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54 **Nestable container with lid.**

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73 Proprietor: **Packaging & Container  
Manufacturers B.V.  
Lorentzstraat 6  
NL 6710 BD Ede (NL)**

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72 Inventor: **van Raalte, Cornelis  
Welysestraat 9  
NL-6669 DG Dodewaard (NL)**  
Inventor: **Markus, Adrianus Johannes Wilhelm  
Juliana van Stolberglaan 209  
NL-6713 PH Ede (NL)**

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74 Representative: **Hoogstraten, Willem Cornelis  
Roeland et al  
OCTROOIBUREAU DSM Postbus 9  
NL-6160 MA Geleen (NL)**

58 References cited:  
**FR-A-2 176 796  
GB-A-1 215 856  
NL-A-6 513 804  
US-A-2 789 608  
US-A-4 165 020**

**EP 0 183 326 B1**

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## Description

The invention relates to a nestable container with lid, both made of plastic, the lid of which comprises a central portion and, on the circumference thereof, a skirt with flange turned down over the edge of the container, in which assembly inward skirt portions may engage under outward container portions to hold the lid onto the container, the angle of inclination between the container wall and the vertical differs in the upper reaches from that in the lower reaches, and the wall of the container is provided all around with a container flange with a descending auxiliary wall to which optionally a bail can be fastened.

Such a container with lid is known from the U.S. Patent specification 4,165,020.

Containers of this type have been made million-fold for decades by injection moulding and have been used as disposable packing material for a variety of substances, such as foodstuffs and paints.

In course of time the standards of attainment imposed upon these containers have strongly increased in number, contained prominence having been given, however, to leakproofness and a low price. Major factors determining the cost are the materials and production costs. As far as the latter costs are concerned, a reduction of the time of the injection moulding cycle constitutes a saving. In order to reducing the cooling period during this cycle it is important for the wall thickness of the container to be kept the same everywhere as far as possible, because the length of this period is determined by the portion having the greatest wall thickness. In order to shorten the cooling period, but also to reduce the consumption of materials, a further aim is, with due observance of the strength requirements, to reduce the wall thickness.

A disadvantage of the known container is that the top edge is in the form of a thick bead resulting, as said above, in an extension of the cooling period. The known container further has a slit between the flange of the lid and the flange of the container. This constitutes a disadvantage in the transport of such containers when, standing side by side, they are liable to shocks and impacts. The fact is that the presence, at the same level, of gripping edges formed by such narrow openings, and flanges results in adjacent containers climbing onto each other during the transport. This problem is known, for instance, from the United States patent specification 3,804,289. Yet another disadvantage of the known container is formed by the presence of extensions projecting below the auxiliary wall, which extends are usually sharp and may cause injuries. Moreover, these projections are apt to get stuck behind other objects, for instance clothes. These two extensions, which serve as nesting stops, are as such a disadvantage, because they are apt to damage the top edges of containers, particularly in high stacks of nested containers that are put down roughly. Notches will then be formed in the top

edge of the container, which will afterwards have a very adverse effect on the sealing action of these edges on the lid. Again during the transport these extensions will slowly grind into the top edges in consequence of the relative movement of the containers during the transport. A series disadvantage of the known container for every user who wants to remove the lid from the container is that the container can be opened only by using a tool that must be inserted into the slit between the skirt of the lid and the flange of the container in order to be able to raise the lid by levering.

The object of the invention is to provide a nestable container with lid that does not have the said disadvantages, or to a far smaller degree.

This has been achieved in that near its top edge the wall of the container passes, via a sharp bend, into a lip at the mouth of the container, which lip has an angle of inclination in respect of the vertical larger than the rest of the container wall, in that the container flange with the descending auxiliary wall is positioned between the sharp bend in the wall and the top edge of the container, in that radial plates have been provided all around the container between the wall of the container and the auxiliary wall, the bottom ends of which plates serve as nesting stops in the nesting of the containers, in that one or more recesses have been made at the junction between the flange of the container and the auxiliary wall, which recesses have mouths both on top of the container flange and on the outside of the auxiliary wall, in that the skirt of the lid tapers inwardly in a downwards direction and the flange provided at its free end is outwardly flared so that, when the container is closed, the inside of the skirt is in sealing contact with the outer wall of the container above the container flange, in that the flange of the lid lies on the flange of the container and covers the recesses at least in part and in that the circumference of the auxiliary wall constitutes the greatest circumference of the container-lid assembly.

The wall thickness of such a container with lid may be the same everywhere. The fastening of the lid is achieved by the widened lip at the mouth of the container together with the position of the skirt of the lid. The seal is at least effected by the wall of the skirt being seated against the outer wall of the container and the lid against the top edge of the container. The required rigidity of the portion of the container wall forming part of the seal is obtained by the presence of a great many radial plates extending downwards from the flange of the container. The radial plates further have the function of nesting stops. Together with the auxiliary wall surrounding them they form a very strong ring round the container in its upper reaches. This has the advantage, in the first place, that in these parts it is difficult for the container to be depressed so that leaks are precluded and, secondly, that when lifting a filled container without lid by its bail, the deformation of the container wall is avoided to a considerable degree. As a

result of a large number of radial plates serving as nesting stops the sensitive top edges of the nested containers lying against these plates are no longer liable to the notching effect of two or just a few nesting stops. Indeed, owing to the large number of plates, in the range of for instance 25—75, a pressure distribution is achieved over an equally large number of places on the top edge of a container underneath. The plates can be attached to the wall of the container or to the auxiliary wall or to both of these walls. Preferably the plates are attached to the auxiliary wall because this prevents stress-corrosion at the innerside of the container. As these plates are surrounded by the auxiliary wall, they do not form disturbing projections. This smooth auxiliary wall surrounding the radial plates round the container provides excellent protection against the climbing of containers placed against each other as described above. Neither is this effect eliminated, as with the known container, by a slit between the flange of the lid and the flange of the container, because these flanges are seated one on the other without any play. The height (h) from the bottom ends of the plates to the top edge of the container can be influenced by the thickness (d) of the container wall, the distance between the walls of the nested containers, the so-called nesting play(s), and the angle ( $\alpha$ ) contained by the container wall and the vertical. The relative relationship can be represented by the formula:

$$h = \frac{d+s}{\sin \alpha}$$

The recess at the junction between auxiliary wall and container makes it very easy for the lid to be removed by hand and constitutes as such a logical indication for opening. It is therefore not necessary to provide the container with arrows and directions for use. The recess is further meant to be a stop catch in the printing of containers, which will rotate in the process and be stopped after each rotation by a projection slipping into the recess. Another advantage of the auxiliary wall is that it may be used as rubbing surface for a flat plastic bail tightly fastened against the auxiliary wall, the shape of which bail corresponds between its two ends with the shape of the circumference of the auxiliary wall. Thus a bail is formed that can be held firmly in, for instance, horizontal position, which is an advantage in the filling, printing and closure as described also in the disclosed Netherlands published patent application 174819.

The flange of the container and the flange of the lid are preferably sloping down in order that any substances spilt onto the flange of the container during the filling may run down from the container flange and will consequently not make it impossible for the flanges of the container and the lid to be seated against each other.

Preferably, the flange of the lid makes a larger angle with the horizontal than the flange of the

container. In that case only the outer circumference of the flange of the lid contacts the flange of the container. This has the advantage that, during closing, positioning of the lid on the container is easier.

The height of the auxiliary wall is preferably more than 1.0 cm to provide enough room for the mouth of the recess on the auxiliary wall provided for the insertion of the finger tips and to avoid the climbing of containers placed side by side. By making a correct choice of the said angle of inclination ( $\alpha$ ), the wall thickness (d) and the nesting play (s) it is possible to obtain the space required for the desired height of the auxiliary wall.

It is to be recommended to produce the lid from a synthetic material more flexible than the synthetic material of the container. Thus a better contact can be obtained between the skirt of the lid and the stiffened wall of the container and the application of the lid, which requires the skirt to move outwards slightly, is facilitated.

In order to obtain yet a third sealing surface, the lid can be provided with a central portion recessed into the container with a sealing fit against the inner wall of the container, which central portion is connected with the skirt by an annular lid portion. The strongly widened top edge is then at least in part received in a channel in the lid shaped like an inverted U. The recessed central portion may reach beyond the position of the container flange on the container. Thus the sealing surface is increased and in applying the lid the centering is improved.

The invention will be further elucidated with reference to an embodiment shown in the drawing.

In the drawing

Figure 1 is half an axial section of a container with a lid separated therefrom and half a side-elevational view of a container with a lid applied on top according to the invention;

Figure 2 is a bottom view of the container of Figure 1;

Figure 3 is an axial section along line III—III in Figure 1; and

Figure 4 shows an axial section of a variant of the container according to the invention.

In Figure 1 a round nestable container is indicated by 1 and a lid going with it by 2.

The container has a bottom 3 and a wall 4 at a suitable nesting angle, which wall terminates via a sharp bend 5 and a widened lip 6 at the container mouth in a top edge 7. Between top edge 7 and the sharp bend 5 in the wall, a flange 8 slants down around the container, provided at its free end 9 with a descending auxiliary wall 10. Between the auxiliary wall 10 and the container wall 4 there are a great many, for instance 72, radial plates 11 indicated with dotted lines, one of which is situated just behind the plane of the drawing. The plates extend from the flange of the container to bottom 12 of the auxiliary wall and the bottom ends 13 of these plates jointly serve as nesting stop for a container underneath.

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Lid 2 consists of a recessed central portion 14 comprising a lid panel 15 and an inner skirt 16, which central portion is connected, via an annular lid portion 17, with a skirt 18 inclined inwards. Skirt 18 is provided with a flared flange 19 the outside diameter of which does not exceed the outside diameter of auxiliary wall 10.

In Figures 1 and 3 a recess 21 has been drawn at junction 20 between flange 8 of the container and the auxiliary wall 10, which recess has a mouth 22 on the outside of auxiliary wall 10 and a mouth 23 on top of flange 8 of the container. In Figure 1 mouth 23 has been indicated with a dotted line, because in this case it is completely covered by flange 19 of the lid.

In the right-hand section of Figure 1 a flat bail 24 is shown, tightly secured between two plates to auxiliary wall 10 with, for instance, a press button 25 while capable of being turned. The other end of the bail is fastened to the auxiliary wall at a place, see Figure 2, situated diametrically opposite the first point 25 on the auxiliary wall. Bail 24 consists of a flexible plastic material and in horizontal position it just fits around the outside of the auxiliary well.

It has been found that a container with lid has the advantage of being capable to cope with a great vertical downward force onto the lid without the lid tending to sink into the container. This is probably attributable to the fact that, with the lid being subjected to such a load, the inwardly inclined skirt of the lid is less inclined to assume a horizontal position, although the specially reinforced lip of the mouth may also play a part here. The fact is that, if the portion of the lip of the container mouth above the flange of the container is subjected to a force directed inwards, plates 11 prevent the portion of the lip of the container mouth below the flange of the container from being bent outwards so that otherwise, at a certain force, the portion above the container flange would have a greater freedom of movement, making it easier for the skirt of the lid to be pulled over edge 7. All this makes it possible for filled containers with lids to be stacked high.

From the point of view of moulding technique the advantage of the design is that the mould need not comprise more than two parts capable of moving along a straight line in respect of each other for opening and closing the mould. Moreover, from the point of view of moulding technique the design also has the advantage that the projections for making the recesses can be taken away by a simple operation. The advantage is that, if so desired, a container-lid assembly can thus be produced the lid of which is indeed very hard to remove. This requirement is sometimes imposed by industrial users of packaging containers to prevent unauthorized people from gaining access to the (hazardous or very expensive) packed goods during the transport.

The container with lid according to the invention need not necessarily have a round horizontal cross-section, but may also have other cross

sections, such as an elliptic or square cross sections.

The container may be produced from a plastic material different from that of the lid. For instance, the container from polypropylene or high-density polyethylene and the lid from soft low-density polyethylene.

The container may vary in height, for instance it may be a low pot or a slightly higher pail. In both cases the container has a printing or labelling surface all around its wall not interrupted by lugs and/or nesting ribs.

In order to provide better protection against opening of the lid by the contents, for instance in a fall of a filled container, the wall thickness of the lid between the skirt and the flange of the lid may optionally be greater. This is shown diagrammatically in Figure 1 by the dotted line 26.

Figure 4 shows a variant of the container. The top edge 7 of lip 6 possesses a vertical mouth wall 27 which fits closely into the corresponding groove 28 in the lid. The angle between flange 19 and the horizontal plane H is larger than the angle between flange 8 and plane H. Figure 4 shows the plate 11 being free from the container wall 4. In practice, after the cooling of the injection-moulded container, the plates 11 may be in close contact with the container wall without being attached to this wall 4.

#### Claims

1. Nestable container (1) with lid (2), both made of plastic, the lid of which comprises a central portion (14) and, on the circumference thereof, a skirt (18) with flange (19) turned down over the edge (7) of the container, in which assembly inward skirt portions may engage under outward container portions to hold the lid onto the container, the angle of inclination between the container wall and the vertical differs in the upper reaches from that in the lower reaches, and the wall (4) of the container is provided all around with a container flange (8) with a descending auxiliary wall (10) to which optionally a bail (24) can be fastened, the container with lid being characterized in that near its top edge the wall of the container passes, via a sharp bend (5), into a lip (6) at the mouth of the container, which lip has an angle of inclination in respect of the vertical larger than the rest of the container wall (4), in that the container flange (8) with the descending auxiliary wall (10) is positioned between the sharp bend (5) in the wall and the top edge (7) of the container, in that radial plates (11) have been provided all around the container between the wall (4) of the container and the auxiliary wall (10), the bottom ends (13) of which plates serve as nesting stops in the nesting of the containers, in that one or more recesses (21) have been made at the junction (9) between the flange (8) of the container and the auxiliary wall (10), which recesses have mouths both on top of the container flange and on the outside of the auxiliary wall, in that the

skirt (18) of the lid (2) tapers inwardly in a downwards direction and the flange (19) is provided at its free end is outwardly flared so that, when the container is closed, the inside of the skirt is in sealing contact with the outer wall of the container above the container flange (8), in that the flange (19) of the lid lies on the flange (8) of the container and covers the recesses (21) at least in part and in that the circumference of the auxiliary wall constitutes the greatest circumference of the container-lid assembly.

2. Container with lid according to Claim 1, characterized in that the flange (8) of the container and the flange (19) of the lid are inclined downwards.

3. Container with lid according to Claim 1 or 2, characterized in that the auxiliary wall (10) is at least 1.0 cm high.

4. Container with lid according to Claim 1, characterized in that the lid (2) is made of a synthetic material more flexible than the synthetic material of the container (0).

5. Container with lid according to any one of Claims 1—4, characterized in that the lid (2) has a recessed central portion (14) providing a sealing fit against the inner walls of the container, which central portion is connected via an annular portion (17) of the lid with the skirt (18).

6. Container with lid according to any one of Claims 1—5, characterized in that the wall of the container is equally thick everywhere.

7. Container with lid according to any one of Claims 1—6, characterized in that the container is provided with a flat plastic bail (24) tightly secured with its ends against the auxiliary wall, the shape of which bail corresponds between its ends with the shape of half an outer circumference of the auxiliary wall (10).

8. Container with lid according to any one of Claims 1—7, characterized in that the plates (11) between the wall (4) of the container and the auxiliary wall 10 are only attached to one of these walls preferably to the auxiliary wall (4, 10).

9. Container with lid according to any one of Claims 1—8, characterized in that the top edge 7 is provided with a vertical mouth wall which can fit into a corresponding vertical groove in the lid.

10. Container with lid according to any one of Claims 1—9, characterized in that the angle between the flange (19) of the lid and a horizontal plane (H) is larger than the angle between the flange (8) of the container and the horizontal plane (H).

#### Patentansprüche

1. Ineinander stapelbarer Behälter (1) mit Deckel (2), beide aus Kunststoff hergestellt, wobei der Deckel einen Mittelteil (14) und auf dessen Umfang einen Rand (18) mit Flansch (19) umfaßt, der über die Kante (7) des Behälters nach unten gebogen ist, und bei dieser Einheit nach innen gerichtete Randteile unter nach außen gerichtet Behälerteile greifen können, um den Deckel auf dem Behälter zu halten, wobei der Neigungswin-

kel zwischen der Behälterwand und der Vertikalen in den oberen Bereichen von dem in den unteren Bereichen abweicht und die Wand (4) des Behälters rundum mit einem Behälterflansch (8) mit einer nach unten gerichtete Zusatzwand (10) versehen ist, an der wahlweise ein Bügel befestigt werden kann, dadurch gekennzeichnet, daß die Behälterwand in der Nähe ihrer Oberkante über eine scharfe Biegung (5) in eine Lippe (6) an der Behälteröffnung übergeht, die einen größeren Neigungswinkel in Beziehung zur Vertikalen aufweist als der Rest der Behälterwand (4), daß der Behälterflansch (8) mit der nach unten gerichteten Zusatzlichen Wand (10) zwischen der scharfen Biegung (5) in der Wand und der Oberkante (7) des Behälters angeordnet ist, daß radiale Platten (11) rings um den Behälter zwischen der Wand (4) des Behälters und der zusätzlichen Wand (10) vorgesehen sind, wobei die unteren Enden (13) der Platten als Stapelanschläge beim Ineinandertapeln der Behälter dienen, daß ein oder mehrere Vertiefungen (21) an der Verbindung (9) zwischen dem Flansch (8) des Behälters und der Zusatzwand (10) gebildet worden sind, die sowohl oben auf dem Behälterflansch als auch auf der Außenseite der Zusatzwand Öffnungen aufweisen, daß der Rand (18) des Behälters (2) sich in Abwärtsrichtung nach innen verjüngt und der an seinem freien Ende gebildete Flansch (19) nach außen aufgeweitet ist, so daß, wenn der Behälter geschlossen ist, die Innenseite des Randes in dichtem Kontakt mit der Außenwand des Behälters oberhalb des Behälterflansches (8) ist, daß der Flansch (19) des Deckels auf dem Flansch (8) des Behälters aufliegt und die Vertiefungen (21) zumindest teilweise überdeckt und daß der Umfang der Zusatzwand den größten Umfang der Behälter-Deckel-Einheit darstellt.

2. Behälter mit Deckel nach Anspruch 1, dadurch gekennzeichnet, daß der Flansch (8) des Behälters und der Flansch (19) des Deckels schräg nach unten geneigt sind.

3. Behälter mit Deckel nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Höhe der Zusatzwand (10) wenigstens 1,0 cm beträgt.

4. Behälter mit Deckel nach Anspruch 1, dadurch gekennzeichnet, daß der Deckel (2) aus einem synthetischen Material hergestellt ist, daß biegsamer ist als das synthetische Material des Behälters (1).

5. Behälter mit Deckel nach einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, daß der Deckel (2) einen vertieften Mittelteil (14) aufweist, der eine dichte Passung gegen die Innenwände des Behälters schafft, wobei der Mittelteil über einen Ringbereich (17) des Deckels mit dem Rand (18) verbunden ist.

6. Behälter mit Deckel nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß die Wand des Behälters überall gleich dick ist.

7. Behälter mit Deckel nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß der Behälter mit einem flachen Kunststoffbügel (24) versehen ist, der mit seinen Enden eng an der Zusatzwand befestigt ist, wobei die Form des

Bügels zwischen seinen Enden mit der Form eines halben Außenumfangs der Zusatzwand (10) übereinstimmt.

8. Behälter mit Deckel nach einem der Ansprüche 1 bis 7, dadurch gekennzeichnet, daß die Platten (11) zwischen der Wand (4) des Behälters und der Zusatzwand (10) nur an einer dieser Wände (4, 10), vorzugsweise an der Zusatzwand, angebracht sind.

9. Behälter mit Deckel nach einem der Ansprüche 1 bis 8, dadurch gekennzeichnet, daß die Oberkante (7) mit einer vertikalen Öffnungswand versehen ist, die in eine entsprechende vertikale Nut im Deckel eingreifen kann.

10. Behälter mit Deckel nach einem der Ansprüche 1—9, dadurch gekennzeichnet, daß der Winkel zwischen dem Flansch (19) des Deckels und einer Horizontalebene (H) größer ist als der Winkel zwischen dem Flansch (8) des Behälters und der Horizontalebene (H).

### Revendications

1. Récipient emboîtable (1) avec couvercle (2), l'un et l'autre fabriquées en plastique, dont le couvercle comporte une portion centrale (14) et, sur sa circonférence, une jupe (18) avec rebord (19) tournée vers le bas par-dessus le bord (7) du récipient, formant un ensemble dans lequel des portions intérieures de la jupe peuvent s'engager sous des portions extérieures du récipient pour maintenir le couvercle sur le récipient; dans lequel l'angle d'inclinaison entre la paroi du récipient et la verticale est différent dans la virole supérieure et dans la virole inférieure; et dans lequel la paroi (4) du récipient présente tout autour un rebord (8) du récipient avec une paroi auxiliaire descendante (10) à laquelle on peut, en option, accrocher une anse (24) le récipient avec couvercle étant caractérisé en ce que, près de son bord supérieure, la paroi du récipient se transforme, par l'intermédiaire d'un pli franc (5), en une lèvre (6) qui se trouve à l'orifice du récipient, lèvre qui présente un angle d'inclinaison par rapport à la verticale supérieure à celui du reste de la paroi (4) du récipient; en ce que le rebord (8) du récipient avec la paroi auxiliaire descendante (10) est placée entre le pli franc (5) prévu dans la paroi et le bord supérieur (7) du récipient; en ce que des ailettes radiales (11) ont été prévues tout autour du récipient, entre la paroi (4) du récipient et la paroi auxiliaire (10), ailettes dont les extrémités inférieures (13) servent comme butées d'emboîtement lors de l'emboîtement des récipients; en ce qu'une ou plusieurs niches (21) ont été prévues à la jonction (9) entre le rebord (8) du récipient et la paroi auxiliaire (10), niches qui présentent des orifices à la fois sur le dessus du rebord du récipient et sur l'extérieure de la paroi

auxiliaire; en ce que la jupe (18) du couvercle (2) s'étend coniquement vers l'intérieur dans la direction vers le bas et que le rebord (19) prévu à son extrémité libre est évasé vers l'extérieure de sorte que, lorsque le récipient est fermé, l'intérieur de la jupe est en contact étanche avec la paroi extérieure du récipient au-dessus du rebord (8) du récipient; en ce que le rebord (19) du couvercle repose sur le rebord (8) du récipient et recouvre au moins en partie les niches (21); et en ce que la circonférence de la paroi auxiliaire constitue la plus grande circonférence de l'ensemble récipient-couvercle.

2. Récipient avec couvercle selon la revendication 1, caractérisé en ce que le rebord (8) du récipient et le rebord (19) du couvercle sont inclinés vers le bas.

3. Récipient avec couvercle selon la revendication 1 ou 2, caractérisé en ce que la paroi auxiliaire (10) a une hauteur d'au moins 1,0 cm.

4. Récipient avec couvercle selon la revendication 1, caractérisé en ce que le couvercle (2) est fabriqué en un matériau synthétique plus flexible que le matériau synthétique du récipient (1).

5. Récipient avec couvercle selon l'une quelconque des revendications 1 à 4, caractérisé en ce que le couvercle (2) présente une portion centrale (14) en creux qui donne un ajustement étanche à l'égard des parois intérieures du récipient, portion centrale qui est reliée à la jupe (18) par l'intermédiaire d'une portion annulaire (17) du couvercle.

6. Récipient avec couvercle selon l'une quelconque des revendications 1 à 5, caractérisé en ce que la paroi du récipient est partout de la même épaisseur.

7. Récipient avec couvercle selon l'une quelconque des revendications 1 à 6, caractérisé en ce que le récipient est muni d'une anse plastique plate (24) fixée, bien serrée, par ses extrémités, contre la paroi auxiliaire, anse dont la forme correspond, entre ses extrémités, à la forme d'une demi-circonférence extérieure de la paroi auxiliaire (10).

8. Récipient avec couvercle selon l'une quelconque des revendications 1 à 7, caractérisé en ce que les ailettes (11) prévues entre la paroi (4) du récipient et la paroi auxiliaire (10) ne sont attachées qu'à l'une de ces parois, de préférence à la paroi auxiliaire (4, 10).

9. Récipient avec couvercle selon l'une quelconque des revendications 1 à 8, caractérisé en ce que le bord supérieure (7) présente une paroi d'orifice verticale qui peut s'ajuster dans une rainure verticale correspondante du couvercle.

10. Récipient avec couvercle selon l'une quelconque des revendications 1 à 9, caractérisé en ce que l'angle entre le rebord (19) du couvercle et un plan horizontal (H) est supérieure à l'angle entre le rebord (8) du récipient et ce plan horizontal (H).

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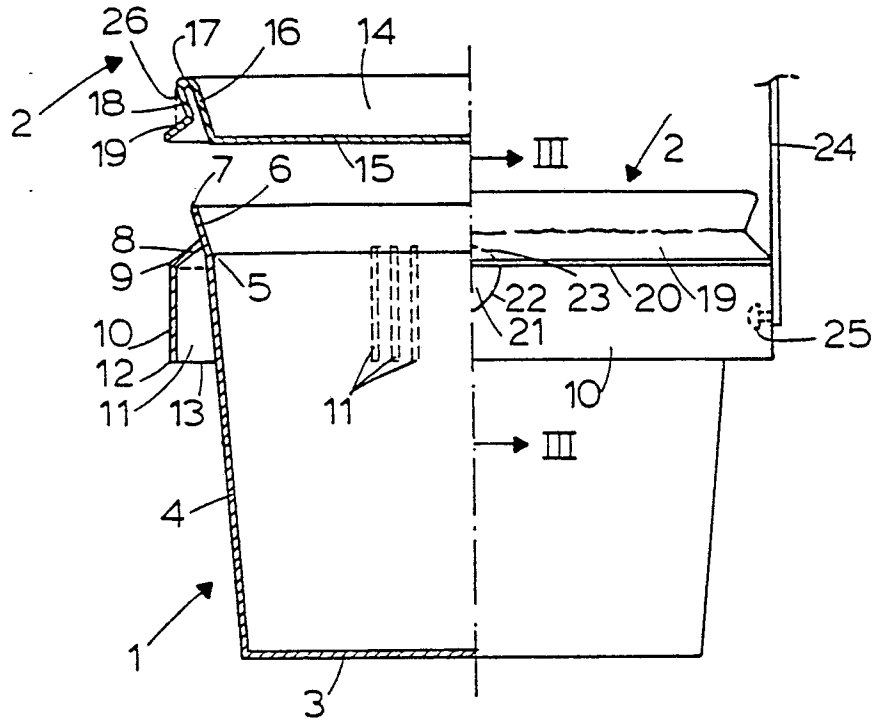


FIG. 1

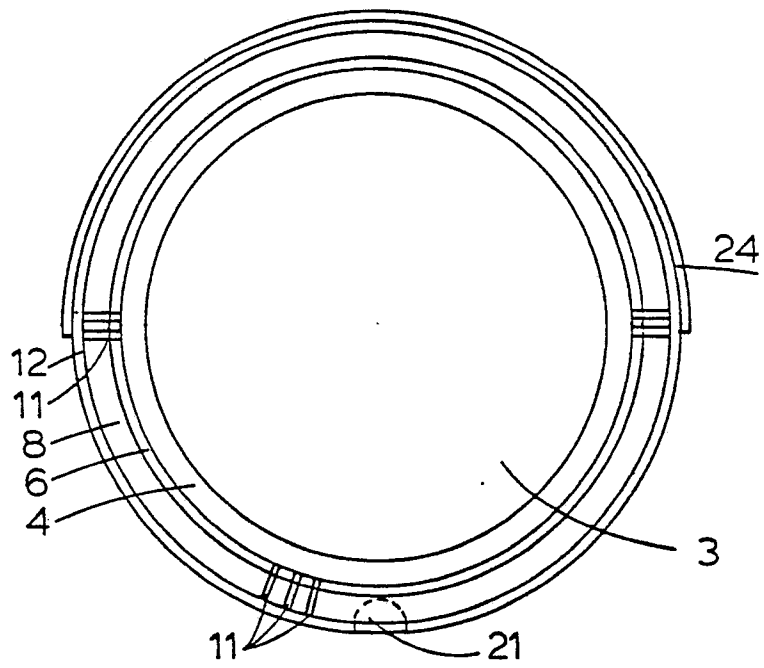


FIG. 2

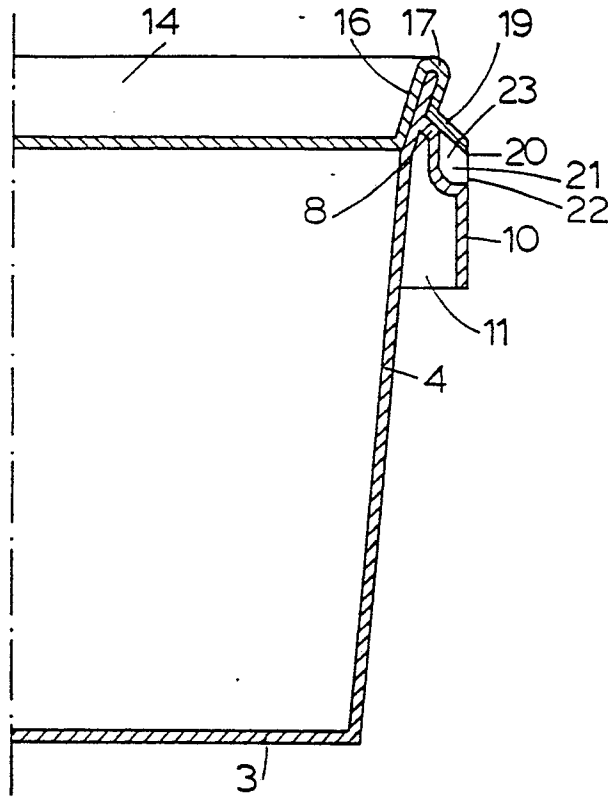


FIG.3



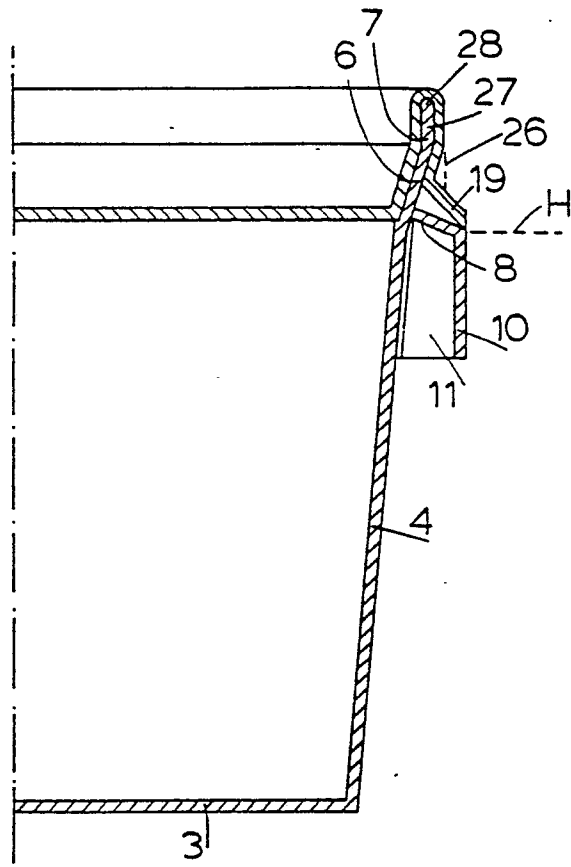


FIG. 4