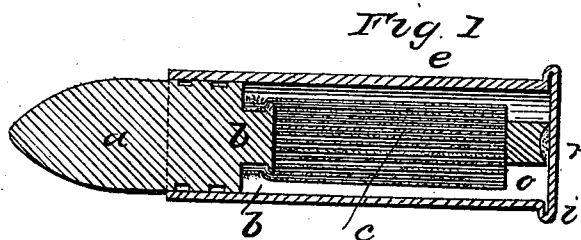


E. GOMEZ.

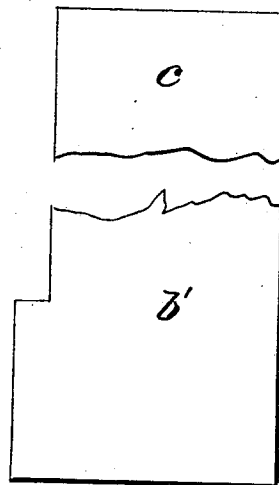
Cartridge.

No. 99,666.

Patented Feb. 8, 1870.



*Fig. 2.*



WITNESSES

Chas H Smith  
Geo. S. Walser.

*Edwin Gomez*  
INVENTOR

# UNITED STATES PATENT OFFICE.

EDWIN GOMEZ, OF NEW YORK, N. Y.

## IMPROVEMENT IN METALLIC CARTRIDGES.

*Specification forming part of Letters Patent No. 99,666, dated February 8, 1870.*

*To all whom it may concern :*

Be it known that I, EDWIN GOMEZ, of the city and State of New York, have invented an Improvement in Cartridges for Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the said invention.

In Letters Patent No. 21,253, granted August 24, 1858, a cartridge is shown in which the explosive material is spread upon a strip of paper, and the same is rolled up and introduced within a separate paper case, that is tied around the ball, and folded together at the back end, to retain the said roll of explosive paper. This character of cartridge was not well adapted to breech-loading fire-arms, because the paper wrapping or case has to be torn open, or else penetrated by the flash of the cap.

The nature of my present invention consists in a new means for attaching the roll of paper and explosive material to the ball, and combining with the said ball and roll of explosive material and paper a metallic cartridge case, whereby this character of cartridge is especially adapted to breech-loading fire arms, as the metallic case prevents the roll of paper being detached, or the powder being shaken out in handling, and acts to prevent the escape of gases at the breech, and confines the flash of the fulminate. The powder between the coils of paper is to be consumed the moment the ball leaves the muzzle. This, I find, lessens the noise of the explosion very materially.

I have shown in the accompanying drawing, in Figure 1, a section of a large-sized cartridge, longitudinally; and in Fig. 2, a portion of the strip of paper or similar material is represented.

The ball is to be of any desired size and shape. I have shown the ball *a* with a central rear projection, *b*, to which the paper is attached.

The strip of paper or other material is cut out, of a width corresponding to the length of the roll or cartridge, when wound up, as seen at *c c*, and toward one end the paper is left wider, as at *b' b'*, in order that the same may extend up around the projection *b*, and receive a winding of string or other material, to attach it to the ball, as seen in Fig. 1.

The strip of material may be coated with varnish, to render the same water-proof, and the coat of explosive material, such as named

in my aforesaid patent, is to be spread upon the strip, and it may be caused to adhere slightly to the surface by the same being spread upon the surface while the varnish is in a slightly adhesive condition, from not being entirely dry, or from being softened by a slight heat, or otherwise.

The powder is retained by the said varnish, so that it does not shake out from between the paper.

By this manner the roll of explosive material is easily and firmly attached to the ball, and a separate case is dispensed with for connecting the roll and ball.

The sheet-metal cartridge-case *e* is made with the usual flange, *i*, so that it can be drawn out from the barrel of the breech-loading fire-arm, and fulminate is to be introduced either in the rim or toward the middle of the cartridge, in any usual manner. I have shown the bridge *o* and fulminate *r* for a central fire.

The roll of paper and explosive material may be perforated or pierced with holes, so as to give opportunity for the detonation to reach the explosive material.

If desired, a coil of tape-fuse, such as in Letters Patent 34,057, granted January 7, 1862, may be inserted in the metallic case, with the end, or a perforated portion of the fuse, contiguous to the fulminate, to insure the explosion of the cartridge; and, if desired, gunpowder or other explosive material may be introduced in the metallic case, in addition to the coil or roll aforesaid.

What I claim, and desire to secure by Letters Patent, is—

1. A sheet of paper, or similar material, coated with an explosive compound, and rolled or coiled, and inserted into and combined with a metallic cartridge-case, so as to separate the powder by the intervening sheet, and retain the powder from shaking out, by said sheet-metal case, as and for the purposes set forth.

2. The cavity at the end of the coil or roll of paper, for the projectile, formed by the wider portion *b'* of the paper containing the explosive material between its layers, substantially as and for the purposes specified.

In witness whereof I have hereunto set my signature this 10th day of September, A. D. 1869.

EDWIN GOMEZ.

Witnesses:

GEO. D. WALKER,  
CHAS. H. SMITH.