

Isaac M. Milbank.
Impt. in Cartridges for Firearms.

No. 122,399.

Fig. 1.

Patented Jan. 2, 1872

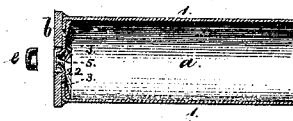


Fig. 2.

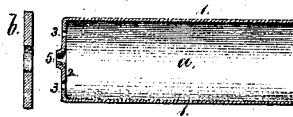


Fig. 3.

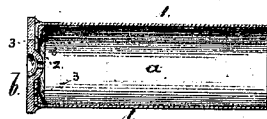


Fig. 4.



Inventor.

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UNITED STATES PATENT OFFICE.

ISAAC M. MILBANK, OF GREENFIELD HILL, CONNECTICUT.

IMPROVEMENT IN METALLIC CARTRIDGES.

Specification forming part of Letters Patent No. 122,399, dated January 2, 1872; antedated December 20, 1871.

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 and made an Improvement in Cartridges for Fire-Arms; and the following is declared to be a correct description thereof.

This invention relates to a cartridge with a sheet-metal case and metal base.

Before my present invention cartridge-cases had been made of a sheet-metal cylinder with a flanged head or base inserted into one end of said cylinder and secured by solder; and in Letters Patent No. 62,283, a metallic case with a flange is shown with a metallic base soldered inside the case. In the instance first named the force of the explosion tends to separate the cylinder from the base, and the base is costly and difficult to make. In the instance last named, the sheet metal of the case has to be bent up to form a flange, and in so doing is liable to be broken.

My present invention allows for the sheet-metal case being made without a flange therein, the flange being produced by a disk of metal soldered to the sheet metal of the cartridge-case at the outside of the closed end. Thereby the explosion is confined within the sheet metal of the case and does not tend to separate the disk, and the disk acts to aid in keeping the case in shape, and its edge forms the flange, by which the same is withdrawn from the fire-arm. I am enabled to make the sheet-metal case of zinc, because there is no flange to the same, and the base can be of cheap metal, as the powder does not come in contact therewith to any considerable extent.

In the drawing, Figure 1 is a section of the cartridge complete. Fig. 2 is a section, showing the base and case separately. Fig. 3 is a section of the base in a slightly-modified form, and Fig. 4 is an end view of the case.

The sheet-metal case *a* is made with the cylindrical sides 1 and flat end 2 of one piece of sheet metal; but there is no projecting flange, as heretofore usual; and *b* is the metallic base in the form of a disk, slightly larger in diameter than the case, so as to form a flange to the same when the base *b* is soldered or brazed

to the end 2 of the case *a*. I find that by making small holes through the end 2 of the case *a*, as seen at 3, the solder will have a better hold, because it can be put into the case, and when melted will run through these holes and flow between the base and case.

I find that by constructing the cartridge-case in this manner I am enabled to employ sheet-zinc for such case, the same being cheaper than the metals heretofore used, and equally servicable; and the soldering can be reliably effected, because the heat can be applied to the disk by a heated plate upon which the disk is placed; and hence the zinc will not be subjected to the risk of injury by the heat, and the solder will flow and unite the parts firmly.

By employing the holes and introducing solder in the shell I am enabled to use a much lighter metal, because the entire base is strengthened by the solder and firmly connected with the exterior base.

In the center of the disk *b* is an opening, through which access is given in igniting the powder in the cartridge; and I remark that any desired primer or fulminating material may be employed; and for the purpose of accommodating primers already known the disk may have a recess, as shown in Fig. 3, and the end 2 of the case is to have an opening in it of a size sufficient for the convex portion of the base at the back of this recess, and in this manner the parts are guided when set together so that the disk and case will be concentric. In order to form an anvil for a shallow priming-cap I make the projecting teat 5 in the center of the sheet-metal end 2 of a diameter smaller than the opening in the head, and upon this the primer *c* can be placed, the edges thereof being within the hole in the base *b*, said base forming a ring around the primer.

This character of cartridge-case is very cheap, strong, reliable, easily made, and not liable to injury in use.

I find that the cartridge-case made of zinc, as aforesaid, is preferable to various metals that have heretofore been used, because it does not become corroded and liable to wedge into the barrel, and hence can be inserted or withdrawn with ease; and that is the case

even if the sheet metal shell does not fit perfectly, the quality of this metal allowing it to yield slightly without injury.

I claim as my invention—

1. The metallic base having a recess for receiving the primer, which recess passes into an opening at the rear end of the sheet-metal case and guides the parts while the base is being soldered to the case, as set forth.

2. The teat 5 projecting from the end 2 of

the sheet-metal case *a*, in combination with the annular base *b* that surrounds said teat, and is soldered to the end 2 of the case, substantially as set forth.

Signed by me this 27th day of April, 1871.

I. M. MILBANK.

Witnesses:

GEO. D. WALKER,

GEO. T. PINCKNEY.

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