

I. M. MILBANK.

Improvement in Cartridges for Fire-Arms.

No. 131,017.

Patented Sep. 3, 1872.

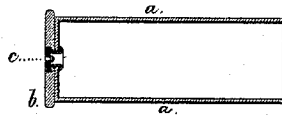


Fig. 1.

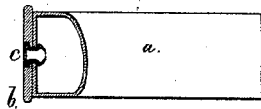


Fig. 2.

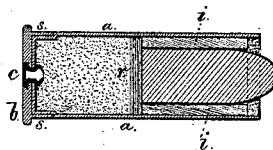


Fig. 3.

Witnesses,

Chas. Smith  
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Isaac M. Milbank.

Lemuel W. Fenell  
att'y.

# UNITED STATES PATENT OFFICE.

ISAAC M. MILBANK, OF GREENFIELD HILL, CONNECTICUT.

## IMPROVEMENT IN CARTRIDGES FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **131,017**, dated September 3, 1872; antedated August 28, 1872.

*To all whom it may concern:*

Be it known that I, ISAAC M. MILBANK, of Greenfield Hill, in the county of Fairfield and State of Connecticut, have invented an Improvement in Cartridges for Fire-Arms, and the following is declared to be a correct description thereof.

In the construction of cartridges for breech-loading fire-arms a sheet-metal case has been made with a separate base, secured in place by soldering, and also by rivets, either solid or hollow.

My improvement relates to that class of cartridges in which a priming-cup is introduced at the center of the base. I make use of this priming-cup for holding or aiding in holding the base to the case.

In the drawing, the sheet-metal case *a* is of usual size, and made of zinc, copper, or other metal. The base *b* is of metal, of a larger diameter than the case, so as to form a projecting flange. The central openings through these portions *a b* are of a size adapted to receive the priming-cup *c*. This cup *c* may be either flat at the end, as seen in the section Fig. 2, or it may be recessed, as seen in Fig. 1, for the purpose of forming a feather-edged cavity for the fulminate, as set forth in Letters Patent No. 103,641. This priming-cup acts to hold the base *b* to the bottom of the case *a*, and is to be riveted up sufficiently to hold or aid in holding the parts together. The mouth of the priming-cup may be turned over, as in Fig. 1, or it may be contracted, as in Fig. 2, in which instance the central portion of the body of the priming-cup is spread to hold the parts *a b* together. The priming-cup *c* may be of greater or less length, and more or less contracted at the mouth, and the fulminate material, mixed with sand or powdered glass, may be introduced into the primer and fill the same, as set forth in my patent dated February 6, 1872. Solder may be employed as an additional means for holding the head to the case, and in this construction the cup *c* guides the head and holds it while being soldered. The fulminate contained in the cup *c* may be consolidated while moist, by the pressure employed in spreading or riveting up

the cup to hold the parts *a b* together. The opening through the cylinder *i* is of a size to allow the ball to freely drop through the same, and the exterior is larger than the interior of the shell *a*; hence, when the cylinder *i* is forced into the shell, the wood will be sufficiently compressed to hold the ball firmly, but when the ball and cylinder leave the barrel the cylinder instantly expands and separates itself from the ball, and the latter hence is not impeded in its flight nor deflected from its course by the cylinder as stripped from the ball. It is also preferable that the cylinder have three or more longitudinal incisions, so as to split in leaving the barrel, and the cylinder *i* is longer than the straight sides of the ball; thereby there is a cavity around the point of the ball, and the air acts thereon to advantage in stripping off the cylinder or sabot. By observing these features the accuracy and uniformity of the shooting will be promoted. The wad *r* is between the ball and powder, and the cavity between the ball and case *a*, at the end of the cylinder *i*, is to be filled with lubricating material.

The cylinder *i* is to be coated with graphite or similar unctuous mineral, in order that it may move through the barrel with but little friction, and the graphite spreading upon the interior of the barrel before the gases come in contact with the same protects the barrel from injury, and at the next discharge the barrel will be cleaned of the carbonaceous deposit more easily; thus the barrel will be kept in good condition, and there will be but little frictional retardation of the ball. The graphite or similar unctuous mineral may be applied to the wood by rumbling the cylinders in the powder, preferably after the cylinders have been saturated with melted beeswax; or the graphite may be added in the greasy saturating material of which beeswax is the principal component.

The head or base *b* is shown in Fig. 3 as made with a short cylinder, *s*, receiving the contracted end of the case *a*, thereby greatly strengthening the base of the cartridge. This may be soldered to the case *a*.

I claim as my invention—

1. The combination, with the head *b* and the case or body *a*, of the cup *c*, serving as a priming-cup as well as a rivet for securing or aiding in holding said parts together, as set forth.

for operation with the cartridge-case and projectile, as set forth.

Signed by me this 5th day of December, A. D. 1871.

I. M. MILBANK.

2. The wooden sabot *i*, constructed as described, with its interior diameter larger than the projectile, when compressed and combined

Witnesses:

HAROLD SERRELL,  
GEO. T. PINCKNEY.