No. 620,387. Patented Feb. 28, 1899.

E. G. WANG.

PROJECTILE.

(Application filed June 25, 1898.)

(No Model.)

Fig. 1.

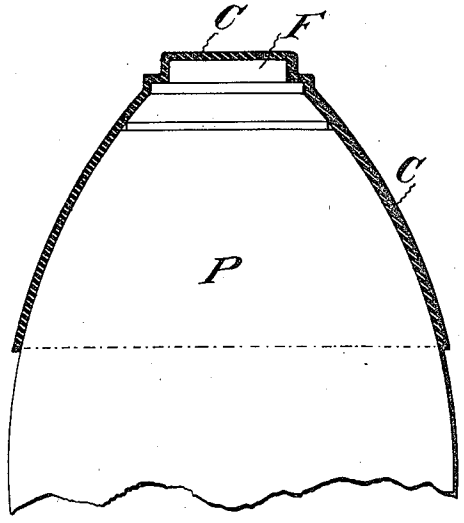
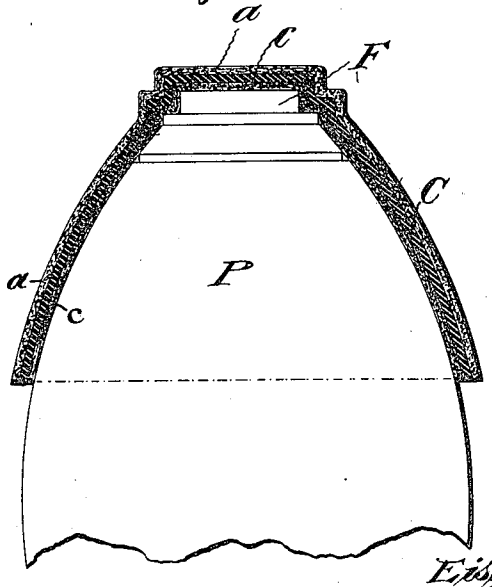


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

EISTEIN GABRIEL WANG, OF CHRISTIANIA, NORWAY.

PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 620,387, dated February 28, 1899.

Application filed June 25, 1898. Serial No. 684,525. (No model.)

To all whom it may concern:

Be it known that I, EISTEIN GABRIEL WANG, a citizen of Norway, residing at Christiania, Norway, have invented certain new and useful Improvements in and Relating to Projectiles; and I do hereby declare that the following is a full, clear, and exact description of the same, such as will enable others skilled in the art to make and use my invention.

This invention has relation to explosive projectiles, and more particularly to shrapnel.

It is well known that the time and combination fuses of explosive projectiles, more particularly the shrapnel-fuses, when exposed to dampness, as is frequently the case in magazines both on land and aboard ships, are seriously affected in so far as their efficiency and reliability are concerned, or, as is frequently the case, their function is entirely destroyed. It is the experience of all those connected with the handling and use of these projectiles that whenever they have been exposed to dampness the fuses, if not rendered entirely useless, are seriously affected, in so far as the time of combustion is concerned, according as more or less moisture has penetrated into the fuse-tubes.

The object of this invention is to provide means whereby these fuses can be thoroughly protected against atmospheric influences in a simple, cheap, and reliable manner and so that the protective agent may in a moment be removed for the purpose of adjusting the fuse to a given time or for any other purpose.

In the accompanying drawings, Figure 1 is a fragmentary elevation of a projectile with the protective cap applied thereto and shown in section. Fig. 2 is a like view showing the cap cemented to the projectile and provided with a waterproof coating.

In carrying out my invention I apply a protective cap C, of rubber, over the fuse F immediately after its insertion into the projectile P in such manner that such cap can be readily removed when the projectile is delivered from the magazine. To this cap C, I give such form as to correspond with the point of the projectile, so as to adapt it to be drawn over such point and over the fuse in such manner as to completely exclude all access of air to said fuse, in that said protective cap is caused to completely cover the fuse and the adjacent parts of the projectile.

In order to more effectually prevent access of moisture to the fuse and also to properly secure the cap to the projectile, I apply a suitable adhesive, preferably rubber cement, to the projectile in the neighborhood of the fuse F, as shown at *c*, Fig. 2, and when the cap C is applied and cemented in place I preferably dip the so-protected portion of the projectile into a solution of asphalt, preferably a solution of asphalt in tar, as shown at *a*, Fig. 2, whereby any pores in the rubber protective cap are effectually closed. It is obvious that this cap can be readily and almost instantaneously removed when the projectile is to be used.

Experiments have shown that the fuse of projectiles protected as described remained unaltered after exposure of the projectile to dampness for a long time, during which unprotected fuses were either very seriously injured or rendered completely useless.

Having thus described my invention, what I claim is—

1. An explosive projectile, its fuse, and a rubber cap applied over the fuse and a portion of the projectile and cemented thereto, for the purpose set forth.

2. An explosive projectile, its fuse, a rubber cap applied over the fuse and a portion of the projectile and cemented thereto, said cap coated with asphalt, for the purpose set forth.

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

EISTEIN GABRIEL WANG.

Witnesses:
ALFRED J. BRYN,
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