

No. 27,933.

PATENTED APR. 17, 1860.

H. SMITH & D. B. WESSON.
METALLIC CARTRIDGE.

Fig. 6.

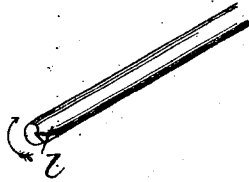


Fig. 4.

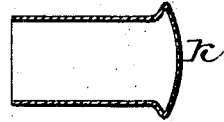


Fig. 5.

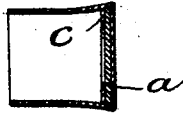


Fig. 7.



Fig. 3.

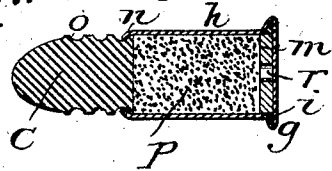


Fig. 2.

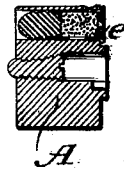
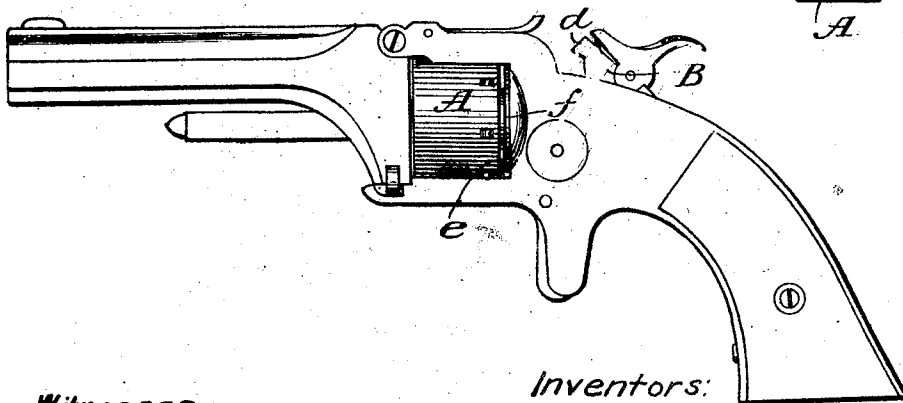


Fig. 1.



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HORACE SMITH AND DANIEL B. WESSON, OF SPRINGFIELD, MASS.

IMPROVEMENT IN FILLING METALLIC CARTRIDGES.

Specification forming part of Letters Patent No. 27,933, dated April 17, 1860.

To all whom it may concern:

Be it known that we, HORACE SMITH and DANIEL B. WESSON, of Springfield, in the county of Hampden and State of Massachusetts, have invented certain Improvements in Metallic Cartridges and in the method of charging the same with fulminating powder, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a view of a revolving pistol in which our improved cartridge is used. Fig. 2, a section through the revolving cylinder and one of the cartridges with the ball attached. Fig. 3, a longitudinal section, enlarged, through one of our cartridges which is charged ready for use. Figs. 4, 5, 6, and 7, details to be referred to hereafter.

We are aware that a metal cartridge for breech-loading pistols, such as is shown in section Fig. 5, has been made, in which the fulminate was spread in a thin layer over the interior of the base of the cartridge, as shown at *a*, and held in place by a washer of thin metal, *c*, or other material.

This description of cartridge is not adapted for a revolving pistol, as shown in Fig. 1. In this pistol, Figs. 1 and 2, chambers are bored through the revolving cylinder *A* and the cartridge is inserted from the rear, one of which is shown at *e*, Fig. 2.

The flange-base of this cartridge projects beyond the rear of the chamber and occupies the space between the cylinder and the recoil-plate *f*. The explosion of these cartridges from the blow of the hammer causes the base to bulge out, as shown in Fig. 4, by which means the cylinder is jammed and prevented from revolving freely.

Metallic cartridges have also been constructed with a milled washer inserted in their base, and the fulminate contained between the projections and depressions around the edges of the washer and the interior surface of the cartridge at its base; but these cartridges are not adapted to the cylinder used in our arm in which the chamber extends entirely through.

Metallic cartridges have also been constructed with a hollow flanged annular base and the fulminate contained in a hollow ring, which is inserted in the hollow annular base

of the cartridge; but this description of cartridge is expensive and the construction dangerous from the difficulty of closing and turning the ring after the fulminate is introduced, without explosion.

To obviate these objections is the object of our present invention, which consists in making the cartridge-case with a projecting flange, *g*, Fig. 3, around its base, so as to form an annular recess, *i*, in which the fulminating powder is placed, the fulminate from the central portion of the head being removed.

That others skilled in the art may understand and use our invention, we will proceed to describe the manner in which we have carried out the same.

In the drawings, Fig. 3 represents an enlarged section through one of our improved cartridges charged and having the ball attached; *h* is the cartridge, which is a cylinder of thin copper or other suitable metal, the base or head of which is somewhat larger in diameter than the cylinder, and is formed with a flange or rim, *g*, where it joins with the cylindrical part *h*, so that there is an annular space or hollow ring, *i*, formed around the base of the cylinder. Into this annular space, *i*, the fulminating powder is forced.

Fig. 6 represents the tool which we employ for the purpose; it is of a size suited to the cartridge shown in Fig. 2.

A portion of the tool at one end is cut away, as at *l*, and as it is revolved in the cylinder *h*, in the direction of the arrow, the fulminating powder is forced out into the annular space *i*. After the fulminate is thus pressed into place it is to be permanently secured there, and this may be effected by a wad, *m*, of paper, leather, or other suitable material, which is forced down to the bottom of the cylinder *h*, as shown in Fig. 3; this wad may be made with a hole through the middle of it, which hole may then be occupied by gunpowder, and thus the fire from the fulminating powder will be communicated with greater surety to the gunpowder with which the cartridge-case *h* is almost entirely filled, as at *p*, Fig. 3. After the gunpowder is inserted, the ball *c'* is attached to the cartridge. This ball which is of the elongated conoidal form, is of such a diameter at its base as to fit snugly into the cartridge-case; it has several grooves, *o*, around its cir-

cumference, into the lower or rear one of which the edge of the case *h* is pressed as at *n*, Fig. 3, by means of a suitable tool or swage; this secures the ball firmly to the cartridge.

After the fulminating powder has been inserted in the annular space *i*, the cartridge is placed in a tool having a hole of a suitable diameter to receive the cylindrical part *h* of the cartridge; a light pressure is then put upon the head to compress the flange *g*, and bring the metal into closer contact with the fulminate. The blow of the hammer is thus rendered more effective and the discharge more certain.

When the percussion-powder is thus confined its explosion does not cause the head of the cartridge to protrude, as before described, and the difficulty arising therefrom is entirely obviated.

In introducing the fulminate into the angular projecting base without previously inclosing it in a hollow ring a much less expensive and equally effective cartridge is produced.

It is obvious that in lieu of the wad other means may be adopted for the purpose of confining the fulminate in place and of preventing it from being rattled or jarred out when dry, without altering the spirit of our invention. For example, a flat metallic ring, Fig. 7, of a diameter that will just drop to the bottom of the cartridge-case and close the recess *i*, may be employed, or the surface of the fulminate may be varnished and thus be prevented from cracking and falling out.

What we claim as our invention, and desire to secure by Letters Patent, is—

A cartridge in which the fulminate is contained in the hollow annular projecting base, substantially as described, without being previously inclosed in a hollow metallic ring.

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