

(Model.)

E. BUTLER.
PERCUSSION SHELL.

No. 340,935.

Patented Apr. 27, 1886.

Fig. 1.

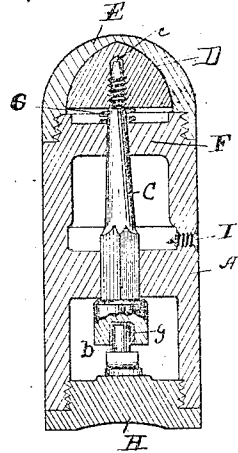


Fig. 2.



Fig. 9.



Fig. 8.



Fig. 6.

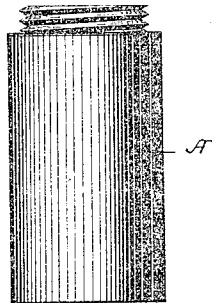


Fig. 4.

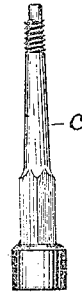


Fig. 7.

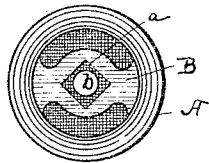


Fig. 5.

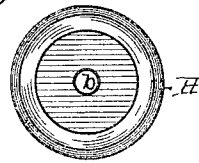
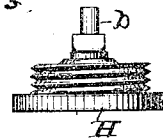


Fig. 3.



Attest;

William S. Brown }
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Inventor,

Elmore Butler

UNITED STATES PATENT OFFICE.

ELMORE BUTLER, OF COLLINSVILLE, ILLINOIS, ASSIGNOR OF ONE HALF TO
WILLIAM L. BROWN, OF SAME PLACE.

PERCUSSION-SHELL.

SPECIFICATION forming part of Letters Patent No. 340,935, dated April 27, 1885.

Application filed December 30, 1883. Serial No. 187,175. (Model.)

To all whom it may concern:

Be it known that I, ELMORE BUTLER, of Collinsville, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Percussion Shells; and I do hereby 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.

My invention relates to an improvement in percussion-shells, the object of the same being to provide a shell that will explode when the point thereof comes in contact with a resisting body; and it consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in longitudinal section of the shell. Fig. 2 is a view in side elevation of the shell point or cap. Fig. 3 is a view of the base and percussion-cap. Fig. 4 is a view in elevation of the hammer. Fig. 5 is a plan view of the base. Fig. 6 is a view in side elevation of the body of the shell. Fig. 7 is a view of the body of the shell, showing the bridge B. Fig. 8 is a view of the spring for holding the hammer away from the percussion-cap, and Fig. 9 is a view of the hammer-head.

A represents the barrel or body of the shell, having a centrally-located bridge or rib, B, extending from one side to the other. This bridge is provided with an angular opening, a, for the passage of the hammer C. This hammer is provided at its enlarged rear end with a cavity adapted to embrace a portion of the nipple, and at its front end with screw-threads adapted to enter a screw-threaded socket, c, formed in rear face of the head D. The front end of this head D is either rounded or conical, and is adapted to fit within a correspondingly-shaped cavity, d, formed in the point E. The head D is somewhat shorter than the length of the cavity in the point E, and consequently is permitted to move longitudinally a short distance, as will be hereinafter explained. The front end of the barrel or body A is screw-threaded for the attachment of the point B, and is either closed or provided with a bridge, F. The closed front

end of the shell or the bridge, as the case may be, is provided with a central opening for the passage of the hammer C. This closed end or bridge assists in guiding the hammer in its movements, and forms a seat for the coiled spring G, which latter encircles the hammer C and bears against the head D.

The hammer consists, essentially, of a rod having an enlarged rear end and a screw-threaded front end, as described, and at a point between said ends with the angular portion d, which latter rests within the angular opening in the bridge B.

From the foregoing it will be seen that the head D is held in contact with the inner concave surface of the point E, and as it is inclosed completely by the shell cannot be moved except by flattening or rupturing the point E.

H is the base of the shell, screwed into the rear end of the body or barrel A. This base is provided on its inner face with a centrally-located nipple, which latter rests in a line with the hammer, and on which the percussion-cap g is placed. This cap (when the parts are adjusted for firing) rests on the nipple h inside of the cavity formed in the enlarged end of the hammer; but the hammer is prevented from bearing on the cap by the spring G, which, as before stated, tends to draw the hammer away from the cap. The body or barrel of the shell is loaded through an opening, which is afterward closed by a screw-cap, I.

When a shell constructed as above described is fired from a gun, there is no liability of the shell exploding until the point thereof is flattened by coming in contact with a resisting body. The flattening or periphery of the point E necessarily moves the hammer rearwardly and explodes the cap g, and the latter ignites the explosive material contained within the shell.

It is evident that slight changes in the construction and arrangement of the several parts might be resorted to without departing from the spirit of my invention; hence I would have it understood that I do not confine myself to the exact construction shown and described, but consider myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. The combination, with a hollow body, a base, a nipple secured to said base, and a point covering the front end of said body, of a longitudinally-movable hammer resting in contact with the inner face of the point, substantially as set forth.
2. The combination, with a hollow body, a base secured to the rear end thereof and provided with a nipple, and a point secured to the front end of said body, of a hammer located within the body and a spring for holding one end of the hammer in contact with the inner face of the point, substantially as set forth.

3. The combination, with a hollow body having one or more bridges, a base having a nipple, and a point having a concave inner face, of a longitudinally-movable hammer and a head secured to the front end of said hammer, the said head resting in contact with the inner surface of the point, substantially as set forth.

4. The combination, with the body, base, and point, of the hammer, the head secured to the front end of said hammer, and a spring for holding the head in contact with the inner surface of the point, substantially as set forth.

ELMORE BUTLER.

Witnesses:

WILLIAM L. BROWN,

JOHN D. LEEDS.