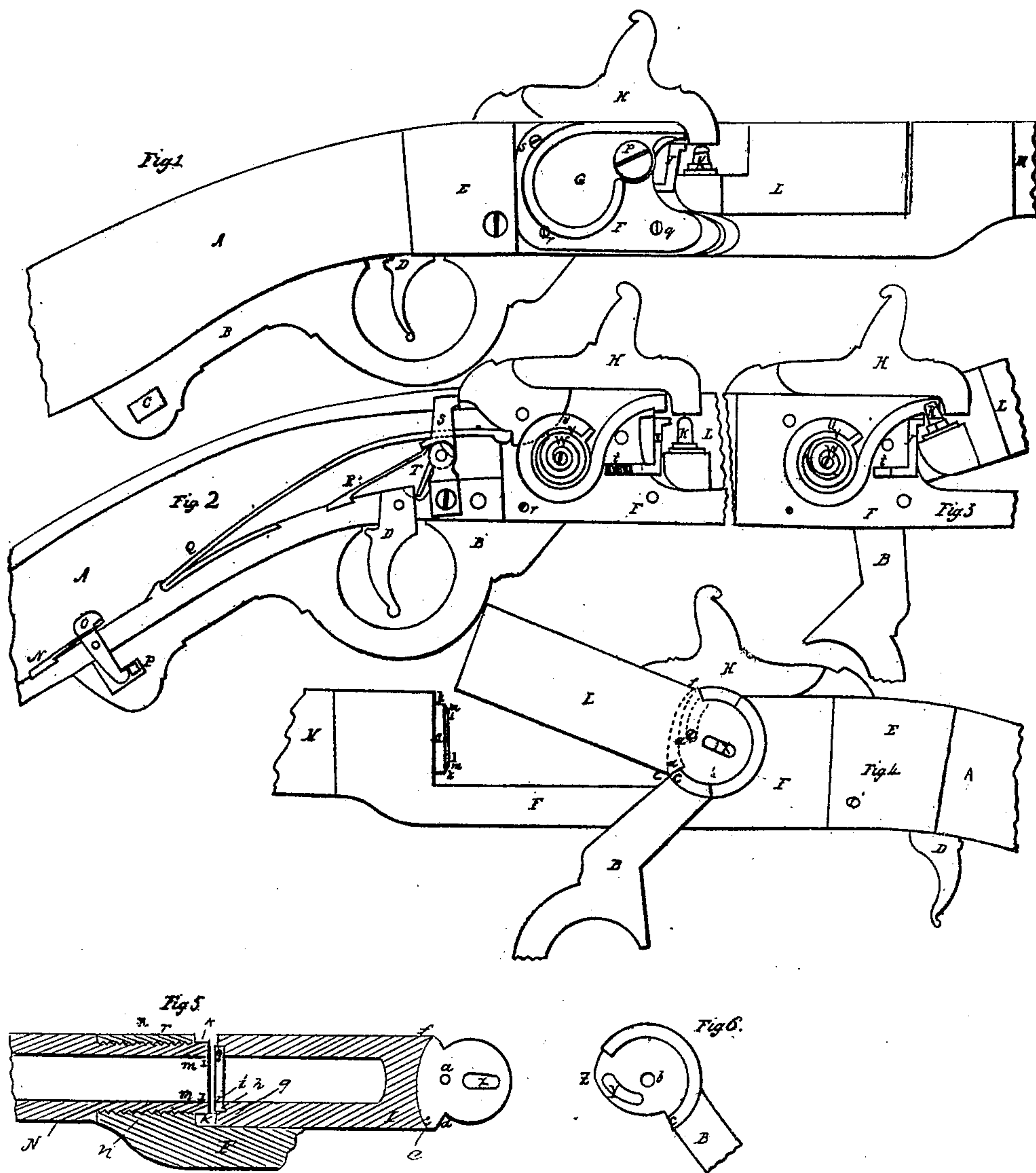


H. GROSS.
Breech-Loading Fire-Arm.

No. 15,072

Patented June 10, 1856.



UNITED STATES PATENT OFFICE.

HENRY GROSS, OF TIFFIN, OHIO.

IMPROVED BREECH-LOADING FIRE-ARM.

Specification forming part of Letters Patent No. 15,072, dated June 10, 1856.

To all whom it may concern:

Be it known that I, HENRY GROSS, of Tiffin, in the county of Seneca and State of Ohio, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, of which—

Figure 1 is a side view of a section of the gun, showing the breech-piece, sliding chamber, hammer, nipple, primer, &c. Fig. 2 is a longitudinal vertical section of the same, showing the interior arrangement of the lock in connection with the hammer and primer. Fig. 3 is a side view of a section of the same, showing the chamber thrown upward, in readiness for receiving the charge, and also the position of the nipple at the same time with reference to the primer and follower, which will hereinafter be explained. Fig. 4 is a side view of a section of the same, showing the eccentric-lever in connection with the chamber, and by means of which the chamber is worked. Fig. 5 is a longitudinal vertical section of the chamber and barrel, showing the point of connection between the chamber and barrel, and also the end of the chamber which connects with the eccentric-lever. Fig. 6 shows the end of the eccentric-lever which connects with the chamber.

The same letters refer to like parts.

A is part of the stock; B, the lever, and which also forms the guard; C, the catch by which the lever is held in its place when down upon the stock; E, cap covering the lock; F, a part of the metal breech-piece; G, the cap of primer; H, the hammer; I, the follower, which acts to prevent the explosion of the caps in the primer when the gun is being discharged; K, the nipple; L, the chamber; M, the barrel; S, the sear, acting upon the upper side of the lock end of the hammer, as seen in Fig. 2.

The construction and operation of this fire-arm are as follows: The barrel is attached to the breech-piece by a screw upon it, and which passes through, as seen at M in Fig. 4, and in the same breech-piece is fitted a movable chamber, L, made of cast-steel, which is worked backward and forward, and also raised up-

ward, for loading, by the eccentric-lever B, which is fitted by a knuckle or joint into the end of the chamber, as seen in Fig. 4. The lever is secured to the breech-piece at *b* by a strong pin, and the chamber is confined to the lever by a slot and pin working therein, as seen at Y in Fig. 6, and the end of the chamber by the slot X, also is assisted in keeping its proper place by the pin *b*. When the lever is thrown forward, the chamber, by means of the slot and pin in the eccentric-lever, is drawn back away from the end of the barrel, (which enters the chamber when it is down in its place,) and by a further forward movement of the lever the chamber is thrown upward by its coming in contact with the shank of the lever at the point *e*, Fig. 4, and in a position to receive the charge or cartridge. The charge being in, the lever is drawn backward, and the chamber is brought down upon its bed in the breech-piece, and by a further movement of the lever in the same direction the chamber, by the eccentric on the end of the lever, is forced forward upon the end of the barrel, making a perfectly tight joint, entirely excluding the escape of powder. At this point the projecting end of the barrel is beveled at the outer edge, and the chamber at the corresponding points is depressed, making the point of contact shear-like, by which the accumulating filth from firing the gun or other obstructions are cut and removed, and the chamber allowed to work smoothly and perfectly during a continuous firing of the gun for at least one hundred discharges before any cleansing is needed. The point of contact just described is seen at *lm* and *hi* in Fig. 5. The primer U is a circular box with a wheel and scroll-spring, and into which percussion-caps are placed and forced forward through the tube of the primer to the upper end of it, and in readiness to receive the nipple K, when the chamber is raised for loading, as seen in Fig. 3. When the chamber is raised, as just named, the nipple enters the end of the primer and is forced into a percussion-cap at this point, which adheres to the nipple, when it again comes down to its place.

To prevent the explosion of caps in the primer, a follower, I, is attached, the upper part of which covers the orifice in the end of the primer when the nipple is down, and is forced

away from this point by the chamber and nipple on being raised upward, as seen in Fig. 3. This follower works by a spiral spring.

The great advantage of the improvement (as claimed) above all others of the breech-loading guns is its simplicity, durability, and facility in use, its freedom from friction, and ability to perform much longer without cleansing.

I am aware that breech-loading fire-arms have been constructed in which the chamber is drawn back and elevated, and then thrown down and moved forward by means of lever-and-cam attachment and other analogous devices. These constructions I expressly disclaim, as where they are used the force of the explosion is either brought upon the pin on

which the breech turns, or is resisted by a surface on one side of the axis of the breech.

What I do claim is—

The breech-piece L and eccentric-lever B, working together, as described, in combination with the breech-seat F, to which the axis of the breech is normal at the time of discharge, whereby the pin around which the breech turns is relieved, and loosening from recoil prevented, also the primer U, and the follower I, in combination with the nipple K, working together, as described. All other parts of said fire-arm I disclaim.

HENRY GROSS.

Witnesses:

R. G. PENNINGTON,
JESSE H. LEIDY.