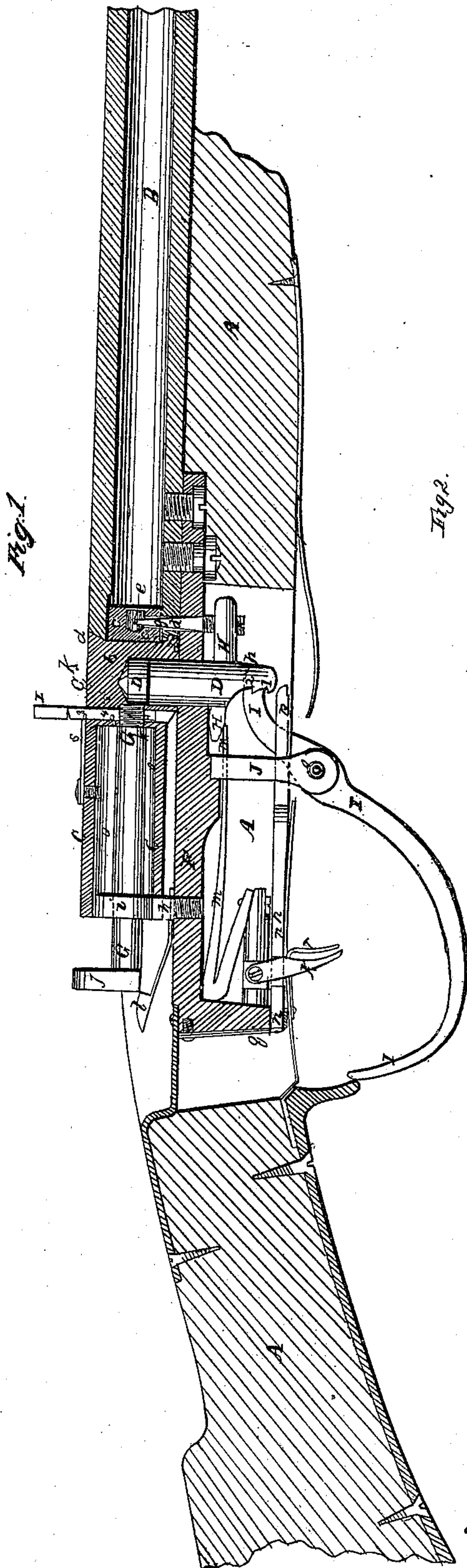


MORGENSTERN & MORWITZ.

Breech-Loading Fire-Arm.

No 40,572

Patented Nov. 10, 1863.



Witnesses:
J. D. Patton
A. Moore

Inventors.
William Morgenstern
Edward Morwitz
By atty A. B. Stoughton

UNITED STATES PATENT OFFICE.

WILLIAM MORGENSTERN AND EDWARD MORWITZ, OF PHILADELPHIA, PA.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 40,572, dated November 10, 1863.

To all whom it may concern:

Be it known that we, WILLIAM MORGENSTERN and EDWARD MORWITZ, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Breech-Loading Guns; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal section through the gun, showing the interior arrangement thereof in full. Fig. 2 represents a side view and section of a cartridge which may be used in the gun.

To enable others skilled in the art to make and use our invention, we will proceed to describe the same with reference to the drawings.

A represents in section a portion of the stock, and B, in similar section, a portion of the barrel, said barrel being open at its rear to receive the cartridge when the breech-block C is run back for that purpose. The breech-block C is made partially hollow, as at *a*, and partially solid, as at *b*, and has upon its front end a projection, *c*, that enters and neatly fits the bore of the gun. The shoulder *d* of the projection *c* is undercut, and the end of the barrel beveled off so as to form a dovetailed joint with said undercut shoulder. The front end of the projection *c* has a chamber, *e*, formed in its end large enough to receive the cap or primer *f* on the cartridge E, and there is also an opening made in its lower side, extending up to the chamber *e*, for the needle or hammer *g* to work through to explode said cap or primer. From the under side of the solid portion *b* of the breech-block there is an opening made, into which the bolt D shoots when the trigger is pulled to lock the breech-block to the barrel before the discharge takes place.

The breech-block C has a sliding motion to and from the rear end of the barrel, as follows: A stud, *h*, is fastened to the lock and barrel-frame F, and has upon it a circular head, *i*, that nearly fills the bore or hollow of the breech-block. A stem, G, having a head, *j*, upon it, by which it may be seized to draw back or push forward the breech-block, is

fastened to the breech-block at *k*, and passes through the head *i*, which steadies and guides it, and a cut-away portion on the under side of the breech-block straddles the neck of the stud *h*, thus allowing the block to freely move on the frame, while it is firmly held thereto.

l is a spring-catch for holding the breech-block in place when run up to the barrel.

The bolt D has connected to it a cross-piece, H, the forward end of which carries the needle or hammer *g*, and the rear end forms a projection to catch the point of the mainspring *m* to contract it when the bolt and needle or hammer are drawn down or set upon a "cock" and it has also upon it shoulders 1 2, on which the dog *n* catches to hold it at "half" or "whole" cock, as the case may be.

I is a lever pivoted at *o* to a hanger, J. The point *p* of this lever passes through a mortise in the bolt D, and then it bends around so as to form a guard for the trigger K. By pressing the lever I upward toward the stock, the bolt D and needle *g* are drawn down until the dog *n* takes into the notch 1 or 2, as the case may be, said dog being pressed forward into the notches by a spring, *q*, behind it. When the trigger K is drawn back, it draws the dog *n* from the notch or notches, (for the dog is forked, straddling the lever I, and takes into notches on both sides of the lever,) and allows the bolt D and needle or hammer *g* to fly, the former locking the breech-block and the latter exploding the cap or primer.

r is a stop to hold the trigger and prevent it from accidentally letting off the bolt and needle when the gun is at the cock.

The sight L is made adjustable for a short or long range by means of notches 3 4 in the shank of the sight and a turning catch-piece, *s*, on the barrel, that takes into said notches, and thus hold the sight at any fixed position.

The cartridge has a paper or other thin case, *t*, which covers the bullet *u* entirely; and at the heel of the cartridge there is a stiff paper or other wad, *w*, with a hole through it for the fire to pass from the cap or primer to the powder *v*, and behind this wad a thinner one, *x*, and a canvas back, *y*, the cap being held in place by the two rearmost disks or wads, *x* *y*, which also confine the paper wrapping to the wad *w*.

Having thus fully described our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

1. The breech-block C, constructed, arranged, and operating substantially as herein described and represented.

2. The combination of the bolt and needle or hammer with the mainspring, lever, dog,

and trigger, for the purpose of cocking and letting go said bolt and needle or hammer, substantially as described.

WILLIAM MORGENSTERN.
EDWARD MORWITZ.

Witnesses:

OTTO MAASS,
G. G. CLAIBORNE.