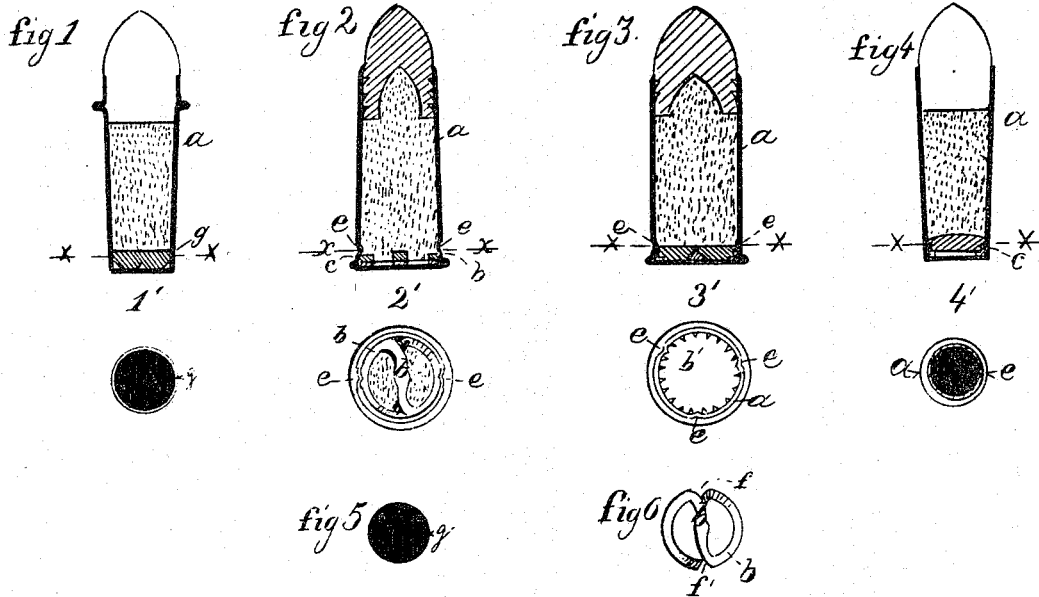


2 Sheets, Sheet 1.

*H. Moffatt,  
Cartridge.*

No. 53168.

Patented Mar. 13 1866.



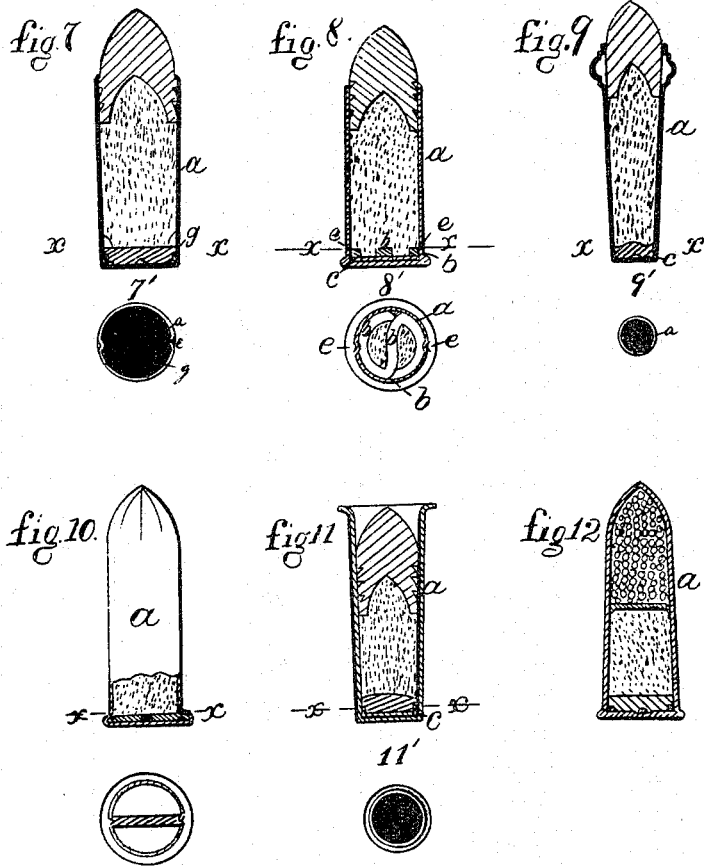
Witnesses  
John G. Windham  
Mr. Thomas J. Burke

Inventor  
Arthur Moffatt

# A. Moffatt, Cartridge.

No. 53,168.

Patented Mar. 13, 1866



Witnesses,

Chas. H. Woodman  
Wm. Thomas J. Burke

Inventor,

Arthur Moffatt

# UNITED STATES PATENT OFFICE.

ARTHUR MOFFATT, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN PRIMING CARTRIDGES.

*Specification forming part of Letters Patent No. 53,168, dated March 13, 1866.*

*To all whom it may concern:*

Be it known that I, ARTHUR MOFFATT, of the city of Washington, District of Columbia, have invented certain new and useful Improvements in Metallic Cartridges for Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, references being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon, in which—

Figures 1, 2, 3, and 4 are longitudinal central sections of cartridge-cases with my improvement attached. Figs. 1', 2', 3', and 4' are front end views of the same, taken on the line *xx* of the several figures under which they are placed. Fig. 5 is a detached wad or anvil of compressed or hard powder. Fig. 6 is a front face view of a removable metallic anvil, as seen in Fig. 2. Figs. 7, 8, 9, 10, 11, and 12 show the application of my improvement to cartridges of various forms.

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

The nature of my invention consists in a combined rim and center primed cartridge, with or without a flange, the fulminate applied in the center and around its periphery only. It further consists in furnishing a cartridge-case with a percussion wad or anvil of paper or of compressed powder, or any composition that would be consumed when the cartridge is fired, said wad or anvil to be used in combination with loose or grain powder or gun-cotton, and to be primed with a fulminating material applied around its periphery, or at its center, or both, adapted as a priming to cartridge cases with or without a flange. It also consists in a removable metallic anvil or disk, having a fulminate or bearing for the fulminate in its center and around its periphery, that can be removed by hand for the purpose of reloading the cartridge-shell.

It is well known that metallic cartridges are much more expensive than unfixed ammunition, and that the shells of the former are generally thrown away as useless after the cartridge has been fired, there being no known way to bring them into use again without sending them back to the manufactory where they are made.

All the metallic cartridges that have hollow

flanged heads for the purpose of containing the fulminate are defective in this respect, viz., that in the act of forming this hollow flange the metal is so stretched that it becomes weak at that point, and, in firing, the heads of the cartridges are liable to be blown off, or to burst out in such a manner as to render it very difficult to open the breech of the gun.

It is also an object to have a cartridge-shell so constructed that it can be reloaded by hand after the cartridge has been fired, which will enable those who use them to insert any kind or quantity of powder, shot, or ball in them that they may desire.

By the use of my removable metallic anvil and primed paper wad, as shown in Fig. 2, or the anvil of hard powder, as shown in Fig. 1, any of the metallic cartridges now in use can be reloaded by hand with great facility after they have been fired.

To enable others skilled in the art to construct and use my invention, I will proceed to describe its construction and operation.

In the drawings, Figs. 2, 2', 8, and 8', *a* represents an ordinary metallic cartridge-shell, with my improvement attached at one end, and a ball attached at the other end. *b* is an anvil or disk. (For a top view see Fig. 6.) Said disk or anvil is made of iron or other metal, and has its upper face divided into two inclined planes. It also has two or more openings, *f*, in its periphery, by which it is allowed to pass the lugs or indentations *E* formed in the side of the cartridge-shell, and which hold down the anvil upon the wad *c*. By turning the anvil (with a tool for that purpose) after it has been placed upon the wad *c*, the incline surface, when it comes in contact with the indentations or lugs, is forced down firmly upon the percussion-wad. This wad may be made of any suitable form, and is intended to be consumed when the cartridge is fired, said wad having a fulminating material applied around its periphery and in its center, and is intended to ignite the charge of powder when the hammer, striking the rear part of the cartridge, explodes the fulminate in the wad *c*, the compressed-powder wad *g* or the disk *b* acting as an anvil for that purpose.

In Fig. 1, *g* represents a disk of compressed or hard powder, which acts as an anvil to explode

the fulminate. Said anvil is consumed when the cartridge is fired, leaving the cartridge-shell empty, ready to be reloaded. Fig. 3 represents a cartridge with a metallic anvil that is not removable, but primed around its periphery and its center, by which it is made a combined rim and center primed cartridge. Said disk or anvil is held in place by two or more indentations, *e*, in the side of the metallic cartridge-shell *a*. Fig. 10 represents a cartridge-shell that is primed in the hollow flange and at the center of the base, and having a narrow bar or strip of metal as an anvil for the center priming, extending across the base, and secured in its place by the indentations *e e* in the sides of the shell, making it a flange and center primed cartridge.

The manner of operating my invention is as follows, (by means of a hand-tool for that purpose:) The anvil or disk *b* is removed by turning it around until the openings *f* in the anvil are opposite the indentations or lugs *E*. Then it is withdrawn and a new percussion-wad inserted. The anvil or disk is then replaced and pressed down tightly upon the wad *c* by turning it in the direction of its incline surface, as represented in Fig. 2. The powder and ball or shot can then be inserted, and the cartridge is ready for use.

When the anvil *g* of compressed powder is used, as represented in Figs. 1, 7, 9, and 12, it is reloaded by first inserting the primed anvil *g*, then the grain-powder or gun-cotton, and then the shot or ball, thus making a cheap and

desirable cartridge, capable of being reloaded by hand or otherwise.

I am aware that the old French metallic cartridge, which has its entire base covered with fulminate, is flange and center primed, but it can only be fired at the flange, there being no anvil to explode the center priming upon, and without which the point of the hammer would smash through the thin metallic base and fail to explode the cartridge. This I disclaim as being no part of my invention; but

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

1. A combined rim and center or flange and center primed cartridge, having an anvil to explode the fulminate that is in its center and around its periphery.

2. A wad or anvil primed with a fulminate, said wad or anvil being consumable when the cartridge is fired, substantially as herein set forth.

3. An anvil primed with a fulminating material in its center and around its periphery, substantially as and for the purpose herein set forth.

4. A removable disk or anvil, constructed so as to form a bearing for the fulminate around the periphery and in the center of the base of the cartridge-case, substantially as herein set forth.

ARTHUR MOFFATT.

Witnesses:

W. H. SULLIVAN,  
A. F. MARSH.