

R. R. MOFFATT.

Cartridge.

No. 110,264.

Patented Dec. 20, 1870.

Fig. 1.

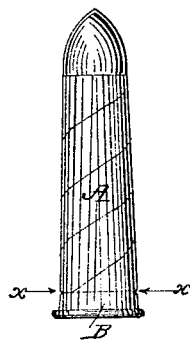


Fig. 2.

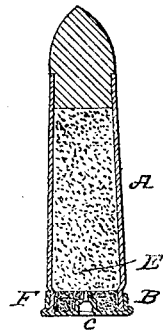
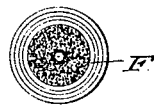


Fig. 3.



Witnesses
Thos. J. Evans
Houghton Wheeler

Inventor
R. R. Moffatt

UNITED STATES PATENT OFFICE

RICHARD R. MOFFATT, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 110,264, dated December 20, 1870.

To all whom it may concern :

Be it known that I, RICHARD R. MOFFATT, of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Cartridges for Breech-Loading Fire-Arms, of which the following is a specification:

In the accompanying drawing, which forms a part of this specification, Figure 1 represents a side view of a cartridge embodying my invention. Fig. 2 is a longitudinal central section of the same. Fig. 3 represents a cross-section of the same, taken upon the line *x x*, Fig. 1.

Similar letters of reference in the several figures represent like parts.

In the manufacture of consumable cartridge-shells difficulties have arisen in the forming of the same from paper treated by sulphuric and nitric acid, the same being difficult to paste together, as well as being too expensive for practical use.

The object of the first part of my invention is to obviate these difficulties, and consists in making a cartridge shell or case, for breech-loading fire-arms, of paper or other fibrous material, treated with oxidized carbolic acid dissolved in wood spirits, which causes it to be highly combustible and will be part of the propelling charge when the cartridge is fired.

The second part of my invention consists in the combination of a packing-wad of powder, or any other combustible material, with a consumable cartridge shell or case and the metallic base or gas-check, its object being to firmly hold together the consumable shell and metallic base or gas-check, and also, among other things, to obviate the difficulty arising from the blowing out of a solid wad, which tends to injure the bore of the gun when the cartridge is fired.

When a metallic (or non-combustible) packing-wad is used in securing the consumable shell to the metallic base or gas-check, it is apt to be forced out into or through the bore of the gun with injurious effects when the cartridge is fired; besides, it is more costly in its construction and application than a packing-wad of compressed powder.

In the annexed drawing, letter A represents the case or shell of a cartridge made of paper or other fibrous material, and prepared with oxidized carbolic acid dissolved in wood spirits, so as to make it highly combustible and water-proof. B is a non-consumable base made from metal, and having a projecting flange around the periphery of its base, and provided with an indentation, C, and an opening, E, in the center of its base, by which a percussion-cap or primer is held and the cartridge is fired. F represents a combustible packing-wad, which firmly holds the case or shell A to the base B.

This wad I prefer to make of gunpowder, which is compressed, as shown in the drawing, while the shell A and base B are in a die. The cartridge-shell is then primed and charged with powder and projectile, ready for use.

The wad F, being of compressed powder, burns (comparatively) slower than the grain powder, and the shell A consequently burns last, and will free all coarse residuum out of the gun.

The non-combustible base B remains in the breech end of the bore of the gun, and prevents any escape of gas.

The base B may be constructed of various shapes and materials, and may be primed at the rim or center in different ways. It can be readily withdrawn from the bore of the gun by any extracting device now used in guns, as it is very short.

In the construction of my cartridge I prefer to use paper which is freed from all earthy matter, such as hemp-paper, which may be rolled, and secured by pasting or otherwise, into the desired cylindrical shape, and then immersed in the solution of oxidized carbolic acid, &c., before attaching it to the metallic base, &c., or, if desired, the paper may be treated with the acid solution before it is made into the cylindrical form, in which case the solution serves as a paste or glue to hold the paper in the position or form desired.

It will be observed that a combustible shell may be readily manufactured in this manner much cheaper, as well as of much cheaper material, than if made by any other method or of any other material known to me.

Having thus described my invention, I desire to secure by Letters Patent—

1. The within-described process of manufacturing consumable cartridge-shells, substantially as and for the purpose herein specified.

2. The combination of the combustible packing-wad F with the combustible shell or case

A, and the non-combustible base or gas-check B, substantially as and for the purpose herein set forth.

R. R. MOFFATT.

Witnesses:

THOMAS COSTIGAN,
THOMAS P. SHAW.