

UNITED STATES PATENT OFFICE.

WILLIAM MORGENSTERN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
TO HIMSELF AND WM. P. WILSTACH, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 48,133, dated June 6, 1865.

To all whom it may concern:

Be it known that I, WILLIAM MORGENSTERN, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and Improved Breech-Loading Fire-Arm; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in making a simple, economical, and safe breech-loading fire-arm, which can be opened by cocking the hammer, but the breech or recoil block can be closed or pushed home without disturbing such position of the hammer, and which can be brought afterward to half-cock, if desired.

Figure 1 is a vertical axial section through the arm, or that part of it shown. Fig. 2 is an elevation of the same, and Fig. 3 an elevation of the right-hand side of the breech-block.

In the drawings, A represents the barrel; B, the frame which secures stock or butt and barrel together; C, the breech-block; D, the cock or hammer; E, the trigger, and N the fixed recoil-seat.

The hammer is placed on a pin, G, which enters it with a square shoulder, (see dotted lines, Fig. 2,) passing through both cheeks of the frame. This pin carries a cam or lever, H, firmly secured to it by a screw or otherwise.

Behind the rear opening of the barrel a central longitudinal slot is cut, in which the breech-block rests, closing the rear end of the barrel firmly and serving as a recoil-block. This is capable of an upward and backward motion, as also the reverse. It is slotted centrally, as seen at I, and has a cam-lever, J, hung in it capable of a forward motion, as indicated by arrow *a*. It is held in a vertical position by means of a spring, *k*, bearing on an upper rear projection. It will be seen it is only capable of rotation in one direction; and its lower end rests in a shallow seat just in rear of the front end of the cam-lever H. The spring *k*, which is in the top of the slot I, extends backward and downward, as seen at *l*, and when the breech-block is in its seat this spring bears against the recoil-seat N, serving to retain it in place.

L is a cartridge-retractor, operated by the

movement of the breech-block. M is the main-spring, having a swivel-connection with the lower part of cam-lever H, which serves the purpose of the tumbler and which engages with the trigger. O is a spring acting on the trigger E to throw it forward.

The operation of the arm is as follows, (Figs. 1 and 2 showing it in its normal position, hammer down, supposing it also not to be loaded:) By taking hold the top or head of the hammer and pulling backward, the same as is usually done in cocking a piece, the cam-lever H, pressing against the front lower end of swinging cam J, raises the breech-block and pushes it backward, its rear end riding over the recoil-seat N, as seen in red lines, Fig. 1. This movement carries back the retractor L, which is ready to have the cartridge placed on its front part, L', just in front of the flange, and the ball entering the breech or bore of the barrel. The two cams are now so far clear of each other that with the thumb or hand the breech-block can be pushed forward into its seat and the hammer will remain at a cock—the arm ready to be fired. The hammer can be put down to half-cock, if desired, and cocked again without disturbing the breech-block. In pulling trigger, however, and firing, the cam-lever H strikes against swinging cam J, pushing it forward and passing it, the spring *k* bringing the latter to its normal position. By repeating this operation the breech is opened and the cartridge-shell drawn out, and can be emptied or taken out. If the retraction be done quickly, the action of the breech-block on the retractor is such that the latter will be tilted, its front end brought up a little, and, acting as a spring-lever, will throw the shell out of its seat—out of the gun. This is a very desirable thing to accomplish.

On the right-hand side of the frame, at its rear end, is inserted a pin, *b*, which enters a guiding-slot, *c*, on the right-hand side of breech-block, thus controlling or regulating the movement of the rear end of the same, an upward as well as a backward one. The front end of this block, however, makes a simple longitudinal movement, regulated by a pin, *d*, on the left-hand side and front end of it, which enters a straight slot, *e*, on the inside of the left-

hand cheek of the frame. (See dotted lines, Fig. 1.) The cartridge is exploded by the nose of the hammer reaching the flange of the cartridge through a hole, *f*, in the front part of the breech-block, or it may strike an intermediate sliding pin, which can transmit the blow.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. Raising the rear of the movable breech from its engagement and retracting it by means of the tumbler-lever H, operated by the hammer in the act of cocking.

2. The lifting and retracting lever H and the tumbler in one piece.

3. The swinging cam or lever J, constructed and arranged substantially as and for the purpose set forth.

4. The combination of the breech-piece C, cam J, and tumbler-lever H, operating in the manner substantially as described.

WILLIAM MORGENSTERN.

Witnesses:

S. S. FAHNESTOCK,

JOHN S. HOLLINGSHEAD.