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(54) **Child-resistant attachment for containers**

Mit einem Zwischenstück versehene, kindergesicherte Verschlussvorrichtung für Behälter

Réceptient muni d'une fermeture comportant une pièce intermédiaire et protégée vis-à-vis des enfants

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(56) References cited:
**US-A- 3 917 097 US-A- 3 967 745
US-A- 4 948 002**

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Description

Field of the invention

[0001] The present invention relates to a package which is resistant to opening by the majority of children, yet which can be opened without undue difficulty by adults, also by those whose manual dexterity may, at least to a degree, be impaired.

Background of the invention

[0002] Child resistant packaging is understood to be an important concept for preventing inadvertent access by children, for example, to potentially dangerous liquid or dry products. However, inclusion of the child resistant feature adds difficulty and frustration for the adult user when attempting to open the package. Due to the difficulty in opening child resistant packages, many persons, especially elderly adults which may also have impaired strength and dexterity, could prefer a non-child resistant package substitute. Alternatively, when dangerous products are purchased in child resistant packages by adults, the child resistant package is often not reclosed in order to defeat the child resistant feature. As a result, the danger of child poisonings may increase in the homes.

[0003] The aforementioned problems are generally recognized in the packaging industry. Attempts to deal with these problems are also disclosed in the patent literature. For example, U.S. Patent No. 4,948,002 issued to Thomock et al. on August 14, 1990 discloses a package comprising a bottle, a collar which is secured in place over the uppermost portion of the bottle and a closure which is secured to the finish portion of the bottle. The collar preferably includes a pair of spring-like push-tabs containing vertical extensions which engage interlocking teeth on the innermost surface of the closure skirt when the closure is fully assembled onto the bottle. To remove the closure, the opposed push-tabs must be manually depressed prior to applying unscrewing torque to the closure to disengage the push-tab extensions from the interlocking teeth on the closure.

[0004] The package disclosed in '002, i.e. the document corresponding to the preamble of claim 1 exhibits highly improved child resistance without significantly impeding access by adults. The package of document '002 has the collar as a transition piece between the container and the closure. This transition piece facilitates the engagement between the container and the closure. Nevertheless, this additional piece increases the manufacturing costs of the package. Indeed, to make the container, the transition piece and the closure making up the child resistant package three different manufacturing processes with three different machines are necessary. Usually, the container is blow molded or injection-blow molded, whereas the transition piece and the closure are injected molded. We found that a certain

amount of manufacturing costs may be saved, if at least the closure and the transition piece are made in a single molding process, since they have a common manufacturing process.

5 Both US-A- 3 967 745 and US-A- 3 917 097 contain subject matter of interest for the invention.

[0005] It is therefore an object of the present invention to provide a transition piece and a closure made in a single molding process for a child resistant package.

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Summary of the invention

[0006] The present invention, having the features set forth in Claim 1 is a child-resistant package comprising a container, a closure and a transition piece. Said container comprises an upper portion, said upper portion comprising a first attachment means for fixing said transition piece to said container and a first engaging means for engaging said closure to said container. Said transition piece comprises an outer wall and a second attachment means corresponding to said first attachment means of said upper portion of said container. Said closure comprises an outer skirt and a top wall. Said closure further comprises a second engaging means corresponding to said first engaging means of said upper portion of said container. Said transition piece comprises at least one resiliently deformable push-tab and said closure comprises at least an interlocking tooth, or said closure comprises at least one resiliently deformable push-tab and said transition piece comprises at least an interlocking tooth. At least part of said push-tab is inwardly movable when a squeezing force is applied to said inwardly movable part of said push-tab. Said push-tab has an exposed surface contour which generally conforms to the exterior surface contour of the adjacent portions of said outer wall of said transition piece or of said outer skirt of said closure. Said interlocking tooth and said push-tab are so formed and positioned to prevent removing of said closure from said container to open said package unless said push-tab is first depressed to disengage said push-tab from said interlocking tooth before said closure is removed. At least part of said push-tab passes adjacent to the innermost surface of said interlocking tooth when disengaging said closure from said container. A breakable connection connects said closure with said transition piece such that said transition piece and said closure are molded as a single piece in one molding process and said closure can be disconnected from said transition piece when said package is opened for the first time. The closure comprises an inner wall comprising said second engaging means and said push-tab is connected with a spring to the innermost surface of said outer skirt of said closure and/or to the outermost surface of said inner well of said closure.

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Brief description of the figures

[0007] Figure 1 is a perspective view of a container

for a child resistant package according to the present invention.

[0008] Figures 2a and 2b are perspective front views of a closure and a transition piece for a child resistant package. Figure 2c is a detailed view of a vertical extension of Figures 2b and 3b.

[0009] Figures 3a and 3b are perspective front views of other closures and a transition pieces for a child resistant package.

[0010] Figure 4 is a perspective front view of another closure and transition piece for a child resistant package.

[0011] Figures 5a and 5b are cross sectional plane views of a child resistant closure according to the present invention.

Detailed description of the invention

[0012] A container (10) for a package according to the present invention is shown in Figure 1. The package comprises the container, a closure (14) and a transition piece (12). Said container defines a hollow body comprising an upper portion (15) with an opening (16). Said upper portion comprises a first attachment means (21) and a first engaging means (22). Preferably, said upper portion comprises a shoulder portion (18) and a neck portion (19). Said neck portion surrounds said opening (16) and may further comprise said first attachment and/or said engaging means.

[0013] Said container (10) according to the present invention is suitable for storing and dispensing potentially dangerous products. Potentially dangerous products are products which may hurt the health of children and adults when not used in a conscious manner and with the correct dosage. Medicaments and cleaning products are, for example, such products. These products may be in solid, tablet, granular, powdered, semi-solid, paste or liquid form.

[0014] Preferably, said container is made of any thermoplastic materials by injection and/or blow moulding. Suitable thermoplastic materials have been extensively described in the art and include vinyl chloride based resins, polymers and copolymers derived from olefins, acrylic polymers and co-polymers, polyethylene, polypropylene, polystyrene, polyethylene terephthalate, polyethylene terephthalate glycol, or mixtures thereof. Said container can be made of single or multi-layer extrusion of such materials. It can also comprise recycled thermoplastic materials. A preferred thermoplastic material used herein for said container is polypropylene or polyethylene.

[0015] Said package further comprises a transition piece (12) and a closure (14). Said transition piece comprises an outer wall (20). Said transition piece is attached onto said upper portion (15) of the container, whereby said outer wall surrounds, but does not close said opening (16). Said transition piece comprises second attachment means corresponding to the first attach-

ment means of said upper portion. Preferably, said second attachment means are located on the innermost surface of said outer wall. The attachment means locks said upper portion and said transition piece together such that said transition piece remains attached to said upper portion even when the closure is engaged or disengaged from said container. For example, when the first and second engaging means enable a rotatable engaging between said container and said closure, said first and second attachment means may be a child resistant snap-fit attachment, or vice versa. In this manner, the movement which may detach said transition piece locked on said container is different from the disengaging movement of said closure.

[0016] Preferably, said first attachment means may further comprise means for interlocking said transition piece to said upper portion to prevent any movement or detachment of said transition piece with respect to said upper portion during the disengaging movement of said closure from said container. For example, when both the attachment means and the engaging means are a combination of lugs and screw threads, said upper portion may comprise at least an anti-rotation lug. Said anti-rotation lug interlocks said upper portion with said transition piece. Consequently, any rotation of said transition piece relative to said container is prevented specifically when said closure is rotatably disengaged from said container.

[0017] Said closure (14) comprises an outer skirt (23) and a top wall (24). Said closure further comprises an inner skirt. This inner skirt comprises the second engaging means, corresponding to the first engaging means (22) of said upper portion (15). Said first and second engaging means between said closure and said upper portion is preferably a snap-fit or combination of lugs and screw threads. Whichever engaging means is chosen, said engaging means has to ensure that said closure closes said package without leakage. The degree of leak tightness achieved by said closure may be different depending from the specific content of said package, i.e. if the content is liquid, granular or tableted.

[0018] The child resistant property of the package is given by the interaction of specific features of said transition piece (12) and said closure (14). As shown in Figure 2a, said transition piece further comprises at least a pushtab (30) with an upward vertical extension (31) which projects above the upper end (25) of said transition piece and points towards the upper wall (24) of the closure. Said upward vertical extension of said pushtab interlocks with an interlocking tooth (32) when said closure is in its closed rest position. In the following, the "closed rest position" is the position in which said closure is fully threaded onto said upper portion (15) of said container. Said interlocking tooth is preferably located on the innermost surface of the outer skirt (23) of said closure (14).

[0019] In another embodiment, the interlocking tooth (32) is formed by a cut through the thickness of the clo-

sure (14) as shown in Figure 2a. The cut through the thickness of the closure is such that the upward vertical extension (31) is blocked within the cut. Consequently, the cut acts like an interlocking tooth impeding the movement to the upward vertical extension when the closure is in its closed rest position. The opening of the closure is prevented by the upward vertical extension being blocked within the cut or the interlocking tooth (32). Indeed, the lower end of the closure (14) has a smaller diameter than the upper end (25) of the transition piece and of the pushtab without the upward vertical extension. The diameter is measured between outermost surfaces of the closure or of the transition piece. Thus the upward vertical extension is the only part of the pushtab (30) which can interact with the interlocking tooth.

[0020] To remove the closure (14), the pushtab (30) must be manually depressed prior to applying a disengaging movement to the closure. In this manner, the upward vertical extension (31) of the pushtab is pushed further into the cut forming the interlocking tooth (32) on the closure, i.e. the upward vertical extension is disengaged from the interlocking tooth located on the closure. The rest of the pushtab does not interact with the interlocking tooth as explained above for the different diameters between the closure and the pushtab. This removal of the closure needs the cooperation of both hands of the user. Indeed, firstly one hand has to hold the bottle and at the same time depress the spring-like pushtabs. Secondly, the closure has to be unscrewed with the other hand. This means that both hands are needed to actually disengage said child resistant closure from the bottle, which is called in the following a "two hand operation".

[0021] An embodiment of a package comprising a child resistant closure which can be opened with only one hand can also be provided. In the following this is called "one hand operation", in contrast to the two-hand operation necessary for the embodiment described above. This is achieved, for example, by the transition piece (112) and closure (114) shown in Figure 3a. In this case the closure (114) comprises at least a pushtab (130) and said transition piece (112) comprises at least an interlocking tooth (132). Said pushtab now located on said closure interlocks with the interlocking tooth located on the transition piece when said closure is in its closed rest position. The locking mechanism between the pushtab and the interlocking tooth is similar to the explanation given before for Figure 2a. In this case the vertical extension (131) points downward away from the top wall (24) of the closure. The downward vertical extension of the pushtab has a greater thickness with respect to the rest of the pushtab. In this manner the downward vertical extension can interact with the cut through the thickness forming the interlocking tooth on the transition piece. This is because the upper end of the transition piece has again a greater diameter with respect to the lower end of the closure.

[0022] An example of a transition piece (212) and a closure (214) comprising as first and second engaging means a snapping mechanism is shown in Figures 2b and 3b. Figure 2b shows the embodiment needing a two hand operation, whereas Figure 3b shows the embodiment needing only a one hand operation. The outer shape of the transition piece and the closure in Figure 2b is similar to the embodiment shown in Figure 2a. The only difference is now the upward or downward vertical extension (231) of the pushtab (230). The upward or downward vertical extension comprises a lug (Fig. 2c, 233). Said lug interacts with said interlocking tooth (232) on the closure to achieve a child resistant closure of the package according to the present invention. Specifically, said lug interacts with said interlocking tooth in such a manner that said closure cannot be pulled off from the corresponding container before said pushtab is pressed. Indeed, only when pushing on said pushtab allows said lug to get free from said interlocking tooth, and consequently to pull off said closure from said container.

[0023] Said lug and said interlocking tooth are made as shown in Figures 2b and 2c. Said lug comprises a lateral extension (234) comprising a flat lower wall (235). Said extension may have a cylindrical shape. Preferably, said extension has a semi-rounded cylindrical shape as shown in Figure 2c which facilitates an easy snap-on and snap-off of said closure from said container. Said interlocking tooth is formed by a cut through the thickness of the closure following the external shape of the pushtab and partially of the pushtab. In particular, the interlocking tooth comprises at least an arm (237) which interacts with the lower wall (235) of the upward or downward vertical extension. Said arm of the interlocking tooth and said lug interact with each other in such a manner that said arm is located under said lower wall when said closure is in its closed position on said container, as shown in Figure 2b. Consequently, in this position said closure cannot be simply pulled off from said container. Indeed, when trying to pull off said closure with an upward movement, said arm of the interlocking tooth comes in interaction with the lower wall of the upward or downward vertical extension. Thereby a further upward movement of said closure is prevented.

[0024] The only way to open said container is first to push on said pushtab (230), thereby inwardly deflecting the upward or downward vertical extension further within the cut forming the interlocking tooth. Consequently, the lug (233) is pushed away from the arm (237) of the interlocking tooth. Said closure can be easily pulled off once said lug is not aligned anymore to the arm. We found that this provides child resistance to said closure according to the present invention. When said closure is snapped onto said container, said lug passes on one side of said cut forming the interlocking tooth. Thereby the pushtab is deflected. Once said lug of the upward or downward vertical extension has overpassed said arm, said pushtab returns to the undeflected position where the lug is positioned within the interlocking tooth.

The same principle and mechanism applies to the embodiment of Figure 3b only that the positioning of the pushtab and the interlocking tooth is reversed with respect to the embodiment of Figure 2b. However, the embodiment of Figure 3b allows a one hand operation, as already described for Figure 3a.

[0025] As described before, said pushtab (30) is the part of said closure or of said transition piece interacting with said interlocking tooth (32). Said pushtab may be part or attached to said outer (23) or inner skirt of said closure. Alternatively, said pushtab may be part or attached to said outer wall (20) of said transition piece. Said pushtab has an exposed outermost surface contour which generally conforms to the exterior outermost surface contour of the adjacent portions of said outer skirt or outer wall. This minimizes the chance of inadvertent depression of said pushtab when said outer skirt is grasped. Said pushtab may be positioned anywhere on said outer skirt, e.g. at different distances from the top wall.

[0026] In Figures 2a to 3b said pushtab is formed by at least a pair of parallel slots (41, 42). In this manner, said pushtab is fixed to said outer wall or outer skirt along the drawn line (44) perpendicular to said slots. Therefore, said pushtab is cantilevered with respect to said outer wall of said transition piece or to said outer skirt of said closure. Another possibility is shown in Figure 4, in which said pushtab is part of said outer skirt, formed by three slots (41, 42 and 43) and connected to said outer skirt through the transition portion (45). The same principles can be applied when said pushtab is part of said outer wall of said transition piece.

[0027] According to the present invention a spring (50) is located between said pushtab (30) and the innermost surface of said outer skirt (23) or the outermost surface of said inner skirt (23') of said closure, as illustrated, for example, in Figure 5a in a cross sectional plane view. In this case, said spring is made of a flexible and resilient arm (51). Preferably, said spring is attached to or is part of the innermost surface of said outer skirt at one end and attached to or leant against said pushtab at the opposite end of said flexible and resilient arm. In this case, said outer skirt (23) comprises a cut through the thickness of said outer skirt. Said cut has substantially the same dimension of said pushtab, giving complete access to said pushtab from the outside of said closure and fully accommodating said pushtab (30). As an alternative embodiment said spring may comprise two flexible and resilient arms (51) attached to or part of the innermost surface of the outer skirt as shown in Figure 5b.

[0028] According to the present invention the package comprises said closure and said transition piece made in a single molding process. This is achieved by having said closure and said transition piece connected to each other by a breakable connection. This breakable connection allows to the molding in a single piece of said closure and said transition piece. This breakable con-

nection enables to disconnect said closure and said transition piece from each other when said package is opened for the first time. This breakable connection further enables the user to check, when buying the package according to the present invention filled with a product, that said package has not been opened before by someone else. Preferably, said breakable connection comprises at least a break-off spur (40). Said break-off spurs connect said closure (14) to said transition piece. This attachment achieved with said break-off spurs is easily broken off when said package is opened for the first time.

[0029] Preferably, said closure (12) and said transition piece (14) are made of thermoplastic material. Such thermoplastic materials have been extensively described in the art and include vinyl chloride based resins, polymers and copolymers derived from olefins, acrylic polymers and co-polymers, polyethylene, polypropylene, polystyrene, polyethylene terephthalate, polyethylene terephthalate glycol, or mixtures thereof. Said closure and said transition piece can be made of single or multi-layer extrusion of such materials. It can also comprise recycled thermoplastic materials. A preferred thermoplastic material used herein is polypropylene. Different parts of said closure or of said transition piece, like said pushtab (30) or said spring (50), may be made of a different thermoplastic material than said outer wall (20) or outer skirt (14) or top wall (24). Parts of different thermoplastic material may be co-injected together. Indeed, we found that said pushtab or spring of different forms (Figures 5a and 5b for example) or of a different material with respect to the rest of said closure or of said transition piece allows to vary the flexibility of said pushtab, i.e. to vary the force needed to be applied on said pushtab.

Claims

1. A child-resistant package comprising a container (10), a closure (14) and a transition piece (12), said container comprising an upper portion (15), said upper portion comprising a first attachment means (21) for fixing said transition piece to said container and a first engaging means (22) for engaging said closure to said container, said transition piece comprising an outer wall (20) and a second attachment means corresponding to said first attachment means of said upper portion of said container, said closure comprises an outer skirt (23) and a top wall (24), said closure further comprising a second engaging means corresponding to said first engaging means of said upper portion of said container, said transition piece and said closure comprising a child resistant means, said child resistant means comprising at least one resiliently deformable pushtab (30) interacting with a corresponding interlocking tooth (32), at least part of said pushtab being in-

wardly movable when a squeezing force is applied to said inwardly movable part of said pushtab, said pushtab having an exposed surface contour which generally conforms to the exterior surface contour of the adjacent portions of said outer wall of said transition piece or of said outer skirt of said closure, said interlocking tooth and said pushtab being so formed and positioned to prevent removing of said closure from said container to open said package unless said pushtab is first depressed to disengage said pushtab from said interlocking tooth before said closure is removed, at least part of said pushtab passing adjacent to the innermost surface of said interlocking tooth when disengaging said closure from said container, characterised in that a breakable connection (40) connects said closure with said transition piece such that said transition piece and said closure are molded as a single piece in one molding process and said closure can be disconnected from said transition piece when said package is opened for the first time, in that said closure (14) comprises an inner wall (23') comprising said second engaging means, and in that said pushtab (30) is connected with a spring (50) to the innermost surface of said outer skirt (23) of said closure (14) and/or to the outermost surface of said inner wall of said closure.

2. A package according to claim 1 characterised in that said breakable connection comprises at least a break-off spur (40).
3. A package according to any of the preceding claims characterised in that said transition piece (112,212) comprises at least an interlocking tooth (132).
4. A package according to claim 3 characterised in that said transition piece (112,212) further comprises at least a cut through the thickness of said transition piece, said cut being dimensioned to fully accommodate said pushtab (130,230).
5. A package according to any of claims 3 to 4 characterised in that said pushtab (130,230) comprises a downward vertical extension (131,132).
6. A package according to any of the claims 1 to 4 characterised in that said closure (14) comprises at least an interlocking tooth (32).
7. A package according to claim 6 characterised in that said pushtab (30) comprises an upward vertical extension (31).
8. A package according to any of the preceding claims characterised in that said closure (14) or said transition piece (12) comprises two pushtabs opposite to each other.

Revendications

1. Emballage résistant à un enfant, comportant un conteneur (10), une fermeture (14) et une pièce de transition (12), ledit conteneur comportant une partie supérieure (15), ladite partie supérieure comportant des premiers moyens de fixation (21) pour fixer ladite pièce de transition sur ledit conteneur, et des premiers moyens de mise en prise (22) pour mettre en prise ladite fermeture sur ledit conteneur, ladite pièce de transition comportant une paroi extérieure (20) et des seconds moyens de fixation correspondant auxdits premiers moyens de fixation de ladite partie supérieure dudit conteneur, ladite fermeture comportant une jupe extérieure (23) et une paroi supérieure (24), ladite fermeture comportant de plus des seconds moyens de mise en prise correspondant auxdits premiers moyens de mise en prise de ladite partie supérieure dudit conteneur, ladite pièce de transition et ladite fermeture comportant des moyens résistant à un enfant, lesdits moyens résistant à un enfant comportant au moins une patte de poussée pouvant être déformée élastiquement (30) agissant mutuellement avec une dent de verrouillage mutuel correspondante (32), au moins une partie de ladite patte de poussée étant mobile vers l'intérieur lorsqu'une force de tassement est appliquée à ladite partie mobile vers l'intérieur de ladite patte de poussée, ladite patte de poussée ayant un contour de surface exposée qui se conforme globalement au contour de surface extérieure des parties adjacentes de ladite paroi extérieure de ladite pièce de transition ou de ladite jupe extérieure de ladite fermeture, ladite dent de verrouillage mutuel et ladite patte de poussée étant formées et positionnées de manière à empêcher un enlèvement de ladite fermeture dudit conteneur pour ouvrir ledit emballage à moins que ladite patte de poussée ne soit d'abord enfoncée pour libérer ladite patte de poussée de ladite dent de verrouillage mutuel avant que la fermeture ne soit enlevée, au moins une partie de ladite patte de poussée devenant adjacente à la surface la plus intérieure de ladite dent de verrouillage mutuel lors de la libération de ladite fermeture dudit conteneur, caractérisé en ce qu'une connexion pouvant être brisée (40) connecte ladite fermeture à ladite pièce de transition, de sorte que ladite pièce de transition et ladite fermeture sont moulées en une seule pièce dans un seul processus de moulage, et ladite fermeture peut être déconnectée de ladite pièce de transition lorsque ledit emballage est ouvert pour la première fois, en ce que ladite fermeture (14) comporte une paroi intérieure (23'), et en ce que ladite patte de poussée (30) est connectée à l'aide d'un ressort (50) à la surface la plus intérieure de ladite jupe extérieure (23) de ladite fermeture (14) et/ou à la surface la plus extérieure de ladite paroi intérieure de ladite ferme-

ture.

2. Emballage selon la revendication 1, caractérisé en ce que ladite connexion pouvant être brisée comporte au moins une liaison cassante (40). 5
3. Emballage selon l'une quelconque des revendications précédentes, caractérisé en ce que ladite pièce de transition (112, 212) comporte au moins une dent de verrouillage mutuel (132). 10
4. Emballage selon la revendication 3, caractérisé en ce que ladite pièce de transition (112, 212) comporte en outre au moins une découpe à travers l'épaisseur de ladite pièce de transition, la découpe étant dimensionnée de manière à recevoir entièrement ladite patte de poussée (130, 230). 15
5. Emballage selon l'une quelconque des revendications 3 à 4, caractérisé en ce que ladite patte de poussée (130, 230) comporte une étendue verticale dirigée vers le bas (131, 132). 20
6. Emballage selon l'une quelconque des revendications 1 ou 2, caractérisé en ce que ladite fermeture (14) comporte au moins une dent de verrouillage mutuel (32). 25
7. Emballage selon la revendication 6, caractérisé en ce que ladite patte de poussée (30) comporte une étendue verticale dirigée vers le haut (31). 30
8. Emballage selon l'une quelconque des revendications précédentes, caractérisé en ce que ladite fermeture (14) ou ladite pièce de transition (12) comportent deux pattes de poussée opposées l'une à l'autre. 35

Patentansprüche

1. Kindersichere Verpackung, mit einem Behälter (10), einem Verschluss (14) und einem Übergangsteil (12), wobei der Behälter einen oberen Abschnitt (15) aufweist, welcher obere Abschnitt erste Befestigungsmittel (21) zum Befestigen des Übergangsteiles am Behälter und erste Verbindungsmittel (22) zum Verbinden des Verschlusses mit dem Behälter aufweist, wobei der Übergangsteil eine Außenwand (20) und zweite Befestigungsmittel korrespondierend zu den ersten Befestigungsmitteln des oberen Abschnittes des Behälters aufweist, wobei der Verschluss eine Außenschürze (23) und eine Deckwand (24) aufweist, wobei der Verschluss ferner zweite Verbindungsmittel korrespondierend zu den ersten Verbindungsmitteln des oberen Abschnittes des Behälters aufweist, wobei der Übergangsteil und der Verschluss Kindersicherungsmittel aufweisen, 40

wobei die Kindersicherungsmittel zumindest eine elastisch verformbare Drucklasche (30) aufweisen, die mit einem korrespondierenden Rastzahn (32) zusammenwirkt, wobei zumindest ein Teil der Drucklasche einwärts bewegbar ist, wenn eine zusammendrückende Kraft auf den einwärts bewegbaren Teil der Drucklasche ausgeübt wird, wobei die Drucklasche eine freiliegende Oberflächenkontur hat, die allgemein der äußeren Oberflächenkontur der benachbarten Abschnitte der Außenwand des Übergangsteiles oder der Außenschürze des Verschlusses entspricht, wobei der Rastzahn und die Drucklasche so geformt und positioniert sind, daß sie ein Entfernen des Verschlusses vom Behälter zwecks Öffnen der Verpackung solange verhindern, bis die Drucklasche soweit eingedrückt ist, daß sie von dem Rastzahn gelöst ist, bevor der Verschluss entfernt werden kann, wobei zumindest ein Teil der Drucklasche neben der innersten Oberfläche des Rastzahnes vorbeitrifft, wenn der Verschluss vom Behälter gelöst wird, dadurch gekennzeichnet, daß eine durchbrechbare Verbindung (40) den Verschluss mit dem Übergangsteil so verbindet, daß der Übergangsteil und der Verschluss in einem Formprozeß als ein Stück geformt werden und der Verschluss von dem Übergangsteil gelöst werden kann, wenn die Verpackung zum ersten Mal geöffnet wird, und daß der Verschluss (14) eine Innenwand (23') aufweist, welche die zweiten Verbindungsmittel aufweist, und daß die Drucklasche (30) über eine Feder (50) mit der innersten Oberfläche der Außenschürze (23) des Verschlusses (14) und/oder der äußersten Oberfläche der Innenwand des Verschlusses verbunden ist.

2. Verpackung nach Anspruch 1, dadurch gekennzeichnet, daß die durchbrechbare Verbindung zumindest einen zerreißbaren Steg (40) aufweist. 45
3. Verpackung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß der Übergangsteil (112, 212) zumindest einen Rastzahn (132) aufweist. 50
4. Verpackung nach Anspruch 3, dadurch gekennzeichnet, daß der Übergangsteil (112, 212) ferner zumindest einen Ausschnitt durch die Dicke des Übergangsteiles hindurch aufweist, welcher Ausschnitt so dimensioniert ist, daß er die Drucklasche (130, 230) zur Gänze aufnimmt. 55
5. Verpackung nach einem der Ansprüche 3 bis 4, dadurch gekennzeichnet, daß die Drucklasche (130, 230) zumindest eine nach unten gerichtete vertikale Verlängerung (131, 132) aufweist.
6. Verpackung nach einem der Ansprüche 1 bis 2, dadurch gekennzeichnet, daß der Verschluss (14) zu-

mindest einen Rastzahn (32) aufweist.

7. Verpackung nach Anspruch 6, dadurch gekennzeichnet, daß die Druckflasche (30) eine nach oben gerichtete vertikale Verlängerung (31) aufweist. 5
8. Verpackung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß der Verschluß (14) oder der Übergangsteil (12) zwei einander gegenüberliegende Druckflaschen aufweist. 10

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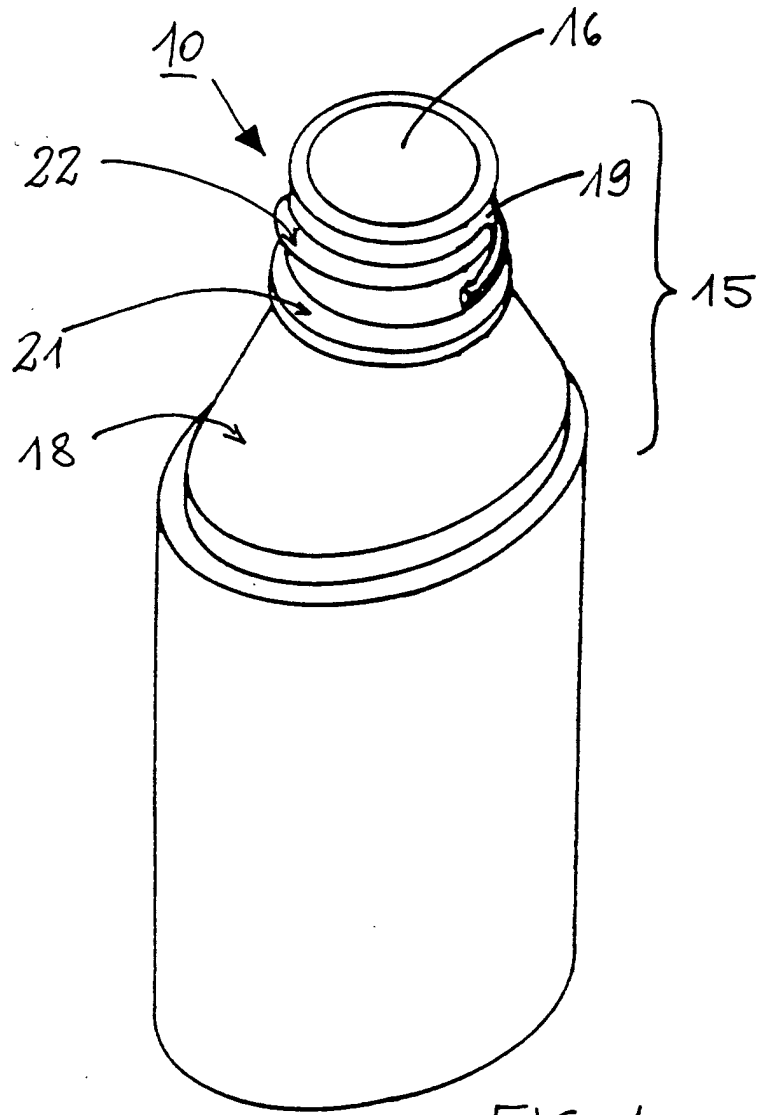
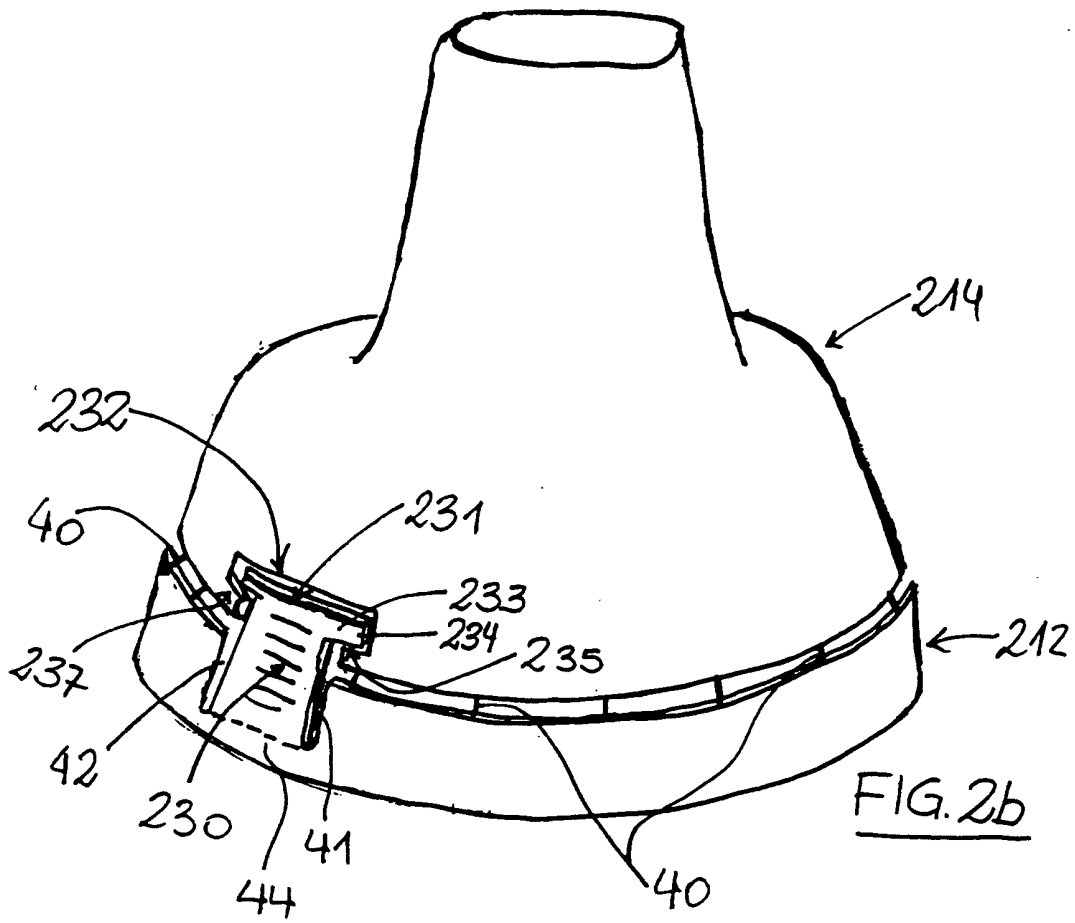
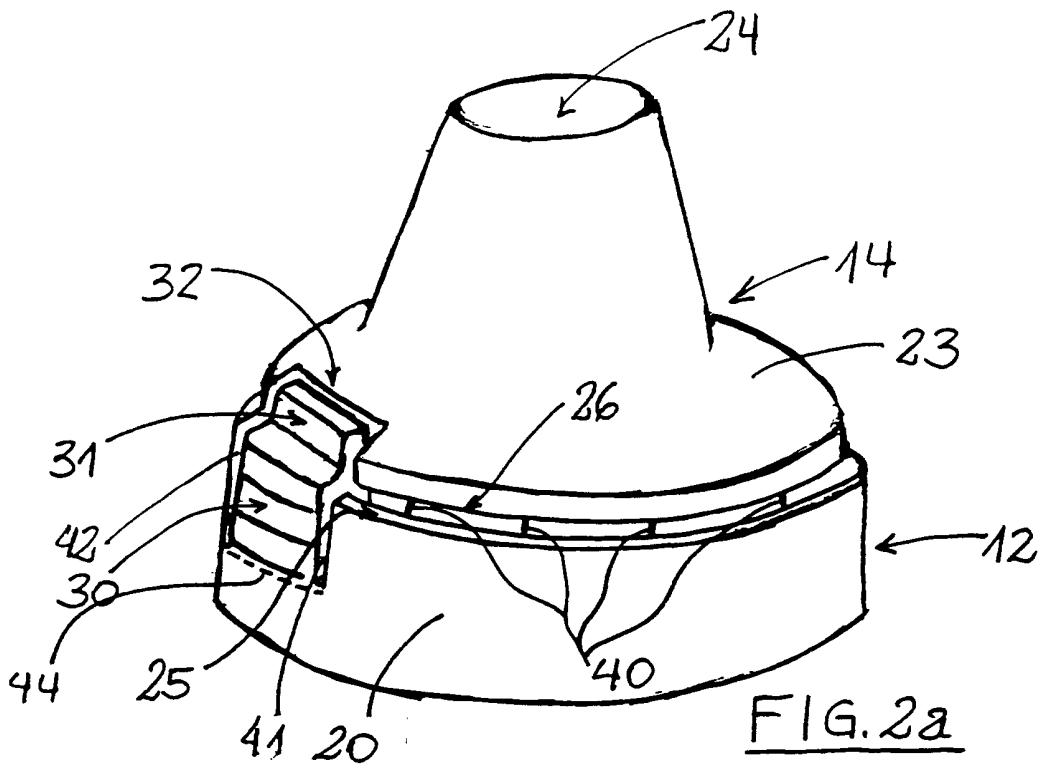
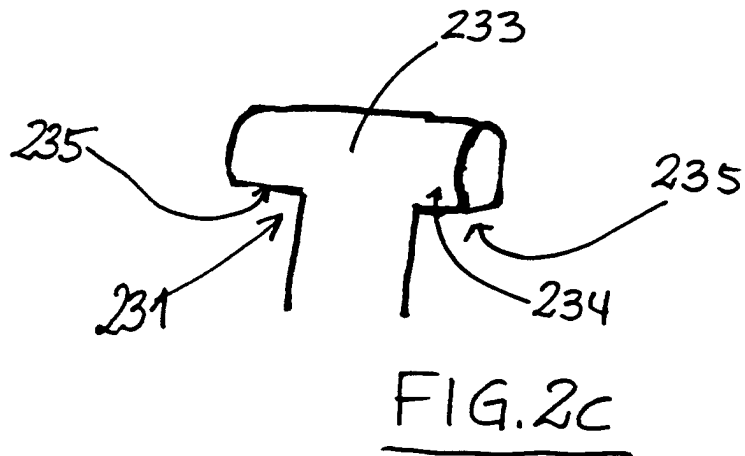
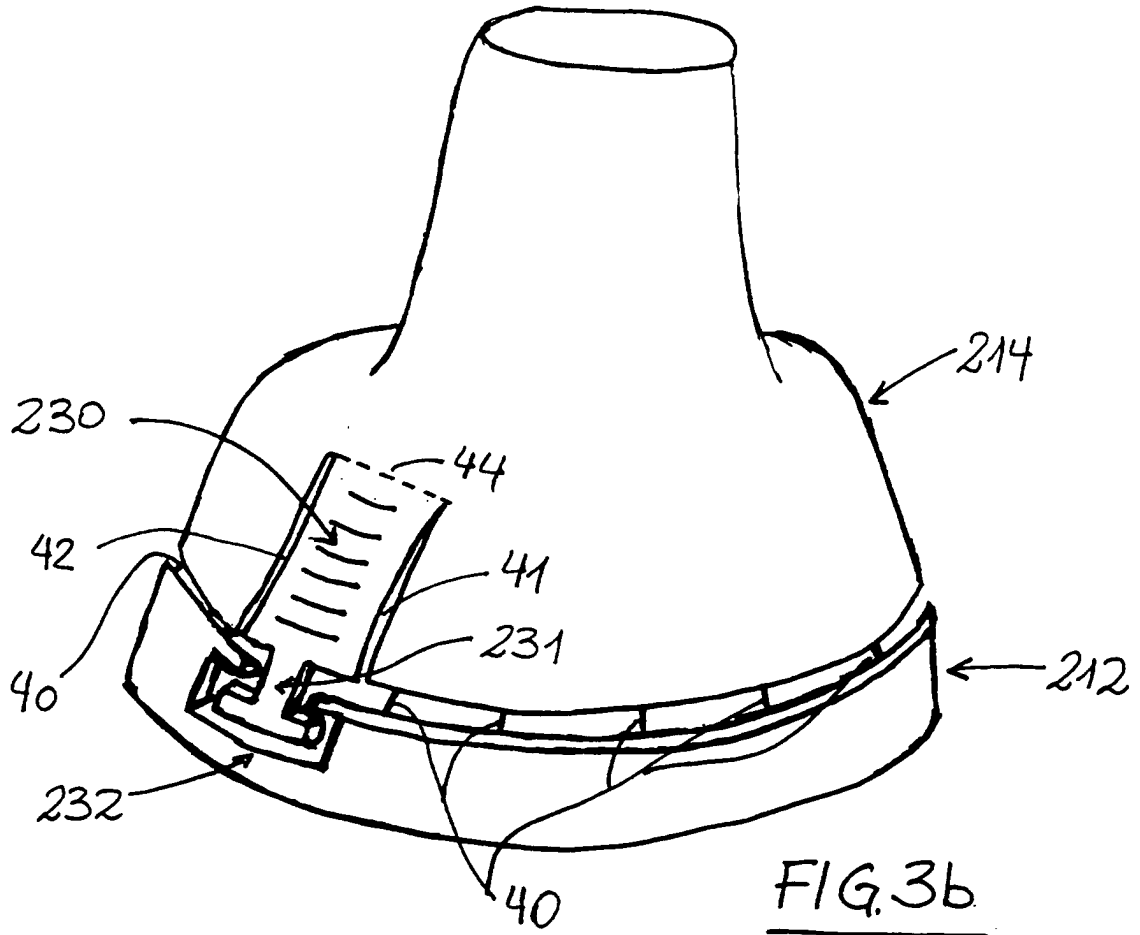
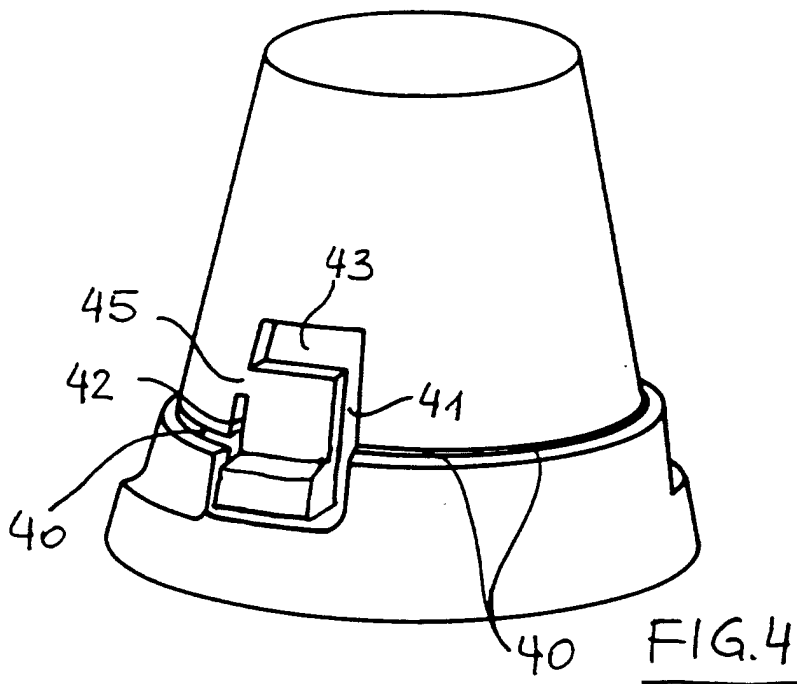
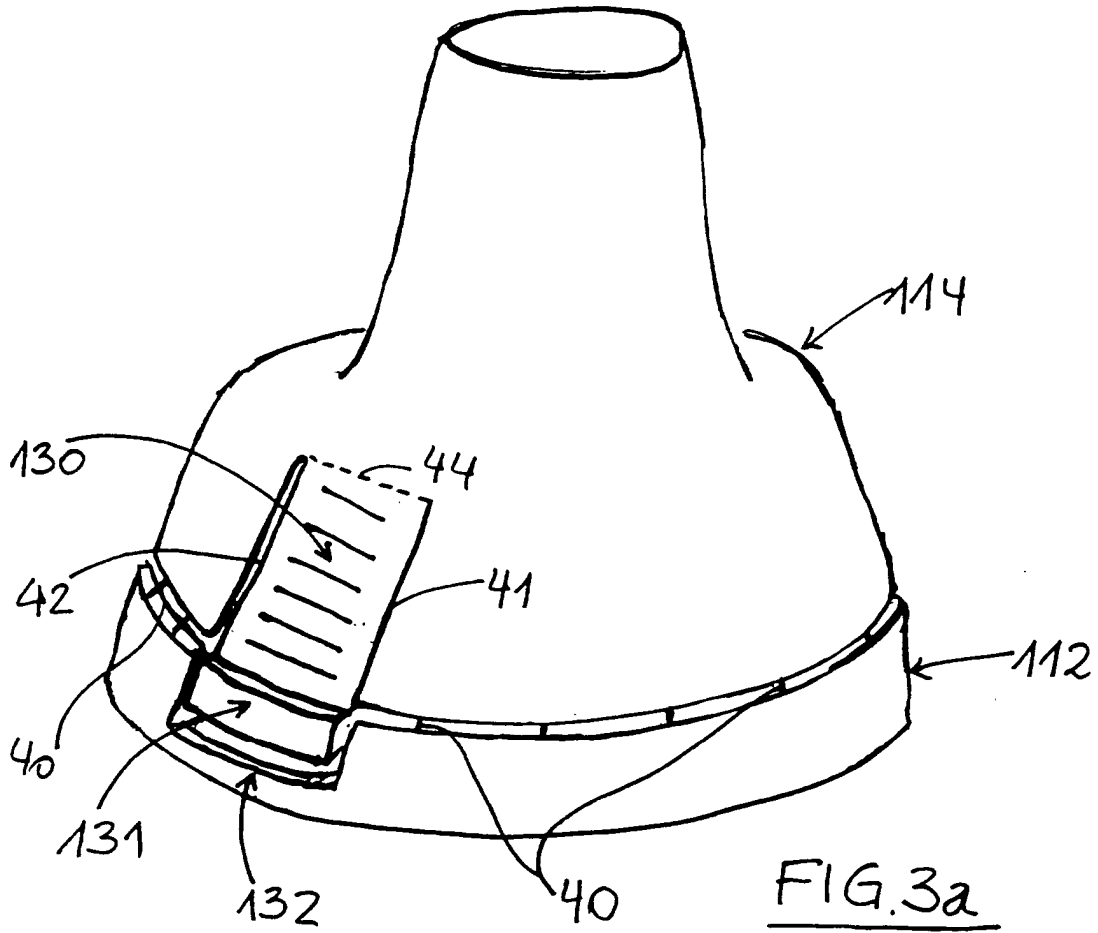


FIG. 1







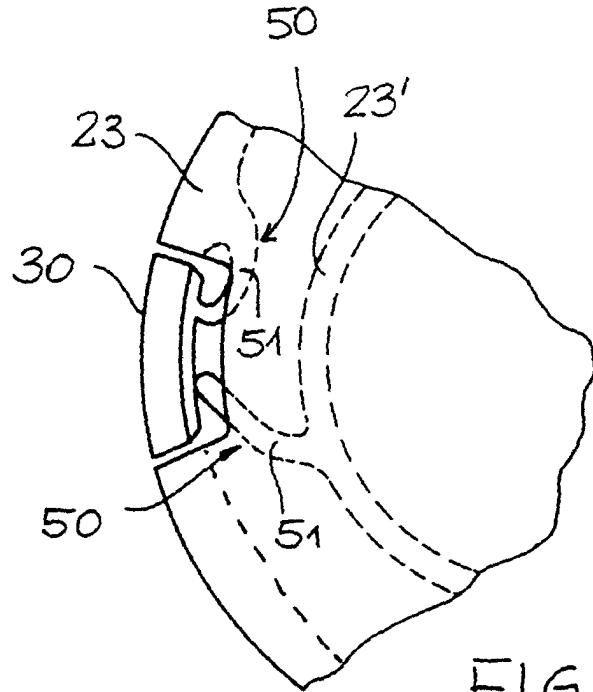


FIG. 5a

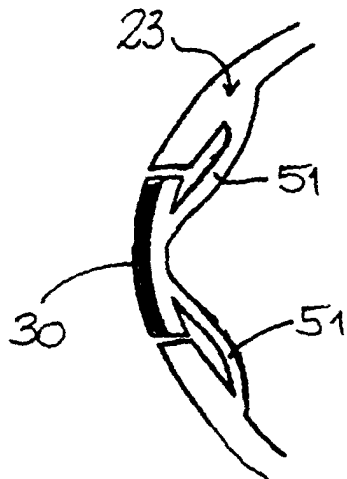


FIG. 5b