L. A. & H. E. SHERMAN.

CARTRIDGE SHELL.

APPLICATION FILED APR. 4, 1910.

980,351. **Patented Jan. 3, 1911.**

Fig. I.

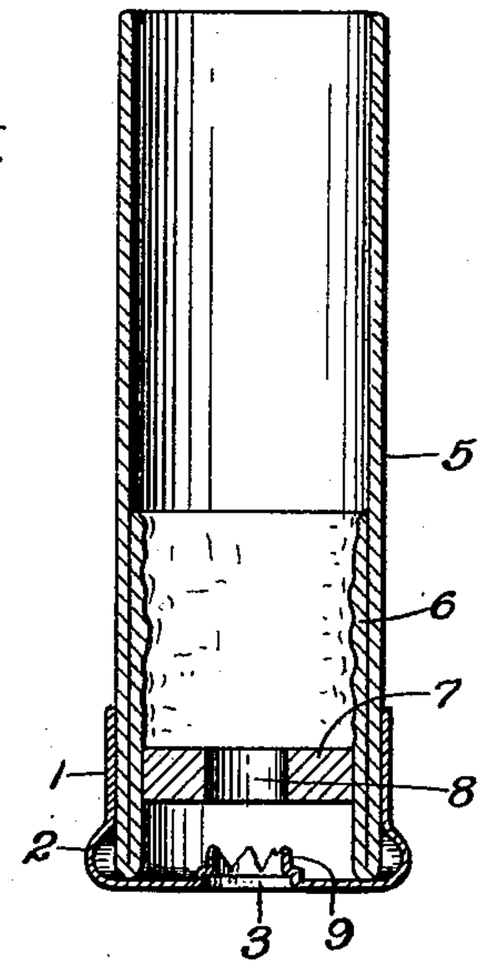


Fig. II.

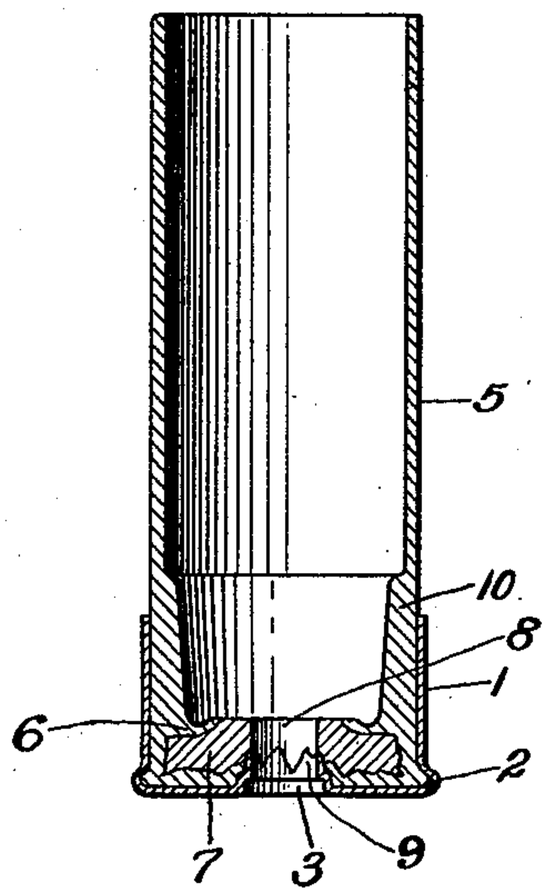
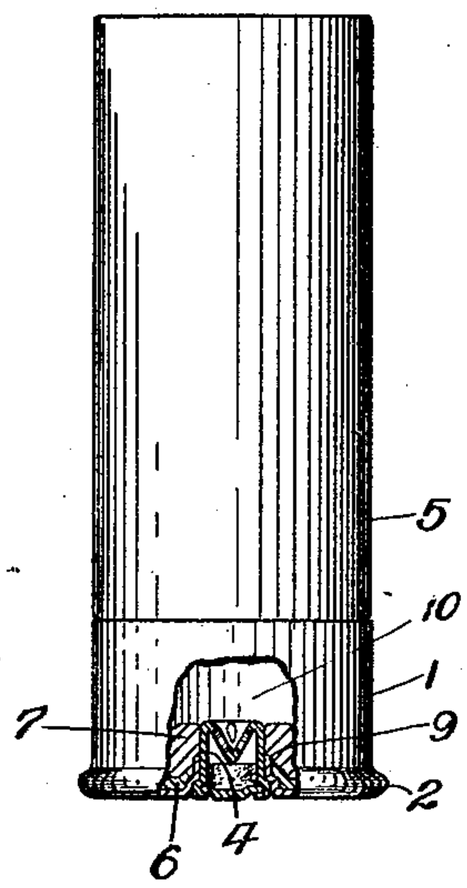


Fig. III.



WITNESSES:

E. H. Cahill.

Myrtle M. Jackson.

INVENTORS

L. A. Sherman.

H. E. Sherman.

BY

Arthur C. Brown.

ATTORNEY.

UNITED STATES PATENT OFFICE.

LOUIE A. SHERMAN AND HARRY E. SHERMAN, OF KANSAS CITY, MISSOURI.

CARTRIDGE-SHELL.

980,351. Specification of Letters Patent. **Patented Jan. 3, 1911.**

Application filed April 4, 1910. Serial No. 553,369.

To all whom it may concern:

Be it known that we, LOUIE A. SHERMAN and HARRY E. SHERMAN, both citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Cartridge-Shells; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to cartridge shells and has for its object to provide a cartridge shell wherein the shell body and base wad are interlocked and the shell body is anchored to the metal cap in a manner to effectually connect the parts and obviate separation of the shell from the cap when the cartridge is discharged. In accomplishing this object, we have provided the improved details of structure hereinafter described and illustrated in the accompanying drawings, in which:—

Figure I is a central section of the several parts of a cartridge shell embodying the features of our invention, shown in their assembled position before they have been pressed into their interlocking relation. Fig. II is a similar view of the parts after the pressing operation. Fig. III is a view of a completed shell, a part of the head being broken away.

Referring more in detail to the parts:— 1 designates the metal cap, having the annular shoulder 2 for receiving a portion of the shell body, and provided with a central aperture 3 for receiving the battery cup 4.

5 designates the shell body, which may be of any suitable material and is folded back within itself to form the wad section 6.

7 designates the base wad, which is composed of hard pressed material and is provided with a central aperture 8 through which the battery cup flange 9 may be projected.

In assembling the parts, the shell body is first turned back, as shown in Fig. I, and the wad 7 inserted into the overlapped end. The overlapped end of the shell is then inserted into the metal cup 1, and the parts placed in a press having a plunger adapted to project into the shell body and engage the wad section 6 and wad 7. When pressure is placed upon these parts the inturned end of the shell is forced outwardly into the cup flange 2 and inwardly beneath the wad 7. Continued pressure of the plunger will force the wad tightly against the underturned portion of the shell body and will force a portion of the shell body over the top of the wad, and will also compress the upper portion of the wad section 6, to form the wad shoulder 10, Fig. II). At the same time that the wad and inturned portion of the shell body are forced into their interlocking relation, the annular shoulder 2 is compressed and binds the out-turned portion of the shell body between its upper and lower sections, so that the shell body is held firmly within the cap.

With this construction, it is apparent that because of the dove-tailed or interlocking relation between the wad and shell body, the force of the explosion, when the shell is discharged, will tend to hold the shell body more firmly in place instead of tending to separate these parts as in the ordinary shell construction.

Having thus described our invention, what we claim as new therein and desire to secure by Letters-Patent is:—

1. A cartridge shell comprising a shell body, a wad located within the shell body, and a metal cap containing the portion of the shell body within which the wad is located, said shell body having a lip pressed over the edge of said wad within the charge chamber, substantially as and for the purpose set forth.

2. A cartridge shell comprising a metal cup, a shell body having one end located within the cup, and having a reinforcing shoulder at the cup end, and a wad located within the portion of the shell body which is contained within said cup, said reinforced portion of the shell body being compressed, forming lips that extend over the edges of the wad at both its inner and outer faces, substantially as set forth.

3. A cartridge shell comprising a metal

cup having an edge flange, a shell body having one end turned inwardly upon itself, a wad located within the doubled portion of the shell body, said shell body being compressed into the cup flange and against the upper and lower faces of the wad, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

LOUIE A. SHERMAN.
HARRY E. SHERMAN.

Witnesses:
MYRTLE M. JACKSON,
E. A. CAHILL.