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PROJECTILE

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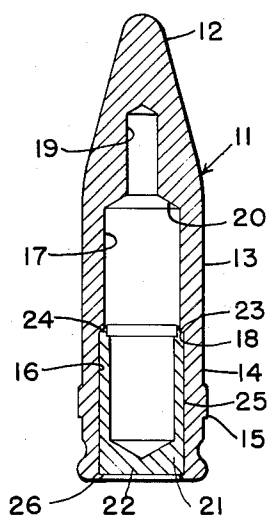


FIG. 1.

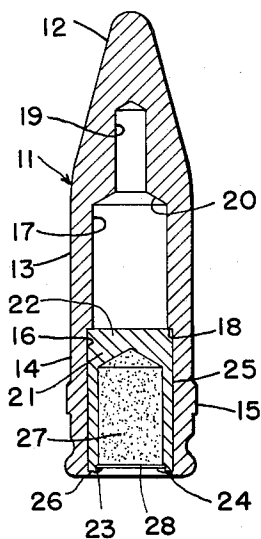


FIG. 2.

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PROJECTILE

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3 Claims. (Cl. 102-87)

(Granted under Title 35, U.S. Code (1952), sec. 266)

The invention described herein may be manufactured and used by or for the Government for governmental purposes without the payment to me of any royalty thereon.

This invention relates to projectiles, and more particularly, to projectiles subject to rapid use such as those employed for purposes of target practice.

The logistic supply requirements of certain ammunition is of a very high order and interchangeability of parts is often sought for economy of time, expense, and other related advantages that result from standardization of parts and like improvements.

Heretofore, separate and distinct projectile constructions have been required for respective tracking or non-tracking items in that either different projectile bodies or different base plugs for the same body have been manufactured, notwithstanding identical projectile external configurations.

It is an object of the invention to provide a projectile construction having component parts interchangeable in assembly for use either as tracer or non-tracking items.

Another object of the invention is to provide a projectile construction which enables the maximum of simplicity in ammunition procurement and/or logistic supply.

In one aspect of the invention the projectile includes a projectile body having a forward closed end nose portion and an open end base portion, the base portion having a central passage that communicates with a smaller central void within the body, and an open ended, reversible base plug secured within the central passage, the plug having a substantially continuous lateral surface extending the full length thereof.

In another aspect of the invention the base plug opening is positioned at the rear of the base portion out of communication with the void and contains tracer mix therein.

These and other objects, features and advantages will become apparent from the following description and accompanying drawings in which:

FIG. 1 is a sectional elevation view of a projectile construction embodying the principles of the invention, and

FIG. 2 is a view similar to FIG. 1 of a projectile used as a tracer item.

In the projectile construction of FIG. 1 the projectile body, shown generally at 11, has a forward closed end, nose portion 12 which is rearwardly and outwardly tapered to smoothly intersect with a preferably cylindrical midportion 13 integrally connected to said nose and a rearmost portion 14, the latter being provided with conventional protuberances 15 or other external configuration as may be desired. Rear portion 14 is provided with a central passage 16, preferably cylindrical, and the mid-

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portion 13 is provided with a central void 17 of somewhat smaller transverse dimensions than passage 16. Passage 16 and void 17 preferably have the same longitudinal central axis as the entire projectile body and communicatively intersect at annular flange 18. Another coaxial void 19 is also provided in the nose, and voids 17, 19 communicatively intersect at tapered flange 20 and are capable of storing propellant, if so desired, although such use would not be necessary for target practice ammunition.

The reversible base plug 21 is preferably in the form of a hollow cylinder having one closed end 22 and an open end provided with a longitudinally extending ring or annulus 23 which is adapted to fit within the rearmost edge of void 17 as shown in FIG. 1 when its adjacent ring-like shoulder 24 is assembled in an abutting relation with flange 18. Plug 21 preferably has a continuous uniform outer surface 25 to be closely, yet smoothly received, either ring (FIG. 1) or closed end (FIG. 2) first, within passage 16. After the base plug has been inserted in its desired position, the rearmost annulus 26 on the projectile body is swaged or otherwise turned inwardly for securing purposes.

When the projectile is desired for tracer or tracking operations, the plug 21 is inserted with its closed end first for abutment with shoulder 18, and has its central opening filled with tracer mix 27 which is retained therein by retaining plate 28. Retaining plate 28 is secured by swaging or otherwise turning the ring or annulus 23 inwardly thereover, as shown in FIG. 2.

Various modifications, alterations or changes may be resorted to without departing from the scope of the invention as defined in the claims.

I claim:

1. A projectile comprising a projectile body having a forward closed end nose portion and an open end base portion, said base portion having a central passage to receive a base plug, the midportion of said body having a central void communicating with but of lesser transverse dimensions than said central passage to define an intersecting flange therebetween, and an open ended, reversible, base plug secured within said central passage, said base plug having a substantially continuous lateral surface extending the full length thereof,

so constructed and arranged that in one position the base plug opening communicates with said void and in its other position is located at the rearmost extent of said base portion out of communication with said void.

2. The projectile in accordance with claim 1 wherein said base plug opening is in said one position with said base plug sealing off said base portion passage.

3. The projectile of claim 1 in which said base plug opening is in its other position and contains tracer mix therein, said base plug defining a tracer housing which closes off said void.

No references cited.

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