

**E. JONES.
Cartridges.**

No. 151,396.

Patented May 26, 1874.

Fig. 1.

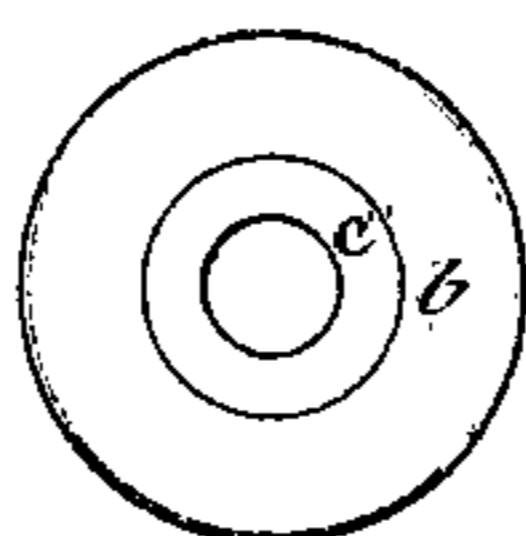
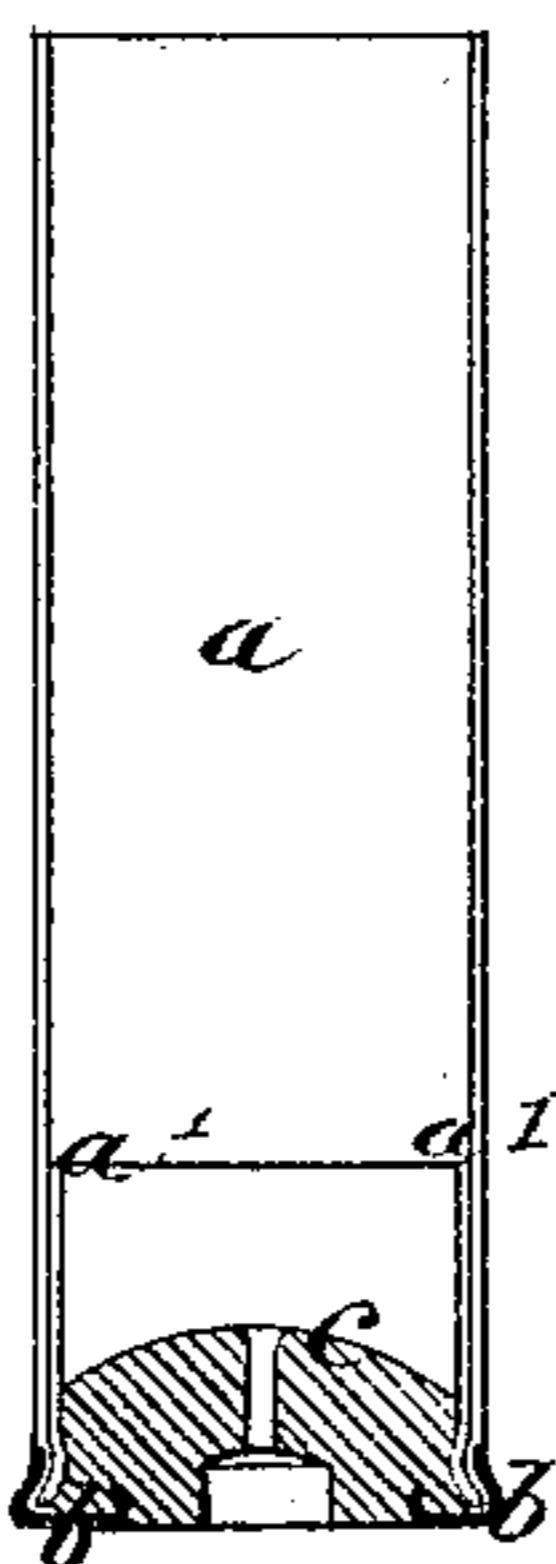


Fig. 2.

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UNITED STATES PATENT OFFICE.

EDWARD JONES, OF BIRMINGHAM, ENGLAND.

IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. 151,396, dated May 26, 1874; application filed May 15, 1873.

To all whom it may concern:

Be it known that I, EDWARD JONES, of Birmingham, in the county of Warwick, England, mechanical engineer, have invented certain Improvements in Cartridges, of which the following is a specification:

The object of my invention is to manufacture cartridges with a flanged metal head in a cheaper manner than heretofore. The invention is designed as an improvement in center-fire cartridges having a flanged metallic head, provided with a metal cup or chamber opening axially outward to receive the anvil and percussion-cap, said head being secured to the body or tube of the case by means of a wad of paper-pulp or equivalent material. To construct such metallic head with cap-chamber, copper of very good quality, or other expensive metal possessing great malleability, is employed. My invention consists in a cartridge-case having a flanged metallic head made of or from a ring, so that said head is left open at its center, in combination with a centrally-recessed wad, which forms a cap-chamber opening outward, substantially as hereinafter described, whereby I dispense with the metal cap-chamber hereinbefore referred to, thus reducing expense, without detracting from the quality of the cartridge-case.

In the accompanying drawing, Figure 1 represents, in longitudinal section, a cartridge-case made according to my invention; and Fig. 2 is an end view of the same.

a is a paper tube intended to receive the charge, and *a'* is a straightening-piece applied thereto. *b* is the metal head, which, instead of being made, as heretofore, out of a disk of thin metal, is formed from a ring, the center of the disk from which the ring was formed having been removed by stamping or otherwise. From the ring of metal thus obtained I form the flanged metal head *b*, turning up the inner edge of the metal in order to provide a countersunk recess for the wad to enter under the pressure of the die or plunger. By

this means the paper wad or equivalent material *c* effectually secures the flanged head to the tube *a* after the well-known manner. In the fly or other press used for consolidating the wad, and thereby securing the parts together, I provide a counter-die, corresponding in shape and size to the interior of the ordinary metallic cap-chamber, which die, standing up through the central hole in the metal head, (when the latter is placed in the press,) will, as pressure is applied, core out or form a cap-chamber in the plastic wad. One or more holes may be left in the wad, to allow the flash from the fulminate to pass to the powder-charge, by providing either the plunger or the counter-die with a suitable projection or projections for forming the same; or holes may be made through the wad by drilling them in it subsequently, it being understood that the central part of the wad should be left sufficiently thick to sustain the blow of the striker used to explode the percussion-cap.

By thus forming the cap-chamber in the wad itself, instead of using a cap-chamber made of metal, I am enabled to reduce the quantity of metal employed in forming the flanged metal head, as well as to economize labor.

Having now explained the nature of my invention, and the manner of carrying the same into effect, I wish it to be understood that I claim—

The cartridge-case consisting of the paper tube *a* and straightening-piece *a'*, provided with the metal head *b*, formed by punching the center of a disk and turning up the inner edge, said tube and head being secured together by means of the paper-pulp wad *c*, having the cap-chamber and flash-orifice formed therein, substantially as shown and described.

EDWARD JONES.

Witnesses:

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