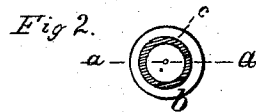
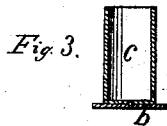
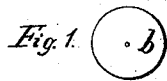


E. MAYNARD.

Cartridge.

No. 22,565.

Patented Jan. 11, 1859.



# UNITED STATES PATENT OFFICE.

EDWARD MAYNARD, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN METALLIC CARTRIDGE-CASES.

*Specification forming part of Letters Patent No. 22,565, dated January 11, 1859.*

*To all whom it may concern :*

Be it known that I, EDWARD MAYNARD, of the city and county of Washington and District of Columbia, have invented an Improved Metallic Cartridge for Breech-Loading Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a bottom view of said cartridge; Fig. 2, a top view of the same; and Fig. 3, a section in the line *a a* of Fig. 2.

My improved metallic cartridge is produced by soldering a steel disk to the exterior surface of the bottom of a brass cup, which is of less diameter than the said disk, and then drilling a small central aperture through the combined brass and steel bottom of said cartridge.

Brass is of such a nature that it is not injured by contact with powder, and it is also of such a nature that when a cartridge made of said metal is loaded and placed in the chamber of a gun it will expand, at the instant of discharging the same, to such a degree as to fill the said chamber and prevent the rearward escape of the gases, and it will almost as instantly resume its normal size again; consequently, the said cartridge can be loaded and discharged a very great number of times without injury to its shape or strength; and the said cartridge may also remain loaded for any length of time without being chemically or mechanically injured by the action of the powder.

The steel disk *b* I shall generally bring to a pretty high temper, and then combine it with the bottom of the brass cup *c* by the process of soldering, which method of procedure will impart to the said disk a spring temper of the proper degree of elasticity. I do not, however, intend to limit myself to the particular temper of the steel disk nor to the manner of combining the same with the brass cup. The projecting periphery of the disk *b* forms a flange which enables the cartridge to be readily taken

hold of by the thumb and finger for the purpose of withdrawing it from the chamber of a gun after it has been discharged, and the said flange also serves the purpose of guarding the bottom of the cartridge against being bruised or indented by rough handling when a large number of the cartridges are transported in boxes or barrels. Another useful quality possessed by the steel portion of my improved cartridge is its power of preserving the small size of the vent-hole after a great number of discharges, which enables said vent-hole to be closed perfectly water-tight by simply pressing a little wax into the same with the finger, either before or after charging the cartridge. And again, when one of my improved cartridges has been placed in the opened chamber of the Maynard breech-loading fire arm, the movement which brings the barrel thereof to its proper position for firing produces a severe friction between the bottom of the cartridge and the solid breech-piece of said fire-arm, which friction and pressure is not uniform over the entire surface of the bottom of the cartridge, and, therefore, it will readily be perceived that the said strain would distort and destroy either the barrel or the bottom of a soft metal cartridge thus situated, while it produces no injury upon any portion of my improved cartridge.

The composition of the brass and the temper of the steel portion of my improved cartridge, and also the method of combining the one with the other, I shall vary to suit the requirements of practical experience.

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

An improved metallic cartridge composed of a brass cup combined with an exterior steel disk, substantially as herein set forth.

EDWARD MAYNARD.

Witnesses:

J. H. H. DOLY,  
SAML. DRURY.