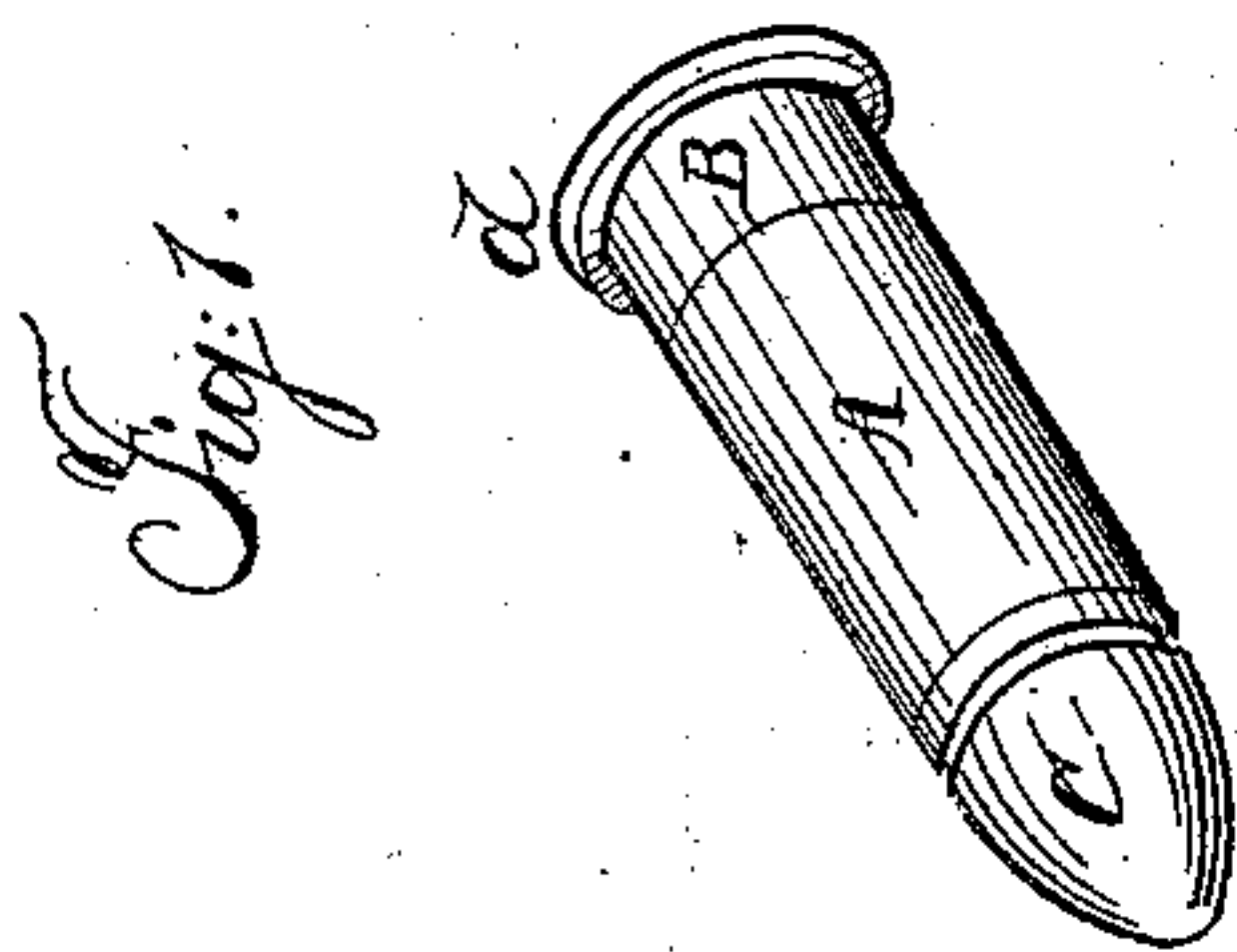
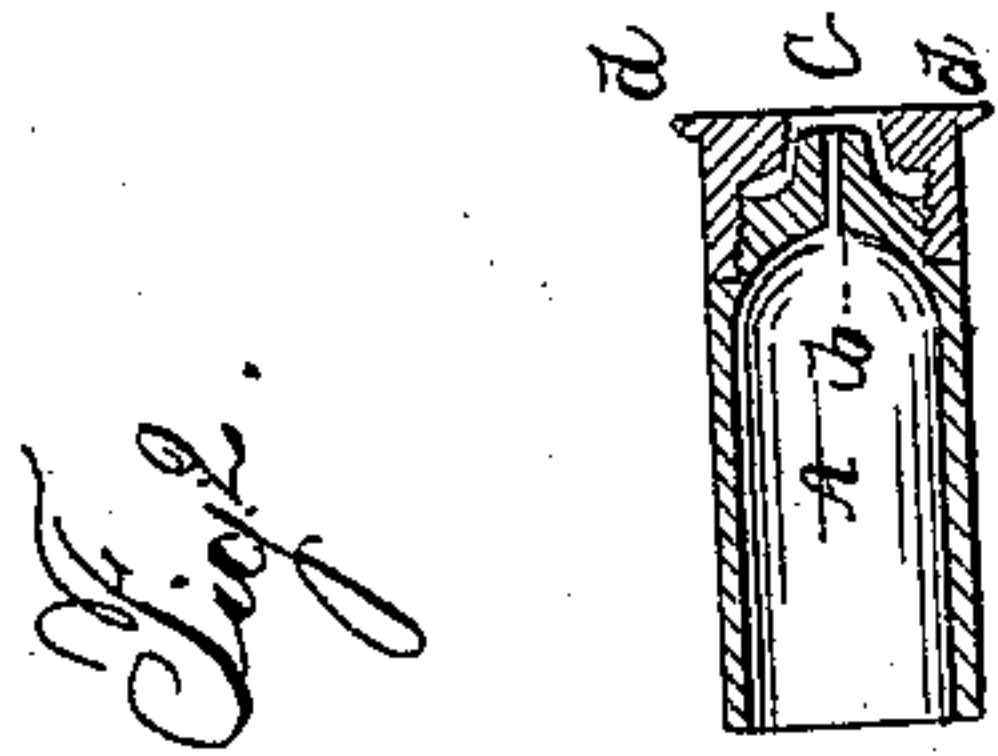
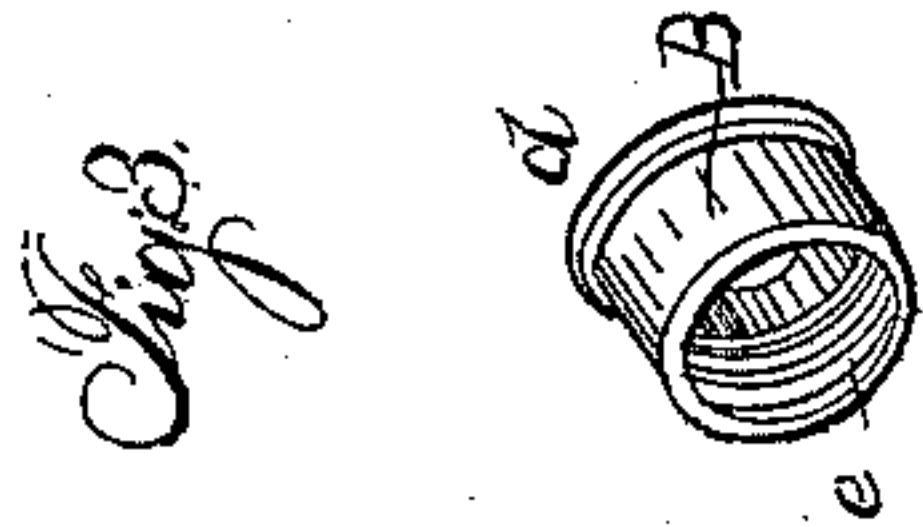


W. H. WILLS.

Cartridge.

No. 45,292.

Patented Nov. 29, 1864.



Witnesses.

N. W. Hearn
P. Eschmacker

William H. Wills.

UNITED STATES PATENT OFFICE.

WM. H. WILLS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN METALLIC CARTRIDGES.

Specification forming part of Letters Patent No. 45,292, dated November 29, 1864.

To all whom it may concern:

Be it known that I, WILLIAM H. WILLS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful improvements in Metallic Cartridges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved cartridge. Fig. 2 is a central vertical section through the cartridge-case. Fig. 3 is a view of the screw-cap detached.

A great objection to that class of fire arms in which a metallic cartridge is employed arises from the difficulty of obtaining these cartridges in wild and unsettled portions of the country, thereby rendering it necessary for sportsmen and others using such arms to carry a very large number of cartridges with them, which are quite expensive, and, on account of their weight and bulk, are inconvenient to transport from place to place.

My invention, which is designed more particularly for sportsmen, has for its object to remedy this inconvenience, and consists in a cartridge, in which, after being fired, the empty case may be recharged with great facility an indefinite number of times by the person using it, thereby rendering it necessary to have only a small number of cartridges, as the materials to recharge the empty cases are to be found where it is impossible to obtain metallic cartridges ready charged, my invention being applicable to that class of fire-arms in which a central rod or plunger is used to discharge the cartridge.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the cartridge-case, which is made of brass or other suitable metal, and of such thickness as to withstand the force of the discharge without injury. At the rear end of this case is formed a tube or nipple, *b*, for the reception of a percussion-cap, *c*, and through this nipple is formed a passage communicating with the interior of the case. At the heel or base of the case A is formed a screw-thread, over which fits the screw-cap B, Fig. 3, which is furnished at its base with a flange, *d*, which enters the groove

at the rear of the barrel of the gun, and by which the empty cartridge-case is ejected in the ordinary manner. Through the base of this screw-cap B, which is made quite thick, is formed an aperture, *e*, through which projects the percussion-cap *c*, the top of which is flush with the base of the cap B when the latter is screwed down tightly in place. This aperture *e* is made slightly conical to correspond to the form of the percussion-cap on the nipple, and is of such a size as to protect the percussion-cap and prevent it from being displaced.

The ball C is made to fit into the open end of the case A with a sufficient degree of friction to hold it in place and prevent its falling out.

It will thus be seen that when a person is about to visit an unsettled portion of country it is only necessary for him to take a small number of these cartridges, (fifty or thereabout,) as after they are fired it is simply necessary to fill the case A with powder and force in the ball C. The screw-cap B is then removed and a fresh percussion-cap placed on the nipple *b*, when the screw-cap is replaced and the cartridge is again ready for use, no wad or other contrivance, except the screw-cap, being required to hold the percussion-cap in place; and all danger is avoided of the supply of cartridges being exhausted, an event not unlikely to happen when the ordinary metallic cartridge is employed.

I am aware that a metallic cartridge has been constructed with a tube or nipple at its base for the reception of a percussion-cap which was held in place and protected by means of a disk or wad of paper, leather, or wood, as in the patent granted to G. W. Morse on the 28th October, 1856. I do not, therefore, broadly claim a cartridge having a nipple for the reception of a percussion-cap, but

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

Covering the heel of the cartridge-case A by a metallic screw-cap, B, substantially in the manner and for the purpose set forth.

WILLIAM H. WILLS.

Witnesses:

P. E. TESCHEMACHER,
N. W. STEARNS.