(No Model.)

J. M. BOWYER.

PERCUSSION FUSE FOR SHELLS.

No. 348,314. Patented Aug. 31, 1886.

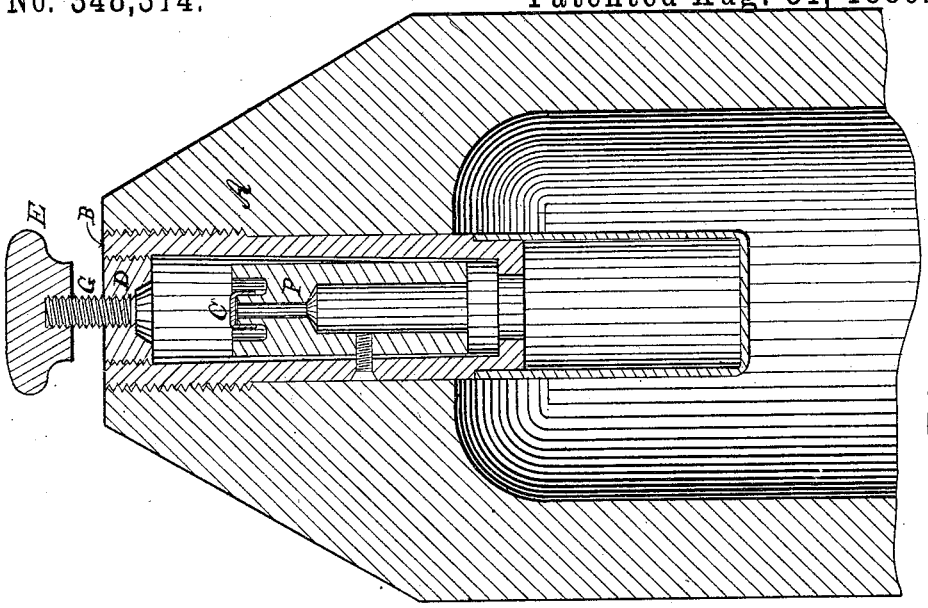

Fig. 2.

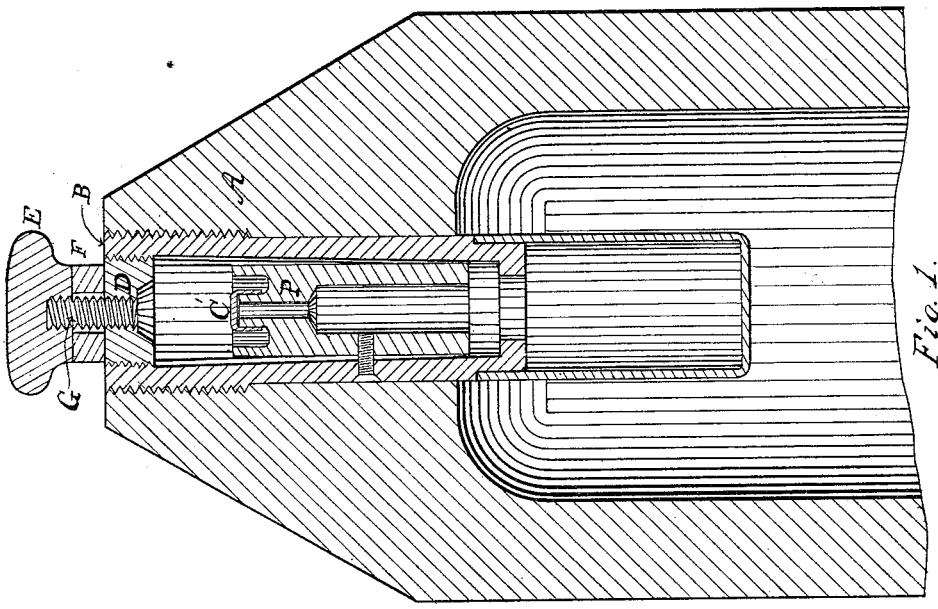

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN M. BOWYER, OF ERIE, PENNSYLVANIA.

PERCUSSION-FUSE FOR SHELLS.

SPECIFICATION forming part of Letters Patent No. 348,314, dated August 31, 1886.

Application filed June 3, 1886. Serial No. 204,156. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. BOWYER, lieutenant United States Navy, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Percussion-Fuses for Rifle-Projectiles; 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.

This invention relates to fuses for rifle-projectiles; and it consists in certain improvements therein, which will be hereinafter fully described, and pointed out in the claims.

My invention is illustrated in the accompanying drawings as follows: Figure 1 is a longitudinal section of the forward end of a projectile and fuse of my construction in position for transportation and storage. Fig. 2 is a like view showing the fuse prepared for firing.

My invention relates wholly to the means for exploding the cap, the general construction and operation of the fuse being as common.

A represents the body of the projectile; B, the stock of the fuse; P, the plunger, and C the percussion-cap, all of which are of the ordinary construction and operation.

D is the cap of the fuse, which in ordinary fuses is made reversible, the countersunk or concave side being in when the projectile is in storage, and out when the projectile is to be fired. In my device this cap D is never reversed, being always kept, as shown, with the countersunk side in.

The means I provide for firing the fuse is the hammer G, which is a steel screw-threaded bolt, which screws into the brass cap D, but does not projeet inwardly beyond the bottom of the countersink or cavity on the inside of the cap. To bring this hammer into action it has to be driven into the fuse by the impact of the shell against the object fired at. When this occurs, the screw-thread in the brass cap D is stripped, and the hammer is thrust in beyond the inner wall of the cap D, and the percussion-cap C on the plunger will impinge against it as the plunger is thrust forward by the checking of the speed of the projectile.

E is a head, which screws onto the outer end of the hammer, and serves to give the hammer a broad bearing on the object against which the projectile is thrown. This is especially desirable where the projectile is thrown against earth-works.

To prevent accidental discharge of the cap C by dropping the projectile before firing and while in storage, I put on the hammer below the cap E, a washer, F, which entirely prevents the hammer being driven in if the projectile be thrown with ever so great force against its point. This washer is removed before putting the projectile into the gun. The work of removing this washer can be done much more quickly than the removal and reversal of the cap D, in the old construction, and no tool is required to do it, as the cap E will be made so as to be easily unscrewed by the hand. Accidental or premature explosion of the projectile, when provided with my device, is about impossible, as an explosion cannot occur until the hammer is driven into the fuse, and this cannot occur until the point of the projectile comes in contact with an object so dense as to strip the thread in the cap D, into which the hammer is screwed. The passage of the projectile through the crest of a wave will not cause such a stripping of the thread named.

What I claim as new is—

1. In a projectile-fuse, the combination, with the plunger P and cap D, of a hammer-bar projecting beyond the cap and leaving a space between its head and said cap for the reception of a safety-washer, and adapted, substantially as set forth, to be driven into the fuse-stock by the impact of the projectile.

2. In a projectile-fuse, the combination, with the plunger P and cap D, of the hammer G, washer F, and head E, arranged and adapted to be operated substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN M. BOWYER.

Witnesses:
ROBT. H. PORTER,
C. SMALLEY.