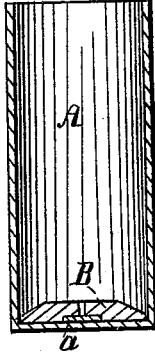


W. TIBBALS.  
Cartridge.

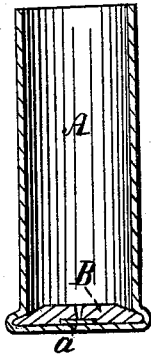
No. 78,337.

Patented May 26, 1868.

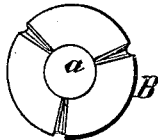
*Fig. 1*



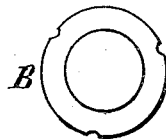
*Fig. 2*



*Fig. 3*



*Fig. 4*



*Witnesses*  
*James Lee*  
*P. T. Dodge*

*Inventor,*  
*W. Tibbals,*  
*By W. C. Dodge*  
*Attorney*

# UNITED STATES PATENT OFFICE.

WILLIAM TIBBALS, OF SOUTH COVENTRY, CONNECTICUT.

## IMPROVEMENT IN PRIMING METALLIC CARTRIDGES.

*Specification forming part of Letters Patent No. 78,337, dated May 26, 1868.*

*To all whom it may concern:*

Be it known that I, WILLIAM TIBBALS, of South Coventry, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Cartridges; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon.

The nature of my invention consists in a novel manner of constructing and securing an anvil or metallic disk in the base of the metallic shell of a cartridge, and in a novel method of locating and securing the priming therein.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it in detail.

I first form up a copper case in the usual manner, as shown by A of Figure 1. I then construct a solid metal disk, B, of a diameter corresponding with the interior diameter of the case A, so that it may be dropped therein, as shown in Fig. 1.

I then draw the case A down, as shown in Fig. 2, reducing it to the proper diameter to fit the gun for which it is intended, and leaving the disk or anvil B securely locked in the flange thus formed around the base of the cartridge-case, as shown in Fig. 2.

The disk B is made of a solid piece of metal, beveled at its edge, as shown in section in Figs. 1 and 2. It has a circular recess formed centrally in its face next to the base of the shell or case A, of sufficient size to receive a "Sharps pellet" or "primer," *a*, so that when the latter is placed in said recess, as shown in Fig. 3, it will exactly fill it. A small hole is bored centrally through the disk B, as shown in Figs. 1 and 2; or grooves may be cut radially from the recess in the rear face of the disk, terminating in notches at the periphery of the disk, as shown in Fig. 3, which is a rear face view of a disk having the grooves instead of the central perforation. In case the notches and grooves are used, care should be taken to have the notches cut so deep in the edge of the disk that they will not be entirely closed by the forward portion of the flange when doubled down over the edge of the disk in reducing the diameter of the case A, as already described.

For priming my cartridge, I use a Sharps pellet, which I place in the recess in the center of the disk or anvil B, before placing the latter in the case A, the pellet being fitted in the recess, so that there will be no danger of its becoming displaced when the disk is put into the case. It is obvious that the ordinary fulminate may be used instead of the pellet; but I prefer the latter, as it is both more safe and convenient. The case, after being thus prepared, is charged with powder and ball in the usual manner.

By these means I produce a metallic cartridge for breech-loading arms that possesses many advantages over those in ordinary use.

I secure a central fire, which enables me to have the entire base of the cartridge covered when fired, and thus lessen the danger of bursting the shell when the charge is exploded.

I secure the anvil in such a manner that it rests firmly against the shoulder of the recess at the rear end of the barrel, thereby giving a firm and solid support against the blow of the hammer, and preventing the possibility of its being driven forward in the case, which has hitherto been a serious difficulty with central-fire cartridges.

I avoid the use of fulminate in the flange, thereby rendering it far more safe to handle.

I prevent the possibility of spreading or smearing the fulminate over the base of the cartridge, which is a very serious difficulty with cartridges constructed in the usual manner; and, finally,

I secure in all cartridges thus made a perfectly uniform quantity of fulminate, which is of great importance, as an unequal quantity renders the effect of the cartridges irregular and uncertain, and if too much be used, greatly increases the liability of rupturing the shell.

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

Securing the anvil B by drawing or forming the shell A down over it, in the manner shown and described.

WM. TIBBALS.

Witnesses:

RALPH CRITTENDEN,  
JAMES LEE,  
P. T. DODGE.