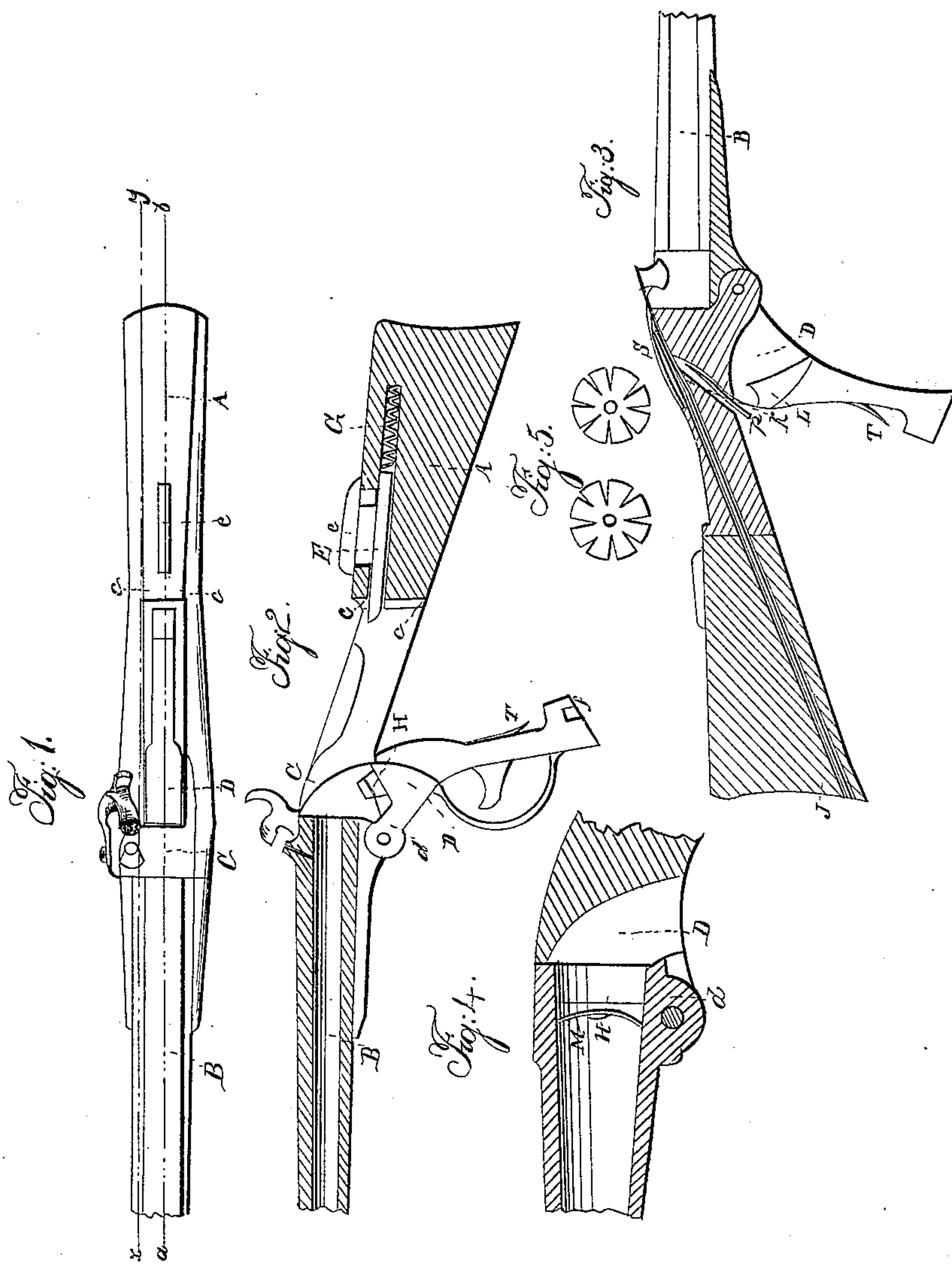


F. D. NEWBURY.
Breech-Loading Fire-Arm.

No. 15,521.

Patented Aug. 12, 1856.



Thos. H. Smith & Co.
Mr. Miller

F. D. Newbury

UNITED STATES PATENT OFFICE.

FREDERICK D. NEWBURY, OF ALBANY, NEW YORK, ASSIGNOR TO R. V. DE WITT, JR., OF SAME PLACE.

IMPROVED FIRE-ARM.

Specification forming part of Letters Patent No. 15,521, dated August 12, 1856.

To all whom it may concern:

Be it known that I, FREDERICK D. NEWBURY, of the city of Albany and State of New York, have invented a new and useful Method of Constructing Breech-Loading Fire-Arms; and I do hereby declare the following specification, with the drawings hereto attached as part thereof, to be a full and accurate description of my invention.

Figure 1 represents a carbine, bird's-eye view. Fig. 2 represents a profile view on left side in vertical section on the line *a b*, Fig. 1. Fig. 3 represents a profile view on right side in vertical section on the line *x y*, Fig. 1. Fig. 4 represents a diagram section of load-chamber and breech-closer, full size. Fig. 5 represents cup-shaped terminals forming the concave breech-seats.

Similar letters in the figures denote the same parts of the apparatus.

My improvement is, first, in the construction and arrangement of the breech-closer; secondly, in the method of connecting the breech-closer with a self-priming apparatus.

A is the stock of the gun; B, the barrel, which is secured at its rear end to block C, forming the front end of the oblong metal frame C c c, which is embedded into a vertical slot cut into the stock. The interior opening of this frame has vertical sides, and is shaped to hold the valve, breech-closer H, and its arm D. This arm is a piece of iron or steel, in its shape conforming as nearly as may be consistently with its use to the profile line of the gun-stock, so that when in its shooting position it may fill up the interior space of the frame C c c. Toward the front a portion of it projects downward and forward, forming a hinge-piece, *d*, pivoted to the under side of C, so that it can be turned down into the positions shown in Figs. 3 and 4. The back end is formed to abut with a square face as nearly as may be at right angles with the axis of the barrel B, and fitting firmly and exactly against the surface of the rear plate *c c* of the frame. To retain the block in this position, a square mortise, *f*, is made into the end of the block, to retain a square bolt, E, which lies in a recess in the stock, and is kept in place by a spring, G, lying behind it in the recess, the bolt being managed by a thumb-piece, *e*, pro-

jecting out through the stock. When the bolt is withdrawn, the releasing-spring T, which is attached to the arm D or to the stock above it throws the arm down, as shown in Fig. 2, preparatory to loading.

The apparatus to close the breech of the barrel is a conical valve, H, fitting snugly into the taper bore of the load-chamber, to the front end of which is secured a thin cup-shaped piece of metal, M, with its concavity outward, called the "concave breech-seat," also fitting the bore of its seat, with a bearing of softer metal lying between it and H. The object of this cup-shaped terminal is to furnish an elastic stop which, if not perfectly tight when in position, may, by the pressure of the gas in firing, have its edge forced up against the surface of the chamber. This cup may be made of a solid piece of metal, or, if greater elasticity be necessary, made up of two cup-shaped pieces of metal with radiating clips in their edges, Fig. 5, the one piece breaking joints with the other.

My method of connecting the breech-closer with a self-priming apparatus is as shown in Fig. 3. A groove is made in the stock in the vertical plane of *x y*, Fig. 1, extending from the butt of the piece to near the priming-cone, and as nearly as may be in a straight range with it, into which a thin metal tube, J K, can be inserted, the tube to contain Maynard's tape priming. The end of the tape passes under a small spring, S, on the top of the stock, which keeps a moderate pressure on the priming, so as to prevent its sliding backward by the action of the feeder. This is a metal spring-piece, *p*, lying in a groove ranging from near the upper end of the priming downward and backward through the stock. From its lower end projects inwardly a little spur, which can take into a groove, L, sunk into the right-hand side of the arm D, the form of which is shown in Fig. 3, the upper and rear lines being so shaped in reference to the rotary movement of D round its center that the upper line shall, as the arm moves down, draw the piece *p* downward a short distance, and its rear line press it (*p*) upward, the effect of which movement is that on its downward motion *p* cannot affect the tape priming, which is held by the spring S, but on its upward movement pro-



pels it sufficiently forward to cover the cone with a fresh portion of the tape. As the arm D requires to be moved such a distance around its center that it would carry the feeding-spring *p* so far as to waste the priming if its whole sweep should be employed to operate *p*, this is prevented by leaving open the angle where the upper and rear lines of the groove would meet if continued, so that, as shown in Fig. 3, the pin *p* passes out of the groove.

The advantage of operating the priming apparatus by the breech-closer instead of by the hammer, as has heretofore been done, is that the piece may be cocked and uncocked as often as there may be occasion so to do without wasting the priming.

The method of using this breech-loader is sufficiently plain without a special description. The advantages I claim for it are simplicity in construction, certainty and security in use, tightness of breech-closer, and facility of cleaning when foul, over any weapon of the kind now in use.

I claim—

1. The releasing-spring T, to throw the arm D promptly down to permit a recharge of the piece.
2. The concave breech-seat M, or its substitute in Fig. 5.
3. The method of arranging tape priming by inserting the same through the stock in the manner described, either with or without metal tubing J K.
4. The spring S, when applied to the stock to prevent the retraction of the tape, and to cover the priming from the weather, arranged substantially as shown and described in the drawings and specification.
5. The feeding-spring piece *p*, in combination with the lever D as its moving power.

F. D. NEWBURY.

Witnesses:

RICHD. VARICK DE WITT,
W. C. MILLER.

