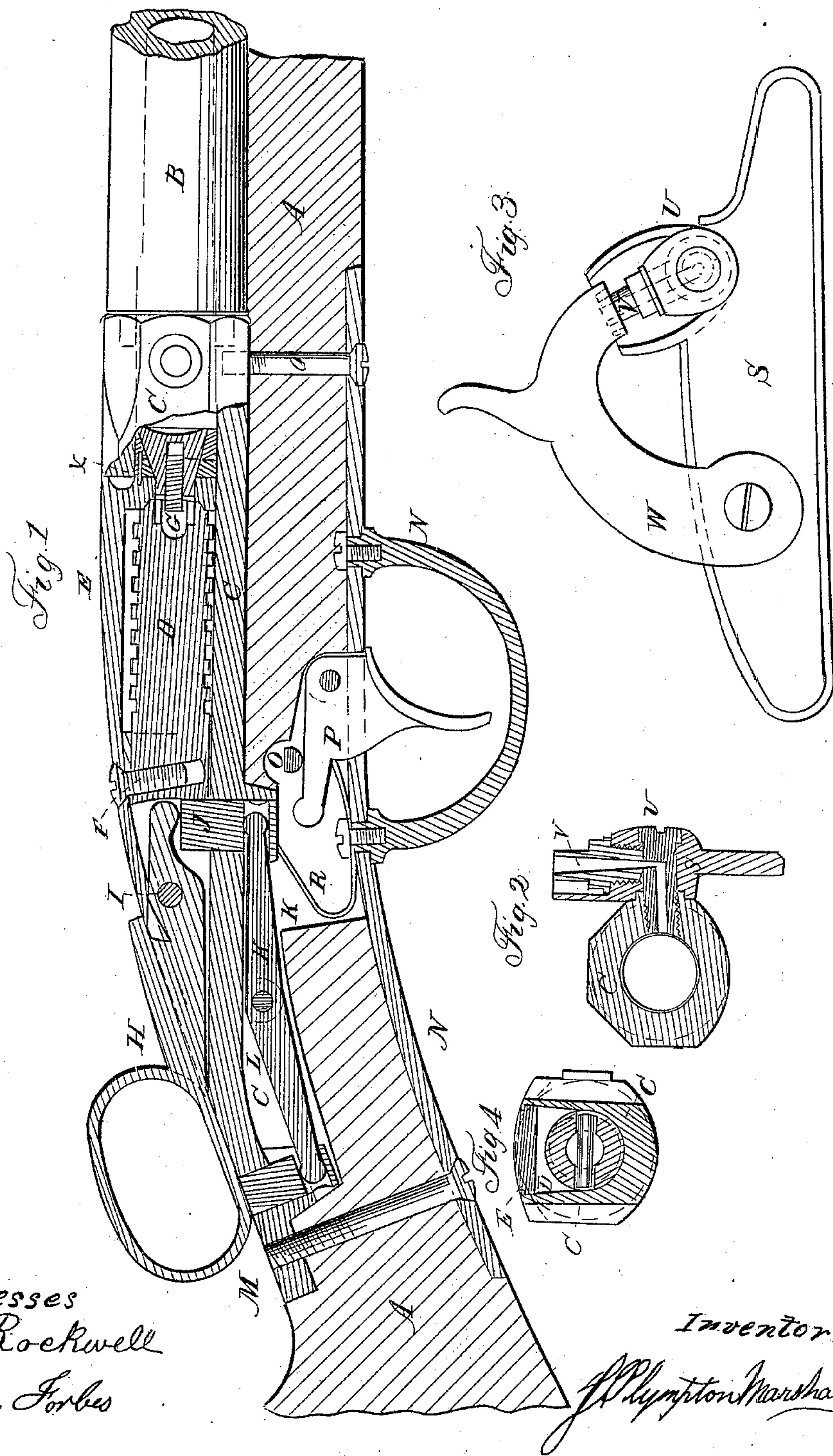


J. P. MARSHALL.
Breech-Loading Fire-Arm.

No. 35,107.

Patented Apr. 29, 1862.



Witnesses
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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 35,107, dated April 29, 1862.

To all whom it may concern:

Be it known that I, J. PLYMPTON MARSHALL, of Millbury, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of a portion of a fire-arm, showing my improvements, the rear end of the barrel and part of the stationary breech-piece being shown in view. Fig. 2 is a transverse vertical section through the breech-piece, lock-plate, cone, cone-seat, shield, and hammer. Fig. 3 is a side elevation of the lock-plate and the parts attached. Fig. 4 is a transverse vertical section at the rear of the screw which holds the expanding rings to the movable breech-piece.

The nature of my invention consists in various improvements in construction, having for their object to render breech-loading arms more secure from the entrance of dirt and water, more easily cleaned, and more secure from accidental discharge, while they are made cheaper, more simple, and more easily put together, all as hereinafter detailed, and set forth in the accompanying claims.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, referring to the drawings, on which the same letter of reference marks the same part wherever it occurs.

A marks the stock of the gun; B, the barrel; C, the stationary breech screwed onto the barrel. The bore of the stationary breech C is in line with that of the cartridge-chamber of the barrel, and corresponds with it in diameter. It has a slot in its top large enough to receive a cartridge. Its bore extends through its entire length, leaving it open at both ends. In this bore is placed and slides the cylindrical piece D, which forms the larger portion of the sliding breech. This piece D fits the bore of the stationary breech C snugly, but so as to slide freely in it.

E is the top plate of the sliding breech, which entirely covers the opening in the top of the stationary breech C when the sliding breech is pushed forward as far as it will go. This plate is attached to the cylindrical piece

D by the screw F, and the two parts together form the movable breech.

From the forward end of plate E a piece projects downward into the bore of the stationary breech, for the purpose of affording an attachment to the breech-pin X, which consists of a cone-headed pin inserted into two or more expanding rings, cylindrical on the outside, and fitting closely the rear of the cartridge-chamber. This compound breech-pin is secured to the forward end of the movable breech by the screw G in the rear of the cone-headed pin. The screw G is T-shaped, and the transverse piece which forms its head is held in a groove of corresponding size in the forward end of the cylindrical piece D, (see Figs. 1 and 4,) which prevents it from being turned round when the pin is screwed onto it. The transverse head also prevents the screw from being drawn through the small hole in which the rear end of the breech-pin is placed. The cone-headed pin has a nick in its forward end, by which it is screwed up upon the screw G when it is desired to expand the rings to make them fit the bore of the cartridge-chamber more closely.

The rear end of the cylindrical piece D has a fork in it, in which is pivoted the operating-lever H by the pin I. The forward end of this lever rests upon the lock-bolt J, and its rear end has a ring or handle by which it is operated. The rear end of top plate, E, passes into a notch in the lever H, as seen in Fig. 1. The lock-bolt J moves vertically in a hole through the bottom of the stationary breech C. When forced up, it passes into a hole in the cylindrical piece D and locks the movable breech in its forward position. When depressed, it forces down the trigger out of contact with the sear of the lock, and thus prevents the discharge of the piece. It has a hole in its lower end, which receives the forward end of lever K, by which it is operated. Lever K is pivoted to a lug on the bottom of breech C by the pin L, which serves as its fulcrum. The forward end of this lever passes into and operates bolt J, as before described. Its rear end passes into and operates bolt M, the upper end of which is directly under the ring of lever H, as shown in Fig. 1. Both extremities of lever K are rounded like a ball, to facilitate the operation of the lever in the bolts.

N N mark the guard and guard-bow, and O the screw-bolts by which they are attached to the stock.

P marks the trigger, and Q the end of the sear of the lock.

R is a spring, the lower end of which holds the trigger against the sear, and its upper end presses up the lock-bolt J into the bolt-hole in piece D, and keeps it there in all positions of the piece unless forced down by the lever H.

In Figs. 2 and 3 are shown, in section and elevation, the lock-plate S, the screw U, which holds the lock to the breech, the cone V, screwed into the cone-seat, and having the hammer W resting upon it. These figures also show the shield and cone-seat. The screw U is bored for a vent, as shown in Fig. 2, and communicates, through a hole in its side, with the bore of the cone V. The cone-seat is formed on the lock-plate, and is of the same piece with it, instead of being made on the breech or barrel. By this construction the cone can be put on its seat and the hammer adjusted to it without the lock being put on the arm, thus rendering the lock complete in itself. There is a round projecting flange around the vent-hole in the breech-piece C, which is received into a recess of corresponding size in the rear side of the shield of the cone-seat. This flange is seen in front elevation in Fig. 1, in section in Fig. 2, and in side elevation in Fig. 4.

The operation of the arm is as follows: The arm being held in the left hand, the ring of the operating-lever H is raised by the thumb and forefinger of the right hand until the lock-bolt J is depressed below the cylindrical piece D, when the movable breech is drawn back by the ring of lever H until it is arrested by a stop, and leaves a sufficient opening in the top of breech C for the reception of a cartridge.

While the breech is thus open, the trigger is prevented from acting upon the sear by the bolt J, which rests upon its rearward arm and holds it down. The cartridge being introduced, the movable breech is shoved forward and closes the opening in the stationary breech, when, the ring of lever H being pressed down upon bolt M, bolt J is forced up into the bolt-hole in cylinder D and securely locks the movable breech in its forward position. A cap being placed on the cone, the arm is ready to be discharged in the ordinary way.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the peculiarly-constructed stationary breech C with the movable breech D E, arranged for conjoint operation in the manner and for the purpose specified.
2. The combination of the operating-lever H and movable breech with the lock-bolt J and trigger P, substantially as and for the purpose described.
3. The combination of the breech-pin X, constructed as described, with the screw G, plate E, and cylinder D, arranged and operating as and for the purpose set forth.
4. Forming the cone-seat and its shield of the same piece with the lock-plate, in the manner and for the purpose set forth.
5. Forming a circular flange around the vent of the stationary breech-piece to fit into a cavity or recess of corresponding size in the rear side of the cone-shield, in the manner and for the purpose described.

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