

J. RUPERTUS.

Cartridge.

No. 69,707.

Patented Oct. 8, 1867.

Fig. 1.

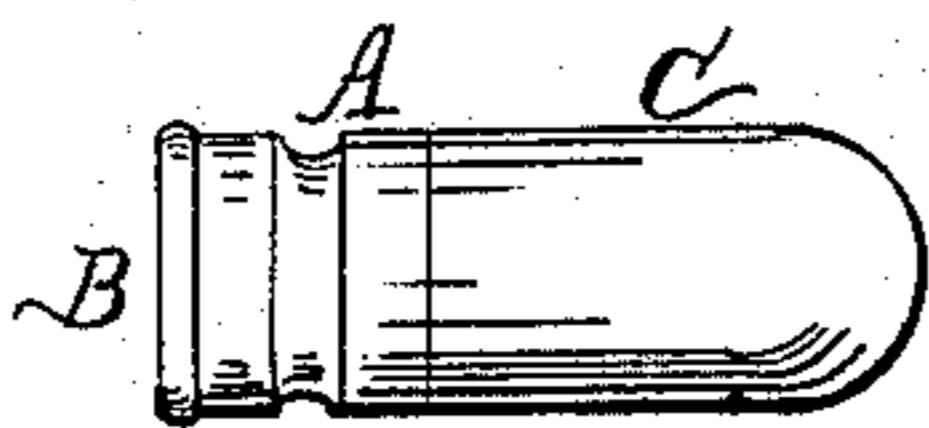


Fig. 2.

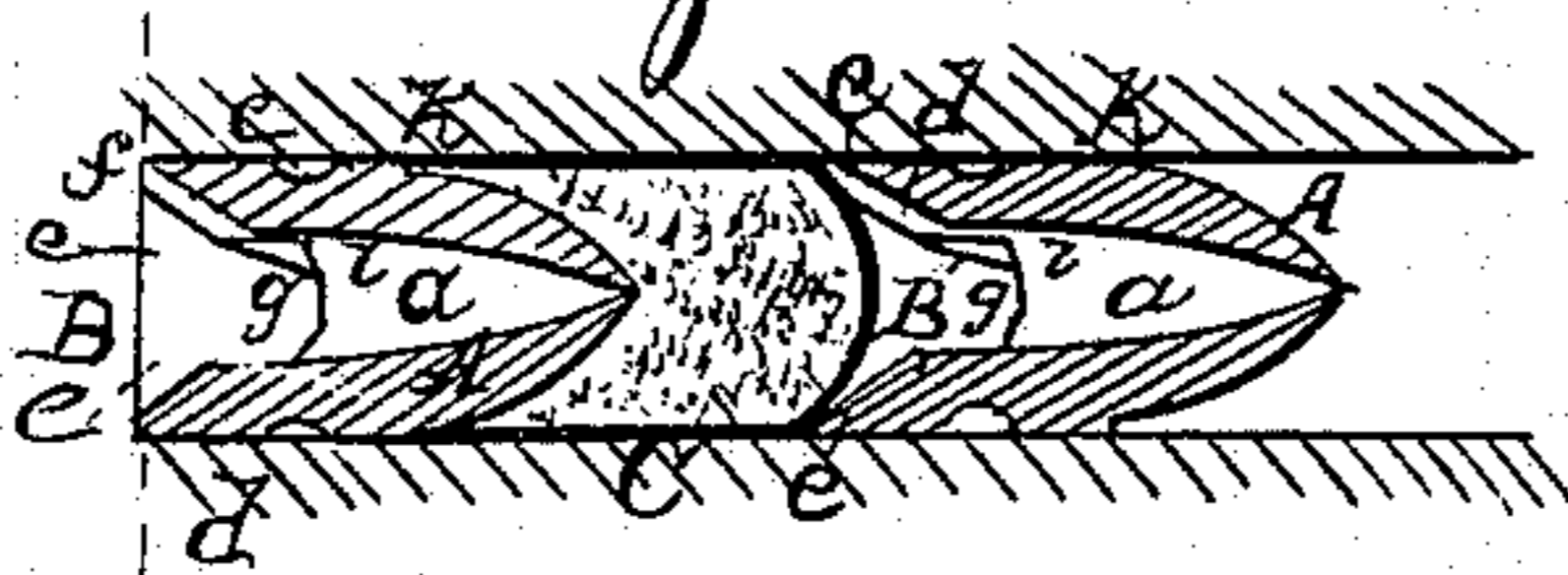


Fig. 5.

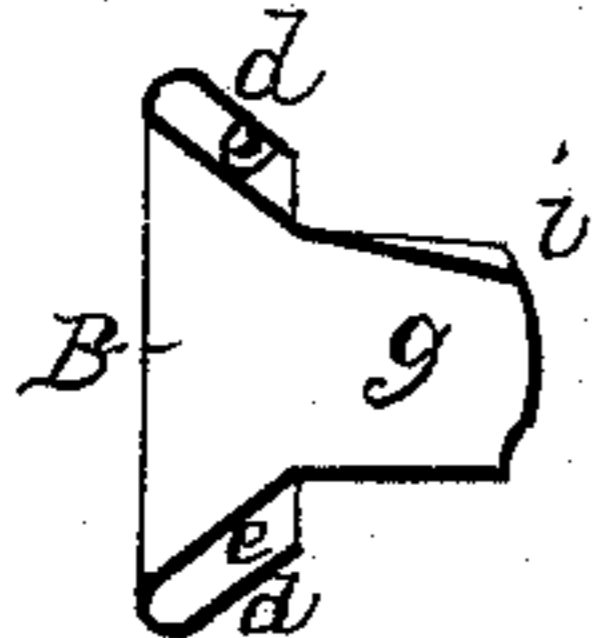
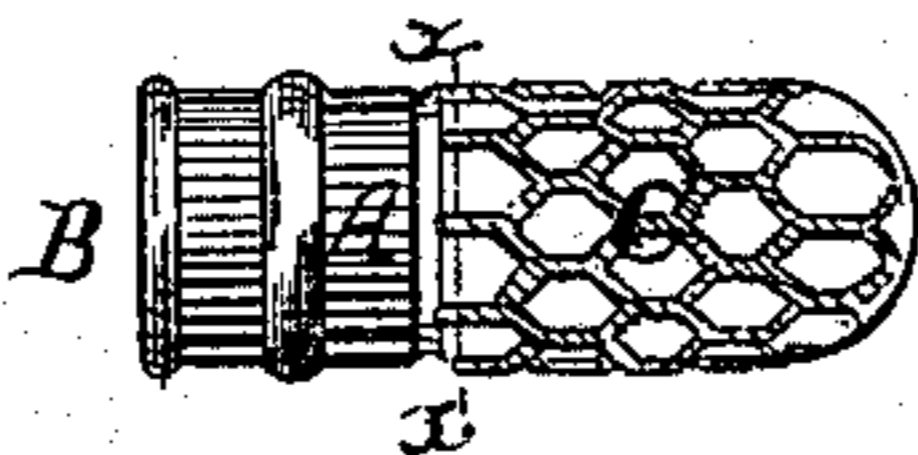


Fig. 3.



Fig. 4.



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UNITED STATES PATENT OFFICE.

JACOB RUPERTUS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CARTRIDGES FOR FIRE-ARMS.

Specification forming part of Letters Patent No. 69,707, dated October 8, 1867.

To all whom it may concern:

Be it known that I, JACOB RUPERTUS, of Philadelphia, Pennsylvania, have invented an Improved Cartridge for Breech-Loading Fire-Arms, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention consists of a cartridge constructed in the peculiar manner fully described hereafter, so that as the cartridges are successively inserted in the barrel of a fire-arm the explosive material of the cartridge last introduced shall serve to discharge the projectile of the preceding cartridge, the casing containing such explosive material being at the same time expelled from the barrel, and leaving the bullet of the exploded cartridge free to be in turn discharged by the explosive material of the cartridge next inserted.

By the use of my improved cartridge the usual extractors may be dispensed with, greater rapidity in firing acquired, and a tight gas-check obtained.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is an exterior view of my improved cartridge for breech-loading fire-arms. Fig. 2 is a sectional view, showing the arrangement of the cartridge and projectile within the bore of the barrel; Fig. 3, a detached face view of part of the cartridge; Fig. 4, a modification of my invention, and Fig. 5 an enlarged sectional view of part of the improvement.

A is the projectile, cylindrical at the rear and tapering in front, and having a central opening, *a*, which is made gradually tapering from near the rear to the point of the projectile, where it terminates in a small hole, the opening at the extreme rear, *c*, of the projectile being made flaring outward for the reception of portion of the sheet-metal case B. This case is of the peculiar shape shown in Figs. 2 and 3, the portion *d*, which bears against the flaring shoulder *c* of the projectile, being bent and folded so as to form an annular chamber, *e*, at the rear end of the case for the reception of the detonate *f*.

The case B is driven into the rear of the

projectile A, and is held by its projection *g*, which fits snugly in the opening *a*, the projection *g*, having, as seen in Fig. 3, three indentations, *i*, forming channels or communications between the detonate-chamber *e* and the central opening *a*. The case C, containing the powder, is secured to the projectile so as to occupy a position in front of the same.

As shown in Figs. 1 and 2, this case is made of thin metal, and is forced onto the projectile until it comes in contact with a shoulder, *k*, on the same. The case may, however, be made of other materials; for instance, it may be made of paper covered with a net-work of thin wire, as shown in Fig. 4, the ends of the wires forming the net-work being bent into a groove in the projectile.

One of the projectiles A is inserted so far into the rear of the barrel of a breech-loading fire-arm as to allow room for the introduction therein of a complete cartridge. The case B is of such a diameter as to bind slightly against the rear of the barrel, as shown in Fig. 2, and thus prevent the cartridge from being pushed too far into the bore.

The detonate is discharged by a suitable striker or by the hammer of the fire-arm and the fire passes directly through the opening *a*, and explodes the powder contained in the casing C, which, with the projectile before it, are expelled from the bore, leaving the empty fulminate-case B and its projectile unmoved.

Another cartridge is now inserted, pushing before it the projectile A until the latter is in the position previously occupied by the projectile A', and is ready to be discharged by the explosion of the powder in the case of the cartridge last inserted. Thus cartridge after cartridge may be introduced, the powder of the new cartridge serving to discharge the projectile of the cartridge previously exploded.

The advantages gained by the manner described of constructing, arranging, and discharging cartridges may be enumerated and described as follows:

First, the case-extractors common to breech-loading fire-arms are dispensed with, and complex mechanism avoided.

Second, the fire-arm can be loaded more rapidly as a new cartridge is inserted in the time usually occupied in extracting a cartridge-case.

Third, the projectile with lubricated packing at the rear of the charge presents an efficient gas-check.

It will be evident that my invention is applicable to large arms or ordnance.

I claim as my invention and desire to secure by Letters Patent—

1. A projectile, A, having a central opening, *a*, in combination with a case, C, arranged in front of the projectile for containing the powder, all substantially as set forth.

2. The combination of the projectile A and its central opening *a* with the case B, its detonate-chamber, and indented or grooved pro-

jection *g*, the whole being arranged substantially as and for the purpose set forth.

3. The casing C, composed of paper or other fabric and wire net-work, and secured to the front of the projectile, all substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JACOB RUPERTUS.

Witnesses:

JOHN WHITE,
W. J. R. DELANY.