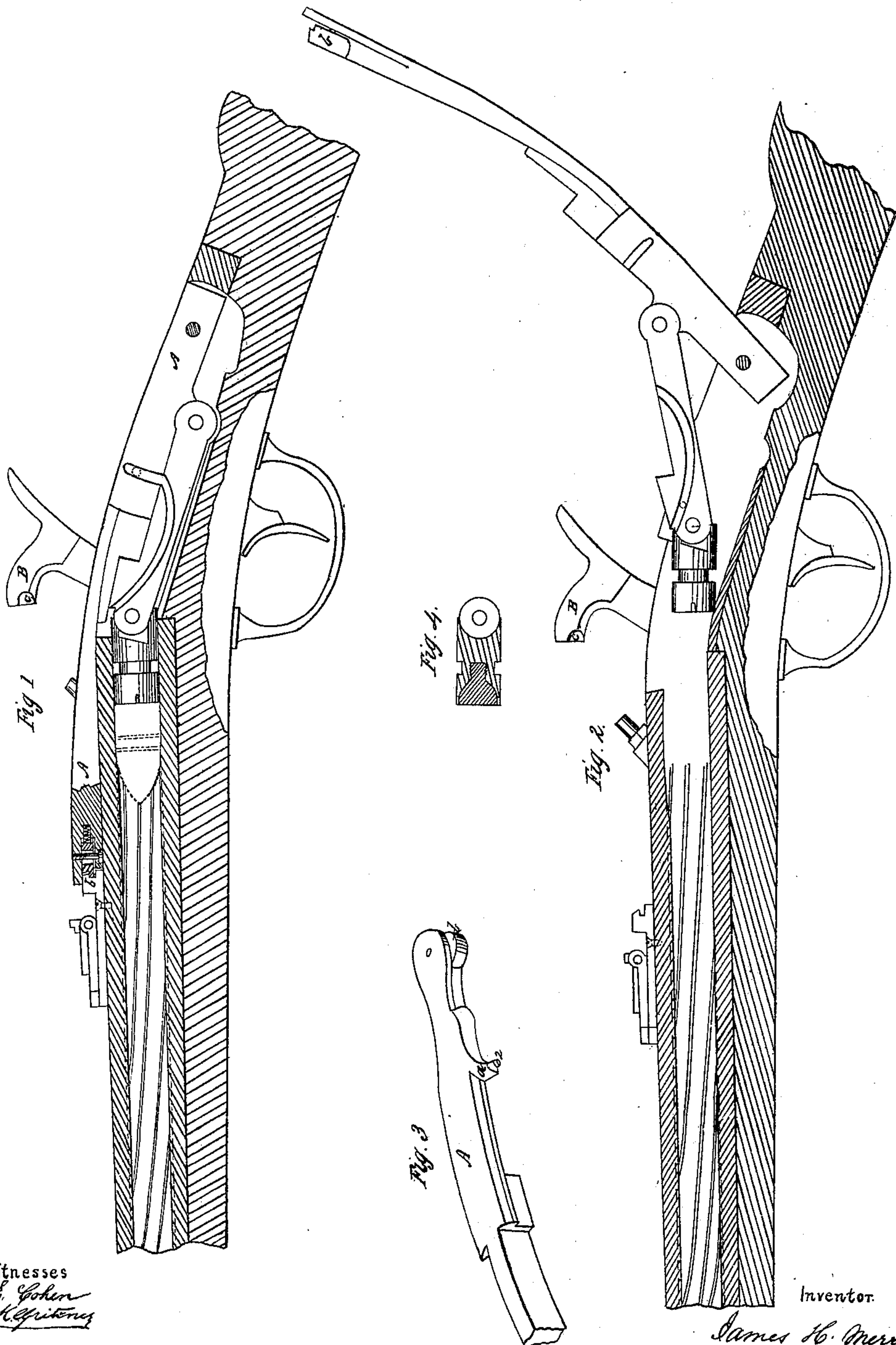


J. H. MERRILL.  
BREECH LOADING FIREARM.

No. 32,033.

Patented Apr. 9, 1861.



Witnesses  
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Inventor.

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# 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. 32,033, 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 sectional drawings of a portion of a breech-loading-gun, and Figs. 3 and 4 represent detached portions, of which Fig. 3 shows more especially the nature of this invention.

In the use of breech-loading guns, where the breech is closed by a plug or other device, and the lever that actuates such device is held in its shut position by a spring-catch, which for convenience must have some prominent projection on it to enable the user to readily raise or throw it back to open the charging-chamber, it is found that the spring-catch is sometimes sprung open by being struck or touched by a twig, or by coming in contact with the person of the user, and when this happens, should the gun be reversed, as often happens when the user is on horseback, the cartridge will drop out. To avoid this contingency is the object of this invention; and the nature of the invention consists in forming a projection upon that side of the main lever next the hammer that will admit of the hammer resting upon it when the hammer is down, and thus prevent said lever from rising until the hammer is first raised up or brought to half-cock, or nearly so, unless it rises against the force of the mainspring of the lock, which no ordinary circumstance could effect; and my invention further consists in combining with the main lever another projection, which fits down close to the nipple and underneath the cap, so that when the lever is raised to recharge the gun this projection will throw off the exploded cap, which often sticks to the nipple and retards rapid loading and firing.

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, Fig. 3.

A represents the main lever that actuates the plug for closing and opening the breech of

the gun, as shown in Figs. 1 and 2. On this lever A, at a point opposite the nipple when the lever is let down, there is a projection, *a*, upon which the hammer B rests when it is let down, and to allow the hammer to come down upon this projection without battering itself or the projection a recess, *c*, may be made on the side of the hammer that will catch the projection just at the moment the hammer strikes the cap or nipple; and as this takes place a moment before the explosion of the cartridge it adds another resisting-point, in addition to those specially provided, against the rising of the lever; but its special office is to prevent the lever from rising when by accident the spring-catch *b* is disconnected by being struck or touched by any object, for when the hammer B is resting upon the projection *a* the whole power of the mainspring of the lock will resist such result or tendency to rise and open up the bore of the gun and drop out the cartridge.

On the projection *a* there is a second projection, 2, that sets in close to the nipple and low enough down toward the root of the nipple as not to interfere with the placing of the cap thereon; and when the cap is placed on the nipple this projection 2 is below it. When the gun is discharged and is to be reloaded, the hammer is raised to half-cock, the lever A is then raised up, and the act of raising causes the projection 2 to throw off the exploded cap. When the plug is drawn back or the rear of the barrel opened, the cartridge is dropped into the chamber, the lever brought down, which runs the cartridge home in the bore. The cap may then be put onto the nipple and the hammer let down onto the cap, (or if preferred the hammer may be let down without the cap and the cap put on just previous to firing,) in which case the hammer aids the catch to hold the lever in place, and will hold it even when the spring-catch is loosened by any accident, and prevents the breech from being opened until the hammer is raised.

I have represented the two projections *a* and 2 as being in one piece, or rather as the latter being a continuation of the former. I do not desire to be understood as expressly claiming them when so made or used, for one may be used without the other, and I may sometimes



so use them. Again, the two projections may be used, each one separately made and connected to the lever, instead of being one a prolongation of the other. These different plans I have studied out, and do not restrict myself to but a single application of the principle, as it admits of change. The idea is to have the hammer or the power of the mainspring of the lock to help hold the lever down, and, secondly, to have an automatic device connected with the main lever that will throw off the exploded cap from the nipple.

Having thus fully described the nature and object of my invention, what I claim therein as new is—

1. In combination with the lever by which

the breech is opened and closed, a projection upon or over which the hammer rests when down upon the nipple, to prevent said lever from rising or opening the breech accidentally, substantially as described.

2. In combination with the lever by which the breech of the gun is opened and closed, a projection which extends under the cap when on the nipple, so that the raising of said lever preparatory to recharging the gun shall throw off the exploded cap and leave the nipple free for a fresh cap, substantially as described.

JAMES H. MERRILL.

Witnesses:

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