

No. 762,269.

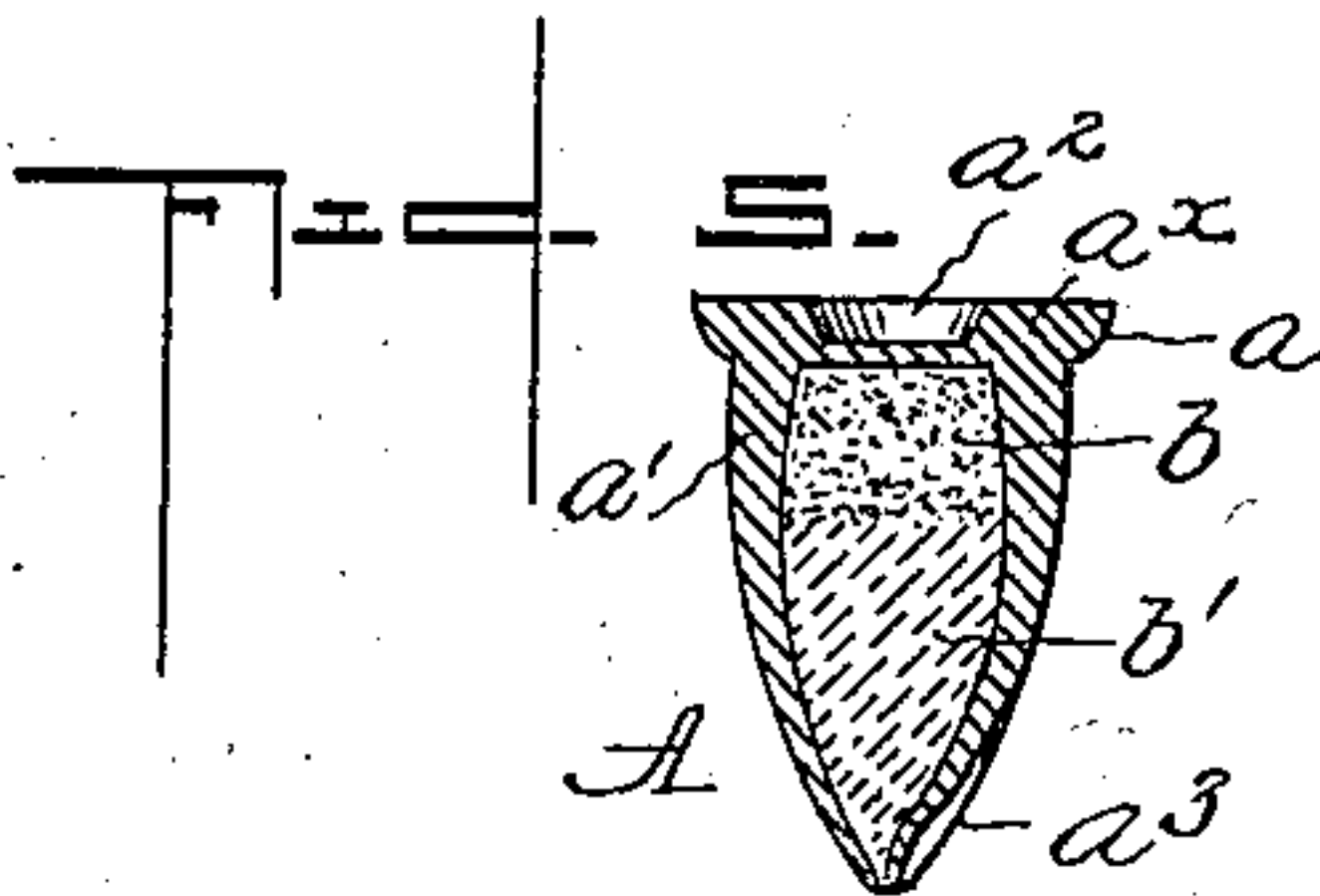
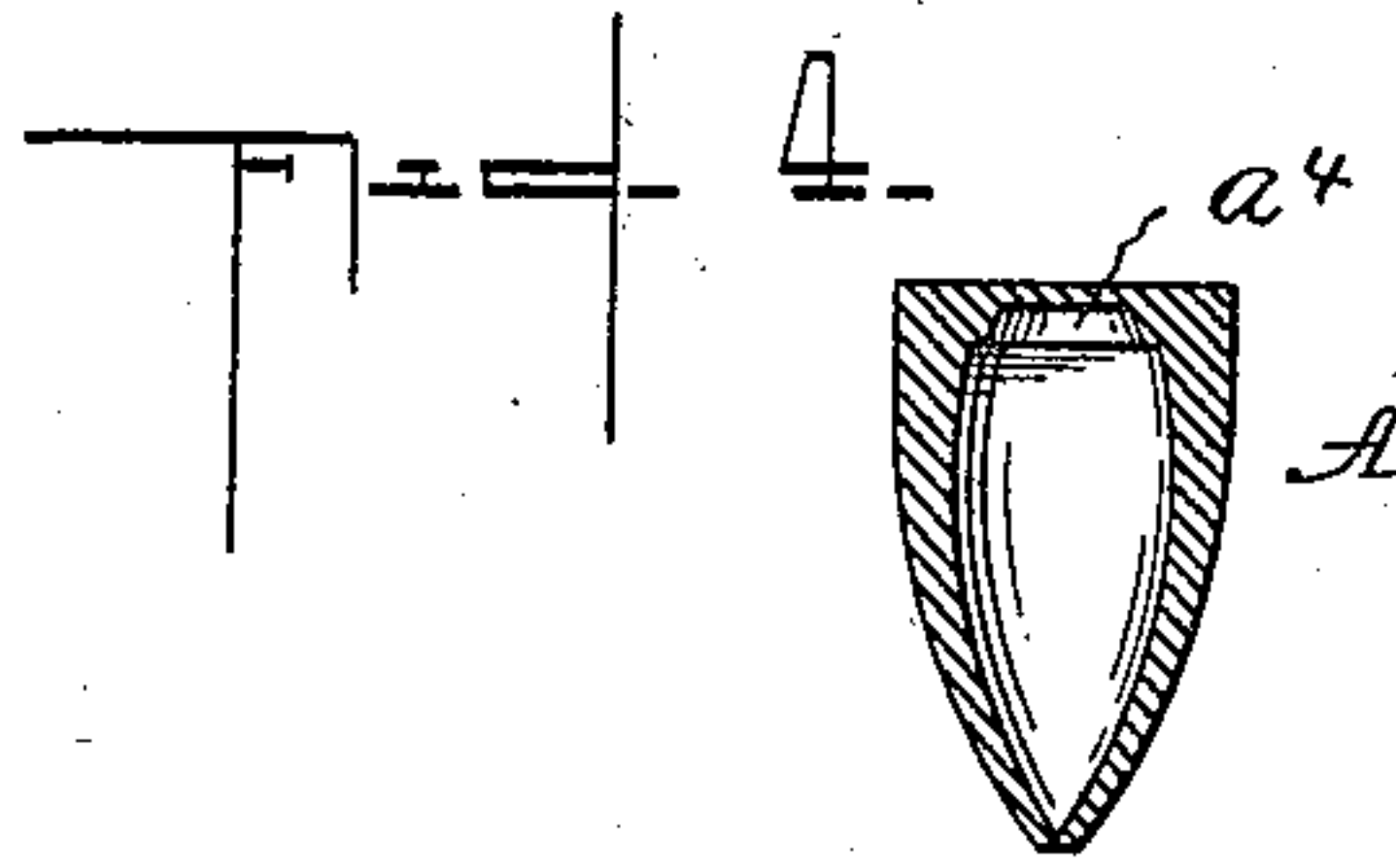
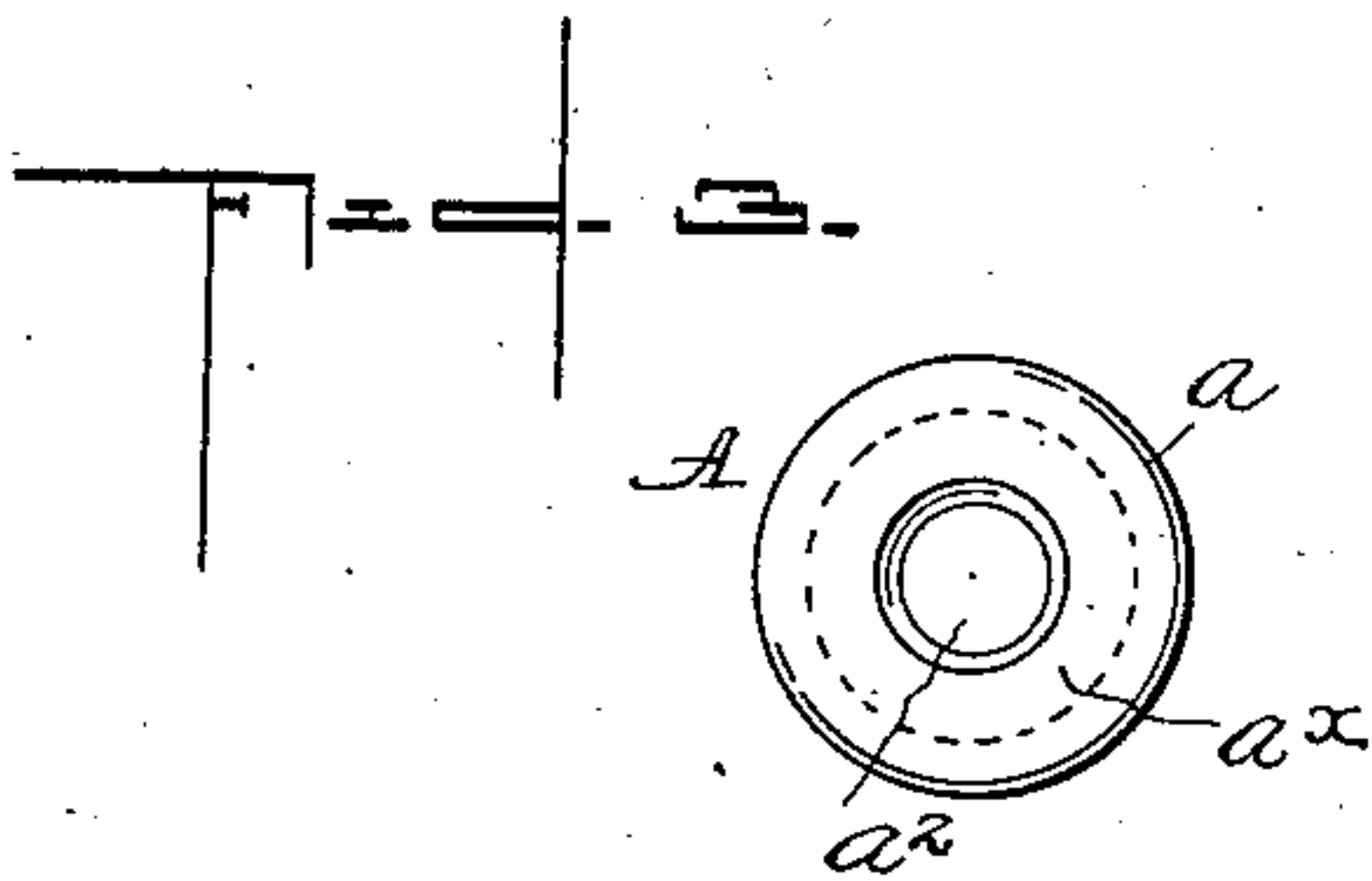
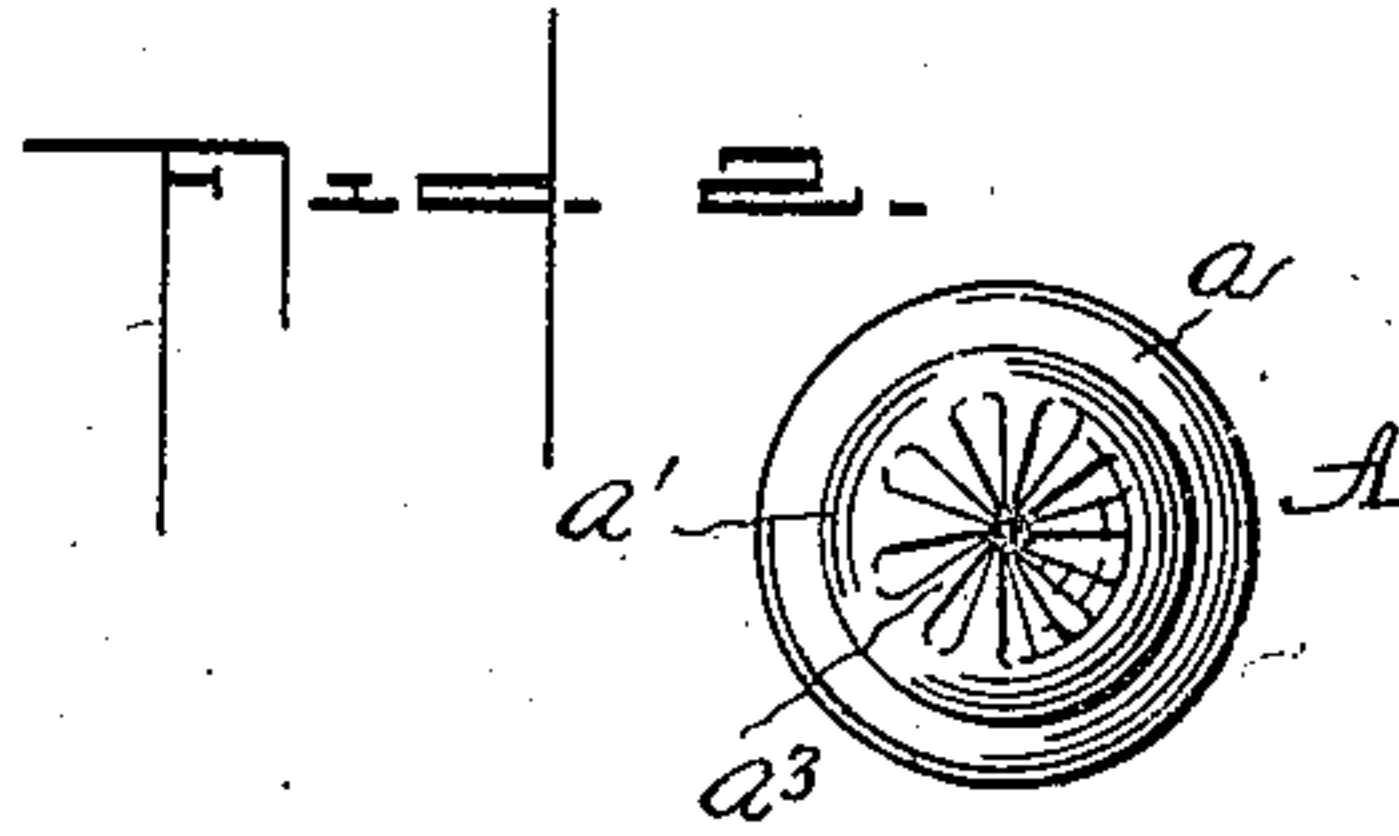
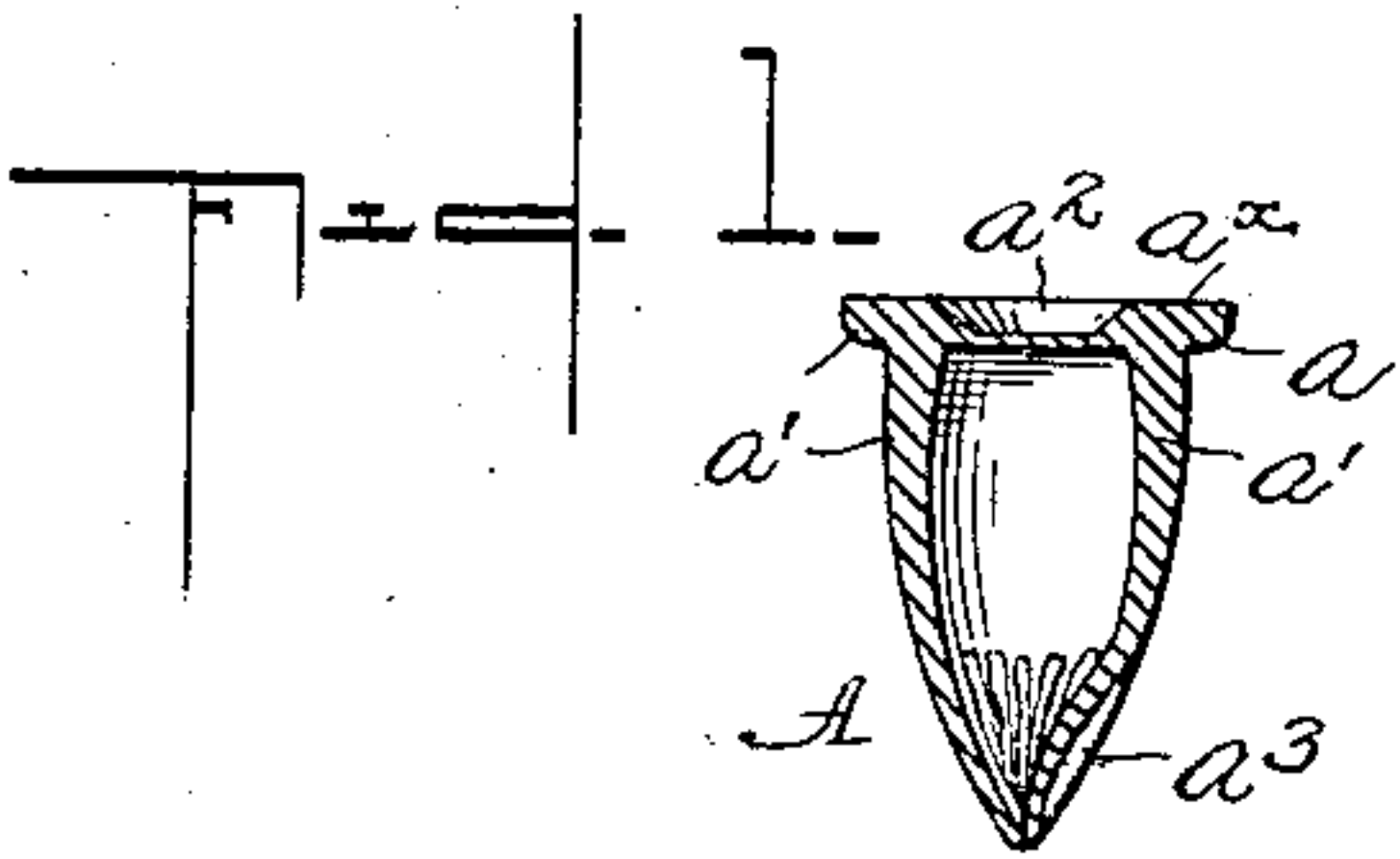
PATENTED JUNE 14, 1904.

C. A. BAILEY.

PRIMER.

APPLICATION FILED NOV. 20, 1903.

NO MODEL.



Charles A. Bailey,
Inventor

Witnesses:-

R. J. Beall
J. E. Thomas

by John B. Thomas
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES A. BAILEY, OF CROMWELL, CONNECTICUT.

PRIMER.

SPECIFICATION forming part of Letters Patent No. 762,269, dated June 14, 1904.

Application filed November 20, 1903. Serial No. 181,983. (No model.)

To all whom it may concern:

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

The primary object of my invention is to provide a primer or fulminate cap for cartridges which will dispense entirely with the employment of an anvil and will permit the use of a very sensitive priming material.

The invention contemplates the provision of a primer comprising a metal cap the closed end of which is comparatively thick to thoroughly protect the sensitive priming material or fulminate which is placed therein and the opposite or body portion gradually reduced in thickness to its outer end and the latter contracted or closed to offer the required resistance to the impact of the firing-pin on the contents of the cap, all as hereinafter fully described and more specifically set forth in the appended claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a sectional view, somewhat enlarged, illustrating the preferred form of construction of primer. Fig. 2 is a plan view looking at the outer end of the primer. Fig. 3 is a similar view looking at the opposite end or head of the primer. Fig. 4 is a sectional view of a modification of the invention. Fig. 5 is a sectional view showing the application of the sensitive priming material and cement.

Similar letters of reference indicate similar parts in all the figures of the drawings.

Referring to said drawings, the letter A designates the metal cap, which, as illustrated in Figs. 1, 2, 3, and 5, is provided with the usual peripheral flange a at the closed end thereof; but it is obvious such flange may be dispensed with, as illustrated in the form shown in Fig. 4.

In carrying out my invention the closed end of the cap A—that is, the head a^x and adjacent sides a' —is comparatively thick, and the sides beyond said thickened portion are gradually reduced in thickness to the outer end of the cap, so that after the priming material

and filling are applied said reduced portion of the sides or outer end of the cap may be closed either by corrugations, as a^3 , or drawn together to a point in the shape of a cone, as in Fig. 4.

The head a^x of the cap is countersunk, as at a^2 , to form a thin wall against which the firing-pin will strike, and this thin wall in the present instance is provided by making the countersink in the outer side, as in Figs. 1, 3, and 5, or in the inner side, as in Fig. 4.

In completing the primer a certain amount of very sensitive priming material or fulminate-paste, as b , is placed in the cap, and after the same is dry a varnish or cement, as b' , is introduced to cover the same. The end of the cap is then closed in the manner hereinbefore described.

By providing the closed end or head of the cap with the thick walls the danger of exploding the primer in forcing the same into the cartridge is removed, inasmuch as the thick portion of the side walls of the cap will be the part that impinges against the sides of the opening in the cartridge during the operation, and by countersinking the end wall or head in the outer side, as in Figs. 1, 3, and 5, the thin portion against which the firing-pin is to strike is protected.

In use the primer will readily explode when struck by the firing-pin, inasmuch as the closed outer end will resist the impact sufficiently to explode the sensitive fulminate material, and the latter when exploded will readily burst open said closed end, owing to the metal being thin at this part of the cap. The primer therefore dispenses with the use of the ordinary anvil, and consequently produces a cheaper construction.

As heretofore stated, the outer end may be closed in any suitable manner; but, as illustrated in the preferred construction, Figs. 1, 2, 3, and 5, the corrugations will offer a better resistance to the impact of the firing-pin and will also better protect the contents of the cap, for in some instances it is purposed to partly fill the cap with a sensitive priming material and then cover the same with a less sensitive fulminate.

By closing the cap in the manner herein shown and described—that is, by flaring the sides inward upon the varnish or cement—the said closed end will more readily open out at the flash of the priming material and allow the flame to quickly ignite the powder charge of the cartridge.

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

1. A primer, comprising a cap the head and adjoining side walls of which are thickened, a sensitive priming material placed in the cap and protected by the thickened walls, a less sensitive material placed over the priming material, and the outer end of the cap closed on the latter, substantially as shown and for the purpose set forth.

2. As an improved article of manufacture, a center-fire primer comprising a cap having a solid end wall with a thin central portion against which the firing-pin strikes, a sensitive fulminate placed in the cap against said end wall, a hard cement or varnish placed over the fulminate and adapted to resist the impact of the firing-pin to explode the fulminate, and the outer end of the cap closed on the cement or varnish to reinforce the same.

3. A primer, comprising a cap the head and adjoining side walls of which are thickened, a sensitive priming material placed in the cap and protected by the thickened walls, a varnish or cement placed thereover, and the outer end of the cap closed over the latter by corrugations, substantially as shown and described.

4. A primer, comprising a cap the head and adjoining side walls of which are thickened, a sensitive priming material placed in the cap,

and the outer end of the cap closed over the latter.

5. A primer, comprising a cap the head and adjoining side walls of which are thickened and from which the sides are gradually reduced in thickness, a fulminate placed in the cap, and the outer end of the latter closed upon the fulminate.

6. A primer, comprising a cap the head and adjoining side walls of which are thickened, a thin portion formed in the head by a countersink in the outer side thereof, a fulminate placed in the cap, and the outer end of the latter closed over the fulminate.

7. A primer, comprising a cap the head and adjoining side walls of which are thickened, a thin portion formed at the center of the head by a countersink in the outer side of the latter, a sensitive fulminate placed in the cap, and a varnish or cement placed over said sensitive fulminate, the outer end of the cap being closed over the cement.

8. A primer, comprising a cap the head and adjoining side walls of which are thickened, a thin portion formed at the center of the head and against which the firing-pin strikes a sensitive fulminate placed in the cap and protected by the aforesaid thickened walls, a cement placed over the sensitive fulminate, and the outer end of the cap closed by corrugations.

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

CHAS. A. BAILEY.

Witnesses:

ELEANOR BINKS,
ARTHUR BOARDMAN