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(54) **A refillable container**

Wiederbefüllbarer Behälter

Réceptacle rechargeable

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**EP-A- 0 585 919**                      **FR-A- 1 546 080**

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## Description

### Field of the Invention

The present invention relates to containers comprising a pouring spout. The containers of the present invention are refillable.

### Background of the Invention

Liquid laundry detergents are mainly delivered in plastic bottles. But also granular laundry detergents in plastic containers are used as an alternative to paper-board cartons. These plastic containers are more resistant to possible mechanical damages and protect the content from any penetration of humidity and fluids from the outside. But for environmental reasons, such plastic containers are preferably sold as refillable containers, which can be refilled from, typically, refill bags. The refilling of containers with laundry detergents which are presently on the market comprising a lid, is achieved by detaching completely said lid from the container. Indeed, the pouring spout is too small to be used as a refilling opening.

We found that the detaching of the lid from the container has several disadvantages. The closure between lid and container is normally made leakage tight. This means that a certain strength is needed to disengage said lid from said container. This may result in an uncontrolled disengagement which may consequently also produce unnecessary spillage from the inside of the container. Therefore the refilling is messy and not easy. Furthermore, we found also that repeated disengagement of the lid from the container may result in the weakening of the tight closure between these two parts especially when it is a snapping closure. This means that with every refilling the container loses more and more its leakage tightness. A premature change of the container may be necessary. Otherwise, a non-tight container may leak unused detergent from between the lid and the container especially during the pouring action. It is therefore an object of the present invention to provide a container which is able to be refilled without detaching the lid from the container.

Such plastic containers can contain liquid or granular laundry detergents and the contained detergent can be directly poured into a measuring and/or dispensing device or directly into the dispensing container of a washing machine through a pouring spout. With commercially available containers, these measuring and/or dispensing devices are inside the container together with the contained granular detergent, said container having a lid. This means that, the hands of the user get in direct contact with the contained detergent. This direct contact between the hands and the granular detergent may result in sticking of granules on said hand, which obliges hand-washing by the user. Furthermore, this simple solution is not possible with a con-

tained liquid detergent, where it is necessary to keep these devices always floating on said liquid detergent. Otherwise, it is very messy to get these devices from the bottom of a liquid filled container. Furthermore, also in this case the lid has to be detached from the container to reach said devices inside. Therefore the spillage described above is even more probable and worse with a full container.

Another problem is the storing of the measuring and/or dispensing device between uses. Keeping it outside the container, for example on top of said container or nearby, has the risk that this device may get stained, contaminated or even lost. To avoid this, the only possibility available to the user is to put it inside the container again. But therefore the lid has to be detached again from the container with the disadvantages discussed before. It is therefore another object of the present invention to provide a container which not only delivers but also is able to hold a measuring and/or dispensing device after every use and is always reached by the user without detaching the lid from the container.

FR-A-1 546 080 discloses a container according to the preamble of claim 1, having a pouring spout and a separate opening with a holding cup. The holding cup can contain a measuring device. However, the holding cup has to be unscrewed to allow access through the separate opening to the interior of the container.

### Summary of the Invention

The objects of the present invention are obtained with a container according to claim 1. The present invention provides a container comprising a pouring spout and a refilling opening, whereby the pouring spout is not the refilling opening. Said container contains liquid or granular laundry detergent and includes a measuring and/or dispensing device for said detergent. Said pouring spout allows a controlled pouring from the inside to the outside of said container. Said refilling opening allows easy refilling of said container. Said device is located in said refilling opening. Said device engages with said refilling opening so that a falling of said device inside said container is prevented without a holding cup.

### Brief Description of the Figures

Figure 1 illustrates a perspective view of the container in an embodiment of the present invention.

Figure 2 shows a top view of the refilling opening of the container represented in Figure 1.

Figure 3 shows a partial cross sectional view of a lid engaged in the container in another embodiment of the present invention.

Figures 4a and 4b illustrate possible engagement systems between the measuring and/or dispensing device and the refilling opening.

### Detailed Description of the Invention

An embodiment of the present invention is shown in Figure 1. The container (10) comprises a side wall (15) defining a hollow body (16) with a base wall (18) and a top wall (19) parallel to said base wall. The shape of said container may be rounded or polygonal. The container (10) of the present invention comprises a pouring spout (14) and a refilling opening (12) on said top wall (19). The top view of said container (10) with said refilling opening (12) is shown in Figure 2. Said container contains liquid or granular laundry detergent and includes a measuring and/or dispensing device (Fig. 3, 30) for said detergent. Therefore, the container (10) according to the present invention has not a detachable lid as an essential feature. Indeed, the refilling can be accomplished through said refilling opening (12).

As a preferred option, the container (10) comprises also a handle (22). This handle may be a separate part permanently attached to the hollow body (16) of the container. But preferably said handle (22) is an integral part of said body (16). The base wall (18) may be adapted to receive the top wall (19) of another container to allow a stable stacking of a container over another. This means that said base wall has the reversed features of the top wall. For example, if the top wall is convex shaped and has securing ribs, the base wall is consequently substantially of the same dimension as the top wall, is concave shaped and has grooves corresponding to the securing ribs of said top wall.

In a preferred embodiment, said container comprises at least a transparent part which allows to look through into the container. Therefore, it is easy for the user to control the remaining amount of content in said container. This transparent part may be of any shape and dimension. Also the location of this part is not critical to the present invention. It is also possible that said container is completely transparent.

The container (10) is made of a plastic material. The plastic material may be chosen by any person skilled in the art. Preferably, adequate materials are chosen to be sufficiently resistant to external mechanical forces against damage or breakage. This may be achieved also with flexible plastic materials which are able to absorb the external forces acting on said material without permanent deformation or damage. Using flexible materials, parts like the handle or the base wall may be reinforced in respect to other parts to ensure a sure handling and stable standing and stacking. Therefore, high density polyethylene, polypropylene, polyethylene terephthalate or polyvinyl chloride are suitable plastic materials for the container. Blow molding is the preferred manufacturing process of these containers.

As an optional feature, the container (10) may also comprise a detachable lid (40) in place of the top wall (19) as shown in Figure 3. In this case this lid comprises the refilling opening (12) on the top wall (41) of said lid. Said lid (40) closes tightly the container. The upper end

lip (45) of said container (10) is adapted to engage said lid in a leakage tight manner. Preferably the upper end lip (45) of said container engages tightly the side wall (46) of said lid (40). To allow an easy lid-container detachment, said lid (40) comprises an opening lip (47) opposite to the pouring spout (14), which cooperates with an undercut portion (48) on the container (10) right under said opening lip. The attachment between the lid (40) and the container (10) may be chosen by any person skilled in the art. Said attachment has to ensure leakage tightness and to prevent sitting of granular substances. Plastic materials are preferably used for the lid. For example, polypropylene is a suitable material. The manufacturing process is preferably injection molding.

An essential feature of the present invention is the pouring spout (Fig. 3, 14). Any person skilled in the art may choose the type of pouring spout. Said spout should allow an easy and controlled pouring of the contained substance from the inside to the outside of said container. In the present invention a hinged spout is preferred. This particular hinged spout, as it will be called in the following, is shown in the open position in Figure 3. Said spout is connected along one side (24) to said lid (40). In the following the same description applies also to said container (10) with said hollow body (16). This spout (24) is closed by pushing the part (25) into the corresponding hole (26) in said lid (40) or body (16), the side (24) acting as a hinge. The spout (14) is blocked therein through a locking mechanism between said part (25) and the side wall delimiting the hole (26). Exerting a small force in the opposite direction of the closing direction, the part (25) gets unlocked from said locking mechanism, obtaining again the open pouring spout.

The main advantage of the pouring spout (14) described in more detail before resides in the fact that said spout does not remain in a protruding position when unused. Therefore, this type of spout occupies the minimum of space, since it is retractable within said lid (40) or said hollow body (16) when said spout is unused. Specifically, saving space has great logistic advantages during storage and transportation of the container (10). Nevertheless, the form of the pouring spout and the locking systems of said spout within said lid or hollow body are various and may be chosen by any person skilled in the art.

The location of the pouring spout (14) may be various. Said spout can be on the side wall (15) or on the top wall (19) of the container (10). If the container comprises a lid (40), said spout may be on the side wall (46) or on the top wall (41) of the lid (40). If the container comprises a handle, said spout is always positioned opposite to said handle. This opposed positioning spout-handle gives a better control of the amount dispensed through said pouring spout. Therefore the dispensing is made handier. The spout is made either of the same material of said container (if said spout is part of said container) or of the material of the lid (if said spout is part of said lid).

The top wall (19) or (41) comprises the refilling opening (12). Any person skilled in the art may choose the exact location on said top wall (19) or (41) and its shape. A top view of said top wall is shown in Figure 2. The dimension of this opening is big enough to allow an easy refilling of the container. Indeed, said opening may be as wide as the top wall. The refilling opening may also be situated on a different plane, preferably under the main plane of said top, as schematically shown in Figure 3. In this manner, the refilling opening is protected from another stacked container onto said top wall (19) or (41) improving also the stability of the stacking. This refilling opening may also continue in the interior of the container with a funnel. Said funnel conveys the refilling into said container in an improved manner.

The refilling opening (12) facilitates the refilling also of the container (10') with the lid (40). Indeed, it is not necessary anymore to detach the lid (40) from said container (10') for refilling. The refilling without the need of detachment of the lid has several advantages. The disengagement of the lid from the container may be uncontrolled with a consequent spillage from the inside of the container. Therefore the detachment of the lid for refilling is messy and not easy. Furthermore, we found also that repeated disengagement of the lid from the container may result in the weakening of the tight closure between these two parts especially when it is a snapping closure. This means that with every refilling the container loses more and more its leakage tightness. A premature change of the container may be necessary. Otherwise, a non tight container leaks unused detergent from between the lid and the container especially during the pouring action. With the refilling opening, the closure between lid and container can be made tighter, since the user is not supposed to disengage the lid from the container.

Detergents, especially so called "compact" detergents, are supplemented with measuring and/or dispensing devices. A lesser amount of compact detergent is needed. Therefore it is important to measure out the exact quantity of detergent necessary for a wash cycle first in a measuring device before putting this measured quantity in a dispenser of a washing machine for example. For other types of detergent it is more important to completely dispense the detergent directly in the washing machine together with the laundry with a dispensing device. A combination of measuring and dispensing devices is also possible. Such devices are commercially available and have been extensively described in the art. Therefore the problem arises how to supplement this measuring and/or dispensing device together with the container filled with laundry detergent.

The easiest possibility is to put said device inside the container. But then a container with a detachable lid is needed. Therefore the corresponding disadvantages of the disengagement of the lid from the container as discussed above can not be avoided. Furthermore, this way of supplementing said device is not possible for liq-

uid detergents. Indeed, said device easily sinks to the bottom of the container. Therefore it is more difficult and messy to recover said device. A possible solution is, for example, to have another opening on the top wall (19) or (41) that holds and engages said device in said opening. In this manner, said device is always reachable by the user without detaching the lid from the container. Said opening gives also the possibility to store the device in between said opening, therefore protecting said device from being stained, contaminated or lost which may happen keeping said device somewhere separated from said container.

As a preferred embodiment of the present invention, the refilling opening (12) holds or engages said device (30), as schematically illustrated in Figure 3. The holding and engaging said device is also possible when the refilling opening comprises a funnel, if this funnel is consequently adapted to the form of said device. Possible engagements between said device and the opening are various. A preferred execution features cooperating snapping or threading mechanisms between said measuring and/or dispensing device and said refilling opening as shown in Figure 4a. In another preferred execution, said measuring and/or dispensing device comprises protruding parts which lie on the edge (31) of said refilling opening (12) when said device is engaged in said opening as shown in Figure 4b. Said edge may also be made flexible to nest said device in a tight manner by pushing said device into said refilling opening. Said device (30) can be therefore used as the only cap reversibly closing said refilling opening (12) in a leakage-tight or sift-proof manner.

As a preferred option of the present invention, the refilling opening (12) with or without said measuring and dispensing device is reversibly closeable by a separate cap (Fig. 3, 50). In this manner, the container (10) or (10') stays closed, even when said device is being used, especially when said device is used as a dispensing device in the washing machine. This is to ensure that the inside of said container can always be isolated from any possible contamination from the exterior. Said cap also protects said device from being damaged or lost during transportation. The engagement system between said refilling opening and said cap may be the same as described previously for the engagement system between said measuring and/or dispensing device, i.e. threading, snapping or other tight engagement systems. Said cap closes the container of the present invention, with or without the measuring and dispensing device engaged in said refilling opening, in a leakage-tight or sift-proof manner. Said cap comprises a top wall and a side wall. In a preferred embodiment, said cap comprises gripping means to facilitate the handling of said cap by the user. Preferably said gripping means are located on the external surface of the side wall comprising ribs perpendicular to the top wall.

The present invention may be used in the following way :

- the measuring and/or dispensing device is disengaged from the refilling opening;
- the contained detergent is poured into the measuring and/or dispensing device in a controlled manner holding through the pouring spout;
- if the measuring and/or dispensing device is put in the washing machine together with the laundry, the cap reversibly closes the refilling opening alone;
- if the measuring and/or dispensing device is not in use, said device engages in the refilling opening and the cap engages on top of said device, said device and said cap both reversibly closing said opening in a leakage-tight or sift-proof manner;
- the amount of contained detergent is controlled through the transparent part of the container holding said container in its standing position;
- once the container is empty, said container is refilled through the refilling opening with detergent available in refilling bags.

The container according to the present invention is stackable, if provided with means which ensure a stable stacking. For example, these means may be ribs on the top wall (19) or (41) engaging corresponding grooves in the bottom of a stacked container. Other means are available to any person skilled in the art. As schematically illustrated in Figure 3, the refilling opening (12) is located on a lower plane in respect to the rest of the top wall (19). This allows to better avoid that the measuring and/or dispensing device (30) and the cap (50) engaged in said refilling opening (12) may impede a stable stacking of another identical container.

## Claims

1. A container (10) comprising a pouring spout (14) and a refilling opening (12), whereby the pouring spout is not the refilling opening, said container (10) containing liquid or granular laundry detergent and said container including a measuring and/or dispensing device (30) for said detergent, said pouring spout (14) allowing a controlled pouring from the inside to the outside of said container (10), said refilling opening (12) allowing easy refilling of said container (10), said device (30) being located in said refilling opening (12) characterized in that said dispensing device (30) engages with said refilling opening so that a falling of said device (30) inside said container (10) is prevented without a holding cup.
2. A container (10) according to claim 1 characterized in that said engagement between said measuring and/or dispensing device (30) and said refilling opening (12) comprise cooperating snapping or threading mechanisms on said measuring and/or dispensing device and said refilling opening.
3. A container (10) according to claim 1 characterized in that said engagement between said measuring and/or dispensing device (30) and said refilling opening (12) comprise protruding parts (31) on said measuring and/or dispensing device (30) which nest in the edge of said refilling opening (12) when said device is engaged in said opening (12).
4. A container (10) according to any of the preceding claims characterized in that said device (30) closes in a tight manner said refilling opening (12).
5. A container (10) according to any of the preceding claims characterized in that said refilling opening (12) with and without said device (30) engaged in said opening (12) is reversibly closeable with a detachable cap (50).
6. A container (10) according to any of the preceding claims characterized in that said container (10) comprises a lid (40), said lid (40) comprising said refilling opening (12).
7. A container (10) according to claim 6 characterized in that said pouring spout (12) is an integral part of said container (10) or of said lid (40).

## Patentansprüche

1. Behälter (10) für flüssiges oder körniges Waschmittel, mit einer Gießtülle (14) zum kontrollierten Ausgießen eines Inhalts des Behälters (10), einer mit der Gießtülle nicht identischen Auffüllöffnung (12) zum einfachen Wiederauffüllen des Behälters (10), und einer in der Auffüllöffnung (12) anordbaren Meß- und/oder Verteileinrichtung (30) für das Waschmittel, **dadurch gekennzeichnet**, daß die Verteileinrichtung (30) und die Auffüllöffnung (12) derart ineinandergreifen, daß ohne die Verwendung einer Halterungsschale ein Hineinfallen der Verteileinrichtung (30) in den Behälter (10) verhindert wird.
2. Behälter (10) nach Anspruch 1, **dadurch gekennzeichnet**, daß das Ineinandergreifen der Meß- und/oder Verteileinrichtung (30) und der Auffüllöffnung (12) durch zusammenwirkende auf der Meß- und/oder Verteileinrichtung und der Auffüllöffnung ausgebildete Schnapp- oder Einführungsmechanismen erfolgt.
3. Behälter (10) nach Anspruch 1, **dadurch gekennzeichnet**, daß das Ineinandergreifen der Meß-

und/oder Verteileinrichtung (30) und der Auffüllöffnung (12) durch hervorstehende auf der Meß- und/oder Verteileinrichtung (30) ausgebildete Teile (31) erfolgt, die in den Rand der Auffüllöffnung (12) eingeschoben sind, wenn die Verteileinrichtung (30) und die Auffüllöffnung (12) ineinandergreifen.

4. Behälter (10) nach irgendeinem der vorangegangenen Ansprüche, **dadurch gekennzeichnet**, daß die Auffüllöffnung (12) mit der Verteileinrichtung (30) dicht verschließbar ist.

5. Behälter (10) nach irgendeinem der vorangegangenen Ansprüche, **dadurch gekennzeichnet**, daß die Auffüllöffnung (12) mit und ohne der in die Auffüllöffnung (12) eingreifenden Verteileinrichtung (30) dicht mit einer auswechselbaren Verschlusskappe (50) verschließbar ist.

6. Behälter (10) nach irgendeinem der vorangegangenen Ansprüche, **dadurch gekennzeichnet**, daß der Behälter (10) einen die Auffüllöffnung (12) enthaltenden Deckel (40) aufweist.

7. Behälter (10) nach Anspruch 6, **dadurch gekennzeichnet**, daß die Gießtülle (14) ein integrierter Bestandteil des Behälters (10) oder des Deckels (40) ist.

#### Revendications

1. Récipient (10) comportant un bec verseur (14) et une ouverture de rechargement (12), grâce à quoi le bec verseur ne correspond pas avec l'ouverture de rechargement, ledit récipient (10) contenant un liquide ou un détergent lessiviel granulaire et ledit récipient comportant un dispositif de mesure et/ou de distribution (30) pour ledit détergent, ledit bec verseur (14) permettant un versement contrôlé à partir de l'intérieur vers l'extérieur dudit récipient (10), ladite ouverture de rechargement (12) permettant de recharger facilement ledit récipient, ledit dispositif de distribution (30) étant disposé dans ladite ouverture de rechargement (12), caractérisé en ce que ledit dispositif de distribution (30) vient en prise avec ladite ouverture de rechargement de telle sorte qu'une chute dudit dispositif (30), à l'intérieur dudit récipient (10), est empêchée sans la présence d'une coupelle de maintien.

2. Récipient (10) selon la revendication 1, caractérisé en ce que ladite prise entre ledit dispositif de mesure et/ou de distribution (30) et ladite ouverture de rechargement (12) comporte des mécanismes d'encliquetage ou de filetage coopérant sur ledit dispositif de mesure et/ou de distribution et ladite ouverture de rechargement.

3. Récipient (10) selon la revendication 1, caractérisé en ce que ladite prise entre ledit dispositif de mesure et/ou de distribution (30) et ladite ouverture de rechargement (12) comporte des parties faisant saillie (31) sur ledit dispositif de mesure et/ou de distribution (30) qui viennent se loger dans le bord de ladite ouverture de rechargement (12) lorsque ledit dispositif vient en prise dans ladite ouverture (12).

4. Récipient (10) selon l'une quelconque des revendications précédentes, caractérisé en ce que ledit dispositif (30) ferme d'une manière étanche ladite ouverture de rechargement (12).

5. Récipient (10) selon l'une quelconque des revendications précédentes, caractérisé en ce que ladite ouverture de rechargement (12), avec et sans ledit dispositif (30) en prise dans ladite ouverture (12), est susceptible d'être fermée de façon réversible à l'aide d'un bouchon détachable (50).

6. Récipient (10) selon l'une quelconque des revendications précédentes, caractérisé en ce que ledit récipient (10) comporte un couvercle (40), ledit couvercle (40) comportant ladite ouverture de rechargement (12).

7. Récipient (10) selon la revendication 6, caractérisé en ce que ledit bec verseur (12) fait partie intégrante dudit récipient (10) ou dudit couvercle (40).

Fig. 1

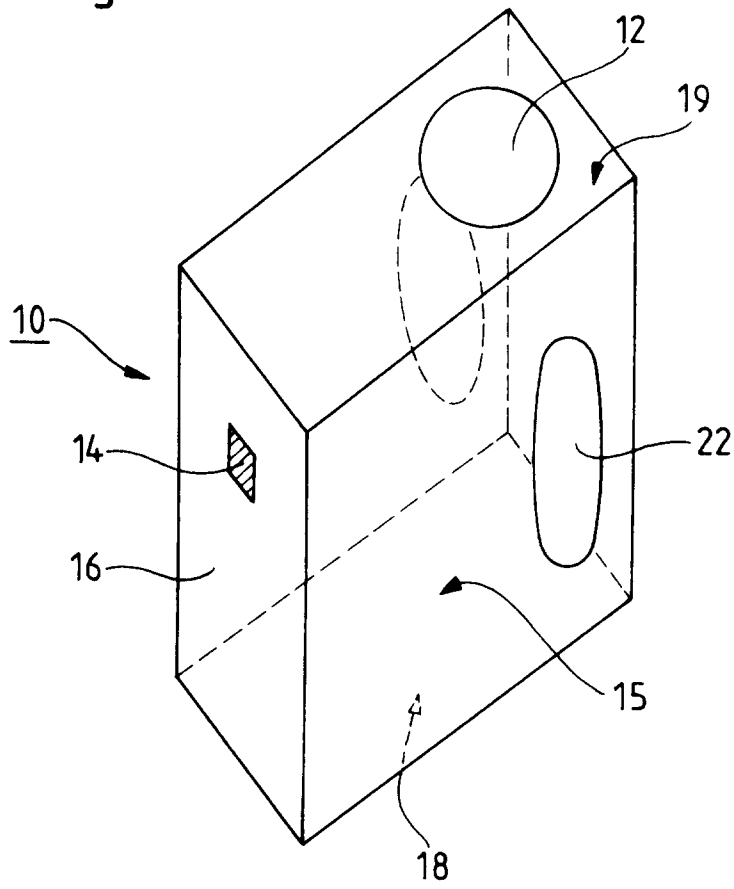
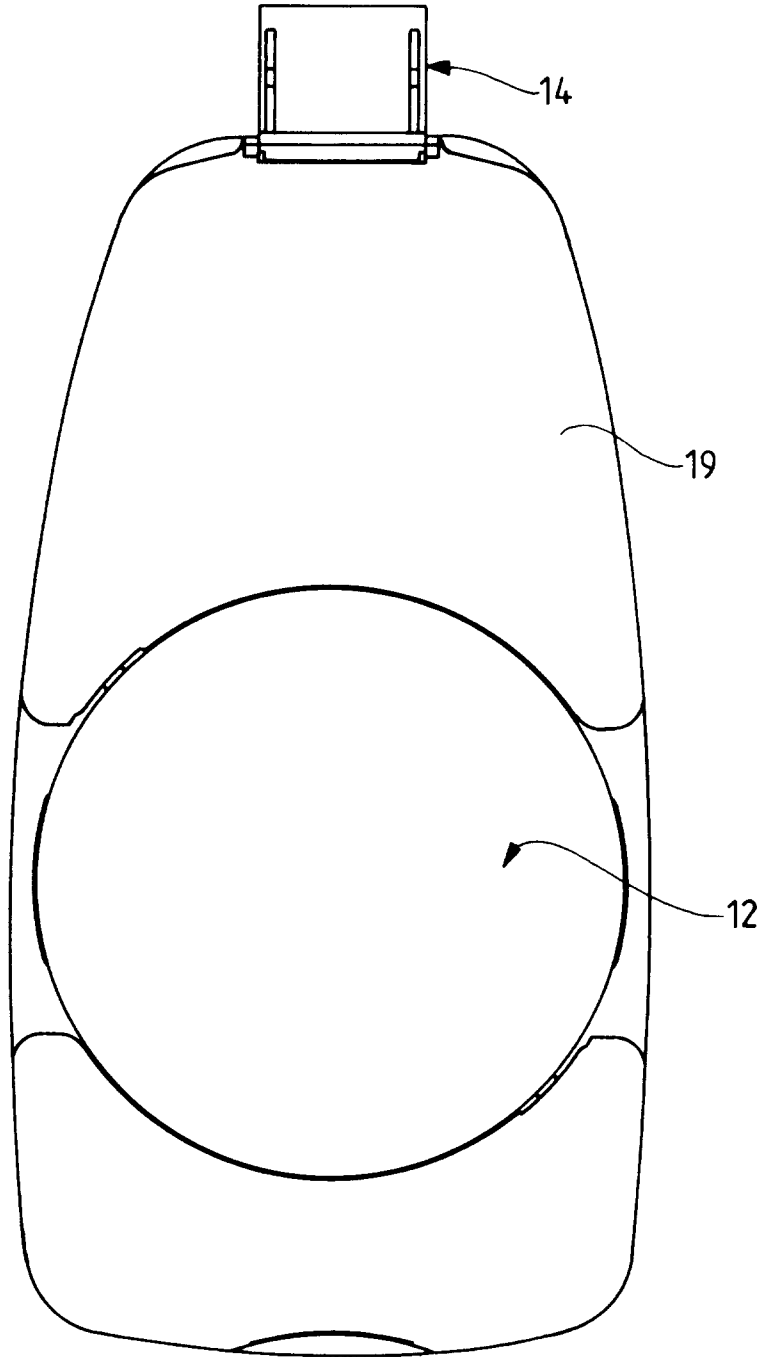


Fig. 2





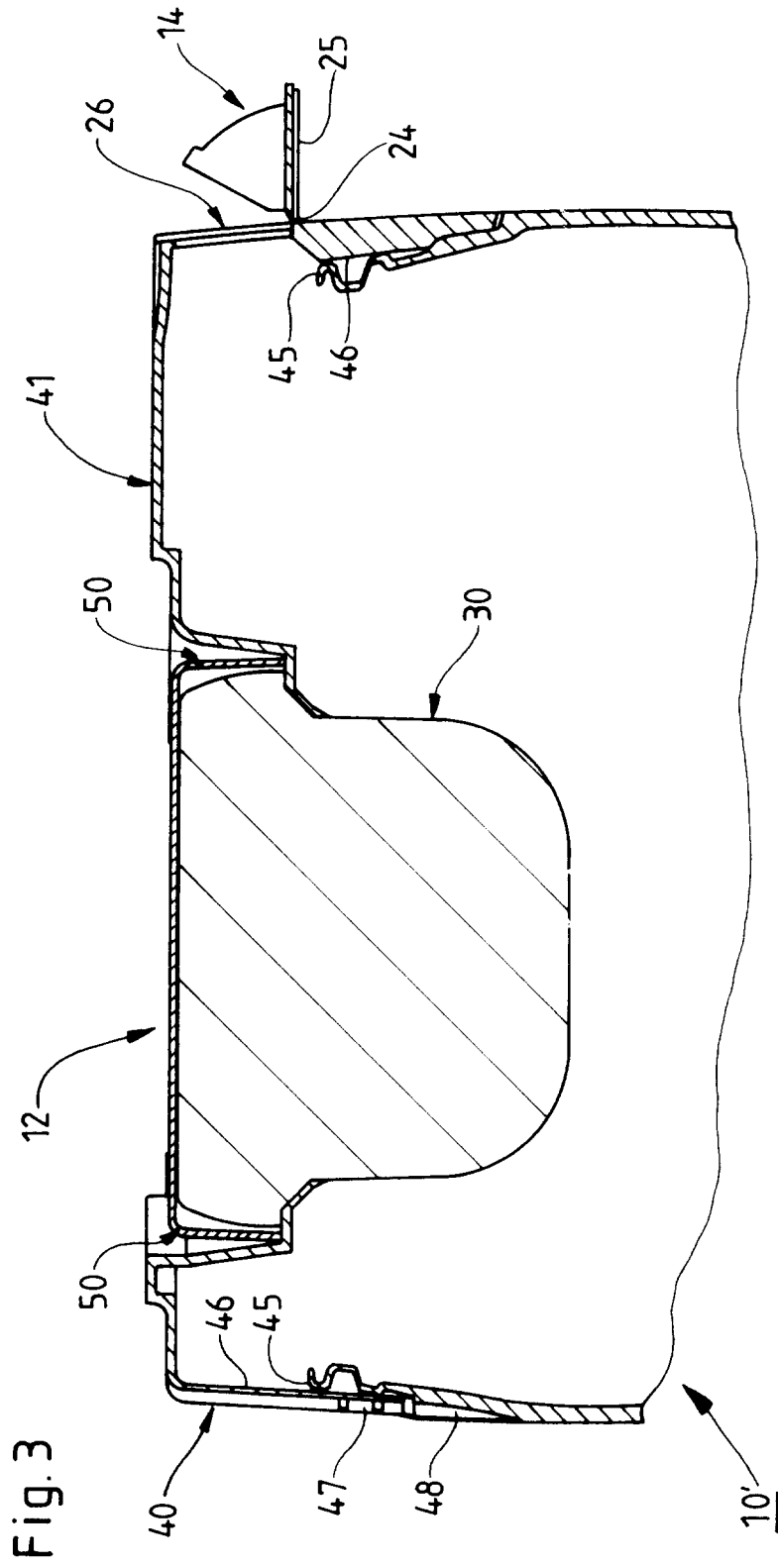


Fig. 4a

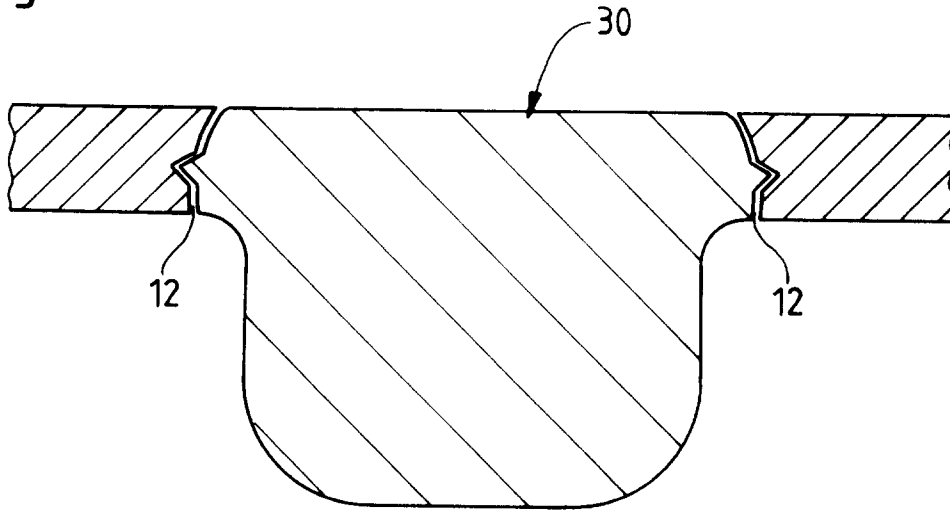


Fig. 4b

