

PATENT SPECIFICATION

(11) 1 573 586

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- (21) Application No. 35993/77 (22) Filed 26 Aug. 1977
(31) Convention Application No. 2641665 (32) Filed 16 Sep. 1976 in
(33) Fed. Rep. of Germany (DE)
(44) Complete Specification Published 28 Aug. 1980
(51) INT. CL.³ F42B 5/26
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F3A 1A



(54) A CASING FOR A PROPELLANT CHARGE

(71) We, RHEINMETALL Gesellschaft mit beschränkter Haftung, of Ulmenstrasse 125, 4 Dusseldorf 1, German Federal Republic, a Company organised and existing under the laws of the German Federal Republic, do hereby declare the invention, for which we pray that a Patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:-

This invention provides a casing for a propellant charge comprising a combustible charge container, a base having a central upstanding boss having an aperture therein for incorporation of a primer cap and an upstanding rim defining a cap within which the lower part of the container is seated, so as to overlie the boss, a resilient annular bearing plate for retaining the container in position, said bearing plate having apertures therethrough and radial slits extending inwards from the perimeter, and means for securing the bearing plate to the boss.

Embodiments according to the invention are shown by way of examples in the accompanying drawings, wherein:-

Figure 1 shows in section the lower part of one casing structure.

Figure 2 shows in section the lower part of a second casing structure, and

Figure 3 shows in plan the structure of Figure 1.

Referring to Figures 1 and 3 a base 1 has an upstanding rim 3 and a fastening device 2 which is adopted to receive a primer cap. The device 2 comprises a bush upstanding from the base 1 and with an internal screw threading. The lip 3a of the rim 3 is shaped at 3b to form a snap connection with an annular resilient packing ring 4 which is contoured to follow the profile of rim 3. The ring 4 may be rubber or a silicone rubber or plastics material. The charge container 5 is of a combustible material and is of a profile adapted to the shape of the cup formed by the base 1, so as

to form a good fit therein. The base of the container 5 includes an aperture 5a through which the bush 2 passes. A bearing plate member 6 of spring steel is located over the bush and is secured by a circlip 7 located under a flange 2a of the bush 2. The bearing plate 6 is provided with suitable perforations or apertures 6c so that the burning charge may have access to the base of the casing to ensure that it is burnt without leaving residual matter.

With a spring steel plate 6 any sideward acting forces on the container are absorbed by virtue of the plate flexing with the ring 4 allowing slight movement. This is assisted by adopting a plate as shown in Figure 3 with radial slits 6b. Thus the container is able to move laterally relative to the base without damage to the container or fastening device 2.

As shown in Figure 2 the plate 6a may be made integral with a threaded bush 8a which engages threading on the fastening device 2.

The arrangement of Figure 1 and 2 may be modified by providing a nut in place of the circlip 7 and flange 2a, the nut engaging threading on the fastening device 2. Alternatively the plate 6 itself may be formed as a circlip to engage the fastening device 2.

WHAT WE CLAIM IS:-

1. A casing for a propellant charge comprising a combustible charge container, a base having a central upstanding boss having an aperture therein for incorporation of a primer cap and an upstanding rim defining a cap within which the lower part of the container is seated so as to overlie the boss, a resilient annular bearing plate for retaining the container in position, said bearing plate having apertures therethrough and radial slits extending inwards from the perimeter and means for securing the bearing plate to the boss.

2. A casing in accordance with Claim 1, wherein the securing means comprises a cir-

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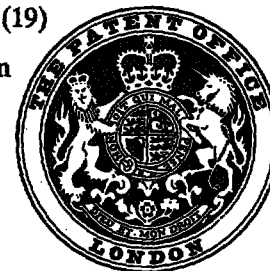
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This invention provides a casing for a propellant charge comprising a combustible charge container, a base having a central upstanding boss having an aperture therein for incorporation of a primer cap and an upstanding rim defining a cap within which the lower part of the container is seated, so as to overlie the boss, a resilient annular bearing plate for retaining the container in position, said bearing plate having apertures therethrough and radial slits extending inwards from the perimeter, and means for securing the bearing plate to the boss.

Embodiments according to the invention are shown by way of examples in the accompanying drawings, wherein:-

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1. A casing for a propellant charge comprising a combustible charge container, a base having a central upstanding boss having an aperture therein for incorporation of a primer cap and an upstanding rim defining a cap within which the lower part of the container is seated so as to overlie the boss, a resilient annular bearing plate for retaining the container in position, said bearing plate having apertures therethrough and radial slits extending inwards from the perimeter and means for securing the bearing plate to the boss.

2. A casing in accordance with Claim 1, wherein the securing means comprises a cir-



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lip located beneath a flange on the boss.

3. A casing in accordance with Claim 1, wherein the securing means comprises a nut engaging threading on the boss.

5 4. A casing in accordance with Claim 1, wherein the securing means comprises a bush threaded to engage threading on the boss.

10 5. A casing in accordance with Claim 1, wherein the securing means comprises a circlip integral with the bearing plate which engages the fastening device.

6. A casing in accordance with any preceding claim, wherein the bush is internally threaded to receive a primer cap.

15 7. A casing for propellant charge substantially as herein described and as shown in Figures 1 and 3 or 2 of the accompanying drawings.

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