

**SAFETY CLOSURE AND CONTAINER****BACKGROUND OF THE INVENTION****1. Technical Field of the Invention**

The present invention relates to safety closures for use on containers. More particularly, the present invention relates to a safety closure for use on a container wherein the safety closure and the container are provided with cooperating means to inhibit access thereto.

**2. Description of the Related Art**

It is often desirable to provide a safety closure for use on a container wherein the safety closure and the container are respectively provided with cooperating locking means to inhibit access thereto by individuals of tender age. It is well-known in the prior art to threadingly fit a safety closure upon a neck portion of a container, wherein engageable lugs project inwardly from opposing mating surfaces of the safety closure and outwardly from opposing surface of the container neck, respectively. The cooperation of the engaged locking lugs and the threaded fit therebetween prevents removal rotation of the safety closure without first overcoming the engagement of the lugs. It is therefore desirable to provide a safety closure threadingly fit upon a container neck, wherein the safety closure and the container neck are provided with cooperating locking means.

Typically, safety closures of the prior art include a side wall having opposed locking lugs projecting inwardly therefrom, wherein the side wall is deformable upon application of an external force. For example, U.S. Pat. No. 3,667,636 to Landen provides a safety closure frictionally fit upon a container neck and being removable therefrom only after an annulus portion thereof is deformed downwardly a sufficient distance to permit a plurality of locking lugs projecting inwardly therefrom to overcome a plurality of locking formulations projecting outwardly from the container neck. However, it is further desirable to provide a safety closure threadingly fit upon a container neck and secured thereto by engagement between cooperating locking lugs provided respectively thereon, wherein the safety closure is threadingly removable from the container neck by moving the safety closure locking lugs radially-outwardly from the container neck locking lugs.

For example, U.S. Pat. No. 3,770,153 to Gach, et al., teaches a safety closure having locking lugs engageable with cooperating locking lugs provided on a container neck, wherein the safety closure locking lugs are radially outwardly-moveable upon application of radially inwardly-directed forces at locations on the safety closure annularly offset from the locking lugs. However, it is further desirable to provide a safety closure threadingly fit upon a container neck and secured thereto by engagement between cooperating locking lugs provided respectively thereon, wherein the safety closure is threadingly removable from the container neck by moving the safety closure locking lugs radially-outwardly from the container neck locking lugs, and wherein the safety closure locking lugs are radially outwardly-moveable upon application of downwardly-directed force to the safety closure.

It is further desirable to provide a safety closure threadingly fit upon a container neck and secured thereto by engagement between cooperating locking lugs provided respectively thereon, wherein the safety closure is threadingly removable from the container neck by moving the safety closure locking lugs radially-outwardly from the container neck locking lugs, and wherein the container neck is provided with means to move the safety closure locking lugs radially-outwardly from the container locking lugs.

**SUMMARY OF THE INVENTION**

The present invention is for a safety closure for use on a container to inhibit access thereto by individuals of tender age. The safety closure is threadingly fit upon a neck portion of the container and is secured thereto by cooperating locking lugs respectively provided thereon. Removal of the safety closure from the container neck requires disengagement of the cooperating locking lugs and unthreading of the safety closure therefrom. Disengagement of the cooperating locking lugs is accomplished by applying downwardly-directed axial force to an outer periphery of the safety closure at locations annularly spaced between locations immediately above the locking lugs, whereby a lower end of the side wall moves axially-downwardly and radially-inwardly immediately below the applied force, thereby causing the lower end of the side wall to move radially-outwardly at locations near the locking lugs. Once each locking lug has moved radially outwardly a sufficient distance to overcome its respective container neck locking lug, the safety closure may be unthreaded from the container neck and removed therefrom.

It is an object of the present invention to provide a safety closure threadingly fit upon a container neck, wherein the safety closure and the container neck are provided with cooperating locking means.

It is another object of the present invention to provide a safety closure threadingly fit upon a container neck and secured thereto by engagement between cooperating locking lugs provided respectively thereon, wherein the safety closure is threadingly removable from the container neck by moving the safety closure locking lugs radially-outwardly from the container neck locking lugs.

It is yet another object of the present invention to provide a safety closure threadingly fit upon a container neck and secured thereto by engagement between cooperating locking lugs provided respectively thereon, wherein the safety closure is threadingly removable from the container neck by moving the safety closure locking lugs radially-outwardly from the container neck locking lugs, and wherein the safety closure locking lugs are radially outwardly-moveable upon application of downwardly-directed force to the safety closure.

It is still another object of the present invention to provide a safety closure threadingly fit upon a container neck and secured thereto by engagement between cooperating locking lugs provided respectively thereon, wherein the safety closure is threadingly removable from the container neck by moving the safety closure locking lugs radially-outwardly from the container neck locking lugs, and wherein the container neck is provided with means to move the safety closure locking lugs radially-outwardly from the container locking lugs.

A safety closure for use with a container having means to receive a closure locking lug in locking engagement therewith includes a top wall, an annular outer wall depending downwardly from an outer periphery of the top wall, an annular inner wall depending downwardly from an underside surface of the top wall, and, at least one locking lug integrally molded with the outer wall, whereby downward displacement of the top wall causes outward displacement of the at least one locking lug from the container means to receive a closure locking lug when in a locking relation therewith.

**BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS**

A better understanding of the present invention will be had upon reference to the following description in conjunc-