

I. M. MILBANK.
Improvement in Cartridges.

No. 115,498.

Patented May 30, 1871.

Fig. 2.



Fig. 1.

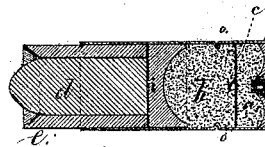


Fig. 3.



Witnesses,

Chas. A. Smith

Geo. A. MacKen

Isaac M. Milbank

Lemuel W. Lerrill atty.

UNITED STATES PATENT OFFICE.

ISAAC M. MILBANK, OF GREENFIELD HILL, CONNECTICUT.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 115,498, dated May 30, 1871; antedated May 26, 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 an Improvement in Cartridges for Fire-Arms; and the following is declared to be a correct description thereof.

Cartridge-cases have been made of wood, and the ball itself has been placed in a wooden cup. In the first-named instance the case remained in the gun, and in the other instance the cup was either difficult to separate from the ball or else did not act to keep the ball central in the gun and clean out the barrel. In some of the devices before employed the ball is diverted from its course frequently by the cup as it is separated. Cases have also been made for grape-shot and small balls.

My invention consists in a hollow cylindrical case, of wood or similar material, with a flaring or conical end, forming an edge for cleaning the barrel and separating the case from the ball after it leaves the barrel, in combination with a rigid wad between the powder and the said ball and cylinder, whereby the ball and cylinder are propelled together as they are projected, and then the wad and cylinder drop off without interfering with the flight of the ball.

The powder-space is separated by a tight wad or diaphragm, and this is torn, bent, or cut in its forward movement, and allows fire to pass from the rear part of the powder to the forward portion, where quicker firing-powder may be used to accelerate the ball after it has been started by the first part of the explosion.

In the drawing, Figure 1 is a longitudinal section of my cartridge, complete. Fig. 2 is an end view of the same, and Fig. 3 is a separate section of the cylindrical ball-case.

The ball *d* fits closely within the cylinder *e*, of wood or similar material, (such as paper-pulp,) and longitudinal incisions may be made to facilitate the splitting or separation of the cylinder from the ball after leaving the barrel. When hard wood or paper is used for the cylinder the incisions are, by preference, employed. The forward end of the cyl-

inder *e* is formed conically, so that there may be an edge for cleaning the barrel of the gun as the cylinder and ball are projected. This edge also acts to throw off the cylinder after leaving the gun. Lubricating material may also be introduced in the space thus formed. The wad or sabot *i* is made of a size and shape to fit against the back end of the ball *d* and the cylinder *e* for the purposes aforesaid. The forward end of the cylinder *e* may be notched to allow some portions to act in cleaning the barrel, while the notches allow the lubricating material to pass to the outside of the cylinder. One solid ball or several long balls or slugs may be introduced in each wooden cylinder *e*. The powder-space in the cartridge is divided up into sections *a b* by means of a wad or diaphragm, *c*. This is to fit tightly and prevent fire from the powder in the section *a* reaching that in *b* until the forward portion of the charge has commenced to move by the explosion in *a*, when the wad *c* is caught by the projections *o o*, on the inside of the cartridge case or barrel, that cut, tear, or bend said wad sufficiently to allow fire to reach the section *b* and accelerate the speed of the ball.

Quick powder can be used in the section *b* without risk from recoil, and the velocity of the ball will be increased.

I do not claim, broadly, a sectional cartridge, as that has been used.

I claim as my invention—

1. The cylindrical case, of wood or similar material, receiving the ball, and made with a conical end and edge for cleaning the barrel, in combination with the rigid wad introduced in the cartridge-case between the powder and said ball and cylinder, as and for the purposes specified.

2. The projections *o o*, combined with the sectional charge *a b* and wad *c*, substantially as and for the purposes set forth.

Signed by me this 22d day of October, A. D. 1870.

I. M. MILBANK.

Witnesses:

HAROLD SERRELL,
GEO. T. PINCKNEY.