

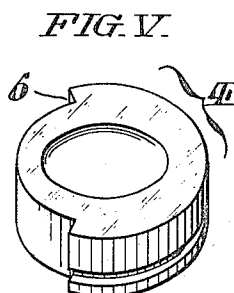
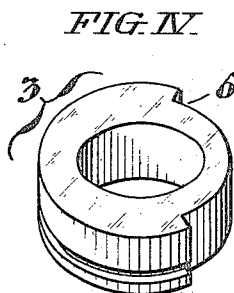
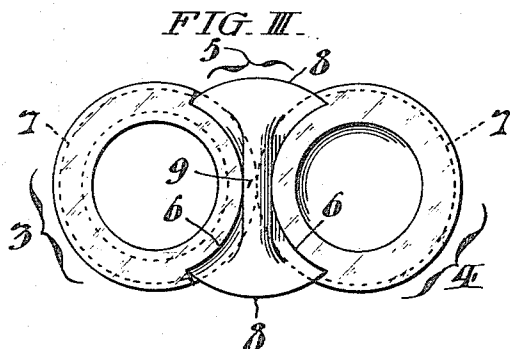
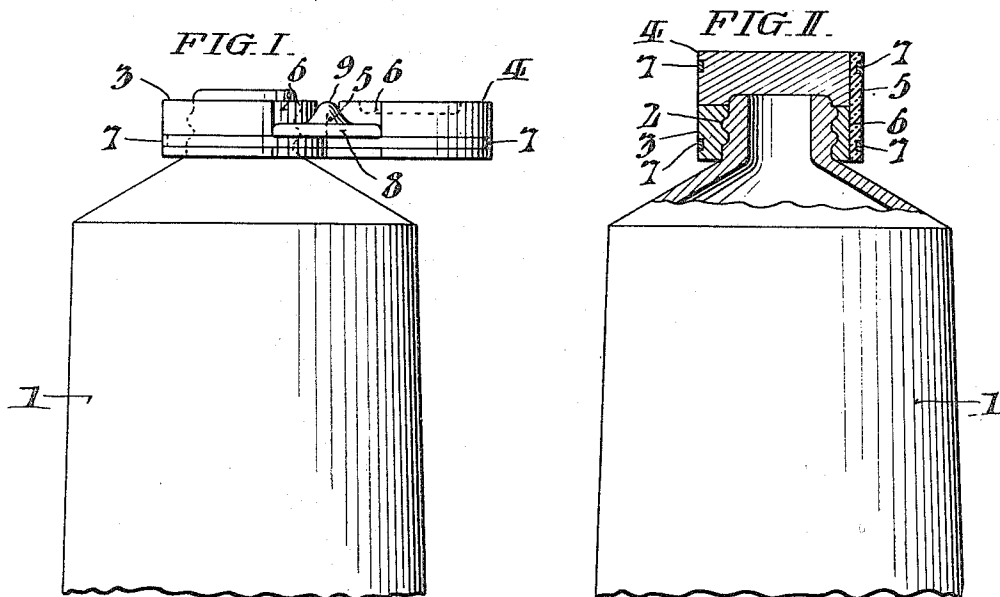
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1,928,445

CONTAINER CLOSURE

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CONTAINER CLOSURE

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3 Claims. (Cl. 221—60)

This invention relates to container closures, and more particularly to hinged closures for metallic tubes, bottles, jars or the like.

Heretofore numerous attempts have been made to improve the conventional forms of stoppers, caps or covers customarily used to seal the contents of containers. Certain of these devices, such as screw caps, are inconvenient and inefficient, because two hands are required to discharge the contents of the container, one hand for holding, tilting or squeezing the container; and the other hand for unscrewing and holding the cap. The detachable cap is also undesirable because of the likelihood of it becoming lost or misplaced, subjecting the container contents to the possibility of spilling, evaporation or deterioration. Other forms of container closures are unsanitary because of the likelihood of contact between the hands, or other germ carrying objects, and parts of the closure member which are exposed to the contents of the container. Still other forms of container closures are unsatisfactory because they do not effectively seal the mouth of the container.

The principal object of my invention is to eliminate the aforementioned difficulties by the provision of a closure member, forming part of, or adapted to be attached to, a container, which can be manipulated with one hand, and which forms an efficient, sanitary and convenient stopper for the mouth of the container. To this end my invention is specifically characterized by a novel form of hinge by which the closure member is joined to a stationary member at the mouth of the container.

Other objects and advantages characterizing my invention, including simplicity, neatness and economy of manufacture, will become more fully apparent from the description hereinafter set forth of one embodiment or example of the invention, the description having reference to the accompanying drawing, whereof:

Fig. I is a side elevation of the discharge end of a container equipped with a closure member embodying my invention, with the closure member in open position.

Fig. II is a sectional view of the same, with the closure member in closed position.

Fig. III is a plan view of the container, with the closure member in open position; and

Figs. IV and V are perspective views of the stationary member attached to the mouth of the container and the closure member respectively.

In the drawing I have illustrated an example of my invention as applied to a conventional form

of metallic container from which tooth-paste, shaving soap or the like is dispensed. The container is designated at 1, and it includes an externally threaded projection 2 at the mouth thereof. An internally threaded member 3 of cylindrical or substantially similar shape, and a closure member 4 associated therewith, are detachably fitted to the projection 2 in the same manner as an ordinary screw cap is customarily fitted to such a container. Though in the selected illustration of my invention the cylindrical member 3 comprises a separate part from the container 1, detachably fitted thereon, my invention also contemplates an arrangement in which the cylindrical member, to which the closure member is joined, forms an integral part of the container.

The closure member 4 corresponds in outside diameter to that of the cylindrical member 3. Interiorly the closure member 4 is configured so that it fits snugly, when in closed position, over the end of the threaded projection 2. For joining the closure member 4 to the cylindrical member 3, there is provided a hinge 5 of rubber or other elastic material. In order to present a smooth exterior surface, both the cylindrical member 3 and the closure member 4 are recessed, as indicated at 6 in Figs. IV and V, throughout regions of their circumferences. While other means of attaching the hinge 5 may be employed, in the present example flat bands 7 extending around the closure member 4 and the cylindrical member 3 are here shown as the means of attachment.

As shown in Fig. III, the attaching surfaces of the hinge 5 extend sufficiently around the circumferences of the cylindrical member 3 and the closure member 4 so that the marginal portions 8 of the hinge serve as tension elements in the nature of springs, whereas the central portion 9 functions merely as a hinge. As appears in Fig. I, when the closure member 4 is in fully open position, the central portion 9 of the hinge is distorted. Being of elastic material, its tendency to recover its original shape urges the closure member 4 toward the mouth of the tube or container 1.

However, when the closure 4 has been moved to the position shown in Fig. I, the plane of the marginal portions 8 of the hinge 5 is below the pivotal point about which the closure member hinges. Hence the marginal edges 8 of the hinge 5 are in this position so tensioned as to oppose movement of the closure member 4 toward the mouth of the container, counteracting the ef-

fect of the central hinge portion 9. As soon as movement of the closure member 4 in the direction of the mouth of the container is initiated, and the plane of the marginal edges 8 passes the effective pivotal point of the hinge, the marginal edges 8 will have an opposite effect and will tend to snap the closure member 4 shut.

Accordingly it will be apparent that with the special form of hinge described herein, the container 1 is normally sealed tightly with the closure member 4 held thereon by the resistance of the elastic hinge 5, which is preferably placed under initial stress by stretching it before attachment. The resistance to opening of the closure member 4 is due to the property which the marginal edges 8 and the central portion 9 of the hinge 5 possess of maintaining or recovering their original condition. The closure member 4 is readily swung away from the mouth of the container 1 by a finger of the hand which holds the container. As soon as it reaches the fully open position, it is maintained at rest in that position so that it offers no interference to the dispensing of the contents. When it is desired to seal the container 1, the initial movement is imparted to the closure member 4 by the operator's finger whereupon it snaps shut to the original position.

From the above description it will be noted that the closure member of my invention can be operated with ease and facility and that it constitutes a sanitary and efficient means of sealing the mouth of a container having obvious advantages over the conventional forms of caps and stoppers.

While I have described one particular embodiment of my invention, it will be apparent that various changes may be made in the form of the apparatus and its manner of application to a container, and that the invention is applicable to a variety of types of containers other than the particular one here selected for illustration, all without departing from the spirit of my invention as defined in the annexed claims.

Having thus described my invention, I claim:
1. In combination with a container having a substantially cylindrical member at the mouth thereof, a closure member adapted to fit over

said cylindrical member, and a hinge of elastic material attached to said cylindrical member and closure member, the attaching surfaces of said hinge extending sufficiently around the circumferences of said cylindrical member and closure member whereby portions of said hinge serve as tension springs holding the closure member away from the mouth of the container when the closure member is in fully open position, and forcing the closure member toward the mouth of the container when movement in that direction is initiated.

2. In combination with a container having a substantially cylindrical member at the mouth thereof, a closure member adapted to fit over said cylindrical member, said members being recessed at regions of their exterior surfaces, and a hinge of elastic material attached to said cylindrical member and closure member and fitting in the recessed regions thereof, the attaching surfaces of said hinge extending sufficiently around the circumferences of said cylindrical member and closure member whereby portions of said hinge serve as tension springs holding the closure member away from the mouth of the container when the closure member is in fully open position, and forcing the closure member toward the mouth of the container when movement in that direction is initiated.

3. In combination with a container having an externally threaded projection at the mouth thereof, an internally threaded cylindrical member engaging said projection, a closure member adapted to fit over said cylindrical member to close the mouth of said container, and a hinge of elastic material attached to said cylindrical member and closure member, the attaching surfaces of said hinge extending sufficiently around the circumferences of said cylindrical member and closure member whereby portions of said hinge serve as tension springs holding the closure member away from the mouth of the container when the closure member is in fully open position, and forcing the closure member toward the mouth of the container when movement in that direction is initiated.

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