Jan. 18, 1944. D. F. SHEPHERD 2,339,298

PROJECTILE SUPPORT

Filed Dec. 17, 1941

Fig. 7.

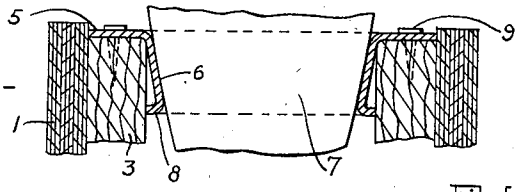
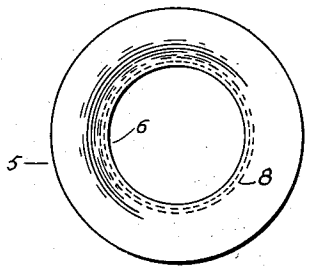


Fig. 1.

Fig. 2.



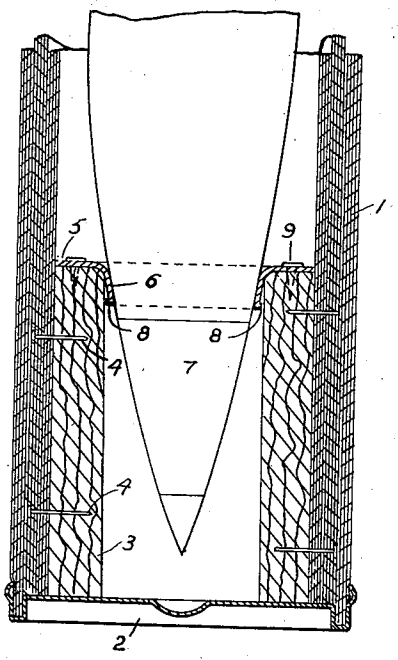


Fig. 3.

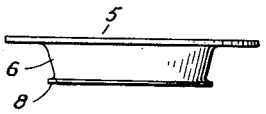


Fig. 5.

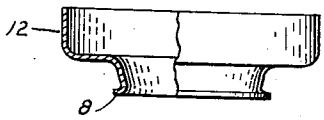


Fig. 4.

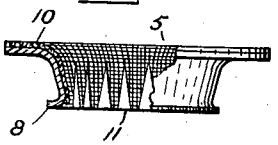
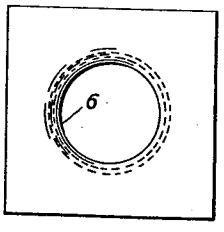


Fig. 6.



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UNITED STATES PATENT OFFICE

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PROJECTILE SUPPORT

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Application December 17, 1941, Serial No. 423,329

1 Claim. (Cl. 206—3)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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 a projectile container and in particular to a support for the ogival end thereof.

In the handling, storing and shipping of projectiles having delicate parts it is necessary to pack each shell in a separate container. The packing at the ogival end requires special attention for two main reasons: first, the point must be secured in spaced relation from the container or mutilation of the latter will result, and second, the point usually bears the delicate elements of the shell whether a mechanical fuse, a windshield or any plain ogive other than a hardened point.

Heretofore, in one example of actual practise, the ogive has been supported by inserting within the container a short sleeve, sliding a U-shaped member through slots in the cap designed to receive a spanner tool and resting the U-shaped tool on the top of the sleeve. This arrangement presented many difficulties due to highly concentrated stresses. It was found that the member would yield at the point of support in the spanner slots and even if hardened would fracture. Likewise the stresses at the point of support on the sleeve being concentrated, the sleeve, being made of wood, tended to yield. In addition to these difficulties, the U-shaped member was heavy and expensive. The present invention overcomes these difficulties as pointed out hereinafter.

It is therefore an object of the invention to provide a support for the ogive in a projectile container which shall be light, easy and inexpensive to manufacture, and which shall afford an even distribution of stresses.

To these and other ends, the invention consists in the construction, arrangement and combination of elements described hereinafter and pointed out in the claim forming a part of this specification.

A practical embodiment of the invention is illustrated in the accompanying drawing wherein:

Fig. 1 is a partial elevational view in axial section of a container with a projectile in place.

Fig. 2 is a top plan view of the ogive support of Fig. 1.

Fig. 3 is an elevational view of the support shown in Fig. 2.

Fig. 4 is an elevational view, shown partly in axial section, of a modification of the ogive support, and

Fig. 5 is a view similar to Fig. 4, showing a further modification of the ogive support.

Fig. 6 is a top plan view of a modification of an ogive support.

Figure 7 is a fragmentary sectional view of the support showing more clearly the relation between the metallic annulus and the interior of the sleeve.

Referring to the drawing by characters of reference, there is shown in Fig. 1 a cylindrical container 1 preferably of rolled paper or cardboard but which may consist of any suitable material and which may be closed off by a metal bottom such as 2. The particular form and material of the outer container itself forms no part of the present invention. Nested within the container and resting on the bottom is a short sleeve 3 of wood or paper or any suitable material and which may be secured in place as by nails 4 or by gluing or any suitable attaching means. Resting on the crown of the sleeve 3 is a metallic annulus 5 with its central portion 6 depending downward on a slant adapted to accommodate a portion of a projectile ogive 7. The inner rim may be further bent away from the ogival curve as shown at 8. This will further strengthen the supporting zone by reason of making contact with the sleeve. The annulus 5 may be attached to the crown of the sleeve 3 as by tacks 9 or other means or may be left loose, in which case it can be withdrawn with the projectile and subsequently removed without difficulty.

The annulus with depending inner surface provides a support which dwells on all available area of the sleeve crown and thus permits the use of a softer and hence cheaper material for the sleeve, such as paper, as well as affording a maximum of surface contact with the projectile to minimize local stresses. The main stresses will be located in a circular zone and can be readily withstood in even a very thin member. The annulus should be supported by the sleeve 3 up to the point of the bend.

Although it might seem probable that binding would occur between a heavy projectile and a metal support no serious difficulties have been encountered on this score. However, such a possibility may be obviated by providing a lining for the support such as canvas 10 shown in Fig. 4. This is shown as having scallops 11 to adapt a a dish-shaped blank to the depending portions of the support, but a simple annulus of the lining

may be adapted without such modification. Any non-metallic material may be used for the lining, the purpose being merely to avoid the interlocking of metal surfaces, and the lining may be attached in any convenient manner as by gluing or stapling.

To avoid possible laceration of the sides of the container, the support may have its outer end upturned as shown at 12 in Fig. 5.

While the annular support has been described as preferably metallic, it will be understood that the particular material used is not to be deemed a limiting factor and other materials will be adapted to achieve the functions of a support having the structure described and claimed herein.

The projectile container has been shown as circular but any other polygonal shape may be used. The supporting member shown in Fig. 6, for instance, is adapted for use with a square container.

I claim:

A projectile container comprising an outer housing, an inner sleeve engaging the inner wall of the housing and shorter than the housing and located at one end thereof, and a support for the projectile ogive comprising a flat portion located on and covering a substantial area of the end portion of said sleeve and having a central flange depending below the level of said flat portion and defining between said flat portion and said flange an inwardly inclined surface adapted to receive the ogive portion of a projectile, the lower end of said flange being provided with an outturned flange in engagement with the inner wall of the sleeve to support the lower end of said flange.

DANIEL F. SHEPHERD.