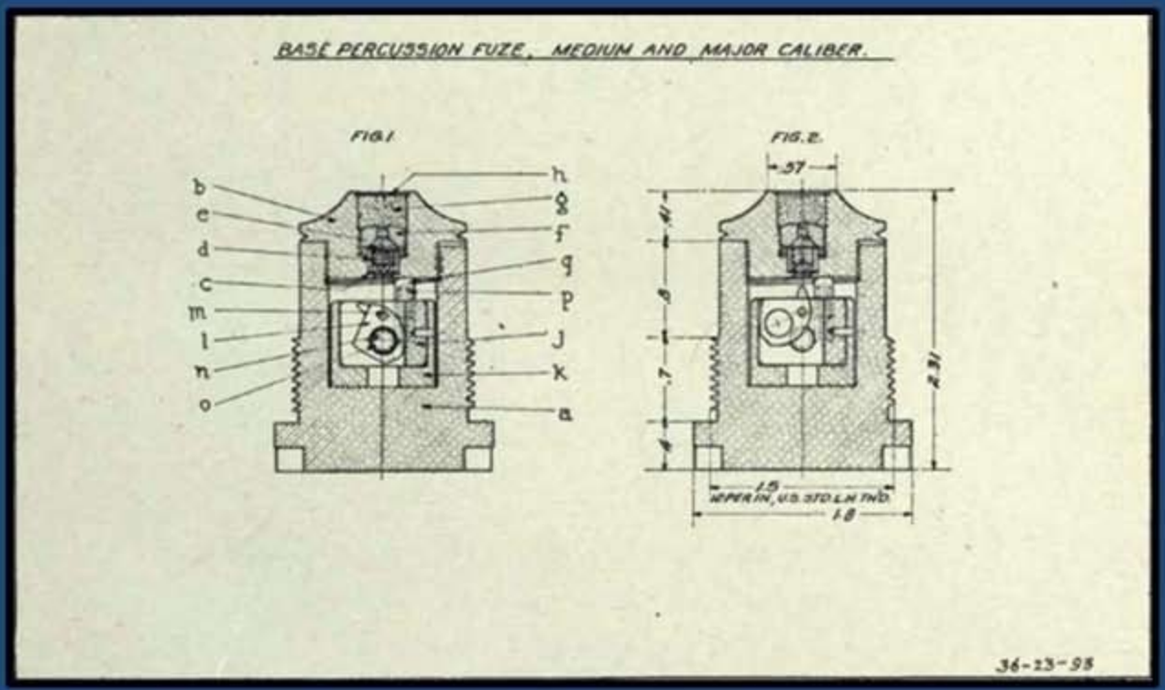

3.2" Shell
w/ Base Percussion Fuze
(circa 1890s – 1910s)

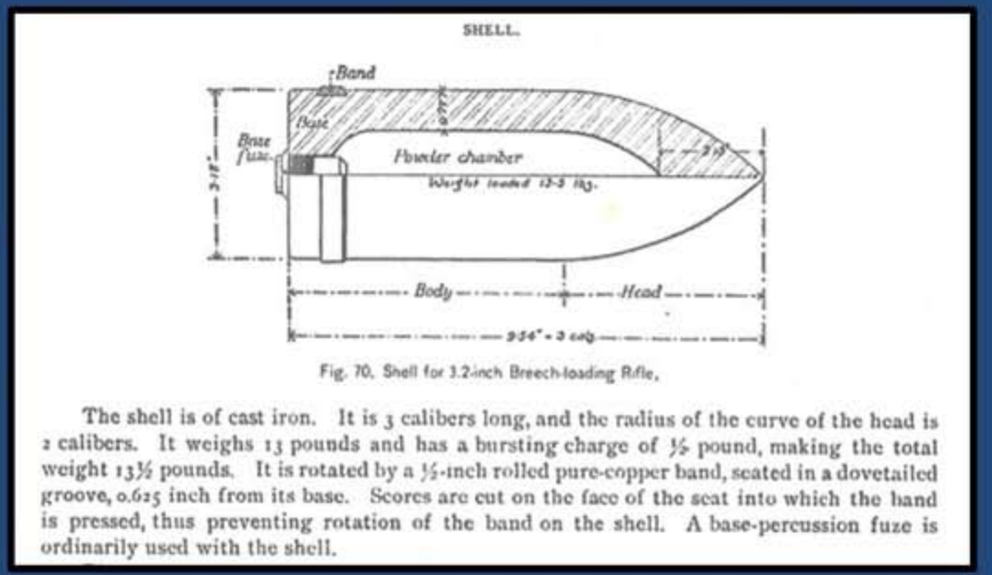

Fig. 70. Shell for 3.2-inch Breech-loading Rifle.

The shell is of cast iron. It is 3 calibers long, and the radius of the curve of the head is 2 calibers. It weighs 13 pounds and has a bursting charge of ½ pound, making the total weight 13½ pounds. It is rotated by a ½-inch rolled pure-copper band, seated in a dovetailed groove, 0.625 inch from its base. Scores are cut on the face of the seat into which the band is pressed, thus preventing rotation of the band on the shell. A base-percussion fuze is ordinarily used with the shell.

BASE PERCUSSION FUZE, MEDIUM AND MAJOR CALIBER.

[Plate V.]

The fuze consists of the following parts assembled as shown in the drawing:

a Body, brass.
b Closing cap screw, brass.
c Primer shield, brass.
d Primer body, brass.
e Primer disk, paper.
f Primer closing screw, brass.
g Reinforcing charge, loose shrapnel powder.
h End closing disk, brass.
j Plunger brass.
k Plunger housing, brass.
l Firing pin, brass.
m Firing-pin fulcrum, steel.
n Safety pin, brass.
o Safety-pin spring, brass.
p Restraining spring, brass.
q Restraining-spring housing, brass.

The plunger *j* is provided with a slot to receive the firing pin *l*, which is mounted on the fulcrum *m* and kept in the unarmed position, figure 1, by two safety pins *n*, in recesses on opposite sides of the plunger and held in the hole in the firing pin by the tension of the springs *o*. These springs are designed to suit the velocity of rotation of the particular projectile in which the fuze is used. The centrifugal force due to the rotation of the projectile forces the pins outward against the tension of the springs and releases the firing pin, which is rotated by the same centrifugal force into its armed position, figure 2. The entire plunger and housing is held to the rear by two springs *p*, pressing on the closing screw through the housing *q*.

Photo Courtesy: Ward R. Stern, email: wrstern@tecoptic.com