Jan. 13, 1948. L. BARBER 2,434,452

AERIAL BOMB

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Fig. 1.

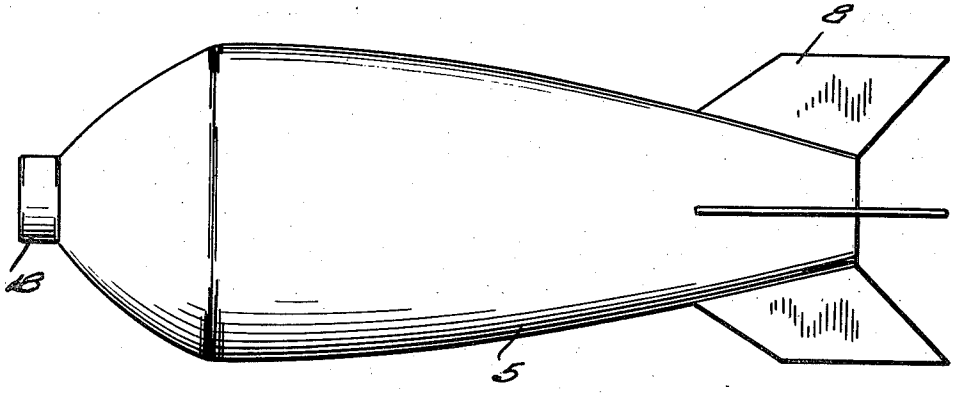


Fig. 2.

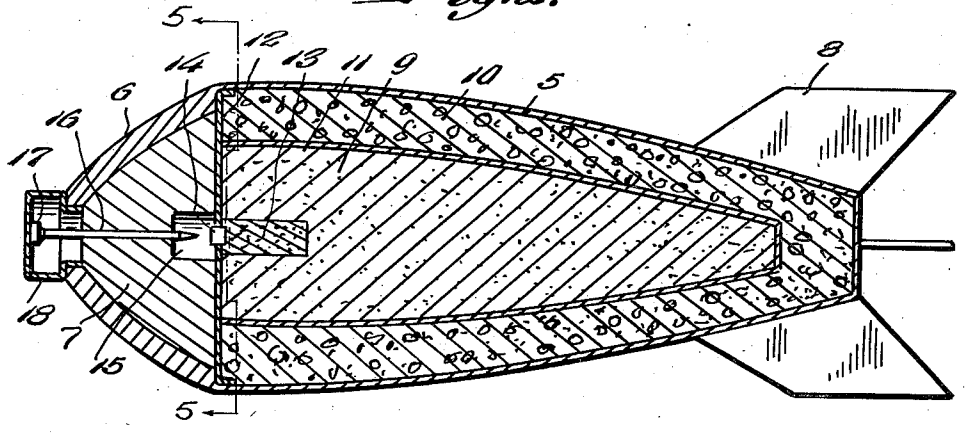
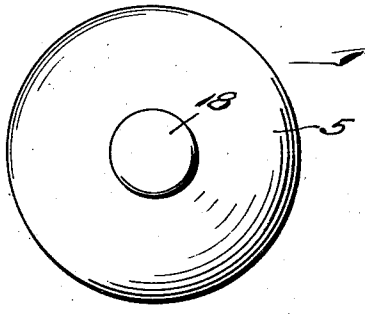


Fig. 3.



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Fig. 4.

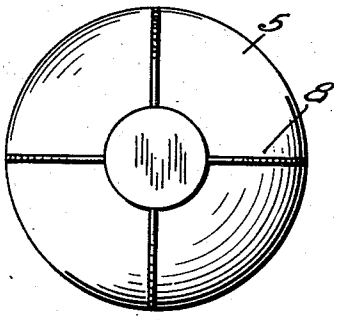


Fig. 5.

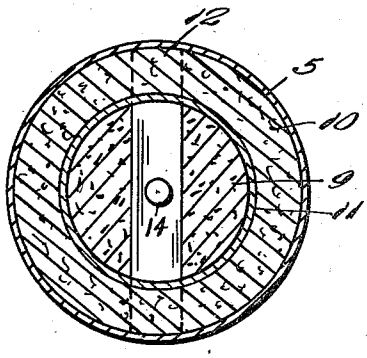


Fig. 6.

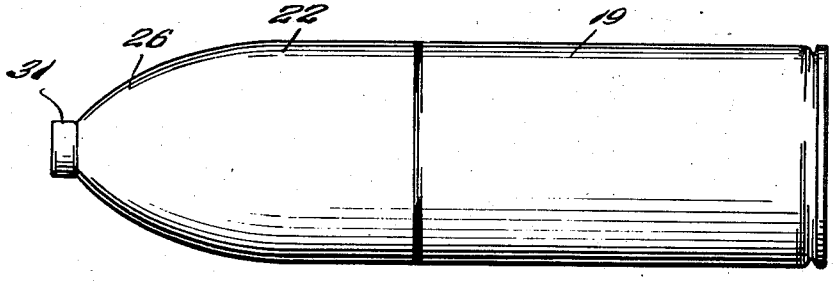
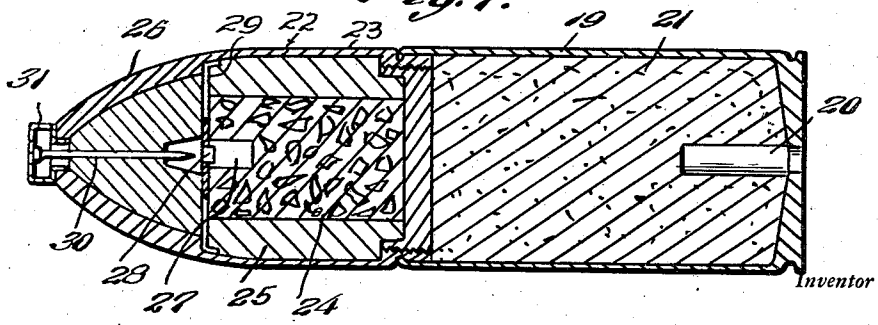


Fig. 7.



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UNITED STATES PATENT OFFICE

2,434,452

AERIAL BOMB

Lonnie Barber, Danville, Va., assignor of one-half to Irene Pritchett, Danville, Va.

Application December 12, 1944, Serial No. 567,795

1 Claim. (Cl. 102—2)

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The present invention relates to a new and useful improvement in aerial bomb and has for its primary object to provide an inexpensive article of this character composed of a shell of thin light weight metal adapted to contain an explosive charge and a quantity of glass fragments adapted to be scattered over the area of the target in the nature of shrapnel.

A still further object is to provide a device of this character of simple and practical construction, which is economical to manufacture, efficient and reliable in performance and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view.

Figure 2 is a longitudinal sectional view.

Figure 3 is a front elevational view.

Figure 4 is a rear elevational view.

Figure 5 is a transverse sectional view taken substantially on a line 5—5 of Figure 2.

Figure 6 is a side elevational view of a shell including a projectile constructed in accordance with the present invention and adapted to be fired from a gun, and

Figure 7 is a longitudinal sectional view thereof.

Referring now to the drawings in detail and first with respect to the form of invention illustrated in Figures 1 to 5 inclusive the numeral 5 designates a shell constructed of relatively thin light weight metal having a blunt nose 6 suitably attached at its front end, the nose being constructed of relatively heavy metal and built for a weight 7 fitted therein to maintain the shell in a perpendicular position with the nose end 6 thereof disposed downwardly when the bomb is released from an airplane.

The rear end of the shell 5 is formed with a plurality of fins 8 of conventional construction.

The shell 5 contains an explosive charge 9 and between the explosive charge and the walls of the shell is placed a quantity of glass fragments 10. If desired the explosive charge may be placed in the shell by means of a frangible bag or container 11, such as heavy paper, light weight metal or the like.

In the front end of the shell 5 and behind the nose 6 and weight 7 is a transverse brace 12 retaining said weight in the nose and supporting

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a cartridge 13 which includes a firing cap 14 positioned in a recess 15 in the rear of the weight 7 of the nose.

A firing pin 16 is slidably mounted in the weight 7 and the nose 6 with its rear end projecting into the recess 15 for striking the firing cap 14 by an inward movement of the firing pin. The front end of the firing pin is formed with a head 17 suitably attached to a cap 18 mounted in the nose and projecting forwardly thereof, the cap being preferably formed of a light weight bendable metal.

In the operation of the device when the bomb is dropped from an airplane or the like the weighted end thereof will cause the bomb to assume a vertical position with the nose 6 downwardly and upon striking the target the cap 18 will become crushed, thus driving the firing pin 16 inwardly to strike the firing cap 14 and fire the cartridge 13 which in turn will fire the explosive charge 9 to explode the bomb and scatter the glass fragments 10 over the surrounding area with destructive force.

In the form of invention illustrated in Figures 6 and 7 a cartridge shell 19 is provided of a type adapted to be discharged from a gun and includes a firing pin 20 for firing the explosive charge 21 in the shell. A projectile 22 closes the front end of the shell 19, the projectile 22 including a shell 23 of light weight metal having the explosive charge 24 therein as well as the glass fragments 25. The front end of the shell 22 is formed with the weighted nose 26 and the projectile 22 is otherwise constructed similar to the bomb illustrated in Figures 1 to 5 inclusive and includes the cartridge 27 and firing cap 28 supported by the transverse brace 29, the cartridge being fired by the firing pin 30 slidably mounted in the nose and having its front end suitably secured to the collapsible cap 31.

When the shell 19 is fired in a gun the projectile 22 is discharged and upon striking the target will explode in the manner as heretofore described.

It is believed that the details of construction and manner of use of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention what I claim is:

An aerial bomb comprising a light weight metal shell having a concave thickened nose of uniform thickness provided with a weight fitted therein for maintaining said shell nose downward in the air, an explosive charge in said shell behind said nose and weight, shrapnel forming

fragments in said shell between said charge and shell and behind said nose and weight, a transverse brace in said shell immediately behind said nose and weight and retaining said weight in said nose, a cartridge supported by said brace and embedded in said charge with a cap extending through said brace, and means carried by said nose for firing said cap upon striking of a target.

LONNIE BARBER.

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