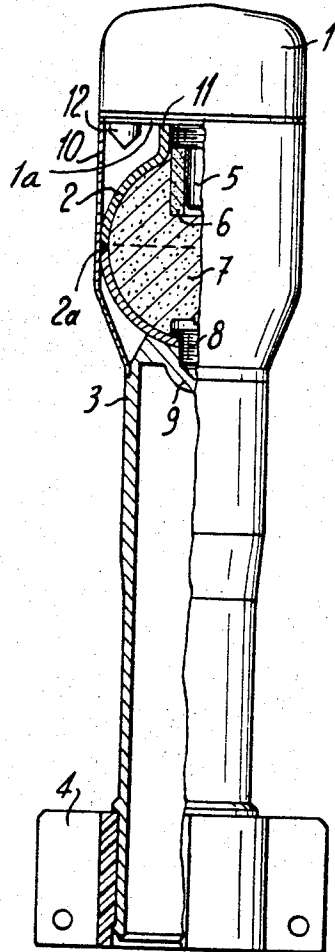


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**RIFLE GRENADE**

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**ABSTRACT OF THE DISCLOSURE**

A rifle grenade having a body of substantially spherical shape, a tubular tail-rod connected at one pole of the sphere, a tubular nipple disposed at the opposite pole of the sphere, a circular plate of the diameter of the body and fixed to the nipple, a ballistic cap enclosing a firing device and disposed above the plate, a cylindrical casing supported against the plate, the cylindrical body and the tail-rod, and a closed peripheral space below the plate and between the casing and the spherical body.

This invention relates to a rifle grenade.

It is an object of the invention to provide a light-weight, compact rifle grenade of simple and economical construction, the efficiency and splinter-producing capabilities of which fulfill the requirements exacted by warfare.

According to the present invention there is provided a rifle grenade, comprising a steel body of substantially spherical shape, a tubular tail-rod connected thereto at one pole of said sphere, a tubular nipple disposed at the opposite pole of said spherical body, a circular plate of the diameter of said body and fixed to said nipple, a ballistic cap enclosing a firing device and disposed above said plate, a cylindrical casing supported against the plate, the spherical body and the tail-rod, and a closed peripheral space below the plate and between said casing and the spherical body.

With the present construction, it is possible to produce, at a relative reduction in missile bulk, an anti-man rifle grenade which is capable of producing a large number of splinters thrown in all directions.

The plate occupying the entire section defined by the calibre can support a firing device or fuse mechanism, which may, for example, be percussion or inertia operated and the diameter of which exceeds the diameter of the nipple through which firing of the explosive is initiated. Thus the primer of this mechanism can, during storage, be in an eccentric position at a sufficient distance from the axis of the grenade.

Furthermore the peripheral space enclosed between the said spherical body and the cylindrical casing may accommodate, if desired, one or more fuse parts.

In one particular embodiment of the invention the tubular tail-rod of the grenade has an end wall integral therewith the upper surface of which is in the form of a spherical socket the concavity of which corresponds to the curvature of the spherical body. Thus there is obtained a stable and resistant seating which is capable of withstanding, at the commencement of thrust, the inertia resulting from the acceleration of the body and fuse of the grenade.

In a preferred embodiment of the invention the spherical body of the grenade is axially fixed to the end wall of the tubular tail-rod by means of a screw passing through the wall of the spherical body.

In order to enable the invention to be more readily understood, reference will now be made to the accompanying drawing, which illustrated diagrammatically and

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by way of example a partial longitudinal section through a rifle grenade according to the invention.

Referring now to the drawing, the grenade has a ballistic cap which encloses a firing device (not shown). The bottom edge of the ballistic cap is supported by the corresponding edge of a plate 1a situated above a spherical steel body 2 comprising two substantially hemispherical shells which are welded together at 2a, the plate 1a having the same diameter as the body 2.

Below the bottom pole of the spherical body there is disposed a tubular tail-rod 3, preferably made of light metal (for example an aluminium alloy), the tail-rod being provided with tail fins 4 near its free end.

The steel body 2 of the grenade encloses a detonator 5 which is embedded in a hollow cylindrical cake of explosive 6 in contact with the principal explosive 7 occupying the remainder of free space inside the body 2. A screw 8 passing through an aperture formed in the bottom pole of the body 2 engages a tapped bore of an end wall 9 closing the top end of the tail-rod 3. This end wall, which is integral with the tail-rod, has a spherical socket-shaped upper surface in which the concave spherical zone corresponds to the body 2.

A thin-walled cylindrical casing 10 bears against the lower edge of the plate 1a, the spherical body 2 (at the location of the weld seam 2a) and an annular shoulder of the tail-rod 3. The spherical body is also formed, at its upper pole, with a cylindrical nipple 11 formed with an internal screw thread into which there is screwed a hollow shank which is integral with the plate 1a and which retains the detonator 5.

Finally, a cap 12, passing through the plate 1a and projecting below it, keeps the firing device in a safe condition during storage and before the commencement of thrust. The acceleration produced when the grenade is shot from the rifle causes this cap 12, due to its inertia, to leave its seating and fall into the peripheral space enclosed between the casing 10 and the body 2.

What I claim is:

1. A rifle grenade, comprising a steel body of substantially spherical shape, a tubular tail-rod connected thereto at one pole of said sphere, a tubular nipple disposed at the opposite pole of said spherical body, a circular plate of the diameter of said body and fixed to said nipple, a ballistic cap enclosing a firing device and disposed above said plate, a cylindrical casing supported against the plate, the spherical body and the tail-rod, and a closed peripheral space below the plate and between said casing and the spherical body.

2. A rifle grenade as claimed in claim 1, wherein the tubular tail-rod of the grenade has an end wall integral therewith and has a top surface in the form of a spherical socket having a concave spherical zone corresponding to said body.

3. A rifle grenade as claimed in claim 2, wherein the spherical body of the grenade is axially fixed to the end wall of said tubular tail-rod by means of a screw passing through the wall of said body.

**References Cited**

**UNITED STATES PATENTS**

2,408,486	10/1946	Shinkle	102—64
2,420,661	5/1947	Fox	102—65.2

**FOREIGN PATENTS**

79,873	6/1919	Germany.
717,204	5/1931	France.

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