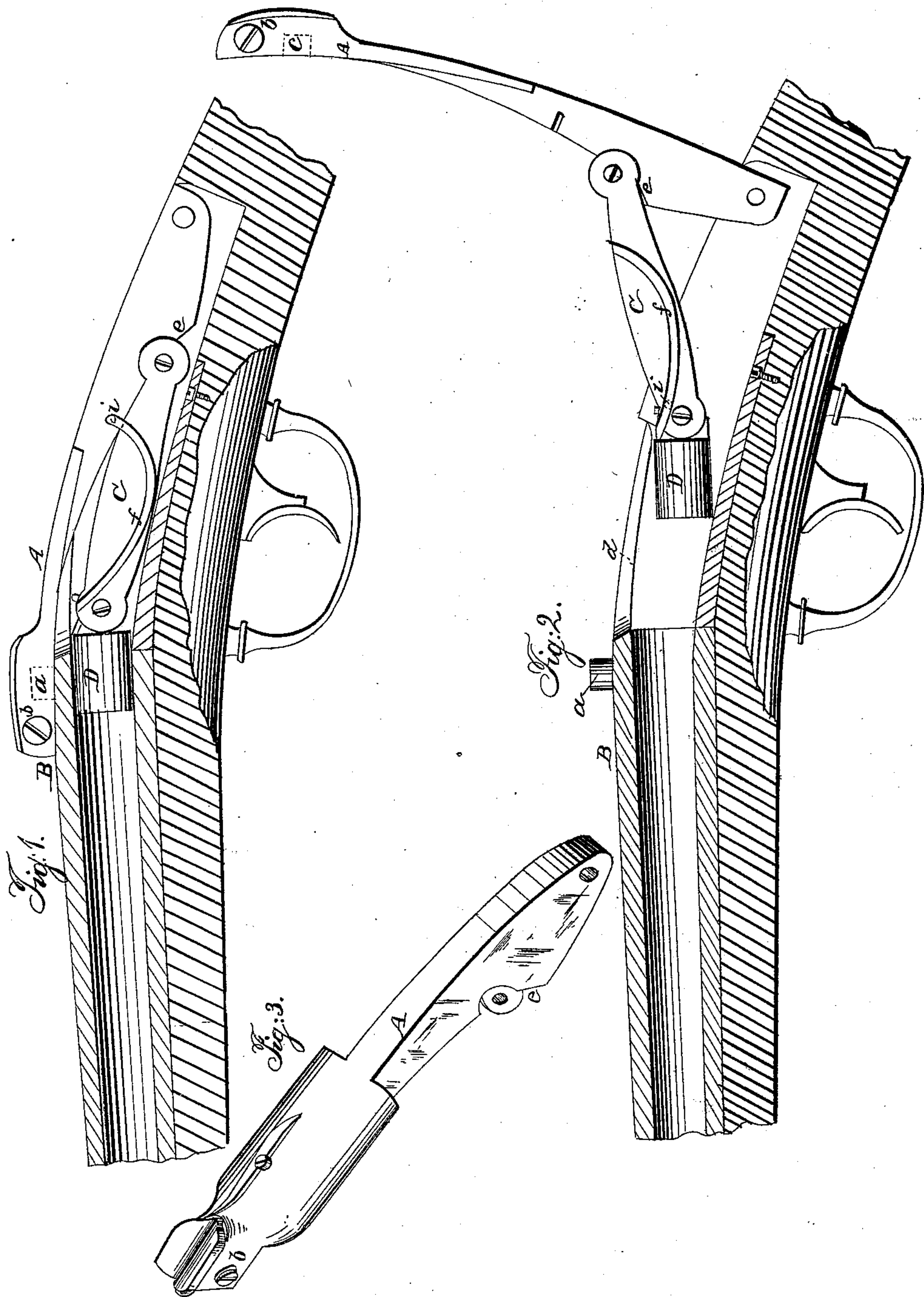


J. H. MERRILL.  
Breech-Loading Fire-Arm.

No. 20,954.

Patented July 20, 1858.





# UNITED STATES PATENT OFFICE.

JAS. H. MERRILL, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 20,954, dated July 20, 1858.

*To all whom it may concern:*

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

Figure 1 represents a portion of the gun in question. Fig. 2 represents a longitudinal section through the same.

Similar letters of reference, where they occur in the separate figures, denote like parts of the gun in both of them.

My invention consists in converting what is known as the "Jenks Gun" from a loose powder and ball breech loader to a cartridge breech-loader, by which means a gun now almost useless can, at a very light expense, be made a useful and valuable arm.

In the use of breech-loading guns, cartridges are absolutely indispensable to make the arm a useful one. The "Jenks Gun," as it is termed, has many good properties in it; but, owing to its being loaded by loose powder and ball, many thousands of them in the hands of the United States and individuals are of comparatively little value. Now, I take the Jenks gun as I find it, and without reconstructing the gun generally, but simply altering one of its parts, I convert it, at a very slight expense, into a breech cartridge-loader. To construct an entire new gun capable of receiving a cartridge at the breech might not involve invention, for the mechanic, knowing what he is about to make, provides beforehand for it; but to take a gun constructed for loose powder and ball loading and so adapt its parts without an entire change of them as to be capable of receiving a cartridge horizontally into its bore, instead of a loose charge at right angles to the bore, does involve much study, invention, and a high degree of skill, as well as making valuable and serviceable to the Government and to individuals a fire-arm laid aside (at least by the Government) as inapplicable to the present wants and conditions of the army service.

To enable others skilled in the art to make and use the invention, I will proceed to de-

scribe the same with reference to the drawings.

In the first place I plug up the hole through which the charge is inserted in the Jenks gun, and let the top *a* of the plug project above the barrel *B* sufficiently far to form a catch for the lever *A* when it comes down on the barrel, and to make the point of the lever *A* of proper form to drop over the plug *a*, I braze on a piece, *b*, which admits of a countersink, *c*, on the under side of said point and a groove on its top, in range with the sights of the gun.

Secondly, I cut away the part *d* behind the barrel and lay a piece of curved metal below the side pieces heretofore used. This opens out a part of the gun heretofore closed up.

Thirdly, I cut away the shoulder *e* where the toggle-lever *c* is pivoted to the main lever *A*, which allows both levers, as well as the piston *D*, to come farther back, and thus leaves more room between the fore part of the piston and the rear of the barrel; but in cutting away the part behind the rear of the barrel I take away the part which was a guide for the piston, to prevent it from twisting or jamming, and must consequently restore something to take its place. This I effect as follows: On the toggle-lever *C*, I cut a groove, *f*, into which a stud or pin, *i*, from the breech-frame passes, and which pin, as the piston is run up toward the barrel, tends to draw down the toggle-lever and keep it more in line with the piston *D*. The piston, by means of this guiding contrivance, moves perfectly free and easy.

The lever *A* may have to be widened at the part which covers the opening *d*, so as to protect said opening, which may be done by welding on side pieces or drawing down the lever. A Jenks gun thus altered is capable of being loaded from the rear by a cartridge, instead of with loose powder and ball through an opening perpendicular to the bore of the gun. There are no parts of the Jenks gun which may be said to be removed and replaced by others, the gun having within itself the elements for converting it into a cartridge-gun by alterations of its parts. Nor is there much added to it. The whole change can be readily and cheaply made, and a gun which is laid aside in the army, owing to the manner of loading it, may be made available as a cartridge-loader, and thus be profitably used.

I make no claim to the parts of this gun when they are arranged as in the Jenks gun. My invention may be said mainly to consist in converting the Jenks gun (after it has been made and without reorganizing its parts) from a loose powder and ball loader to a cartridge-loader, and thus make useful and valuable several thousand stands of arms that are now laid aside as not available for the service; but I should deem a new gun constructed as I have described and shown, whether made anew in whole or in part, as involving my invention, so long as the parts were arranged as I have represented them.

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—

Converting what is known as the "Jenks Carbine" from a loose powder and ball loader to a cartridge-loader—viz., by plugging up the vertical opening through which that gun was loaded, cutting away in rear of the barrel so as to load at the rear end of the bore, and allowing the lever, toggle, and piston to come far enough back to admit a cartridge to be dropped in behind the bore and then run up into the chamber, with a groove and pin to guide the toggle and piston, as herein set forth.

JAMES H. MERRILL.

Witnesses:

THOS. H. UPPERMAN,  
E. COHEN.