J. P. NIKONOW.

NON-RICOCHETING SHELL.

APPLICATION FILED JUNE 17, 1918.

1,298,085. Patented Mar. 25, 1919.

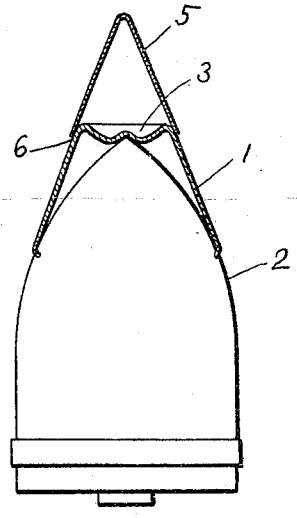

Fig 1

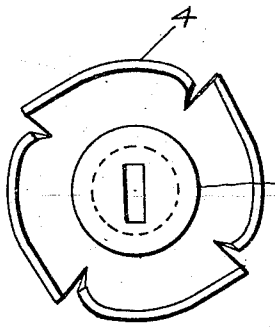

Fig 3

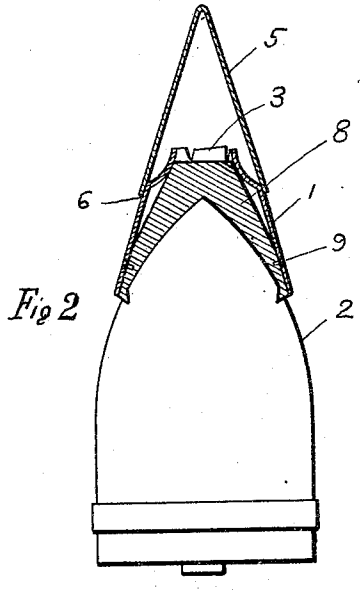

Fig 2

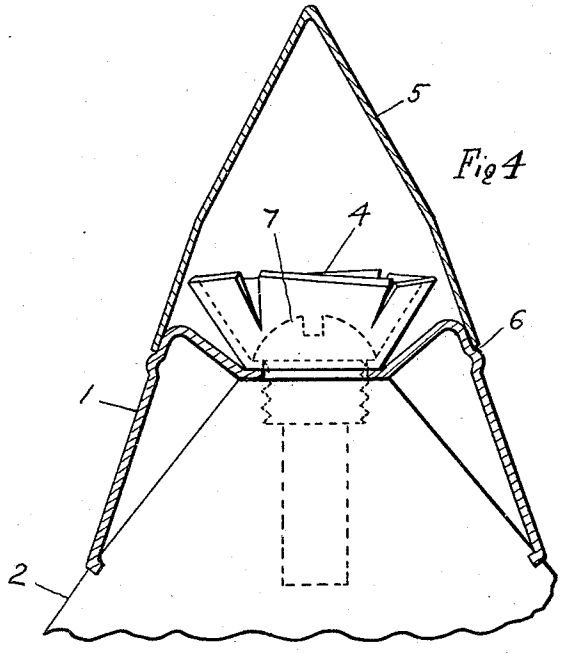

Fig 4

WITNESSES:

Edward J. Lang.

INVENTOR

John P. Nikonow

UNITED STATES PATENT OFFICE.

JOHN P. NIKONOW, OF NEW YORK, N. Y.

NON-RICOCHETING SHELL.

1,298,085. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed June 17, 1918. Serial No. 240,303.

To all whom it may concern:

Be it known that I, JOHN P. NIKONOW, a citizen of Russia, and resident of the city, county, and State of New York, have invented a new and useful Improvement in Non-Ricocheting Shells, of which the following is a specification.

My invention relates to the improvements in non-ricocheting shells or projectiles, which do not rebound, when striking the water at a low angle, and has a particular reference to such projectiles, which being adapted to penetrate into the water at low angles, possess at the same time good ballistic qualities.

It is a well known fact, that ordinary pointed shells, while possessing good ballistic qualities on account of a low wind resistance, cannot penetrate into the water, when firing is done at a short distance and low angles, but rebound or ricochet from the water, thereby becoming ineffective against partly submerged vessels, such as submarines.

I propose to provide such shells with a special cap, which will enable them to penetrate the water at low angles, but over this water penetrating cap I fit a special wind cap, so as to preserve good ballistic qualities of the projectile, this wind cap being attached in such way, that it breaks off, when the shell strikes the water obliquely.

I attain this object with the mechanism, illustrated in the accompanying drawing, in which—

Figure 1 is an elevation of a shell with a sectional view of my water penetrating or non-ricocheting attachment and my wind cap, Fig. 2 is a modification of same, Fig. 3 is an end view of my water penetrating attachment, and Fig. 4 the elevation of same with a sectional view of the other parts of my invention.

My non-ricocheting shell consists of an attachment 1 fitted over an ordinary shell or projectile 2. This attachment consists of a metal cap, provided with a depression 3 in the central portion and somewhat sharpened edges, especially adapted to cut in into the water, thus preventing the rebounding of the shell. This action may be helped further by undercutting the edges of this cap and forming them in a screw type fashion, as is shown on Figs. 2, 3 and 4. An additional piece 4 may be used for this purpose. Such screw form of the cap will especially help the shell to penetrate in the water on account of the rotary motion of the shell.

This cap may be fastened directly to the body of the shell, as per Fig. 1, or it may be fastened over an armor penetrating cap 8 as per Fig. 2. Figs. 3 and 4 show a method, whereby this cap or a combination of caps is fastened by means of a fuse or detonator 7.

Such cap, while effectively preventing the ricocheting of a projectile, would offer too much air resistance, so that it is necessary to attach a special wind cap 5 over my non-ricocheting cap. This wind cap fits over suitably shaped edge 6 of the non-ricocheting cap and may be even soldered in place, fastening being of such nature, however, that the joint will readily break, when the shell hits the water sidewise, thereby exposing the non-ricocheting cap to the action on the water.

This purpose may be accomplished as shown in Fig. 4 by allowing the wind cap 5 to rest on the circular projection, formed near the outer edge of the cap 1. This will enable the joint to withstand the shock of the shooting from the gun, also the shock, when entering the water almost vertically, but this joint will break from a comparatively light blow, directed on the side of the cap.

Important advantages of my invention are, that it will enable the projectiles to penetrate the water at all practical angles of shooting, thereby rendering effective all shells with delayed explosion fuses or depth bombs, at the same time preserving good ballistic qualities of such shells. Also that my invention can be attached to any already existing shell.

I claim as my invention:

1. In a non-ricocheting shell, the combination with a shell, a cap, provided with edges, adapted to penetrate the water, said cap being fastened to said shell, and a wind cap in coöperation with said first cap, said wind cap being adapted to break off from the impact with the water.

2. In a non-ricocheting shell, the combination with a shell, a non-ricocheting cap in coöperation with said shell, said non-ricocheting cap having sharp edges, adapted to penetrate the water, and a wind cap in cooperation with said non-ricocheting cap, said wind cap being adapted to break off from the impact with the water.

3. In a non-ricocheting shell, the combination with a shell, a non-ricocheting cap in coöperation with said shell, said non-ricocheting cap having sharp edges and concave central portion, and a wind cap, in coöperation with said non-ricocheting cap, said wind cap being adapted to break off from the impact with the water.

4. In a non-ricocheting shell, the combination with a shell, sharp edges on the forward portion of said shell, and a wind cap, covering said sharp edges and adapted to break off from the impact with the water.

In testimony whereof, I have hereunto subscribed my name this 31 day of May, 1918.

JOHN P. NIKONOW.

Witness:
EDMUND H. JUDSON.