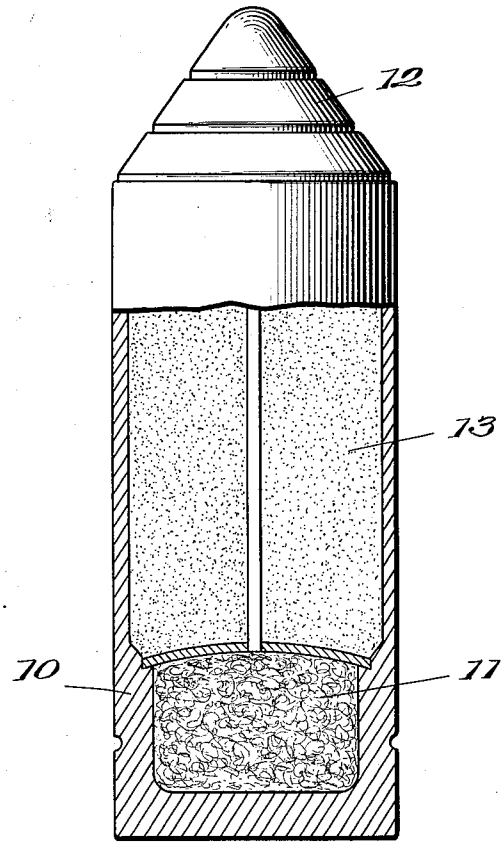
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ANTIAIRCRAFT PROJECTILE

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ANTIAIRCRAFT PROJECTILE

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4 Claims. (Cl. 102—29)

This invention relates to ammunition and particularly to projectiles for attacking and disabling aircraft.

Broadly, the object of the invention is to provide a projectile with which aircraft, in flight, can be disabled without requiring direct hit or impact of particles of the shell of sufficient size to destroy structural portions of the craft.

Another object of the invention is to disable aircraft by rendering their motor units inoperative, either by curtailing the air and/or gas supply of the motor or by effecting sufficient injury to the motor cylinders to render them substantially inoperative.

More specifically, the invention contemplates an anti-aircraft projectile carrying a charge of material which will enter the air and gas supply lines of internal combustion engines, and also the cylinders of the engine and clog said supply lines. Thus, the engine will be disabled either by lack of air for carburetion of the fuel or by lack of fuel, or both. Where the material gains access to the engine cylinders, the walls of the latter will be severely scored and the operating efficiency of engine materially reduced or at least to a point where further flight of the craft will be prevented.

With these and other objects in view, the invention consists in certain details of construction and combinations and arrangements of parts, all as will hereinafter be more fully described and the novel features thereof particularly pointed out in the appended claims.

In the accompanying drawing there is shown, partly in elevation and partly in cross section, a projectile embodying the present improvements, certain portions of the projectile being illustrated more or less diagrammatically.

In the present illustration, the base portion of the projectile 10 is formed with a chamber for a bursting charge 11 and the forward end of the projectile is provided with what is commonly known as a nose fuse 12. The major portion of the interior of the projectile 10 is filled with a material 13 capable of entering and clogging the air and/or fuel supply lines of internal combustion engines generally used as power units for aircraft. This material should also be capable of scoring the walls of the engine cylinders, as this will greatly interfere with efficient operation of the motors of aircraft.

To function efficiently, a material such as emery dust is preferably used in the projectile. The essential factors in selecting the material, however, are that it should be capable of withstanding high temperatures, thus indicating a mineral such as emery; it must be in granular form of such fineness and weight that its entry into and fouling of the supply lines and cylinders of the engine will be augmented by the suction created by the engine cylinders; and it should preferably be of sufficient hardness to severely score the cylinder walls.

The bursting charge and fuse are illustrated more or less diagrammatically and, while the bursting charge is shown loaded in a separate body, this practice need not necessarily be followed. Any suitable material may, of course, be used for the bursting charge. Also, the fuse may be of any desired type, but a time fuse is preferred as this will effect detonation of the projectile without a direct hit or impact. Thus the shell need only be exploded in the vicinity of the aircraft or in the path of the latter, so that particles of the main charge 13 will be drawn into the intake manifold of the motors. Thus, in attacking a craft, a so-called "danger zone" can be formed around the craft through which it cannot pass without fouling its motors and making continued flight impossible. The area of this so-called danger zone and its effectiveness, will, of course, vary with the number of projectiles exploded, the radius and effectiveness naturally increasing with the number of projectiles exploded in a given area.

What I claim is:

1. An anti-aircraft projectile containing a bursting charge, and a charge of finely divided material capable of impairing the operation of internal combustion engines.

2. An anti-aircraft projectile containing a bursting charge and a charge of mineral matter in granular form capable of impairing the operation of internal combustion engines.

3. An anti-aircraft projectile containing material in granular form capable of closing the air passages of the air supply line of internal combustion engines to an extent to render the latter inoperative.

4. An anti-aircraft projectile containing a granular material of such fineness and weight as to be drawn into the intake manifold and cylinders of internal combustion engines by the force of the suction created in the cylinders.

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