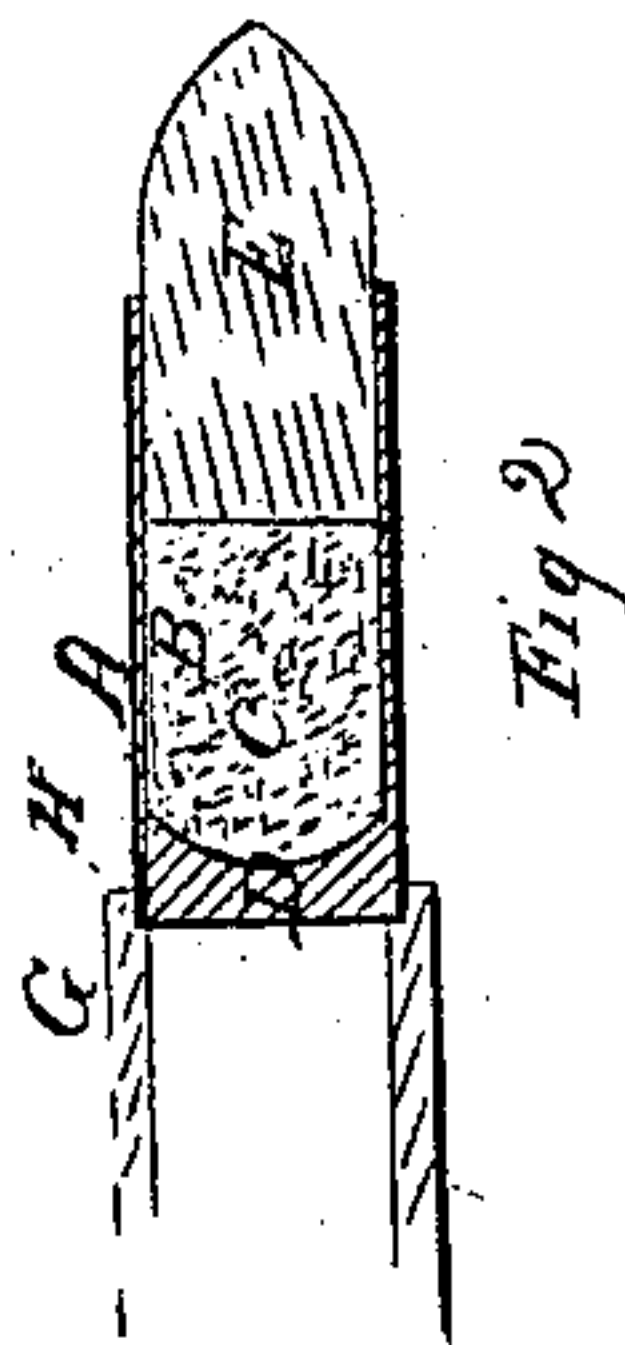
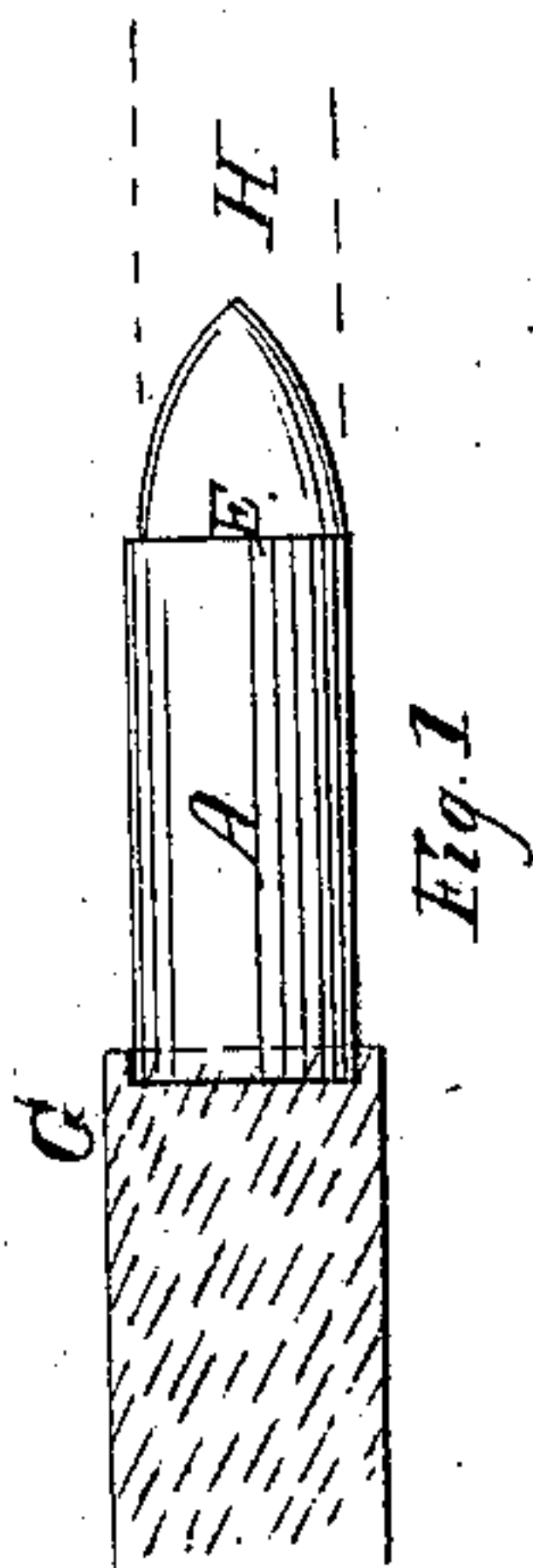
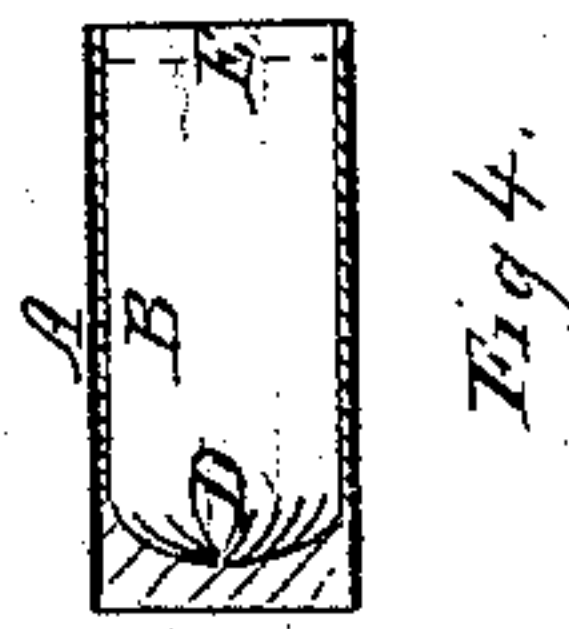
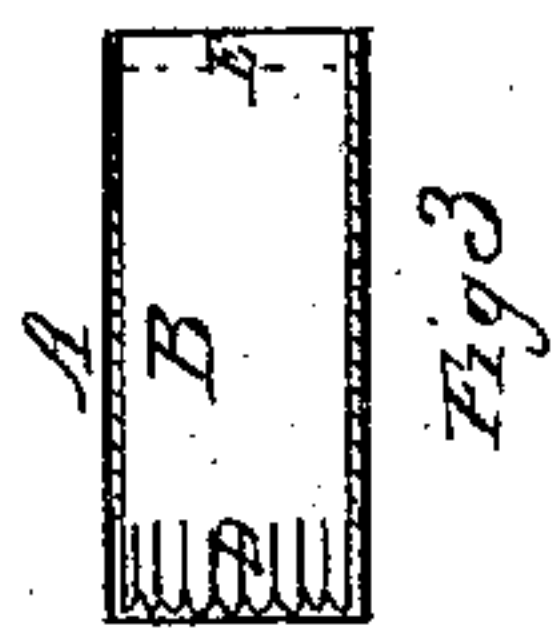


E. C. DUNNING.
Cartridge.

No. 34,713.

Patented March 18, 1862.

Witnesses
Wm. Fine
Chas. H. Curtis } *E. C. Dunning*



UNITED STATES PATENT OFFICE.

ELIJAH C. DUNNING, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO IRVING HULL, OF SAME PLACE.

IMPROVEMENT IN METALLIC CARTRIDGE-CASES.

Specification forming part of Letters Patent No. 34,713, dated March 18, 1862.

To all whom it may concern :

Be it known that I, ELIJAH C. DUNNING, of the city of Bridgeport, county of Fairfield, and State of Connecticut, have invented a new and useful Improvement in the Mode of Constructing Metallic Cartridge-Cases; and I do hereby declare that the following is a correct description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in the formation and arrangement of a double cylindrical metallic water-proof cartridge-case, the inner case being slit and notched at one end, so that it can be folded down over the charge of powder.

To enable others skilled in the art to make and use my invention, I will proceed to describe the mode of constructing and the operation of the same.

The drawing is a general view and representation of the case, charged and uncharged.

Figure 1 is a side view of the cartridge; Fig. 2, longitudinal section of same when charged; Fig. 3, longitudinal section of the case when empty; Fig. 4, longitudinal section of the case when prepared for filling; Fig. 5, end view of the case.

I make the outer and inner case, A and B, of thin metal, of all the various sizes required for cartridges of rifles, pistols, or any kind of fire-arm.

The cases are of metal the necessary thickness to make them sufficiently light, firm, and strong for the purpose.

The inner case B is of very thin flexible metal, and is attached at the ball end E to the outer case A by a narrow line of solder or other proper device, and the other part remains loose and free.

The powder end D of the inner case B is notched and slit down about half the diameter of the opening, as shown in Fig. 3, forming a series of narrow portions or leaves that can be pressed down or folded over the end of the charge of powder C, thus forming a water-tight covering to the same, which can be made perfectly so by the application of a coat of wax or tallow or other suitable substance.

These two combined cases A and B form the covering to the charge of powder C and

ball E, in the same manner as the usual paper case or covering, and are filled with the powder and the ball inserted, substantially as the usual paper case, the leaf end D being first purposely turned down and prepared, as at Fig. 4; and when the charge is in, the whole forms a complete metallic water-proof cartridge, light, firm, and durable.

The inner diameter of the case must be of the exact size of the bore of the barrel for which it is intended to be used; and at the muzzle end of the barrel O it is intended to form a small rabbet or enlargement, H, to admit the end of the metallic case when loading the same. The end of the case being square, it is stopped by the edge formed by the rabbet.

When the gun is to be loaded, the end of the cartridge is placed in the rabbet, as at Fig. 1. The hollow end of the ramrod is placed on the ball, and the charge is displaced from the metallic case and forced down into the barrel, leaving the case as it is placed on the end of the muzzle to be removed by the act of withdrawing the ramrod.

By this operation there will be nothing forced into the barrel but the pure charge of powder and ball, thus obviating the annoyance of remnants of paper and other fouling matter being left in the barrel after being discharged.

This cartridge also obviates the injurious and disagreeable necessity of biting off the end of the cartridge preparatory to loading, as is the case with the usual paper cartridge.

Another advantage, also, is, that the gun can be loaded in any position, either vertically or horizontally, or while the soldier is reclining or lying down, or any other position.

What I claim as my invention, and desire to secure by Letters Patent, is—

A water-proof metallic cartridge-case composed of two thicknesses of metal, combined and arranged in the manner and for the purpose, substantially, as herein set forth and described.

ELIJAH C. DUNNING.

Witnesses:

WM. VINE,
CHAS. H. CURTIS.