B. B. HOTCHKISS.

CARTRIDGES FOR FIRE-ARMS

No. 193,658. Patented July 31, 1877.

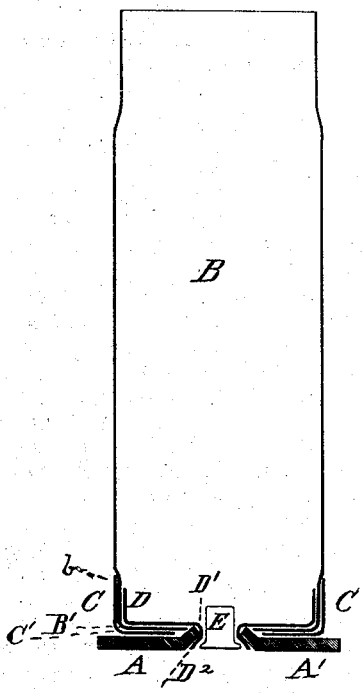

Fig. 1.

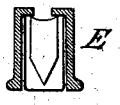

Fig. 2.

Fig. 3.

Witnesses:

W. C. Dey,

M. A. Van Nanee

Inventor:

B. B. Hotchkiss.

by his attorney

C. L. Stetson

UNITED STATES PATENT OFFICE.

BENJAMIN B. HOTCHKISS, OF NEW YORK, N. Y.

IMPROVEMENT IN CARTRIDGES FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **193,658**, dated July 31, 1877; application filed January 11, 1877.

To all whom it may concern:

Be it known that I, BENJAMIN B. HOTCHKISS, of New York city, in the State of New York, temporarily residing at 27 Rue de Choiseul, Paris, France, have invented certain Improvements in Metallic Cartridges, of which the following is a specification:

The improved cartridge is more particularly intended for small-arms, but it may be used with success for larger cartridges required for my revolving cannon, and for the Gatling and analogous machine-guns.

It is adapted for the Boxer primer, requires no paper or analogous material liable to change its condition with time, and avoids the necessity for producing holes and applying rivets.

The accompanying drawing represents what I consider the best means of carrying out the invention.

Figure 1 is a general longitudinal section through the entire cartridge, with the primer in elevation. The succeeding figures represent the primer on a larger scale. Fig. 2 is a longitudinal section through the primer, and Fig. 3 is a cross-section through the same.

Referring to the drawing, A A′ is a circular plate of stout sheet-iron. A space around the central hole is made conical, or approximately so. The sunk space thus provided should be enough to allow not only for the flanged head of the primer, but also for the thickness of the material of the internal cup, as will presently appear.

B is the body of the shell. It is preferably made of spiral-wound brass, in the manner now much approved for the cylindrical portion of a cartridge; but this is not absolutely essential. It may be produced in the form of a single continuous tube; but in either construction it has a slight shoulder at *b*, and has the end flanged inward, as indicated by B′. C C′ is an external cup, strengthening the lower outer corner of the external cup or shell. E is a primer of the character, I think, generally known as the Boxer. It is the form made by Goupeir, of Paris, its exterior being a short tube flanged inward at the front end, and outward at the back end, and containing in its interior a percussion-cap and a suitable anvil.

D D^1 D^2 is a piece which performs the important functions of an internal cup, a lining around the central hole, which fits tightly to the primer E, and a flanged or turned-out portion in rear of the central hole. It gives unity to the base. The part D corresponds to an ordinary internal cup, the part D^1 is a lining for the central hole, and the part D^2 a flange in rear thereof.

The parts, with the exception of the primer, being applied together, a suitably-formed header is brought into play to spread the rear end D^2, and cause it to firmly clinch and rivet the parts together. The primer previously prepared being forced home by a suitable machine, the cartridge is ready for charging.

My improvement is particularly adapted for military use with small-arms; but it may be used in breech-loaders of all ordinary patterns, and for all ordinary purposes. The front of the cartridge may be united with a ball, or with a charge of shot for sporting, or may be closed by any ordinary mode, to allow the use of a separate projectile or collection of projectiles in front.

I claim as my invention—

A cartridge having the external cup C, matched upon the metallic shell B B′, in combination with the metallic plate A A′ and internal piece D D^1 D^2, as and for the purposes specified.

In testimony whereof I have hereunto set my hand this 6th day of October, 1874, in the presence of two subscribing witnesses.

B. B. HOTCHKISS.

Witnesses:

WM. C. DEY,

E. VOLKMANN.