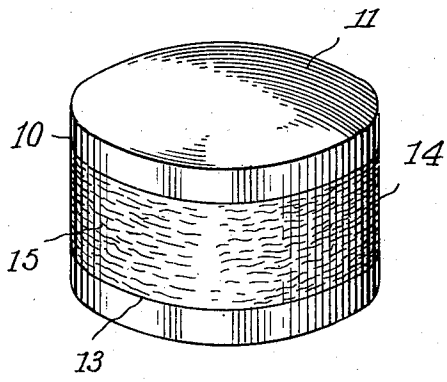
Feb. 5, 1946. M. E. BAAR 2,394,135

CONTAINER CLOSURE

Filed Dec. 24, 1942

Fig. 1



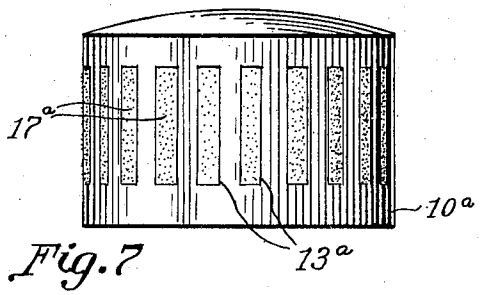


Fig. 7

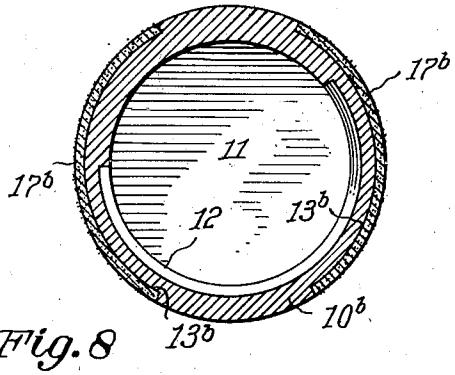


Fig. 8

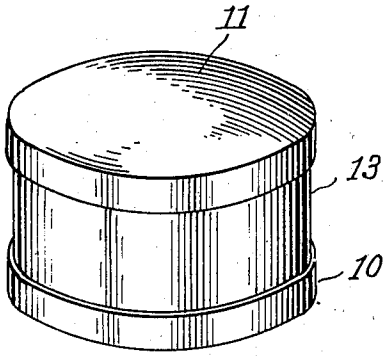


Fig. 2

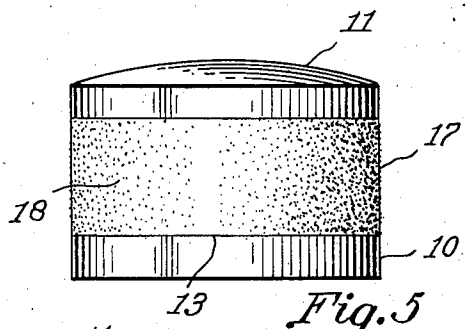
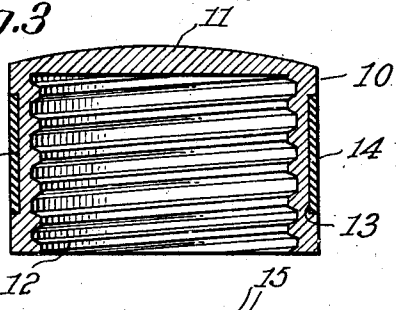


Fig. 5

Fig. 3



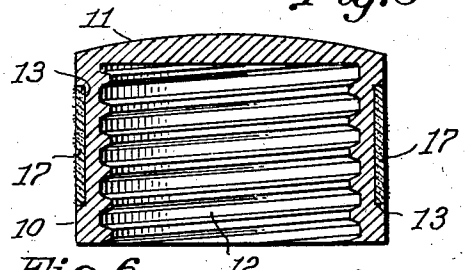


Fig. 6

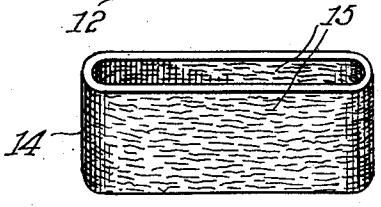


Fig. 4

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UNITED STATES PATENT OFFICE

2,394,135

CONTAINER CLOSURE

Max E. Baar, Canton, Ohio

Application December 24, 1942, Serial No. 469,979

4 Claims. (Cl. 215—43)

The invention relates to closures for containers such as bottles, jars and the like, and more particularly to a container closure provided with a peripheral insert or inserts of friction material to be gripped by the fingers for facilitating the removal of the closure from the container.

The object of the invention is to provide means for easily removing a screw-threaded cap, or the like from bottles, jars and other containers.

It is another object of the invention to provide a container closure having one or more recesses in its peripheral portion with friction material inserted therein.

Another object is the provision of a container closure provided with a peripheral groove and having a band of friction material located in said groove.

A further object is the provision of such a container closure in which a band of rubber is located under tension in said groove.

A still further object is the provision of a container closure of the character above referred to in which a band of friction material is molded into said groove.

Another object of the invention is to provide a container closure having a plurality of spaced recesses around its periphery and inserts of friction material mounted in said recesses.

The above, together with other objects which will be apparent from the drawing and following description, or which may be later referred to, may be attained by constructing the improved container closure in the manner illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of a container closure constructed in accordance with the invention, a rubber band being located in a peripheral groove in the closure;

Fig. 2, a perspective view of the improved container closure before the friction band has been applied thereto;

Fig. 3, a vertical sectional view of the container closure shown in Fig. 1;

Fig. 4, a detached perspective view of a rubber band, or ring, adapted for attachment to the container closure;

Fig. 5, a side elevation of a container closure embodying the invention, in which a band of friction material is molded into the peripheral groove of the closure;

Fig. 6, a vertical sectional view of the container closure shown in Fig. 5;

Fig. 7, a side elevation of a modified form of the invention, in which the container closure is provided around its periphery with a series of spaced recesses in which are mounted inserts of friction material; and

Fig. 8, a transverse sectional view through a container closure having a recess or groove extending partially around each side thereof and an insert of friction material located in each recess.

Similar numerals refer to similar parts throughout the drawing.

The container closure indicated generally at 10 may be formed of any suitable material such as metal, hard rubber, plastic materials such as cellulose acetates, phenol formaldehydes or synthetic resins or other suitable material.

This container closure or cap is adapted for use upon bottles, jars and other containers for various kinds of products and may be of the general construction and arrangement commonly used in closures of this general character.

Such closures are generally of hollow cylindric form provided with a closed top wall 11 and internal screw-threads 12 or other means by which the closure is attached to the neck of the bottle or other container upon which it is used.

It is frequently necessary that these closures be tightly screwed upon the container in order to preserve the contents thereof and this often causes difficulty in removing the closure from the container since the fingers slip upon the surface of the closure. Owing to the fragile nature of these container closures it is not practical to use pliers or similar tools to remove the same from the container thus requiring that only the fingers be used in unscrewing the cap from the container.

The present invention therefore contemplates the provision of means upon the exterior of the container closure to provide a friction grip for the fingers so that the closure may be easily unscrewed from the container.

In order to provide this friction surface a peripheral recess or groove 13 of substantial width may be formed around the exterior of the container closure as shown in Fig. 2, this groove being formed when the closure is molded, cast or otherwise formed so that no extra operation is necessary to produce the groove.

A band or ring of suitable friction material is then placed in the groove 13 filling the same and providing the friction surface to be gripped by the fingers for removing the closure from the container.

As shown in Figs. 1, 3 and 4, this ring of friction material may be in the form of a rubber band 14 of substantially the width of the groove 13 and preferably of considerably less diameter

than the container closure so that the rubber band may be stretched tightly around the closure within the groove as shown in Figs. 1 and 3.

The surfaces of the rubber band 14 may be crinkled or otherwise roughened as indicated at 15 so as to provide a friction surface upon the exterior to be gripped by the fingers as well as a friction surface upon the interior of the band for frictionally gripping the surface of the closure within the groove 13. If desired this elastic rubber band may be cemented to the outer surface of the closure, within the groove 13, as indicated at 16.

As shown in Figs. 5 and 6 the friction gripping surface may be produced by molding a band 17 within the groove 13, this band being molded of any suitable friction material such as hard rubber or plastic material having sand, emery dust or other similar material impregnated therein so as to produce a friction surface as indicated at 18 to be gripped by the fingers for unscrewing the cap from the container.

As shown in Figs. 7 and 8 the invention may be carried out by providing a plurality of spaced recesses around the periphery of the cap and locating inserts of friction material in said recesses.

In Fig. 7 is shown a container closure 10^a having a multiplicity of spaced recesses 13^a formed in its periphery, inserts 17^a, of friction material, being located in said recesses so that they may be engaged by the fingers and thumb for unscrewing the cap from the container.

Another modification is shown in Fig. 8, in which the cap 10^b is provided with a recess in groove 13^b extending partially around each side of the cap, inserts 17^b, of friction material, being located in said recesses in position to be engaged by the fingers to remove the cap from the container.

The plastic, friction material as shown in Figs. 5 to 8 may be molded into the grooves or recesses in the cap in any usual or well known manner, or the recessed cap may be immersed in plastic friction material so as to fill the recesses therewith, and the surplus friction material may be wiped or scraped, or otherwise removed from the surface of the cap.

Although an ordinary screw thread is shown upon the interior of the container closure it should be understood that the particular type of means for attaching the closure to the container does not in itself form any part of the invention, as various common variations of threads such as a partial thread or a bayonet lock, as used on many container closures, may be used, or the closure may be otherwise attached to the container, the invention residing in the friction means upon the outside of any cap of this general type to assist in turning or unscrewing the cap from the container.

From the above it will be evident that a simple, inexpensive and efficient means is provided for producing a friction surface around the exterior of a container closure to facilitate easy removal thereof from the container.

I claim:

1. A closure for a container having a neck, said closure comprising a unitary, integral, molded cap internally shaped to engage a neck of a container, said cap having a plurality of spaced recesses in its outer surface, integral walls entirely surrounding each recess, and inserts of plastic friction material impregnated with grit molded in said recesses.

2. A closure for a container having a neck, said closure comprising a unitary, integral, molded cap internally shaped to engage a neck of a container, said cap having a recess in its outer surface extending only partially around the periphery of the cap, integral walls entirely surrounding the recess, and an insert of plastic friction material impregnated with grit molded in said recess.

3. A closure for a container having external screw means, said closure comprising a unitary, integral, molded cap having internal screw means to engage an external screw means upon a container, said cap having a plurality of spaced recesses in its outer surface, integral walls entirely surrounding each recess, and inserts of plastic friction material impregnated with grit molded in said recesses.

4. A closure for a container having external screw means, said closure comprising a unitary, integral, molded cap having internal screw means to engage an external screw means upon a container, said cap having a recess in its outer surface extending only partially around the periphery of the cap, integral walls entirely surrounding the recess, and an insert of plastic friction material impregnated with grit molded in said recess.

MAX E. BAAR.