

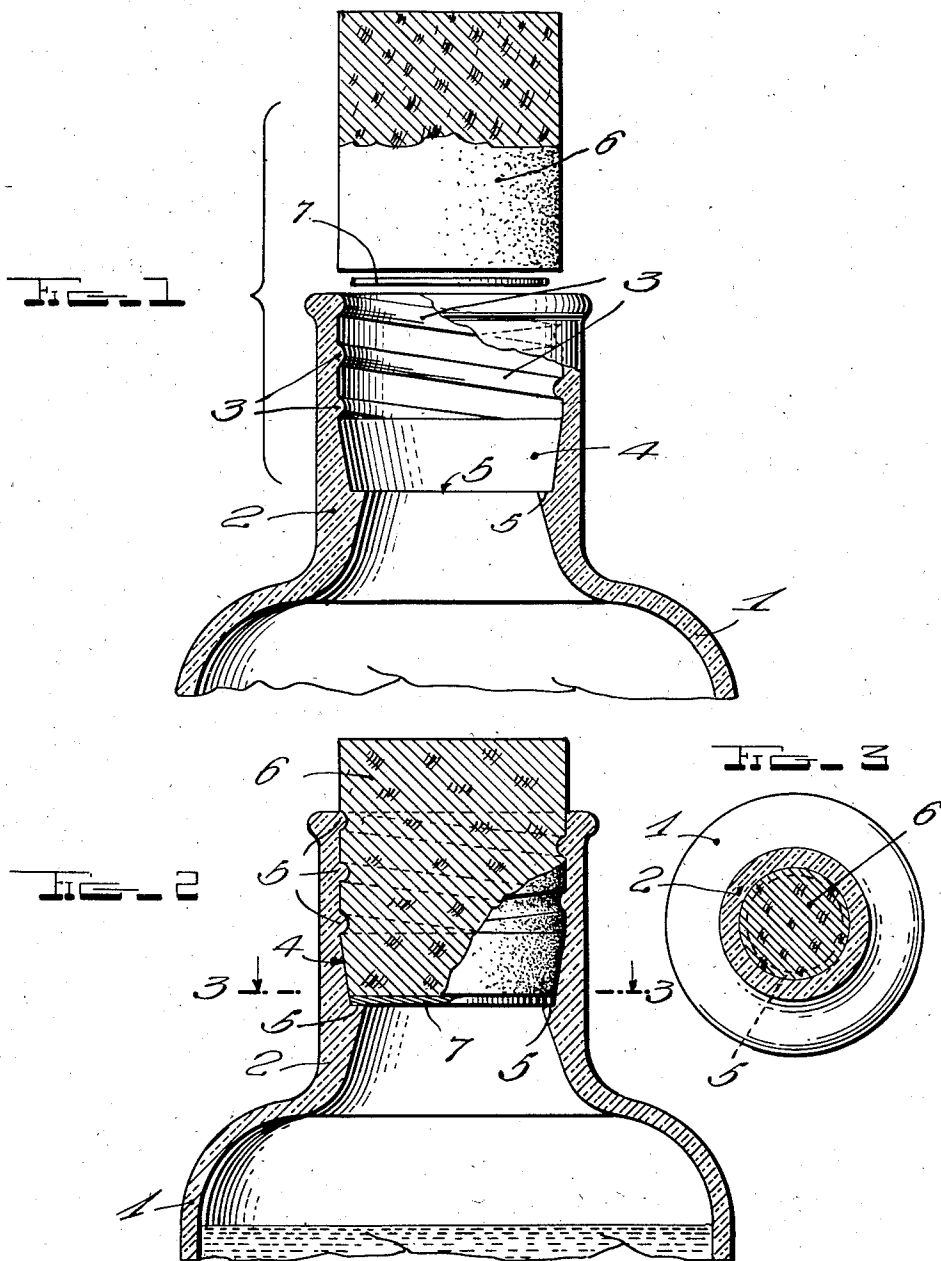
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CONTAINER AND CLOSURE THEREFOR

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CONTAINER AND CLOSURE THEREFOR

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1 Claim. (Cl. 215—49)

My invention relates to new and useful improvements in containers and closures therefor and primarily to a bottle and stopper, the primary object being to provide a container so constructed that a stopper introduced therein may be readily removed without the use of tools, instruments and the like and without danger of destruction of said stopper.

A further object of the invention resides in providing a container and closure therefor which is so constructed that the closure or stopper has portions thereof in sealing contact with the inner walls of the container to preclude casual emission of the contents therefrom and other portions of said closure disposed beyond the walls of said closure whereby simple movement by the user may be had for the disengagement of said closure from the container.

Still another object of the invention resides in the provision of a container having a neck, the inner wall of which is provided with a spiral projection or thread and a stopper therefor formed of resilient or expansible and compressible material adapted for threaded engagement therewith.

Still another object of the invention resides in providing the inner wall of the neck of the container with a tapered portion below the threaded portion thereof terminating in an annular seat, whereby to compress a definite portion of the stopper to insure a sealing engagement between the stopper and the wall of the container and simultaneously preclude the casual emission of the contents of the container.

A still further object resides in providing a means in association with the annular seat in the neck of the container to form a base support for the lower end of the stopper and assure a sealing engagement of the lower end of the stopper with the neck of the container.

A still further object resides in providing a device which is comparatively simple in construction, inexpensive to manufacture and one which will be very efficient in use.

With these and numerous other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawing, forming a part of this application:

Figure 1 is a fragmentary side elevation of a bottle, partly in section, incorporating my improvements therein and disclosing the stopper,

partly in section, removed and in juxtaposition to the neck of the bottle previous to introduction therein;

Figure 2 is a vertical section, partly in elevation showing the stopper and disk in effective sealed position in the bottle; and

Figure 3 is a horizontal section therethrough as seen on the line 3—3 of Figure 2, looking in the direction of the arrows.

In describing the invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which the numeral 1 designates a bottle or similar container formed of glass, metal, earthenware or any other desired material, the neck 2 of which has the inner wall thereof provided with a spiral rib or thread 3 extending from the mouth of the bottle a suitable distance through the length of said neck. The portion of the neck immediately adjacent to the termination of the spiral rib or thread 3 extending a suitable distance therebelow is tapered smaller towards its lower edge as shown by the numeral 4 and the lower edge of said tapered portion 4 terminates in an annular ledge or shoulder 5, the same projecting inwardly of the neck of the bottle and adapted to form a seat for the stopper or closure therefor.

In this connection, I have disclosed in the drawing a closure or stopper designated by the numeral 6 which, as illustrated in the drawing, is formed of cork, although I do not wish to be limited to this particular material as said stopper may be formed of rubber, composition or any suitable compressible and resilient material. I do not wish to be limited to a closure formed of any particular material as the same may be formed from any material that is adapted to be compressed into sealing engagement with the inner wall of the bottle neck.

Obviously, the stopper is of a diameter suitable to the diameter of the neck of the bottle and inasmuch as the spiral rib or thread 3 projects inwardly from the wall of said neck, said stopper will be caused to be compressed when the same is introduced into the neck of the bottle. In this connection, it may be stated that the closure when introduced into the neck of the bottle at such time when it is desired to seal the contents therewithin, is turned into said neck and given a threaded movement due to the spiral relation of the rib or thread 3 to the neck. When so introduced, obviously, the lower portion of the stopper 6 will be compressed by reason of the tapering of the portion 4 of the neck of the

bottle, as clearly illustrated in Figure 2 of the drawing. This compressing of the lower portion of the stopper is in addition to the compression of said stopper caused by the spiral rib or thread 3. In order to firmly seat and seal the lower portion of the stopper in the bottle, I provide a disk 7 formed of any desired material such as metal, rubber, composition, or anything suitable according to the character of the contents of the bottle. This disk being seated on the shoulder 5, as clearly disclosed in Figure 2 of the drawing, will form a base support for the lower end of the stopper limiting the downward movement of said stopper into the neck and will simultaneously retain the lower portion of the stopper in flat or horizontal position at all times further sealing said stopper in the neck of the bottle and precluding the contents of said bottle from being removed casually.

The stopper 6 is preferably cylindrical and of a length sufficiently great to permit a portion thereof to protrude above the upper end of the neck of the bottle when said stopper is fully sealed and seated in position as shown in Figure 2 of the drawing, whereby anyone desiring to remove the contents from the bottle may readily engage said protruding portion of the stopper and remove the latter by giving the same a turning or twisting movement.

It is a well known fact that in the use of stoppers with bottles of the type shown, paraffine is used as a seal between the stopper and the wall of the bottle. It may be used in connection with my invention as usual but it will be seen that the particular character of the sealing engagement between stopper and neck of the bottle will preclude casual disengagement of the stopper from the bottle. Whereas it has been found that stoppers frequently become disengaged from the necks of bottles particularly where paraffine is used as a sealing element, such casual disengagement is impossible in view of the compression between the threaded wall of the bottle and the stopper proper and the necessity for the turning movement of the stopper in order to remove the same.

Obviously, the compressing of the stopper, as shown in Figure 2, causes a sealing engagement between said stopper and the side wall of the neck of the bottle. Further, it will be seen that the tapering of the lower portion of the neck of the bottle terminating in the seat provides a further sealing contact between the lower portion of said

stopper and the lower portion of the neck of the bottle. The annular shoulder or seat, with which is associated the disk, forms a sealing contact for the lower face of the stopper with the neck of the bottle, so that the many disadvantages incident to the use of ordinary stoppers and bottles will be eliminated. Through this particular construction, it will be seen that the use of corkscrews or other instruments usually used in the removal of stoppers from bottles will be eliminated. Furthermore, the disk forming a base support for the lower end of the stopper will prevent portions of the stopper or extraneous matter dropping into the contents of the bottle.

Whereas I have shown the disk as an element of my invention, it will be understood that it is not absolutely necessary that such disk be used. The use thereof is made primarily when the contents of the bottle or container are of such nature as may adversely affect the material of which the stopper is composed or vice versa.

From the foregoing description of the construction of my improved container and closure, the construction thereof and the method of application to use will be readily understood. It will be seen that I have provided a simple, inexpensive and efficient means for carrying out the numerous objects of the invention.

While I have particularly described the elements best adapted to perform the functions set forth, various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described the invention, what is claimed is:

A container having a neck, walls of the neck being internally threaded from its upper end for a portion of its length and in spaced relation to the lower end of the threaded portion being formed with an internal circumferentially extending shoulder the portion of the walls of the neck between the shoulder being unthreaded and tapered downwardly, a flat disk of rigid material fitted into the neck and resting upon said shoulder with its margins contacting with walls of the neck, and a stopper separate from the disk formed of resilient and compressible material and screwed into the neck with its lower portion compressed by the tapered portion of the walls of the neck and its lower end face in flat contacting engagement with the disk.

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