

R. WHITE.
METALLIC CARTRIDGE.

No. 110,881.

Patented Jan. 10, 1871.

fig. 1

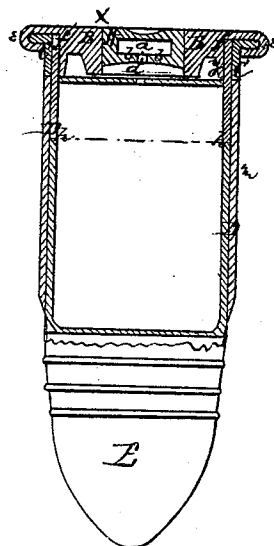


fig. 2

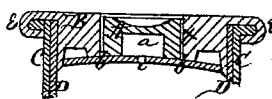


fig. 3

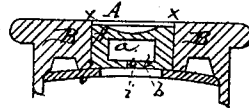
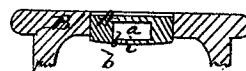


fig. 4



Witnesses:

W. A. Yeatman,
C. A. Curtis,

Inventor.

Rollin White
per
Alvan D. Mason
att'y.

United States Patent Office.

ROLLIN WHITE, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 110,881, dated January 10, 1871.

IMPROVEMENT IN METALLIC CARTRIDGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ROLLIN WHITE, of Lowell, in the county of Middlesex and in the State of Massachusetts, have invented certain new and useful Improvements in Cartridge; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, making a part of this specification:

The object of my invention is to produce a cheap yet substantial cartridge, the case of which shall part or divide when leaving the gun; and

It consists in the construction and arrangement of the various parts forming said cartridge, as will hereinafter be fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my cartridge; and

Figures 2, 3, and 4 show various modifications of the same.

A represents the cap, within which is the space *a*, for the fulminating powder, with the vent *i* from said space.

Around the vent *i*, forming a plate or part of the cap, is the anvil *b*.

d is the opening in the head or butt *B*, in which opening the cap *A* is inserted. The walls or sides of this cap-chamber are vertical, as shown at *x*, figs. 1, 2, 3, and 4. This cap may be made by any suitable means of one or more plates, and inserted into the aperture of the head, where it is to be held by any means desired, so as to prevent it from being forced into the cartridge by the blow of the hammer. Its upper or outer surface may or may not be concave in the center, and, if concave, making the metal at this point much thinner. At or near the center is the only place where a blow will ignite the fulminate. Hence, it follows that even if the cap should be flush with the outer surface of the head, no ordinary blow on the head will or can explode the fulminate. Only by a blow of a pointed hammer or other similar instrument directly in or near the center of the cap will the fulminate be exploded.

Within the head *B* may be placed a plate, *b'*, to form the cartridge-anvil, in which case the anvil *b* of the cap may or may not be dispensed with, as desired.

In some cases I may form my cap without the vent *i*, in which case a portion of the plate or anvil should be made so thin or weak that the explosive force of the fulminating powder will burst through and drive the fire into the charge or cartridge.

The head or butt *B* is formed with a thick portion

or circular flange, *z*, around the opening *d*, in which the cap is inserted.

A short distance from, outside of, and around this flange is another circular flange or lip, *y*, which forms a reinforce or bearing for the paper tube *k*.

This tube is placed around and against the lip *y*, and is confined by means of a short metallic tube, *C*, which is flanged at its rear edge, as shown, and the flange *e* of the head is then bent over the flange of this metallic tube, thus holding the two tubes *C* and *k* in place.

The flange or lip *y* and the metallic tube *C* extend equal distance forward, and the paper tube *k* is thus held firmly between two straight metallic surfaces.

By using the paper tube *k* the metallic tube *C* need only be long enough so as to hold the paper tube firmly, thereby lessening the expense. There is also another object in using said paper tube, which will be presently described.

D represents the main tube or shell of the cartridge, made of paper and cloth or other suitable material, and adapted to form the patching of the ball or shot.

This tube *E* is intended to be of the same thickness as the paper tube *k*, so as to form a joint with the same, as shown at *h*.

The tubes *k* and *D* are connected together by means of paper, *m*, pasted or otherwise fastened around the same. If the tube *k* was made of metal, it would be difficult to paste the paper tube *m* on it; but being of paper, this is readily done. This outside covering *m* being merely a single thickness of paper, allows the cartridge to divide or separate at *h*, and the power of the charge will drive or carry the front portion, with the ball or shot, out of the gun.

The shell *D* is, as above mentioned, adapted to form the patching of the ball or shot.

The ball *E* is grooved and placed within the patching. A string is then wound firmly in the grooves, with some soft or greasy substance. This string remains in said grooves until the cartridge is fired, and while the ball is passing through the atmosphere the string will unwind, and the ball will leave the tube or shell soon after it leaves the gun.

Having thus fully described my invention, What I claim as new, and desire to secure by Letters Patent, is—

1. The cap-chamber *d*, with parallel vertical walls, *x*, extending all the way through the base, substantially as set forth.

2. The cap *A*, having a concavity in its outer surface, and provided with a fulminate-receptacle, *a*, and anvil *b*, with or without the vent *i*, substantially as set forth.

3. The combination of the cap-chamber, as described, with a cap, *A*, substantially as described, and for the purposes set forth.

4. The combination of the cap *A*, constructed as

described, and the plate or anvil *b*, substantially as and for the purposes herein set forth.

5. The head or butt *B*, constructed as described, with a flange, *e*, and lip *y*, substantially as and for the purposes herein set forth.

6. The combination of the head *B*, metal tube *C*, and paper tube *h*, all constructed and arranged substantially as and for the purposes herein set forth.

7. The combination of the head *B*, with its tubes *C* and *f*, and the tube or shell *D*, constructed as de-

scribed, and connected together by means of the outside covering *m*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, 1870.

ROLLIN WHITE.

Witnesses:

SAML. W. STICKNEY,
JAMES M. COLUM.