No. 871,396. PATENTED NOV. 19, 1907.

G. W. GENTIEU.

PROJECTILE.

APPLICATION FILED APR. 12, 1906.

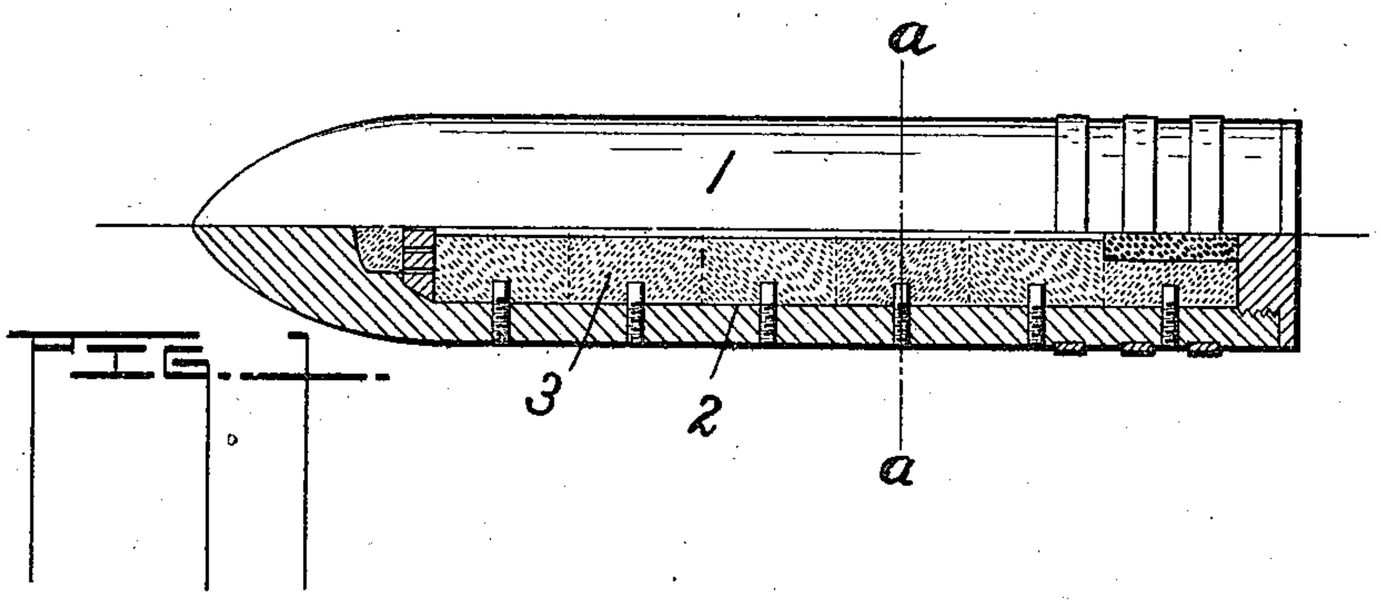


FIG. 3.

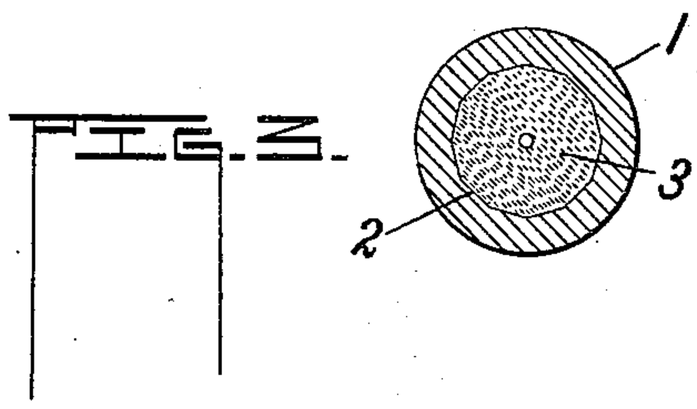
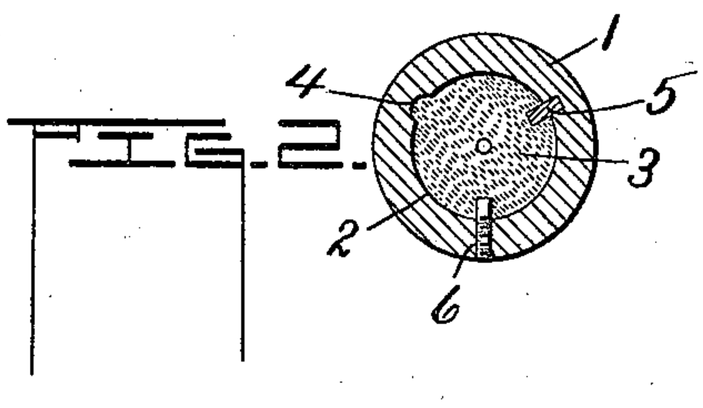


FIG. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE W. GENTIEU, OF PEORIA, ILLINOIS.

PROJECTILE.

No. 871,396. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed April 12, 1906. Serial No. 311,219.

To all whom it may concern:

Be it known that I, GEORGE W. GENTIEU, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Projectiles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference more particularly to explosive projectiles; and the object which I have in view is to firmly fix or fasten the mass of explosive in the projectile so that rotation of the projectile will be immediately imparted to the mass of explosive contained therein.

It is very important in explosive projectiles that are hurled or thrown with a revolving motion that the inclosed explosive be so held therein that the rotation which is imparted to the projectile is immediately imparted to the mass of explosive contained therein. This is necessary from the fact that unless the motion of the projectile is immediately imparted to the explosive, the friction of the projectile revolving about the explosive is often great enough to create sufficient heat to prematurely explode the charge. In my present invention, this is accomplished by providing the projectile with some means which suitably engages the mass of explosive and locks it in the chamber of the projectile.

In the accompanying drawings, to which reference is had in the following specification and in which similar reference characters indicate similar parts in the several views, Figure 1 shows a loaded projectile constructed in accordance with my invention, the lower half thereof being in vertical longitudinal section; Fig. 2 a vertical transverse sectional view on the line *a*—*a* of Fig. 1; Fig. 3 a vertical transverse sectional view of a projectile contemplated by my invention.

The projectile 1 herein shown is adapted to be loaded with wet explosive in accordance with the improvements in projectile loading set out in an application filed by me on April 12, 1906 which bears Serial No. 301,622 and has a chamber 2 extending lengthwise thereof, in which the blocks 3 of wet explosive are placed and compressed to the required density as set out in said application.

For the purpose of locking the mass of explosive in the projectile against separate motion, a groove 4 may be provided in the wall of the explosive chamber adapted to receive a portion of the mass of explosive therein as it is pressed into the projectile, or the explosive chamber may be constructed in the prismatic form, as shown in Fig. 3 or in some other shape which, when the explosive is compressed therein, will effectually resist movement of the mass of explosive. This object may also be accomplished by providing locking means which engage the wall of the projectile and the mass of explosive, such as the key 5, which is seated in the wall of the explosive chamber, extends from end to end thereof, and engages a portion of the mass of explosive, or pins 6 may be inserted through the wall of the projectile into the mass of explosive at intervals throughout the length of the explosive chamber, as shown. In locking the explosive in the projectile by the latter means, it is necessary to drill holes in the mass of explosive to receive the ends of the pins, and the outer ends of the pins must be filed smooth with the surface of the projectile. As the explosive is compressed in the projectile in a wet state and still retains considerable moisture when pressed in place therein, the holes for the plugs may be safely drilled in nitro-cellulose or other explosive which detonates from concussion.

It is thought that any one of the means herein described is sufficient in itself to lock the explosive in the projectile against separate motion. However, if desired, they may be combined without departing from the spirit of my invention.

What I claim is:

1. In an explosive projectile, the combination of a shell provided with a substantially cylindrical chamber therein, a mass of explosive in said chamber and plugs along the lateral walls of the chamber projecting into the mass of explosive for the purpose specified.

2. In an explosive projectile, the combination of a shell provided with a substantially cylindrical chamber therein, a mass of explosive in said chamber and a plurality of threaded plugs extending through the wall of

the magazine chamber and projecting into the mass of explosive for the purpose specified.

3. In an explosive projectile, the combination of a shell provided with a substantially cylindrical chamber therein, a plurality of solid, undivided substantially cylindrical blocks of explosive compressed in said chamber, and a plurality of plugs having a threaded connection with the wall of the chamber and projecting into the blocks of explosive for the purpose specified.

In testimony whereof I have affixed my signature, in presence of two witnesses.

GEORGE W. GENTIEU.

Witnesses:

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E. M. GILES.