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54 **Container with elastically reversible hinge.**

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Description

This invention relates to a container, such as a tubular container or an extruded container.

It is already known for a container of this type to have a threaded or a coupling type cap. However, it is troublesome to attach or detach the cap to or from the container, and it is inconvenient that the removed cap can be separated unintentionally.

It is also known from US-A-4 234 103 to provide a container with an elastically reversible hinge which eliminates the above-mentioned drawbacks of a conventional container, the container comprising a container body having a neck which has a port, a cover engagable with the port for opening or closing the port of the container body 1, and an elastically reversible hinge formed on a part of a peripheral edge of the cover.

The aim of the present invention is to improve the container described in US-A-4 234 103. This is achieved by the characterising features of claim 1 herein.

The characteristic features of the invention will become more fully apparent and more readily understandable by the following description and the appended claims when read in conjunction with the accompanying drawings, in which:

Fig. 1 is a longitudinal sectional side view of a first embodiment of a container with an elastically reversible hinge of the present invention;

Fig. 2 is an perspective view of the first embodiment disengaging the cover;

Fig. 3 is a longitudinal sectional side view of a second embodiment of a container with an elastically reversible hinge of the invention; and

Fig. 4 is an perspective view of the second embodiment disengaging the cover.

Figs. 1 and 2 show a first embodiment of the invention wherein a container is formed of a synthetic resin and comprises a container body 1 having a neck 12, a cover 2 and an elastically reversible hinge 3. A reduced-diameter port 11 is formed at a top of the neck 12 of the container body 1. An engaging recess 13 is formed on a part of an upper peripheral wall edge of the neck 12 from an upper surface of the neck 12. A peripheral step 14 is formed at an upper peripheral wall edge of the neck 12. A pawl engaging recess 16 for disengaging the cover 2 is formed from the upper surface of the neck 12 at a radially-opposite position to the engaging recess 13.

The cover 2 has a peripheral edge to be detachably engaged with the peripheral step 14 of the neck 12 on an inner surface of the cover 2. A plug cylinder 21 to be engaged with the port 11 of the neck 12 is projected from the inner surface of the cover 2. The cover 2 is moulded from an elastic material.

The elastically reversible hinge 3 is formed at a part of the peripheral edge of the cover 2. A hinge attaching base 31 of the hinge 3 is inserted fixedly into the engaging recess 13.

The elastically reversible hinge 3 comprises the hinge attaching base 31 in the form of a tongue piece with a pawl, integral hinges 32, and an elastic piece 33 of substantially L shape which is integrally moulded with the cover 2. An upper end of the attaching base 31 connects to the peripheral edge of the cover 2 by means of the integral hinges 32, 32. The elastic piece 33 is provided between the integral hinges 32, 32, the upper end portion of the piece 33 being provided at a position near the centre of the top surface of the cover 2 or at a position 34 above an upper attachment 35 of the integral hinges 32, 32. The lower end portion of the piece 33 is provided at a position 37 which is below the integral hinges 32, 32. The cover 2 is pivotally rotated around the integral hinges 32, 32 which act as a rotating axis so that the cover 2 can be opened or closed. In other words, the integral hinges 32, 32 act as a first hinge, while the ends 34, 37 of the elastic piece 33 act as a second hinge and as a third hinge, respectively. The elastically reversible hinge 3 is so formed that the elastic piece 33 is elongated to the maximum when the end 37, the integral hinges 32, 32 and the end 34 are disposed along a rectilinear line. An elastic reversion is generated on the elastically reversible hinge 3 when the end 37, the integral hinges 32, 32 and the end 34 are aligned along the rectilinear line on the way of pivotally rotating the cover 2.

Figs. 3 and 4 show a second embodiment of a container of the invention with an elastically reversible hinge. A lower portion of the engaging recess 13 is cut out to be opened to form a cut-out portion 17. The cut-out portion 17 communicates with the engaging recess 13. The pawl of the hinge attaching base 31 is engaged with an upper edge 15 of the cut-out portion 17.

According to the present invention as described above, the cover 2 of the container can be opened or closed by one-touch actuation. Since the elastically reversible hinge 3 is employed, the opening and closing states of the cover of the container can be held to be very convenient for use.

Consequently, the drawbacks of the conventional container can be eliminated, and the container with the elastically reversibly hinge can be provided inexpensively.

Claims

1. A container with an elastically reversible hinge comprising :
 - (a) a container body (1) having a neck (12),

the neck (12) having a port (11);
 (b) a cover (2) which can be made of an elastic material and which is engageable with the port (11) for opening or closing the port (11) of the container body (1); and
 (c) an elastically reversible hinge (3) integrally moulded on a part of a peripheral edge of the cover (2), the elastically reversible hinge (3) including integral hinges (32, 32) and an elastic piece (33) of substantially L shape;

characterised in that:

(d) the elastically reversible hinge (3) includes a hinge attaching base (31) comprising a tongue piece with a pawl;

(e) an engaging recess (13) is formed on a part of an upper peripheral wall edge of the neck (12) from an upper surface of the neck (12); and

(f) the hinge attaching base (31) is inserted fixedly into the engaging recess (13).

2. A container according to claim 1, characterised in that a cutout portion (17) which communicates with the engaging recess (13) is formed at a lower portion of the engaging recess (13), and the pawl of the hinge attaching base (31) is engaged with an upper edge (15) of the cutout portion (17).
3. A container according to claim 1 or claim 2, characterised in that the lower end portion (37) of the elastic piece (33) is provided below the integral hinges (32, 32).

Patentansprüche

1. Behälter mit einem elastisch verschwenkbaren und umsteuerbaren Scharnier mit
 (a) einem Behälterkörper (1) mit einem Hals (12), wobei der Hals (12) einen Auslaß (11) hat,
 (b) einem Deckel (2), der aus einem elastischen Material bestehen kann und der mit dem Auslaß (11) zum Öffnen und Schließen dieses Auslasses des Behälterkörpers (1) in Eingriff bringbar ist, und
 (c) einem elastisch verschwenkbaren Scharnier (3), das an einem Teil der Umfangskante des Deckels (2) einstückig angeformt ist, wobei das elastisch verschwenkbare Scharnier (3) einstückige Gelenkteile (32, 32) und ein elastisches Teil (33) von im wesentlichen L-förmiger Gestalt umfaßt, dadurch **gekennzeichnet**,
 (d) daß das elastisch verschwenkbare und umsteuerbare Scharnier (3) ein Scharnierbefestigungsteil (33) mit einem Zungenstück

und einer Sperrklinke aufweist,

(e) daß an einem Teil der oberen Umfangswandkante des Halses (12) von der Oberfläche des Halses (12) her eine Eingriffsvertiefung (13) eingeformt ist und

(f) daß das Scharnierbefestigungsteil (31) fest in die Eingriffsvertiefung (13) eingeschoben ist.

2. Behälter nach Anspruch 1, dadurch gekennzeichnet, daß am unteren Abschnitt der Eingriffsvertiefung (13) ein ausgeschnittener Abschnitt (17) eingeformt ist, der mit der Eingriffsvertiefung (13) in Verbindung steht, wobei die Sperrklinke des Scharnierbefestigungsteiles (31) mit einer oberen Kante (15) des ausgeschnittenen Abschnittes (17) in Eingriff ist.
3. Behälter nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der untere Endabschnitt (37) des elastischen Teiles (33) unterhalb der einstückigen Gelenkteile (32, 32) vorgesehen ist.

Revendications

1. Récipient à charnière élastiquement réversible, comportant :
- (a) un corps (1) de récipient ayant un col (12), le col (12) ayant un orifice (11) ;
 (b) un couvercle (2) qui peut être réalisé en une matière élastique et qui peut être engagé avec l'orifice (11) pour ouvrir ou fermer l'orifice (11) du corps (1) du récipient ; et
 (c) une charnière élastiquement réversible (3) venue de moulage sur une partie d'un bord périphérique du couvercle (2), la charnière élastiquement réversible (3) comprenant des charnières intégrées (32, 32) et une pièce élastique (33) de forme sensiblement en L ;
 caractérisé en ce que :
- (d) la charnière élastiquement réversible (3) comprend une embase (31) de fixation de charnière comportant une pièce en languette ayant un cliquet ;
 (e) un évidement d'engagement (13) est formé sur une partie d'un bord supérieure de la paroi périphérique du col (12) à partir d'une surface supérieure du col (12) ; et
 (f) l'embase (31) de montage de la charnière est insérée fixement dans l'évidement (13) d'engagement.
2. Récipient selon la revendication 1, caractérisé en ce qu'une partie découpée (17) qui communique avec l'évidement (13) d'engagement est formée à une partie inférieure de l'évidement

(13) d'engagement, et le cliquet de l'embase (31) de montage de la charnière est engagé avec un bord supérieur (15) de la partie découpée (17).

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3. Récipient selon la revendication 1 ou la revendication 2, caractérisé en ce que la partie extrême inférieure (37) de la pièce élastique (33) est prévue au-dessous des charnières intégrées (32, 32).

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FIG. 1

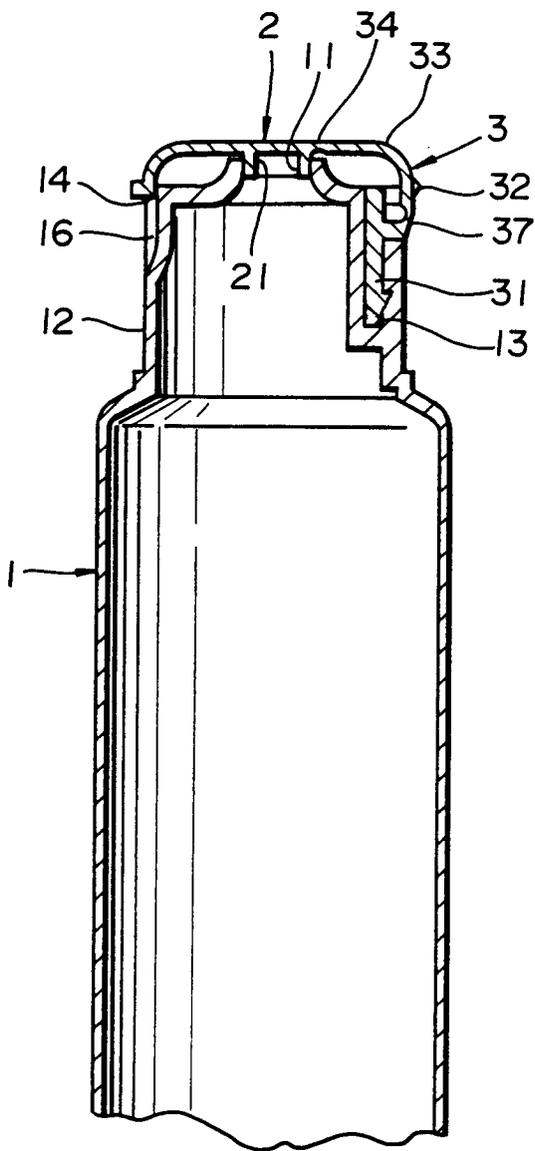


FIG. 2

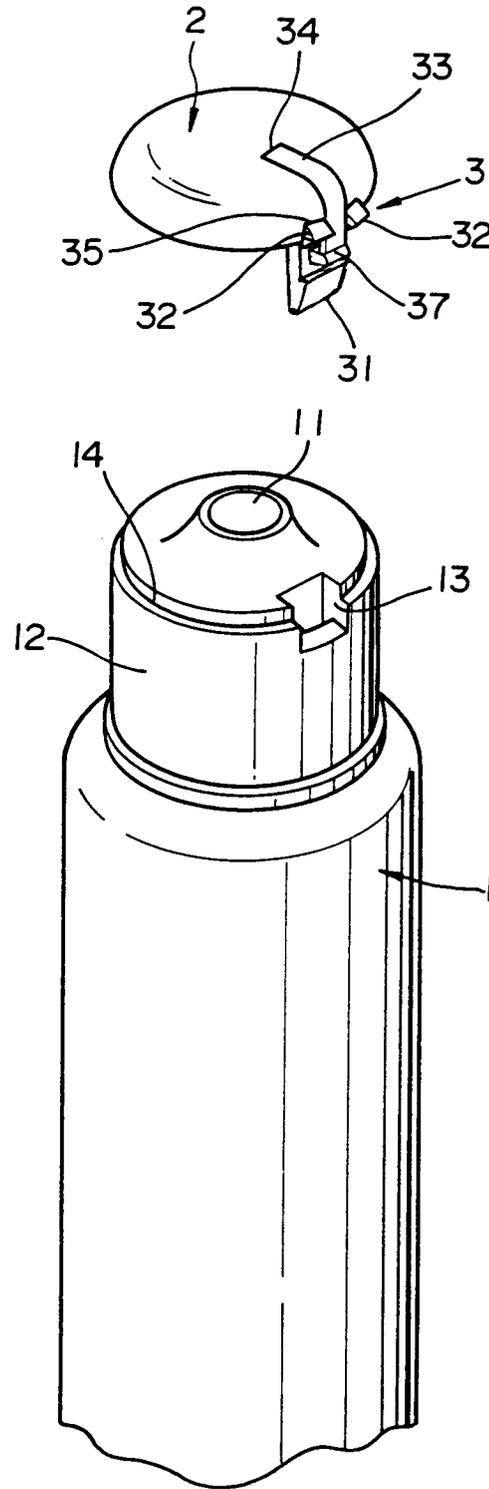


FIG 3

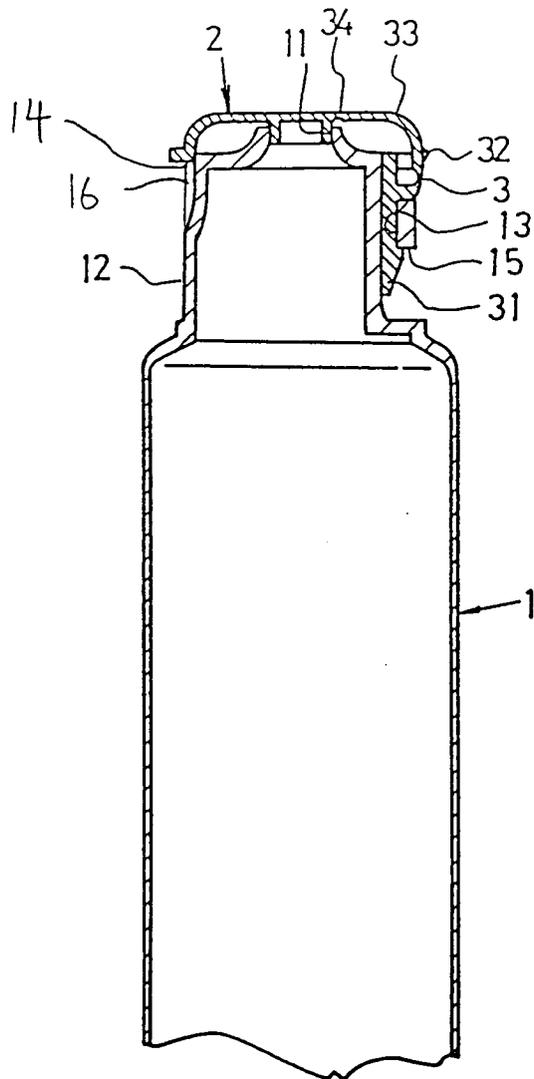


FIG 4

