

J. RIDER.

Cartridge.

No. 70,612

Patented Nov. 5, 1867.

Fig. 1.

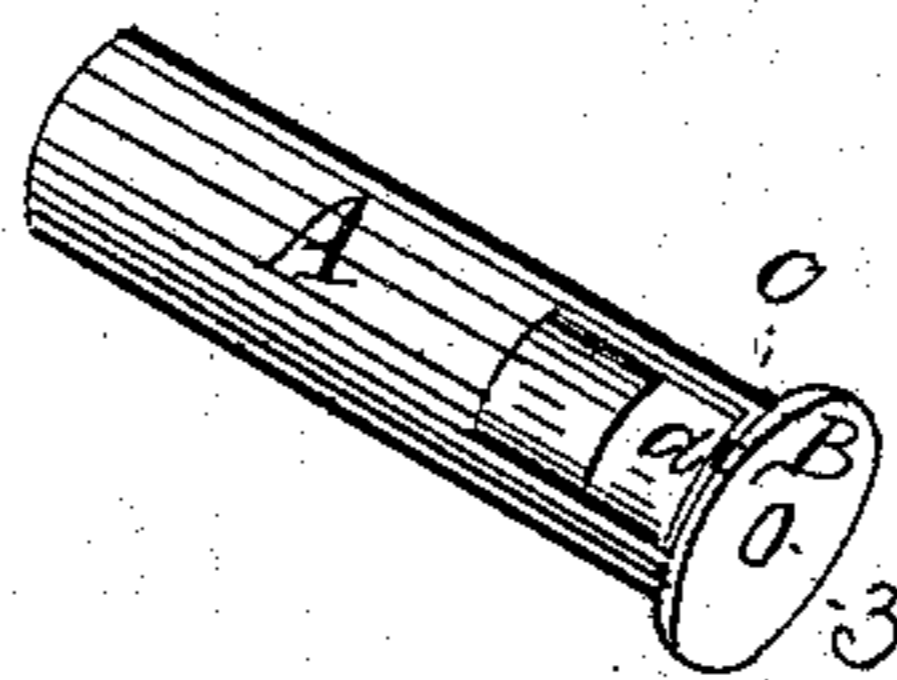


Fig. 2.

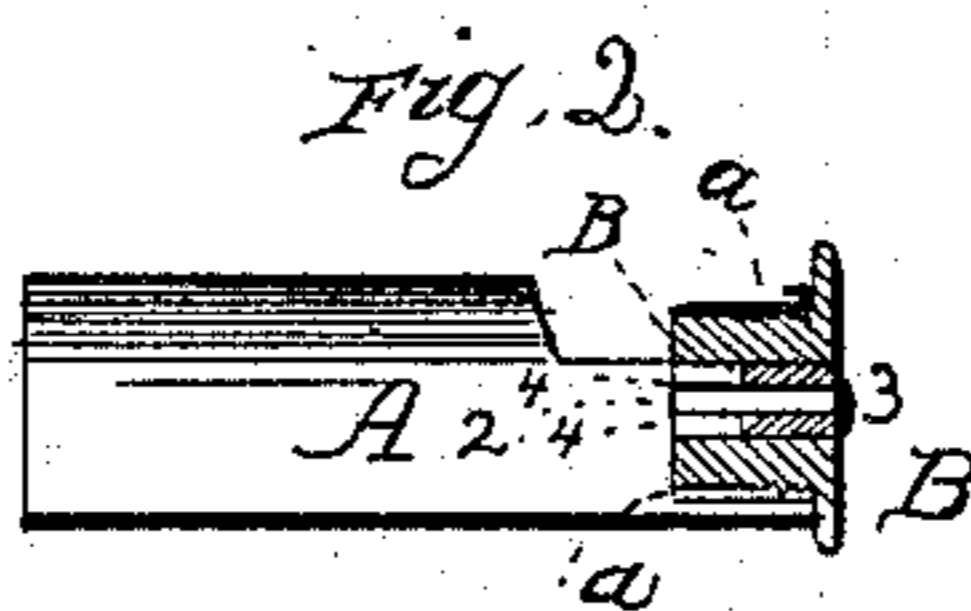
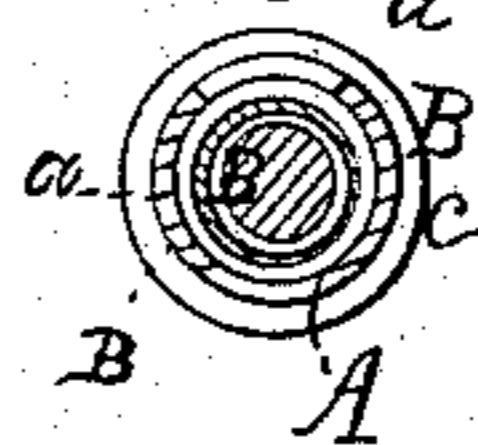


Fig. 3.



Witnesses.  
*J. G. Carter* } Joseph Rider,  
Notary of Chambouran } By atty. A. B. Stoughton.

# UNITED STATES PATENT OFFICE.

JOSEPH RIDER, OF NEWARK, OHIO, ASSIGNOR TO HIMSELF AND E. REMINGTON & SONS, OF ILION, NEW YORK.

## IMPROVEMENT IN PRIMING METALLIC CARTRIDGES.

*Specification forming part of Letters Patent No. 70,612, dated November 5, 1867.*

*To all whom it may concern:*

Be it known that I, JOSEPH RIDER, of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Cartridge-Cases for Breech-Loading Fire-Arms; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of one of the cartridge-cases in question, with a portion of the shell cut away to show the interior thereof. Fig. 2 represents a section taken through the shell or cartridge, as shown in Fig. 1. Fig. 3 is a view from the front end of the case.

Similar letters of reference, where they occur in the separate drawings, denote like parts in all of the drawings.

My invention consists in using, in connection with a shell, the rear end of which is turned inward and forward, a sheet or other hard metal base, that screws into the inner flange of the shell, and which base carries well protected within it a loaded cap, that can be put on or taken off without unscrewing the base when the shell is empty or not loaded, and which packs itself and prevents the escape of gas, as will be explained.

To enable those 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 copper cylinder, the end *a* of which is turned inside of the cylinder, and projects a short distance within the interior thereof, as shown in the drawing.

The base B of the cartridge I make of steel, or of metal, by preference, harder than the copper. This piece B has a screw-thread cut upon it, which runs into a screw-thread in the inwardly-projecting part *a* of the cartridge-case, and has a milled flange, *c*, upon it, by which it may be screwed into or unscrewed from the shell, at pleasure, by the fingers. A circular groove is cut nearly through this base, leaving a central column, 2, which serves as a stem or nipple to receive a flangeless cap, 3. From

the bottom of the groove one, two, or more openings, 4, are drilled clear through the base. The cap is shown in place, and when it is struck or ignited its charge presses the metal out against the outer wall of the groove, and thus the force of the explosion of the fulminate makes the cap pack its own recess, seat, or opening, and the fire is driven through the holes 4 into the charge in the cartridge. The explosion of the charge in the cartridge drives the gas in between the interior flange *a* and the shell of the cartridge, and thus not only forces the flange *a* against the base B and packing the joint between them, but also forces the shell against the cartridge-chamber and packs the joint between them also.

The cap 3 may be put on or into its recess at any time, or just before using the cartridge, and it may be removed at any time without emptying the cartridge or incurring any risk of premature explosion by unscrewing the base, and then inserting a pin or wire through one of the openings 4 against the interior of the cap, and pushing it out or off from its nipple. The cartridge shell or case has no permanent end piece, and none at all until the base B is screwed or otherwise put in and fastened. When a cap fails to explode the charge on being struck from want of fulminate, it can be removed and a fresh cap put in or on without emptying the cartridge, as above explained.

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

1. A shell without an end piece, and a flange turned and projecting forward on its inside, substantially as and for the purpose described.

2. In combination with a shell having an inward flange, a base, B, having a recess for a cap, and holes extending from said recess to the charge in the cartridge, and removable and replaceable, substantially as and for the purpose described.

JOSEPH RIDER.

Witnesses:

W. H. THOMAS,  
A. E. SMITH.