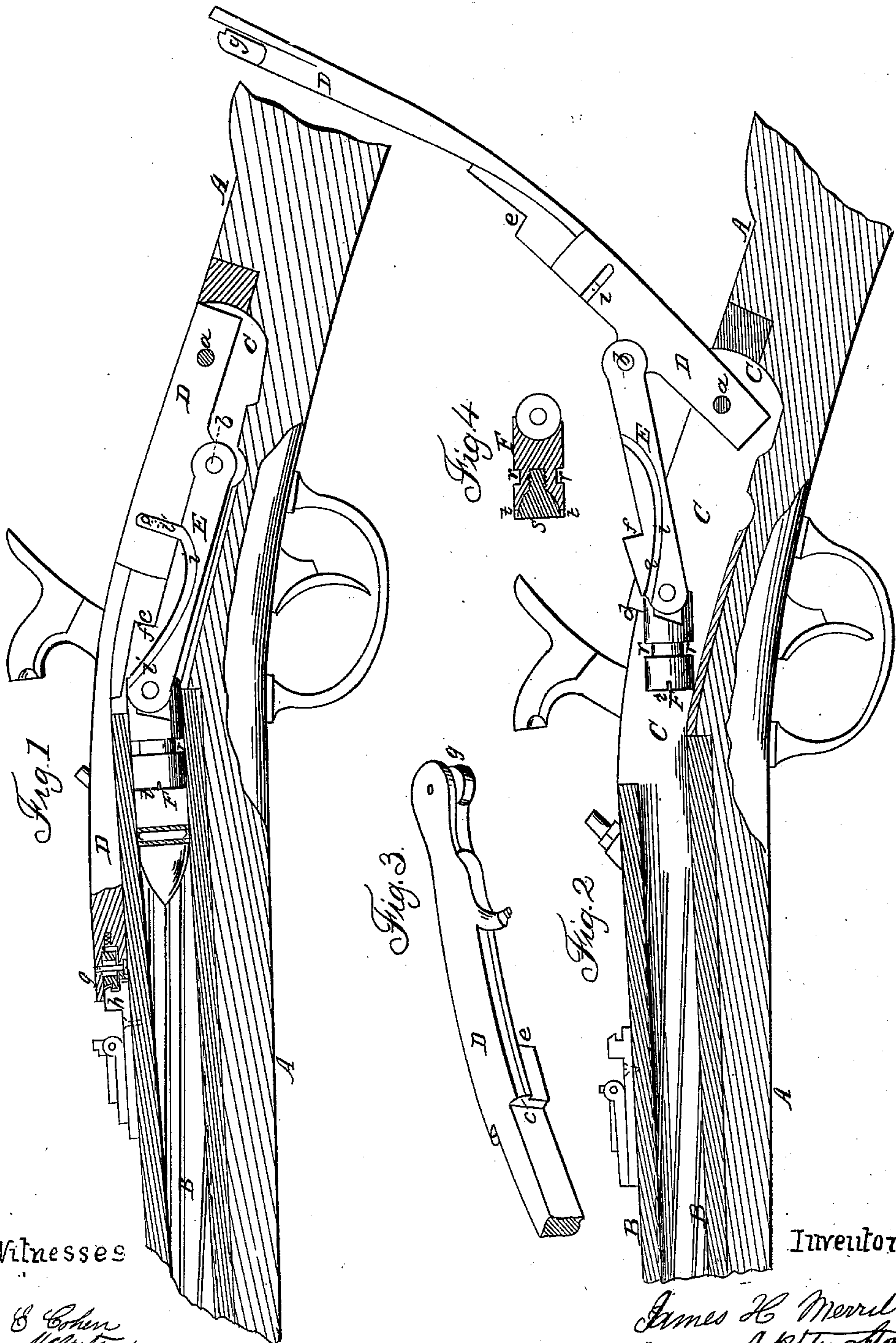


J. H. MERRILL.

Breech-Loading Fire-Arm.

No. { 1,028, {
32,032. }

Patented Apr. 9, 1861.



Witnesses

E. Cohen
M. Putnam

Inventor

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By Atty. A. Stoughton

UNITED STATES PATENT OFFICE.

JAMES H. MERRILL, OF BALTIMORE, MARYLAND, ASSIGNOR TO MERRILL
PATENT FIRE ARMS MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 32,032, dated April 9, 1861.

To all whom it may concern:

Be it known that I, JAMES H. MERRILL, of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 and 2 represent longitudinal vertical sections through portions of a gun, showing its several parts in two positions; and Figs. 3 and 4 represent detached parts that will be specially referred to in the description.

The recoil from the explosion of a cartridge of course comes upon the breech-plug behind it, and when that breech-plug is hung to a lever it transfers the recoil to the lever, and is apt to jump or spring it open, and sometimes injure the lever.

The object of my invention is to so connect my levers and breech-plug when they are in line as that several shoulders upon them and upon the casing of the gun shall interlock or lap over, and thus break or divide up the recoil upon several points, all of which tend to hold the breech-plug firmly against recoil; and my invention consists in not only having shoulders upon the main lever that lock in with shoulders on the gun-casing, but also to have shoulders upon the levers themselves, which interlock when the gun is charged and discharged, and thus additionally brace the breech-plug against recoil or flying back.

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

A represents a portion of the stock, and B, a portion of the barrel, of a gun constructed after my general plan—that is to say, the barrel being entirely open at its rear, and behind the barrel a long open chamber, C, for ready loading and easy cleaning, and in which chamber the levers and breech-plug are hung and actuated as follows: The lever D is pivoted at *a* near the rear of the chamber C, and to this lever, at *b*, is pivoted the rear end of the toggle-lever E, said toggle-lever being pivoted at its other or front end to the breech-plug F. Upon the lever D are shoulders *c c*, which close down in contact with shoulders *d* on the gun-casing, when the lever is brought

down, as shown in Fig. 1, and beyond the shoulders *c* there is on the under side of said lever D a shoulder, *e*, which shuts down in contact with a shoulder, *f*, on the toggle-lever E, and at the end of the lever there is a spring-bolt, *g*, that takes under a catch-piece, *h*, on the barrel. At all these lap-joints, where one piece moves past another, there is a scraping-edge that will clean off any gummy matter or dirt, which might otherwise prevent the parts from coming down close if allowed to accumulate in these joints.

i is a groove formed in the toggle-lever E, (in one or on both of its sides,) which receives a pin, *o*, set in the casing, and which pin guides the toggle-lever in its forward and rearward movement, for the purpose of drawing down or raising up the breech-plug F, as the case may be. This groove is of a curved form so far as it extends through the toggle-lever, and it continues into the lever D in a more direct line, as seen at *i'*; or, in other words, the groove in the toggle-lever is more nearly in the line of its length, while in the lever D it is at right angles to such a line. When the lever D is shut down, the pin *o* is in the groove *i'*; when raised up, it is in the forward part of the groove *i*.

The plug F has a groove, *r*, cut in it, for holding any lubricating compound, and also for forming a gas-chamber, which when the plug is withdrawn for another charge relieves itself.

The front part of the breech-plug is hollowed out, and a copper or any other expansive metal plug, *s*, inserted therein, and the edges of the plug are split, as at *t*, to allow them to yield to the expansion of the copper, and to pack thereby the bore of the gun.

Having thus fully described the nature and object of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

The combination of the shoulders upon the levers and upon the casing of the gun, to take the recoil of the breech-plug upon instead of allowing it to come entirely upon the pivots, and for security against the springing up of the levers, substantially as described.

JAMES H. MERRILL.

Witnesses:

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P. W. THOMAS.