

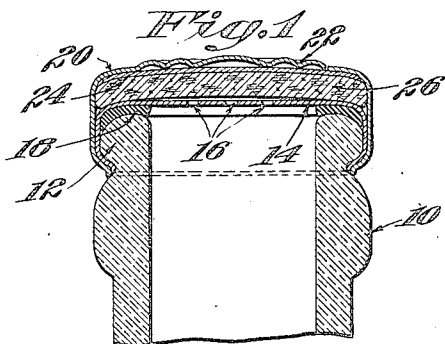
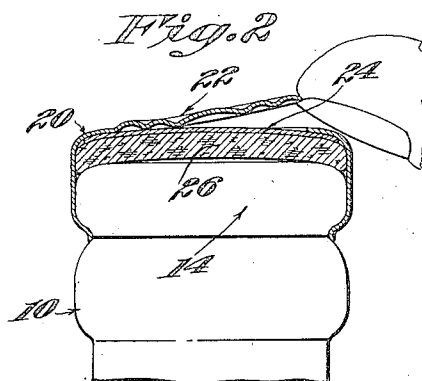
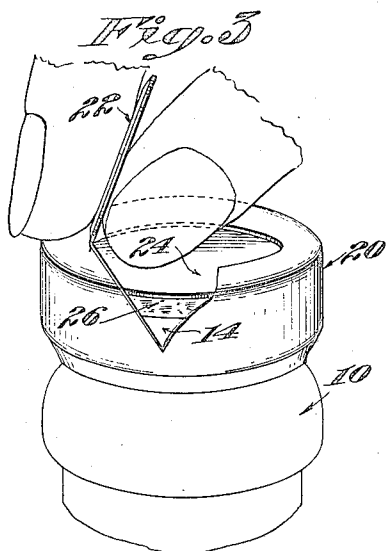
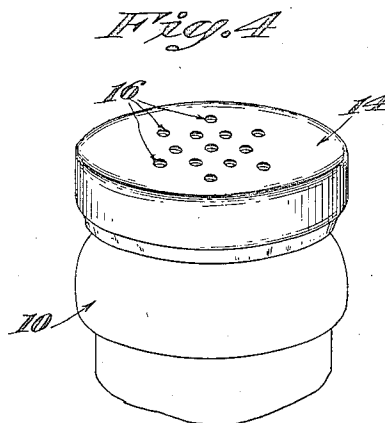
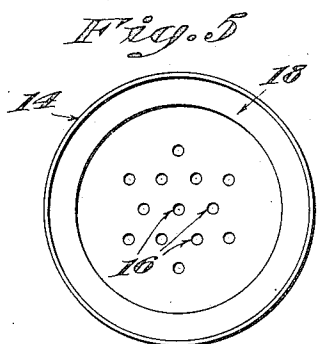
Oct. 30, 1923.

1,472,093

F. G. SHULL

BOTTLE CLOSURE

Filed June 8, 1921



Witness
M. E. C. C. C.

Inventor
Frederick G. Shull
by his attorney
Van Euren, Fisk, Hildreth & Carey

UNITED STATES PATENT OFFICE.

FREDERICK G. SHULL, OF DALLAS, TEXAS, ASSIGNOR TO ALUMINUM SEAL COMPANY,
OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BOTTLE CLOSURE.

Application filed June 9, 1921. Serial No. 476,078.

To all whom it may concern:

Be it known that I, FREDERICK G. SHULL, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Bottle Closures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to closures for glass receptacles and more particularly to closures of this type embodying a removable seal and a perforated top employed in conjunction therewith.

The object of the present invention is to provide new and improved form of closure for glass bottles containing liquids or dry materials or mixtures of both which provides a hermetically closed seal for the bottle prior to the use of the liquid or substance contained therein and a perforated permanent top for the bottle which is exposed upon removal of the outer seal and which serves to control the removal of the contents from the bottle in the usual manner.

With this object in view the several features of the invention consist in certain novel features of construction, combinations and arrangements of parts hereinafter described and claimed, the advantages of which will be obvious to those skilled in the art from the following description.

In the accompanying drawings illustrating the preferred form of the invention Fig. 1 represents a section in elevation of a bottle top having the new form of closure applied thereto; Fig. 2 is a view of the ordinary form of seal illustrating the manner in which the removal of the seal is initiated; Fig. 3 is a perspective view illustrating a further stage in the removal of the outer seal; Fig. 4 is a perspective view of the closure, illustrating the appearance of the inner perforated top after the outer seal has been removed; Fig. 5 is a bottom plan view of the inner perforated top before application to the bottle; and Fig. 6 is a cross section in elevation of the perforated top.

The present invention comprises essentially an inner perforated cap and an outer seal which are so designed with respect to one another that they may be applied

to the end of a bottle by a single crowning operation. With both seals in position the end of the bottle is hermetically sealed and the contents may be preserved for an indefinite period without deterioration. When it is desired to use the contents of the bottle the outer metallic seal is easily removed in a manner which will be obvious to those skilled in the art, exposing the inner perforated seal which remains permanently connected to the end of the bottle in such a manner as to prevent discharge of the contents except through the openings.

As indicated clearly in Fig. 1, the bottle indicated at 10 is provided with a lip 12 about which the closure is locked. The new closure comprises an inner cap 14 having perforations 16 in the end and provided with an inner sealing ring 18 of compressible material, which forms a hermetic seal between the cap and the lip of the bottle, as indicated in Fig. 1. The outer seal comprises a ring 20 of thin material having a flap 22 located centrally thereof and connected to the ring at one end. The ring 20 encloses and holds in place a metallic disk 24 which overlies a compressible disk 26 of cork or similar material for sealing the end of a bottle. The inner and outer sealing caps may conveniently be made of aluminum or similar material in thin sheet form which may be readily applied to the end of the bottle and crimped about the lip 12 in the manner indicated in Fig. 1 without the necessity of two separate crowning operations. When both seals are in position, as indicated in Fig. 1, the bottle or other container is hermetically sealed and the contents are not affected by the atmosphere. When it is desired to use the contents, on the other hand, the flap 22 may be easily lifted, as indicated in Fig. 2, and drawn back, tearing the outer enclosing ring 20, as shown in Fig. 3. This permits the removal of the entire ring 20, releasing the metallic disk 24 and compressible disk 26 to expose the inner seal 14 with its perforated surface. The removal of the outer seal does not loosen or in any manner affect the inner seal which remains permanently in position so long as the bottle is in use, the contents being discharged through the perforations in the surface in a manner which will be obvious to those skilled in the art.

This form of closure provides a compact and relatively simple seal which has exceptional advantages in connection with the bottling of vinegar and similar liquids, condiments, ground spices, toilet preparations, powders, etc. In spite of the fact that the new form of seal provides essentially two separate and complete closures for the container it does not substantially complicate the application of the closure to the end of the bottle in the crowning operation.

While it is preferred to employ the specific construction and arrangement of parts shown and described, it will be understood that this construction and arrangement is not essential except so far as specified in the claims, and may be changed or modified without departing from the broader features of the invention.

The invention having been described, what is claimed is:

1. The combination with a container, having an annular sealing lip, of inner and outer sealing caps of aluminum or like material having flanges crimped about the lip to secure and hermetically seal the caps thereto, the outer cap being provided with a flap to facilitate its removal from the container and the inner cap being provided with perforations or openings through which the contents of the container may be discharged, and a compressible packing member interposed between the outer and inner sealing caps to hermetically seal the contents of the container when the outer cap is in position.

2. The combination with a container, having a sealing lip adjacent the mouth, of an inner cap having a perforated top and a flange crimped about the lip, an outer seal of thin sheet metal having a flange crimped to the lip about the outside of the first men-

tioned flange and provided with a flap to facilitate the removal thereof from the container, a metal disk enclosed within the outer sealing cap and a sheet of compressible material underlying the metal disk and engaging with the inner sealing cap and acting in conjunction with the outer sealing cap to hermetically seal the contents of the container.

3. The combination with a container, having a sealing lip, of an inner perforated sealing cap crimped about the lip, a compressible sealing ring interposed between the cap and the lip of the container, an outer sealing cap also crimped about the lip of the container and provided with a flap connected to the cap at one side and adapted to facilitate tearing the cap off the container, and a packing member of compressible material interposed between the outer and inner caps to hermetically seal the contents of the container.

4. The combination with a container of glass or similar material, having an annular sealing lip, of an inner perforated sealing cap of aluminum or like material having a flange adapted to be crimped about the lip of the container, a rubber sealing ring interposed between the cap and lip of the container, an outer sealing cap of aluminum or like material having a flange adapted to be crimped about the lip of the container outside of the inner flange and provided with a flap connected to the cap at one side, a thin disk enclosed within the cap, and a sealing disk of cork or like material underlying the thin disk and serving to hermetically seal the contents of the container when the outer sealing cap is in position.

FREDERICK G. SHULL.