March 15, 1966 H. B. LERMER 3,240,384

DETACHABLE CAP HAVING INTEGRAL SUPPORTING MEANS

Filed Dec. 2, 1963

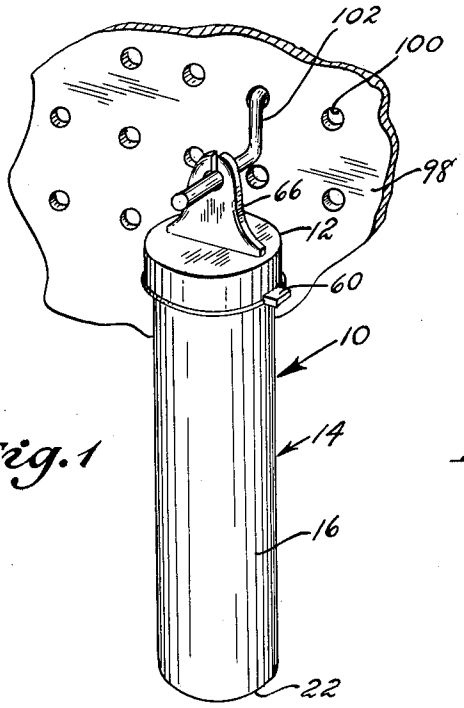


Fig. 1

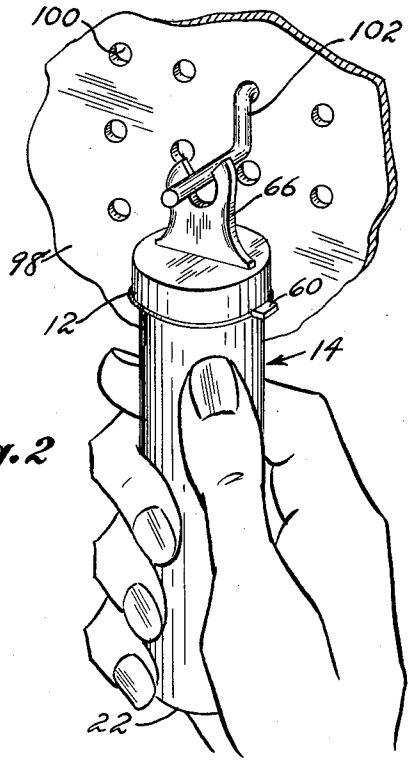
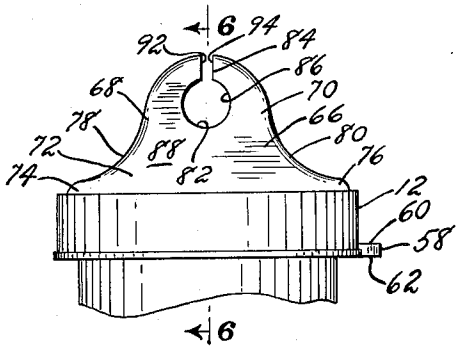


Fig. 2

Fig. 3



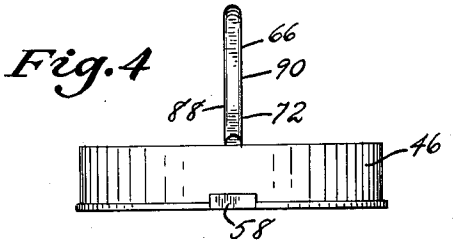


Fig. 4

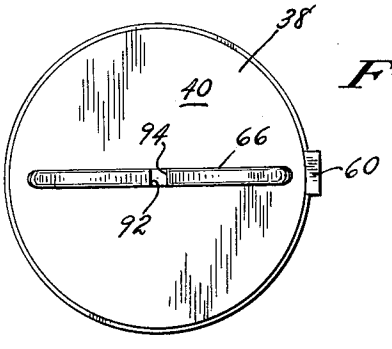


Fig. 5

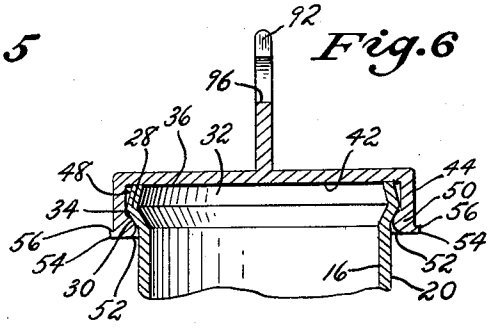


Fig. 6

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DETACHABLE CAP HAVING INTEGRAL SUPPORTING MEANS

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This invention relates generally to display and storage units, and more particularly to a container which will effectively store and display merchandise upon a display support, and yet may be readily detachable therefrom.

Present display containers which attempt to utilize removable portions for support purposes as well, have not proven successful because when an attempt has been made to remove a container from the display support the removable section also tends to become detached from the main body of the container unit. Previous attempts to solve this problem have resulted in removable members, but removable only in the sense that the container itself must be practically destroyed to gain access to the merchandise therein. Examples of such display units are the now popular Blister Package, through which the merchandise is displayed through a transparent bubble, but the bubble is firmly attached to the cardboard backing which in turn has a hole or other means for attachment or removable securement to a display support.

Accordingly, it is among the objects of this invention to provide a device in which the support member may be easily removed from the display support and yet remain securely engaged to the body of the container during removal.

Another object of the present invention is to provide a device of the character described which will provide a technically feasible, yet attractive, display and storage unit.

Yet another object of the present invention is to provide a display unit of the character described which will be sufficiently durable to a high degree, so that after the unit has served its initial display purposes it may continue to be used for storage purposes indefinitely and without destruction, despite repeated engagement and disengagement of the removable member.

A feature of the present invention is that it is inexpensive to manufacture, resulting in consequent wide distribution and use.

Still a further object of the present invention is to provide a device of the character described which may be fabricated from readily available materials.

A feature of the present invention is that it is made from non-corrosive materials, and consequently is not subject to the deleterious effects of the atmosphere and/or the merchandise contained therein.

These objects and features, as well as other incidental ends and advantages, will become more clearly apparent during the course of the following disclosure and be pointed out in the appended claims.

The invention consists of a transparent storage container which may be used for display purposes as well. The upper edge of the container is beaded. The supporting element is basically a cap having a downwardly extending sidewall with an inner beaded edge in mating relation with the beaded edge of the container. Extending upwardly from the top wall of the cap is an engaging member consisting of two symmetrically opposed fingers defining a keyhole slot therebetween, so that a support element, such as a hook emanating from a display board, may be forced through the narrow portion of the slot and be accommodated by the lower wider portion. When it is desired to remove the device from the display board all that is necessary is simply to pull the container in a direction away from the narrow neck portion of the keyhole slot thereby forcing the fingers apart so that the hook support may pass out of engagement therewith. During this removal operation the force exerted in the plane of the engaging member and away from the cap body causes the side walls of the cap to extend or be contracted inwardly, thus creating a gripping pressure between the mating bead elements of the cap and the container.

The cap is provided at its lower-most edge with a lip. When it is desired to remove the cap from the container unit, all that is necessary is to apply a slight upward pressure at the lower surface of the lip, thus causing the inner beaded edge of the cap to be moved away from the mating beaded edge of the container, and the cap detaches easily and non-destructively from the container unit.

In the drawing, to which reference will be made in the specification, similar reference characters have been employed to designate corresponding parts throughout the several views.

FIGURE 1 is a perspective view, showing a preferred embodiment of the invention, as it would appear in display position mounted on a rod support of a display board.

FIGURE 2 is a perspective view similar to FIGURE 1, but showing the device as it is being removed from the rod support of the display board.

FIGURE 3 is a fragmentary side elevational view showing the details of the cap.

FIGURE 4 is a front elevational view of the cap shown in FIGURE 3.

FIGURE 5 is a top plan elevational view of the cap.

FIGURE 6 is a fragmentary sectional view as seen from the plane 6—6 in FIGURE 3.

In accordance with a preferred embodiment of the invention, there is shown a container unit **10** comprising a cap **12** and a container **14**.

In the embodiment shown, the container **14** is cylindrical in shape, and comprises an extended cylindrical side wall **16** having an inner surface **18** and an outer surface **20**. The lower edge of the container is sealed by a bottom wall **22**. The upper edge of side wall **16** is modified to form a beaded edge **28** including an outwardly extending circular portion **30** and a forwardly extending circular portion **32**, the portions meeting at a joint **34** thus forming the beaded edge. The top portion **32** terminates at an upper edge **36**.

The detachable cap **12** is generally cylindrical in shape and in conformity with the container unit. The cap may be molded or otherwise formed from a flexible plastic material such as a polyethylene. In the present embodiment the cap consists of a generally circular and planar top wall **38** having an upper surface **40** and a lower surface **42**. Depending downwardly from the top wall is a side wall **44**. The side wall is generally cylindrical in shape and extends downwardly for a short distance along the container unit, and in engaged condition beyond the upper edge **36** to effect a closure.

The outer surface **46** of the side wall is cylindrical in configuration except for an optional decorative vertical striping **46** as shown in FIGURE 4. The inner surface **48** of the side wall includes a first downwardly extending portion **50** which is generally parallel to the outer surface of wall **44**. The portion **50** extends downwardly for a distance beyond the joint **34** of the beaded edge of the container unit **14**. Depending from the portion **50** is an inner beaded edge **52** terminating in a lower edge **54** of the cap. The lower edge **54** and the side wall **44** form a slight outwardly extending annular flange **56**. When the cap is placed upon the container unit the inner diameter of the beaded edge **52** and portion **50** is just slighly greater than the outer diameter of the beaded edge of

the container unit, allowing a snug mating fit between the two elements.

Extending from a portion of the annular flange **56** is a lip **58** having an upper surface **60**, a lower surface **62**, and a side surface **64**. A slight pressure on the lower surface **62**, due to the flexible nature of the cap will allow the above portion of the beaded edge of the cap located directly behind the lip **58** to be moved away from the beaded edge of the container units, thus allowing the cap to be easily removed from the container unit.

Depending upwardly from top wall **38** and integrally molded therewith is an engaging member **66**. The member is located in a plane perpendicular to the plane of the top wall **38** and is integrally molded, but being slightly less flexible due to its greater width. The engaging member consists generally of two upwardly extending fingers **68** and **70** which are symmetrically opposed to each other. The fingers extend from a lower portion **72**, the lower portion beginning at the circumference or outer peripheral circumference of the top wall **38** as portions **74** and **76**. The portion **72** then is defined by inwardly sloping circular walls **78** and **80** and blends into the fingers **68** and **70**, which define the keyhole slot **82**. The slot includes a neck portion **84** and a lower circular portion **86**. The entire engaging member **66** is broadly defined by a left surface **88**, a right surface **90**, the left wall **78**, and the right wall **80**, which meet surfaces **92** and **94**, to define the neck portion **84** of the keyhole slot **82**, and which terminate in a circular inner surface **96**, which defines the circular portion **86** of the keyhole slot.

In use when it is desired to store and display elements in the display units embodying the invention, the merchandise is placed inside the container unit and the cap is then snapped into place on the top of the beaded edge of the container unit forming a snug fit with the beaded edge of the detachable cap. The container unit is generally of a transparent plastic so that the merchandise may be viewed from the exterior thereof.

The display unit **10** may then be placed in position for display and sale in any convenient manner. As shown in FIGURE 1, the display may take the place upon a display board **98** having spaced perforations **100** which may receive a bent hook or rod support **102** in the manner shown.

Although the engaging member is thicker then the rest of the cap, the fingers are still capable of distortion in directions opposite and towards each other within the plane of the said engaging member. Thus the fingers may easily be opened and the support bar may be forced through the neck portion and into the circular portion of the keyhole slot. Once this has been accomplished the fingers resume their normal position, and the display unit maintains its positions upon the display board.

To remove the display unit from the display board, all that is necessary is to grasp the container unit, as shown in FIGURE 2, and by pulling downwardly the rod presses upwardly against the fingers causing them to spread and allowing the rod to pass through the neck portion, thus springing the engaging member. This pull exerted upon the cap causes the inner beaded edge of the cap to grip the outer beaded edge of the container wall more tightly. Thus snapping the display unit off a support rod will not consequently result in the separation of the removable member and the container unit body. As stated previously, all that is necessary to remove the cap from the container body is simply to apply an upward pressure on

the lower surface of the lip of the cap. This causes the inner beaded edge of the cap to be separated from the mating outer beaded edge of the container unit, and the cap readily detaches from the container unit.

I wish it to be understood that I do not consider the invention limited to the precise details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the invention pertains.

I claim:

1. A detachable cap having integral means for attachably supporting itself from an elongated rod-like member comprising:

(a) top wall having an upper surface,

(b) a side wall integral with the said top wall and having an inner surface,

(c) means positioned on the inner surface of the said side wall for engaging a container,

(d) an engaging member of plane configuration integrally formed upon said top wall and extending in a plane substantially perpendicular from said upper surface thereof, said engaging member including first and second fingers defining a keyhole shaped slot therebetween, said slot having a neck portion and a generally circular portion, said fingers being resiliently flexible in said plane in such a manner as to expand said keyhole slot to permit passage of said rod-like member from said circular portion through said neck portion whereby said cap may be disengaged therefrom.

2. In combination, a detachable cap having integral means for attachably supporting itself from an elongated rod-like member comprising:

(a) a top wall having an upper surface,

(b) a side wall integral with said top wall and having an inner surface,

(c) means positioned on the inner surface of the said side wall for engaging a container,

(d) an engaging member of plane configuration integrally formed upon said top wall and extending in a plane substantially perpendicular from said upper surface thereof, said engaging member including first and second fingers defining a keyhole shaped slot therebetween, said slot having a neck portion and a generally circular portion, said fingers being resiliently flexible in said plane in such a manner as to extend said keyhole slot to permit passage of said rod-like member from said circular portion through said neck portion whereby said cap may be disengaged therefrom,

(e) a container having an open end and means adjacent said open end for engaging said means on the said side wall of the cap whereby movement of the said container in a direction to disengage said engaging member from said rod-like member serving to pin the engagement between the engaging means on said cap with that of said container.

References Cited by the Examiner

UNITED STATES PATENTS

2,941,703	6/1960	Abramowitz	206—7
2,958,439	11/1960	Yochem	215—41
3,023,925	3/1962	Sher	220—60

THERON E. CONDON, *Primary Examiner.*