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(54) **Trash container for use with handle bags**

Müllbehälter für die Verwendung mit Tragetaschen

Poubelle destinée à l'usage des sacs à poignées

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Description

Field of the invention

[0001] The present invention relates to a trash container for use with handle bags.

[0002] The invention further relates to a trash-containing assembly comprising such container.

Background of the invention

[0003] Trash containers are known to generally comprise a receptacle having a side wall closed by a bottom wall to define a chamber for a bag, which is designed to contain trash and prevent it from contacting the receptacle.

[0004] Typically, bags are engaged with the container by simply folding them back onto the top edge. If the bags have handles, i.e. are of so-called "T-shirt" type, such handles are left outside the container, without being engaged therewith.

[0005] Also, such containers typically have a handle attached to the top edge of the container. Such handle is bulky and difficult to handle, wherefore the container can be only grasped in a poorly hygienic and difficult manner.

[0006] Another thash container is known from US-B-6581796, which discloses a trash container according to the preamble of claim 1.

Summary of the invention

[0007] The object of this invention is to overcome the above drawbacks, by providing a trash container that is highly efficient and relatively cost-effective.

[0008] A particular object is to provide a trash container that can both be grasped by a user in an easy and hygienic manner and provide engagement for the bag handles.

[0009] A further object is to provide a trash container that can be easily fabricated by molding.

[0010] Another object of the invention is to provide a trash container that allows easy storage and stacking.

[0011] Yet another object of the invention is to provide a trash containing assembly that uses such trash container.

[0012] These and other objects, as better explained hereafter, are fulfilled by a trash container for use with handle bags as defined in claim 1, and by a trash containing assembly as defined in claim 10.

[0013] Advantageous embodiments of the invention are defined in accordance with the dependent claims.

Brief description of the drawings

[0014] Further characteristics and advantages of the invention will be more apparent from the detailed description of a preferred, non-exclusive embodiment of a trash can of the invention, which is described as a nonlimiting example with the help of the annexed drawings, in which:

FIGS. 1 and 2 are perspective views of a first embodiment of a trash container of the invention;
FIGS. 3 and 4 are perspective views of a second embodiment of a trash container of the invention;
FIG. 5 is a side view of the trash container of FIG. 1;
FIG. 6 is a sectional view of the trash container of FIG. 5, as taken along a plane *VI-VI;*
FIG. 7 is an enlarged view of certain details of FIG. 6;
FIG. 8 is a sectional view of the trash container of FIG. 5, as taken along a plane *VIII-VIII;*
FIG. 9 is a diagrammatic view of the trash containing assembly of the invention.

Detailed description of a preferred embodiment

[0015] Referring to the above figures, the trash container of the invention, generally designated by numeral 1, consists of a receptacle 2 with a side wall 3 closed by a bottom wall 4 to define a chamber V for holding and supporting a handle-type bag 5, of the type known in the market as "t-shirt bag", i.e. having carrying handles 6, 6'. Preferably, a lid 7 may be provided, for connection to the receptacle 2 by hinge means 8.

[0016] The side wall 3 of the receptacle 2 has a pair of inward recesses extending from opposite sides 9, 9'. The recesses 10, 10' are defined by outer peripheral edges 11, 11' with respective downward appendices 12, 12' extending therefrom.

[0017] The appendices 12, 12' allow both the container 2 to be hygienically grasped by a user and the handles of a bag 5 to be engaged therewith.

[0018] The handles 6, 6' of the bag 5 may be introduced in the gaps 13, 13' between the rear faces 14, 14' of the appendices 12, 12' and the front surfaces 15, 15' of the recesses 10, 10', whereas the rest of the bag 5 may be introduced into the chamber V of the receptacle 2, as shown in Figures 1, 3 and 9, in which the bag 5 is outlined by dashed lines.

[0019] Advantageously, each of the recesses 10, 10' may have a substantially elongate shape, extending along an axis X, X' parallel to the side wall 3. Furthermore, the appendices 12, 12' may be located in the vicinity of the top end 16, 16' of each recess.

[0020] Such configuration will afford comfortable and firm grasp by the user and bag engagement. By placing the appendices 12, 12' and associated gaps 13, 13' at the top, the user will easily introduce his/her hands therein and engage the handles 6, 6' of the bag 5.

[0021] During the manufacturing process, such configuration will also eliminate the step of mounting container handles or similar means, required in traditional containers.

[0022] The elongate appendices 12, 12' may further have a substantially rounded outer peripheral area, to prevent user injury and damages to the bag handles.

[0023] Conveniently, each of the recesses 10, 10' may extend in the vertical direction substantially to the bottom wall 4 of the receptacle 2. The recesses 10, 10' may also have a slightly upwardly decreasing cross section, for easier stacking of multiple containers.

[0024] Preferably, the receptacle 2 will be fabricated by molding of a polymeric material selected from the group comprising polyethylene, polypropylene, ABS, polycarbonate, polyamides.

[0025] Conveniently, each of the appendices 12, 12' may be substantially coplanar or slightly recessed relative to the side wall 3 of the receptacle 2.

[0026] Such configuration is particularly advantageous during fabrication of the trash can. The provision of appendices 12, 12' not projecting out of the side wall 3 avoids any undercut with respect to the side wall and facilitates molding.

[0027] In order to improve the mechanical properties of the can 1, the appendices 12, 12' may be integral with the side wall 3 of the receptacle 2 and may operably formed of one piece therewith.

[0028] In a first embodiment, as shown in Figures 1 and 2, the trash can 1 may have the side wall 3 and/or the bottom wall 4 substantially continuous and unperforated.

[0029] In a second embodiment, as shown in Figures 3 and 4, the side wall 3 and/or the bottom wall 4 may have a plurality of through apertures 18 for improved ventilation of the contents of the receptacle 2. These apertures 18 may be also formed in the lid 7, if any.

[0030] For this purpose, the bag 5 may be formed from an air-permeable polymeric material, and may be preferably entirely made of it, and be of such a size as to be held and supported in the receptacle 2 at a predetermined distance d from the bottom wall 4 thereof.

[0031] This configuration of the can 1 - bag 5 assembly, as schematically shown in Figure 9, allows effective treatment of organic waste. The apertures 18 formed in the receptacle 2, in addition to the air permeability of the bag, will prevent the organic waste stored in the bin from emitting foul smells, which is a serious problem especially when organic waste is collected in indoor environments, such as households. The weight of the organic waste will be also considerably reduced due to loss of humidity.

[0032] By having the bag supported at a predetermined distance d from the bottom wall 4 and the side wall 3, and anyway not in contact therewith, ventilation will be improved in the assembly between the can 1 and the bag 5, and no condensation will occur between the outer surface of the bag 5 and the bottom wall of the container. Furthermore, the bag will be prevented from falling back into the can, and from forming local malodorous areas.

[0033] In any case, in both first and second embodiments of the container 1, the receptacle 2 may be equipped with a plurality of support feet 19. Particularly, in the second embodiment of the container 1, such feature will further improve ventilation in the assembly between the container 1 and the bag 5.

[0034] The above disclosure shows that the trash container for handle bags of the invention fulfills the intended objects and particularly meets the requirement of allowing both easy and hygienic grasp thereof by a user and engagement of the bag handles.

[0035] The provision of appendices 12, 12' extending downwards from the peripheral edge 11, 11' of the recesses 10, 10' will create a gap 13, 13' between the rear face 14, 14' of the appendices 12, 12' and the front surface 15, 15' of the recesses 10, 10', which will be useful to fulfil the above object.

[0036] The trash container of this invention is susceptible of a number of changes and variants, within the inventive concept disclosed in the appended claims. All the details thereof may be replaced by other technically equivalent parts, and the materials may vary depending on different needs.

[0037] While the trash container has been described with particular reference to the accompanying figures, the numerals referred to in the disclosure and claims are only used for the sake of a better intelligibility of the invention.

Claims

1. A trash container for use with handle bags (5), comprising a receptacle (2) which has a side wall (3) closed by a bottom wall (4) to define a chamber (V) for a handle bag (5), said side wall (3) has at least one pair of inwardly directed recesses (10, 10') on opposite sides (9, 9'), **characterized in that** each of said recesses (10, 10') has a peripheral edge (11. 11') from which extends a downward appendix (12, 12') which defines grasping means for a user and engaging means for the handles of the bag (5).

2. Container as claimed in claim 1, wherein each of said recesses (10, 10') has a substantially elongated shape extending along an axis (X, X') parallel to said side wall (3), each of said appendices (12, 12') being located in the proximity of the top end (16, 16') of its respective recess (10, 10').

3. Container as claimed in claim 1 or 2, wherein each of said appendices (12, 12') is substantially coplanar or slightly recessed with respect to the side wall (3) of the receptacle (2) in such a manner to avoid any undercut with respect to said side wall and facilitate molding operations.

4. Container as claimed in claim 2, wherein each of said appendices (12, 12') is integral with the side wall (3) of said receptacle (2).

5. Container as claimed in claim 2, wherein each of said elongate appendices (12, 12') has a substantially rounded outer peripheral zone (17, 17'), to pre-

vent user injury and damages to the handles (6, 6') of the bag (5).

6. Container as claimed in claim 1, wherein each of said recesses (10, 10') vertically extends substantially to said bottom wall (4) of the receptacle (2).

7. Container as claimed in claim 6, wherein each of said recesses (10, 10') has slightly upwardly decreasing cross section, for easier stacking of multiple containers.

8. A container as claimed in claim 1, wherein said receptacle (2) is manufactured by molding of a polymeric material selected from the group comprising polyethylene, polypropylene, ABS, polycarbonate, polyamides.

9. Container as claimed in claim 1, wherein said side wall (3) and/or bottom wall (4) have a plurality of through apertures (18).

10. A trash containing assembly, particularly for collecting organic waste, comprising:

- a trash container (1) as claimed in any one of the preceding claims;
- a handle bag (5) supported internally to said container (1) at a predetermined distance (d) from its bottom wall (4), said bag (5) being formed from an air-permeable polymeric material.

Patentansprüche

1. Abfallbehälter zur Verwendung mit Tragbeuteln (5) mit einer Aufnahme (2), die eine Seitenwand (3) aufweist, die von einer Bodenwand (4) geschlossen ist, um eine Kammer (V) zu bilden für einen Tragbeutel (5), wobei diese Seitenwand (3) mindestens ein paar nach innen gerichtete Ausnehmungen (10, 10') aufweist an gegenüberliegenden Seiten (9, 9'), **dadurch gekennzeichnet, dass** jede der Ausnehmungen (10, 10') eine Umfangskante (11, 11') aufweist, von der sich ein Anhang (12, 12') nach unten erstreckt, der Greifeinrichtungen bildet für einen Nutzer und Eingriffsmittel für die Griffe des Beutels (5) .

2. Behälter gemäß Anspruch 1, **dadurch gekennzeichnet, dass** jede der Ausnehmungen (10, 10') eine im wesentlichen längliche Form aufweist entlang einer Achse (X, X') parallel zu der Seitenwand (3), wobei jeder der Anhänge (12, 12') in der Nähe von dem oberen Ende (16, 16') seiner jeweiligen Ausnehmung (10, 10') angeordnet ist.

3. Behälter gemäß Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** jeder der Anhänge (12, 12') im wesentlichen so koplanar oder leicht zurück genommen ist relativ zu der Seitenwand (3) der Aufnahme (2), dass jede Hinterschneidung mit Bezug auf diese Seitenwand vermieden wird und Gießvorgänge erleichtert werden.

4. Behälter gemäß Anspruch 2, **dadurch gekennzeichnet, dass** jeder der Anhänge (12, 12') einteilig ist mit der Seitenwand (3) der Aufnahme (2).

5. Behälter gemäß Anspruch 2, **dadurch gekennzeichnet, dass** jeder der länglichen Anhänge (12, 12') eine im wesentlichen gerundete äußere Umfangszone (17, 17') aufweist, um Verletzungen von Nutzern und Beschädigungen an den Griffen (6, 6') des Beutels (5) zu verhindern.

6. Behälter gemäß Anspruch 1, **dadurch gekennzeichnet, dass** sich jede der Ausnehmungen (10, 10') im wesentlichen senkrecht zu der Bodenwand (4) der Aufnahme (2) erstreckt.

7. Behälter gemäß Anspruch 6, **dadurch gekennzeichnet, dass** jede der Ausnehmungen (10, 10') einen nach oben leicht abnehmenden Querschnitt aufweist für leichteres Stapeln von mehreren Behältern.

8. Behälter gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Aufnahme (2) durch Giessen eines polymerischen Materials hergestellt wird, das ausgewählt ist aus der Gruppe mit Polyethylenen, Polypropylenen, ABS, Polycarbonaten, Polyamiden.

9. Behälter gemäß Anspruch 1, **dadurch gekennzeichnet, dass** die Seitenwand (3) und/oder die Bodenwand (4) mit einer Vielzahl von Durchgangsöffnungen (18) versehen ist.

10. Abfallbehältereinheit, insbesondere zum Sammeln von organischem Abfall mit einem Abfallbehälter (1) gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** ein Tragbeutel innen am Behälter (1) getragen ist mit einem vorbestimmten Abstand (d) von der Bodenwand (4), wobei der Beutel (5) aus einem luftdurchlässigen, polymeren Material gebildet ist.

Revendications

1. Poubelle destinée à être utilisée avec des sacs à poignées (5), comprenant un récipient (2) qui a une paroi latérale (3) fermée par une paroi de fond (4) pour définir une chambre (V) prévue pour un sac à poignées (5), ladite paroi latérale (3) présentant au

moins une paire de renfoncements dirigés vers l'intérieur (10, 10') sur des côtés opposés (9, 9'), **caractérisée en ce que** chacun de ces renfoncements (10, 10') présente un bord périphérique (11, 11') d'où part un appendice descendant (12, 12') qui définit des moyens de prise pour un utilisateur et des moyens d'accrochage pour les poignées du sac (5).

2. Poubelle selon la revendication 1, dans laquelle chacun desdits renfoncements (10, 10') a une forme sensiblement allongée qui s'étend le long d'un axe (X, X') parallèle à ladite paroi latérale (3), chacun desdits appendices (12, 12') étant placé à proximité de l'extrémité supérieure (16, 16') du renfoncement respectif (10, 10').

3. Poubelle selon la revendication 1 ou 2, dans laquelle chacun desdits appendices (12, 12') est sensiblement coplanaire ou légèrement en retrait par rapport à ladite paroi latérale (3) du récipient (2), de manière à éviter toute contre-dépouille par rapport à ladite paroi latérale et à faciliter les opérations de moulage.

4. Poubelle selon la revendication 2, dans laquelle chacun desdits appendices (12, 12') est d'une seule pièce avec la paroi latérale (3) dudit récipient (2).

5. Poubelle selon la revendication 2, dans laquelle chacun desdits appendices (12, 12') allongés a une zone périphérique extérieure sensiblement arrondie (17, 17') afin d'éviter les blessures ainsi que les détériorations des poignées (6, 6') du sac (5).

6. Poubelle selon la revendication 1, dans laquelle chacun des renfoncements (10, 10') se prolonge verticalement sensiblement jusqu'à ladite paroi de fond (4) du récipient (2).

7. Poubelle selon la revendication 6, dans laquelle chacun desdits renfoncements (10, 10') a une section transversale qui décroît légèrement vers le haut, pour permettre d'empiler plus facilement plusieurs poubelles.

8. Poubelle selon la revendication 1, dans laquelle ledit récipient (2) est fabriqué par moulage d'une matière polymère choisie dans le groupe comprenant le polyéthylène, le polypropylène, l'ABS, le polycarbonate et les polyamides.

9. Poubelle selon la revendication 1, dans laquelle ladite paroi latérale (3) et/ou ladite paroi de fond (4) a (ont) une pluralité d'ouvertures débouchantes (18).

10. Ensemble pour contenir des déchets, particulièrement destiné à collecter des déchets organiques, comprenant :

- une poubelle (1) selon une quelconque des revendications précédentes ;
- un sac à poignées (5) supporté à l'intérieur de ladite poubelle (1) à une distance prédéterminée (d) de la paroi de fond (4), ledit sac (5) étant formé d'une matière polymère perméable à l'air.

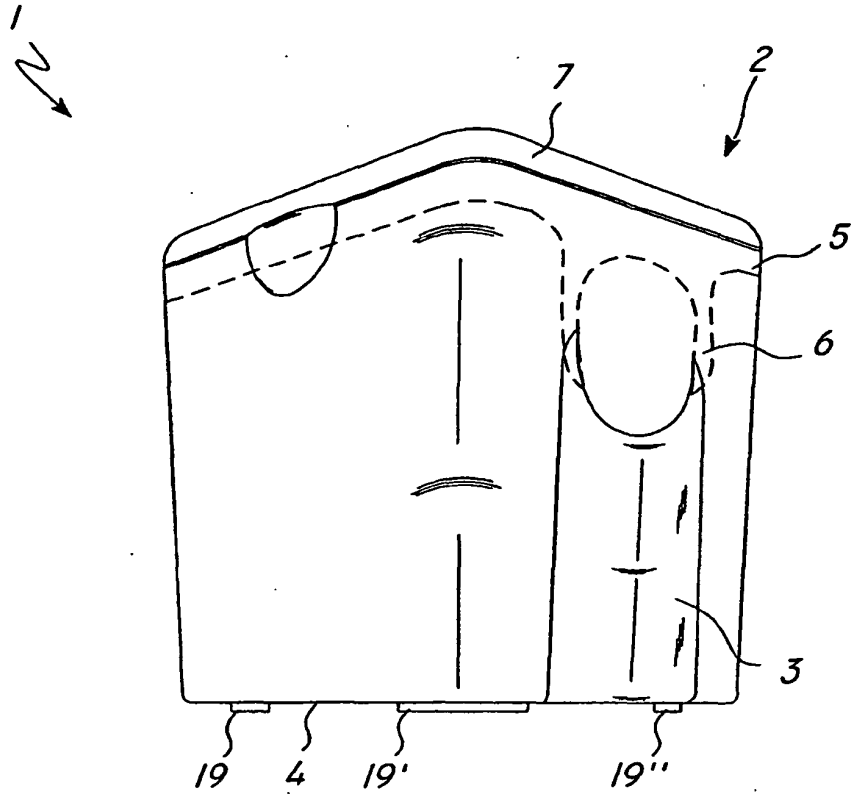


FIG. 1

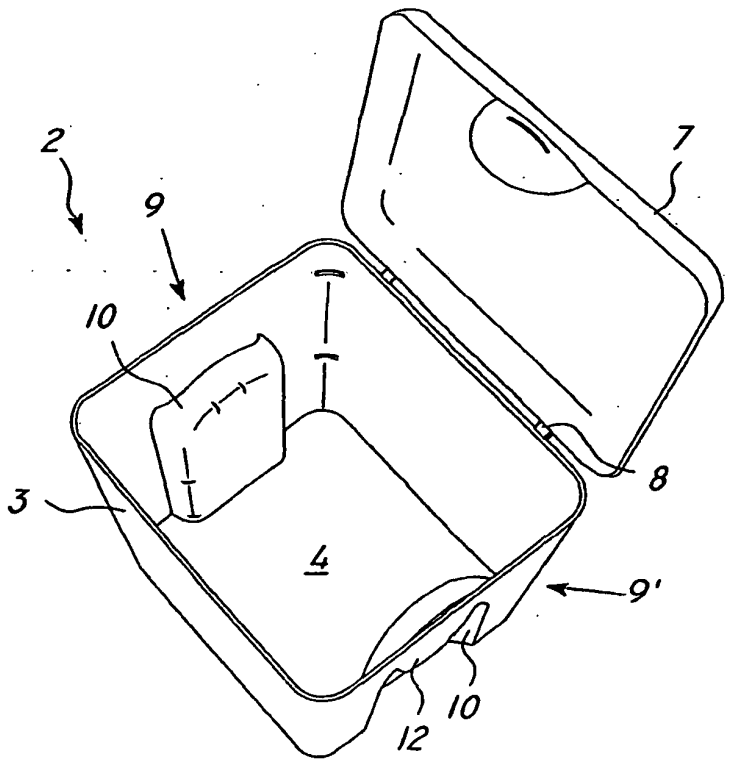


FIG. 2

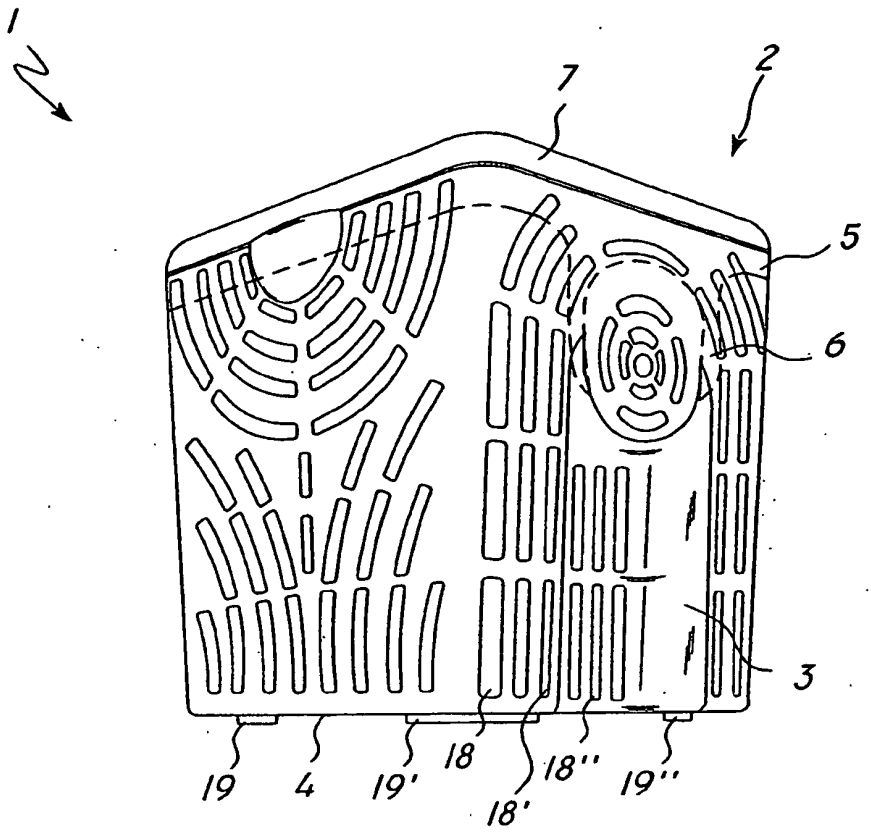


FIG.3

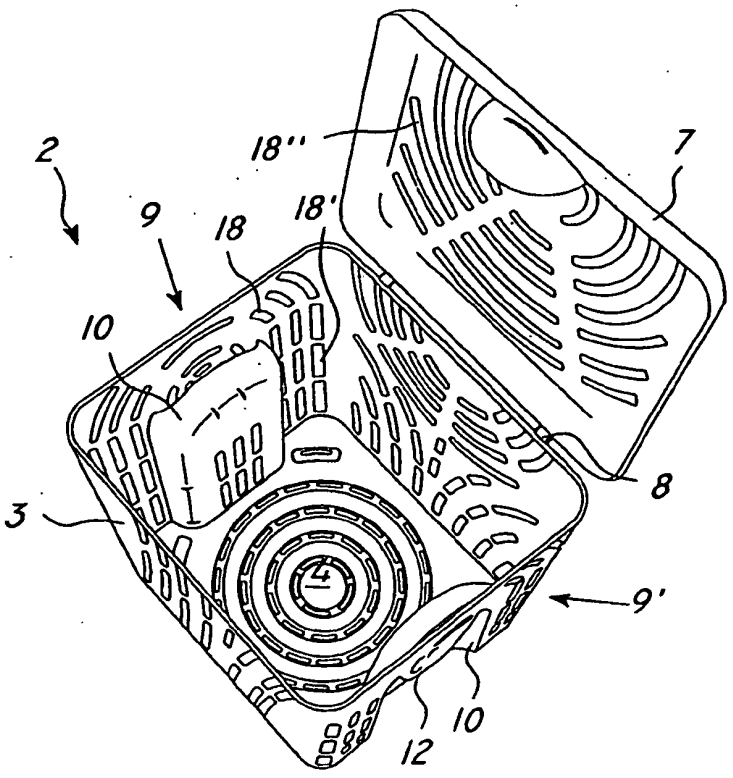


FIG.4

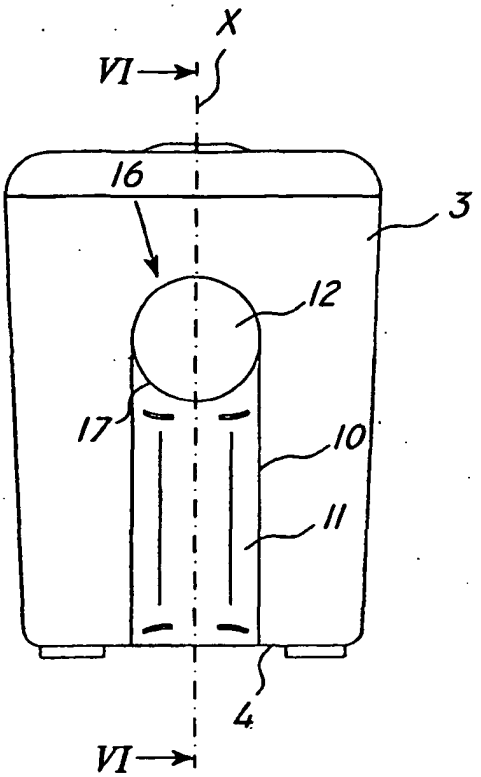

X
VI
16
3
12
17
10
11
4
VI

FIG.5

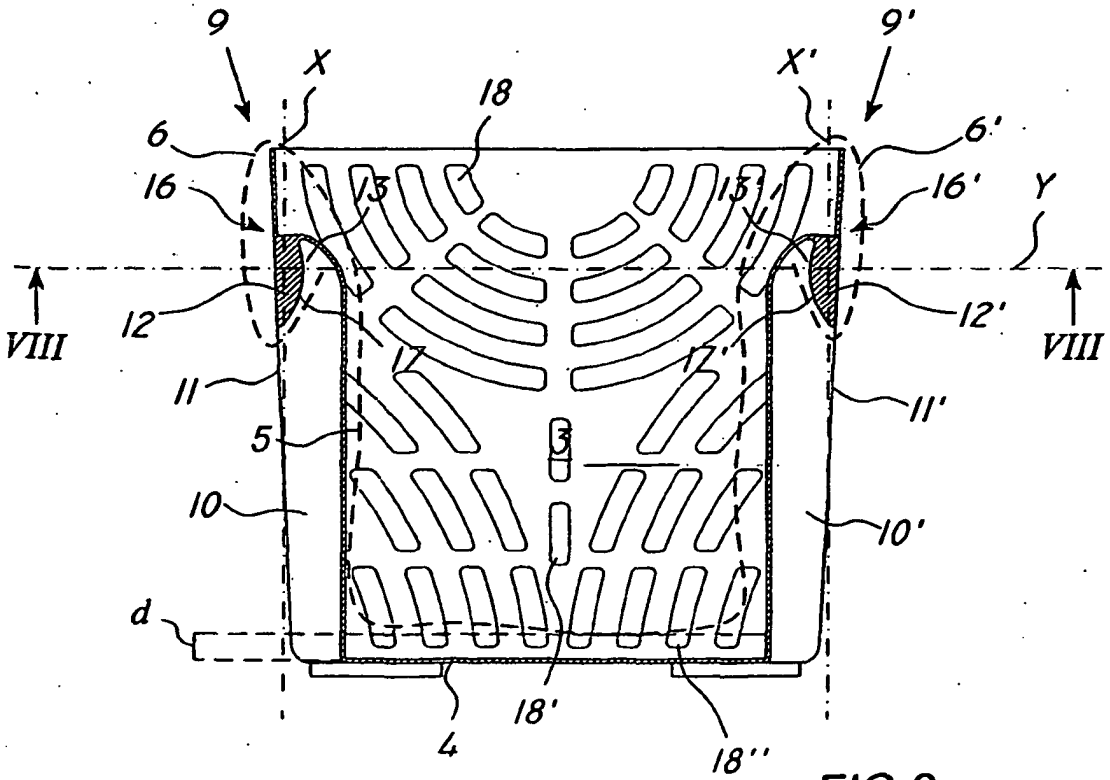

9
X
18
X'
9'
6
6'
16
13
13
16'
Y
VIII
12
12'
VIII
17
17'
11
11'
5
3
10
10'
d
4
18'
18''

FIG.9

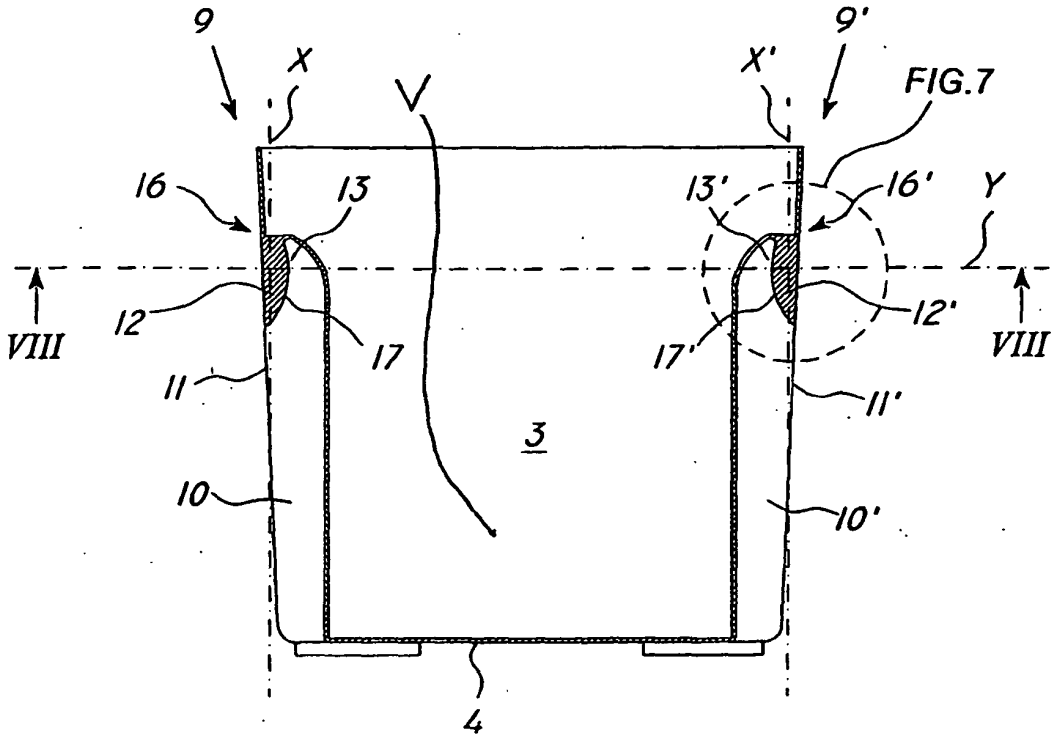


FIG.6

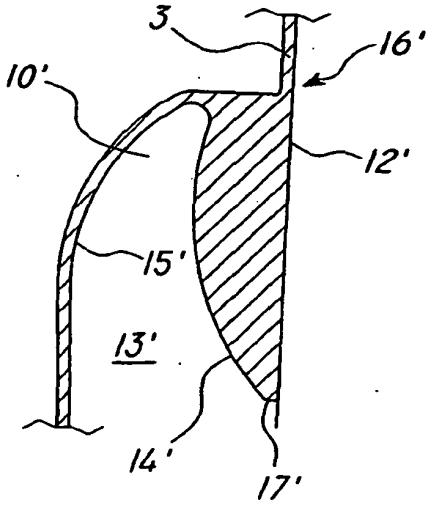


FIG.7

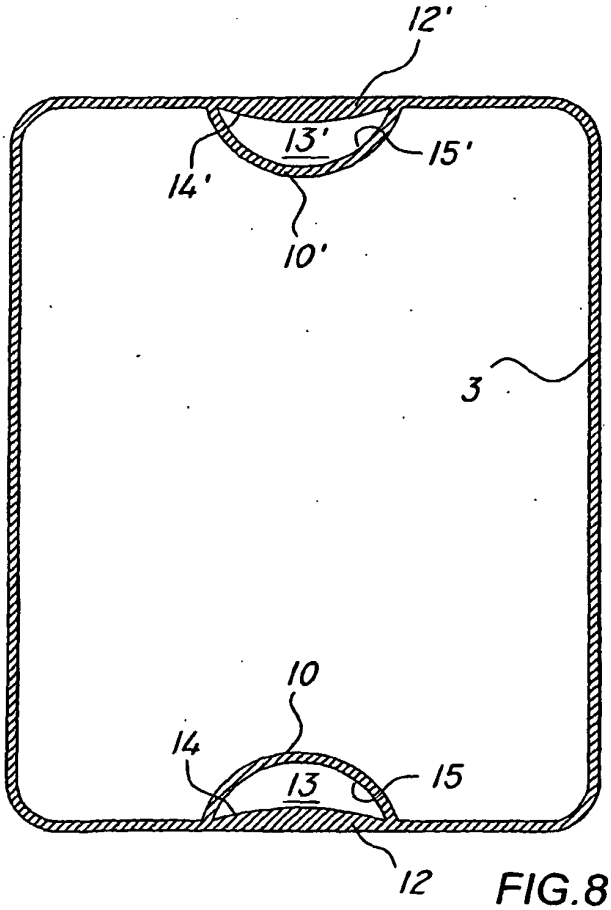


FIG.8

REFERENCES CITED IN THE DESCRIPTION

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