

No. 869,046.

PATENTED OCT. 22, 1907.

C. A. BAILEY.
CARTRIDGE.

APPLICATION FILED AUG. 6, 1907.

Fig. 1.

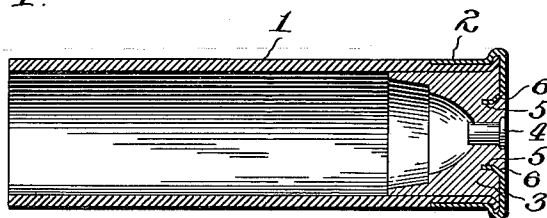


Fig. 2.

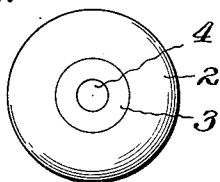


Fig. 3.

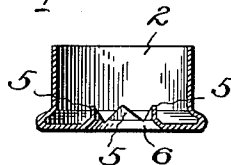
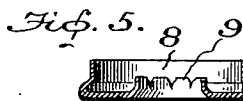
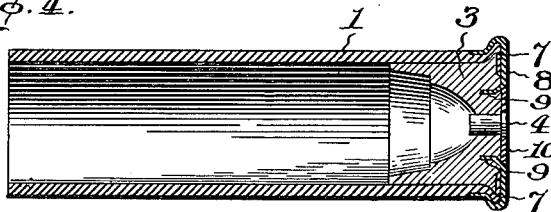


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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CARTRIDGE.

No. 869,046.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed August 6, 1907. Serial No. 387,338.

To all whom it may concern:

Be it known that I, CHARLES A. BAILEY, a citizen of the United States, and a resident of Cromwell, in the county of Middlesex and State of Connecticut, have invented certain Improvements in Cartridges, of which the following is a specification.

This invention is an improvement in cartridges, and relates more especially to the class of paper-tube cartridges or shot shells comprising a paper-tube, a metal cap and a base-wad, said cap and base-wad closing the tube at one end, and in which closed end the primer is located, as is usual.

The primary object of my invention is to provide a simple and effective means for firmly and securely connecting the parts of a paper tube cartridge or shot shell together.

In the construction of a paper tube cartridge as ordinarily practiced the paper tube is connected to the metal cap by means of a base-wad, usually of paper or wood pulp, and which is pressed within the paper tube so as to clamp the latter between said base-wad and cap, the connection in some instances being reinforced by crimping the inner end of the paper-tube and forcing the same into the rim-flange of the metal cap.

My present invention contemplates an improved construction of the metal cap, whereby the same will intimately engage the base-wad so that neither the base-wad or the paper-tube will pull away from the metal cap in extracting the empty shell from the fire-arm.

My invention therefore consists in the particular construction and arrangement of parts, as herein shown and described, and specifically set forth in the appended claims.

In the accompanying drawings, which form a part of this specification:—Figure 1 is a sectional view of a paper-tube cartridge, constructed in accordance with my invention. Fig. 2 is an end view of the cartridge. Fig. 3 is a sectional view of the metal cap. Fig. 4 is a sectional view illustrating a slight modification. Fig. 5 is a sectional view of the cap employed in the modification.

Like numerals of reference indicate like parts in the several figures of the drawings.

1 designates the paper-tube, 2 the metal cap, and 3 the base-wad, the latter having the usual primer 4 embedded therein.

In carrying out my invention the metal cap 2 is provided with projections or teeth 5 which are embedded in the base-wad so as to form a direct rigid connection between said metal cap and base-wad, and in the present instance these projections or teeth are formed on the head of the metal cap and project inwardly, as shown. The teeth or projections 5 are at the edge of a central opening in the head and are formed by the

metal which is pressed inward in forming the opening. This of course may be done in a suitable die, and in forming the opening and projections or teeth the said opening is countersunk or made wider at its outer end, as at 6, for the purpose hereinafter explained. By constructing the metal cap in this manner, when the parts are assembled or connected together in a press, as is usual, the points or teeth 5 will be pressed into the outer end of the base-wad so as to be embedded therein, and a part of said base-wad will be forced into the opening and spread into the wider or countersunk outer portion thereof so as to produce a very secure connection between the base-wad and the cap and prevent these parts from becoming separated. It will also be noted that the outer portion of the base-wad will be flush with the outer surface of the head of the cap, as shown in Figs. 1 and 2, and will present a neat finish to the end of the cartridge.

In some instances, or where a long metal cap is used the end of the paper tube may be plain, as shown in Fig. 1, but in case a short metal cap is employed I prefer that the inner end of the paper-tube be crimped, as at 7, Fig. 4. It is also apparent that instead of employing pointed teeth on the metal cap to engage the base-wad the engagement may be secured by means of substantially a plain flange. This latter modification is illustrated in Figs. 4 and 5, in which 8 is the short metal cap and 9 the inwardly projecting flange, and in this instance the said flange is slightly broken.

In each case, as will be noted, the metal cap has a positive and secure engagement directly with the base-wad and so that it cannot easily pull away from the same, and as the paper-tube is clamped between these parts there is little or no chance of the parts becoming separated in removing an empty shell from a fire-arm.

Where it is not desirable to have the base-wad exposed at the end of the cartridge I may, in some instances, cover the same by a thin metal disk, as 10, Fig. 4, the same being inserted or placed in position before the parts of the cartridge are assembled.

Having described my invention, what I claim as new and desire to secure by Letters-Patent, is:—

In a cartridge or shot-shell, the combination with the base-wad and paper-tube, of a metal cap embracing the paper-tube and having a central opening in its head which is wider or countersunk at its outer end, projections extending inwardly from the edge of the opening and embedded in the base-wad, and a metal disk covering the base wad at the outer end of the opening in the cap, substantially as shown and described.

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

CHAS. A. BAILEY.

Witnesses:

T. H. NOBLE,
S. E. NOBLE.