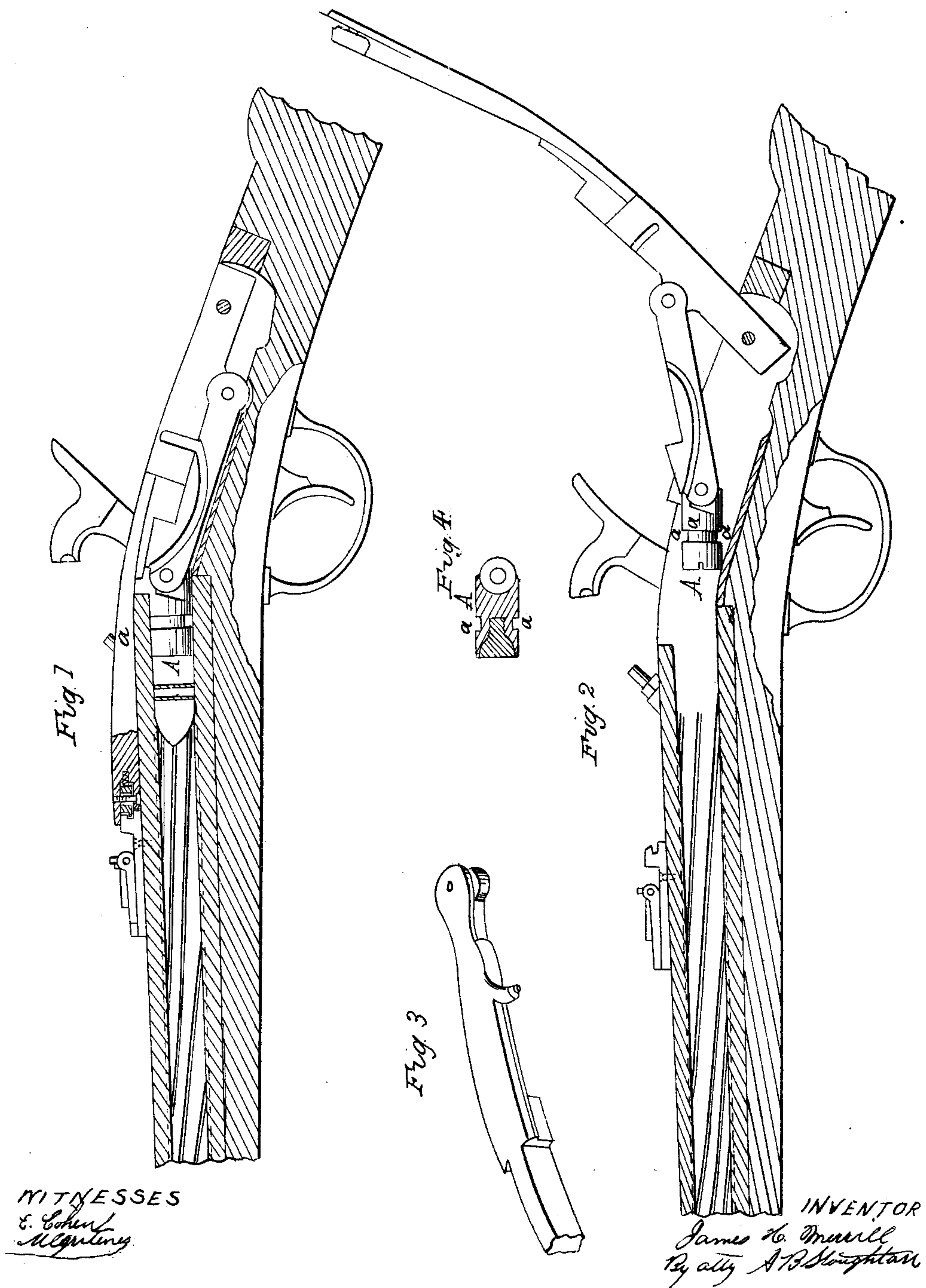


J. H. MERRILL.

Breech Loader.

No. 32,451.

Patented May 28, 1861.



UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 32,451, dated May 28, 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 construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figures 1 and 2 represent longitudinal sections through so much of a breech-loading-gun as will illustrate my invention, and Figs. 3 and 4 represent details thereof that will be referred to.

A breech plug or pin for a breech-loading gun must be well and constantly lubricated to work well, and even then, without some way or means of escaping the gas and removing the matter that accumulates in the bore of the gun, it will not work freely, smoothly, and tightly, all of which are important and necessary. The user will scarcely devote that time and attention to lubrication and cleansing that is actually necessary to keep the arm in perfect order; and hence I have devised a plan by which this is automatically done in the act of charging and discharging the gun; and my invention consists in combining with a piston having a copper plug in it and a split rim, the forming a groove in the plug or breech-pin, which performs a triple service—viz., it makes a chamber for containing a lubricating compound; it forms a chamber into which the gas from the explosion of the charge may enter, and from which it escapes when the plug is drawn out; and, thirdly, the edges of the groove become scrapers for scraping off any

matter that may cling to the bore—one edge scraping as the plug is inserted in the bore, and the other performing a similar function when the plug is drawn out of the bore, and in both cases any matter that is scraped off finds a place of deposit in the groove, from whence it is easily removed.

A represents the plug, and *a* the groove made therein. The edges of the groove form a scraping-edge that takes off all gummy or other matter clinging to the bore. Tallow or any other lubricator may be put into this groove *a*, and it is given out to the bore of the gun at every reciprocation of the plunger or plug. The groove *a* also serves as a chamber for the gas to enter, and the moment the groove is drawn back to the end of the barrel the gas escapes, and is thus in a great measure got rid of.

The drawings clearly show the manner of using the plug or plunger A, and need not be described in detail. It has a copper plug in it to expand it, and a split rim, so as to yield to the expansion of the copper, and thus tightly pack the joint between the piston and the bore of the gun.

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

In combination with a piston having a copper plug in it and a split rim, the making a groove in the plug or plunger, for the purpose and in the manner substantially as herein described.

JAMES H. MERRILL.

Witnesses:

DAVID CARSON,
P. W. THOMAS.