as and for the purpose set forth.

SYLVESTER H. ROPER.

Witnesses:

TRUEMAN B. TOWNE,  
HAYWARD P. HALL.