Sept. 8, 1936. A. FABRIZIO 2,053,772

SALUTE OR TORPEDO

Filed March 3, 1936

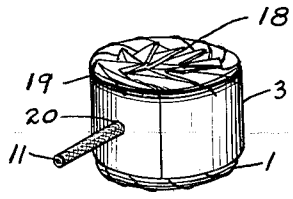


Fig. 1.

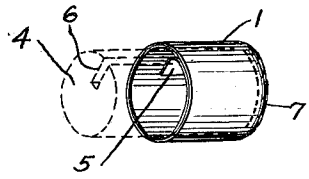


Fig. 2.

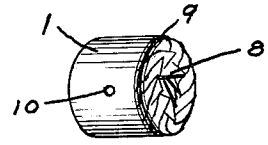


Fig. 3.

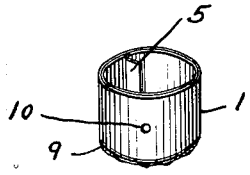


Fig. 4.

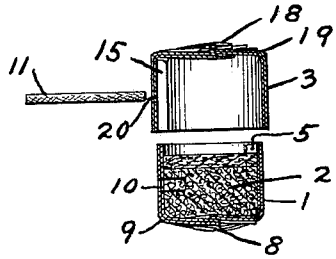


Fig. 5.

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UNITED STATES PATENT OFFICE

2,053,772

SALUTE OR TORPEDO

Achillo Fabrizio, Havre de Grace, Md.

Application March 3, 1936, Serial No. 66,933

4 Claims. (Cl. 102—25)

This invention refers to fireworks and more particularly to that type known as salutes or torpedoes. It has, among its objects to provide a casing for containing the powder or explosive that may be quickly and inexpensively made; that can be handled with greater safety; that will explode more completely and conspicuously; that will have a fuse arrangement that will lock the parts of the casing together and which can have a casing made from flat blanks of predetermined form and size, without further cutting or folding after forming.

Other forms of casings for torpedoes and salutes are rolled from a sheet of paper or other suitable material and an end portion bent in several folds over each other and then glued to keep them in position. The folds are a source of leakage and create fire and explosive risks which users prefer to avoid while keeping them in storage. In this invention, the material is given an initial backward bend before rolling which serves the lock against unrolling. While being rolled on a mandril or more or less solid character, the portion extending beyond the mandril is frictionally engaged so as to cause this portion to twist and close itself. At the end of the movement, the twisted portion is struck hard enough to flatten out in a collapsible spiral against the bottom of the casing. This makes it leakproof, and avoids the necessity of gluing the end. Other features of the construction will be referred to in this description.

In the drawing which illustrates, by way of example, a modification of this invention:—

Figure 1 is a view in perspective of a salute embodying the invention,

Figure 2 is a view of the casing receiver, mounted on a mandril, during the process of rolling and twisting,

Figure 3 is a perspective view of the receiver section, showing the exterior after having its end portion struck and flattened,

Figure 4 is a perspective view of the interior of a casing receiver,

Figure 5 is a sectional view taken through the casing with its sections separated for the purpose of showing positions and construction more clearly.

Similar reference characters refer to similar parts throughout the drawing.

In the construction, 1 represents the receiver of a casing, so called because of its being the portion that receives the powder or explosive contents 2 of the salute or torpedo. The cover 3 is so-called because it covers and encloses the receiver section. The material for the receiver and cover is preferably of treated paper with sufficient plies to make same reasonably stiff. The material is rolled on a mandril 4 with its initial flap 5 folded slightly into a groove 6 in the same. This enables the mandril to roll same and when taken off the tool will cause the portion 5 to project inwardly as indicated. During the rolling, the portion 7 projecting beyond the mandril, is twisted into a quasi-conical or spiral form, through the use of a device provided in connection with the process for the purpose. When the receiver is completely rolled its quasi-conical or spiral end portion is struck and flattened out causing the end to be tightly closed as shown at 8 in Figure 3 and locked, while the bottom 9 is formed to stiffen the receiver. The cover 3 is made similarly and has its respective twisted and struck end portion 18 on its top 19 and its interior flap 15.

The powder 2 is placed in the receiver 1 with its flap 5 inwardly extending. The portion of the material forming the struck base 8 extends out sufficiently to form a cushion, as well as a closure. This feature enables the devices to be packed more safely. The cover is placed over the receiver and its flap 15 is pushed back and forms a frictional resistance to its withdrawal, so that when the parts are together they hold securely.

After the cover and receiver are placed together, they are held by means of a fuse 11 located in the side of the casing and passing through the holes 10 and 20 in the walls 1 and 3 as indicated.

When the fuse is lit and sets off the salute, the explosive action also sets fire to the flap 5 and serves to set fire to the casing and complete its destruction and that of any contents remaining. The twisted and struck ends tear out and open up with the explosion, at the same time providing a more suitable arrangement for burning afterwards. This enables the salute or torpedo to more adequately burn up all the powder and eliminate the danger of same being left unburnt after the explosion. The result is that little remains of the salute after the explosion, to litter around or form an aftermath danger.

While but one form of the invention is shown in the drawing it is not desired to limit this application for patent to that particular form, or in any other way, otherwise than limited by the prior art, as it is appreciated that other forms of construction might be used that would employ

the same principles and come within the scope of the appended claims.

Having thus described the invention what is claimed is:—

1. A salute of the class described comprising in combination a receiver of flexible material cylindrically formed and having an inwardly projecting flap therein, a cover of like flexible material cylindrically formed with its top twisted into a tight and non-leaking closure, and having an interior flap, the cover being adapted to enclose the receiver and its flap to frictionally engage with the walls of the receiver, powder in the receiver and with the flap thereof disposed therein and with the cover closing the powder within the receiver, and fuse means for igniting the powder and material of the cover and receiver.

2. In a device of the class described, a receiver body having a predetermined form with its walls symmetrically arranged and having its bottom portions formed into a twisted flattened arrangement, tightly closing the same against leakage of powder and without requiring a sticking substance to prevent unwrapping, and a flap formed from the walls extending interiorly within the body.

3. In a device of the class described, a receiver body having a predetermined form with its walls symmetrically arranged and having its bottom portions formed into a twisted flattened arrangement, tightly closing the same against leakage of powder and without requiring a sticking substance to prevent unwrapping, and a flap formed from the walls extending interiorly within the body, and a cover having a predetermined form with its walls symmetrically arranged and having its top portions formed into a twisted spiral and flattened arrangement to form a tight closure against leakage of powder without requiring sticking material thereon to prevent unwrapping, said cover being adapted to slide over and close said receiver body, and a flap in the cover to frictionally resist the removal of the cover from the receiver.

4. In a device of the class described, a receiver body having a predetermined form with its walls symmetrically arranged and having its bottom portions formed into a twisted flattened arrangement, tightly closing the same against leakage of powder and without requiring a sticking substance to prevent unwrapping, a flap formed from the walls extending interiorly within the body, a cover having a predetermined form with its walls symmetrically arranged and having its top portions formed into a twisted spiral and flattened arrangement to form a tight closure against leakage of powder without requiring sticking material thereon to prevent unwrapping, said cover being adapted to slide over and close said receiver body, a flap in the cover to frictionally resist the removal of the cover from the receiver, and a fuse member disposed in the walls of the cover and receiver for exploding the contents thereof, and adapted to secure the cover and receiver together against opening or separation.

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