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(54) **Plastic bucket**

Kunststoff-Eimer

Seau en matière plastique

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GB-A- 2 271 764
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US-A- 2 851 187
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Description

[0001] The invention relates to a plastic bucket with a bottom and a standing peripheral wall connected thereto and bounding on its free side remote from the bottom a mouth opening with a mouth rim, on which peripheral wall an outward extending peripheral flange is present which connects to the peripheral wall at a distance from the mouth rim such that an end part of the peripheral wall remains available for coupling to a clamping edge of a cover which engages thereover, which peripheral flange comprises a first flange part extending at least more or less transversely of the peripheral wall and, connecting to the first flange part, a downward extending second flange part with a first free end edge, wherein the main plane of the bottom and the planes through the mouth rim and the lower free end edge are all substantially flat and substantially mutually parallel, on which second flange part are formed two handgrips placed mutually diagonally.

[0002] Such a bucket is known for instance from NL-A-89 02650. In this known plastic bucket the handgrips extend under the flange part and are formed such that they connect at an angle to the second flange part. Particularly in the case where the known bucket must be manufactured by injection moulding, a relatively complicated mould is required in respect of the described structure.

[0003] Another bucket is known from GB-A-2 271 764.

[0004] With a view to the above, it is an object of the invention to embody a bucket such that it can be manufactured by injection moulding with a simple mould.

[0005] It is a further object of the invention to embody a plastic bucket such that it has a more attractive appear-ance.

[0006] It is finally an object of the invention to embody a bucket such that it can be machine-handled more easily during automatic filling operations.

[0007] The above stated objectives are generally realized with a plastic bucket of the type stated in the preamble of claim 1 being characterized by a carrying handle which is pivotally connected to a second flange part by means of two hinge connections situated above the handgrips such that in lying position the carrying handle can rest on the handgrips. It is noted in this respect that the bucket described in the prior art does not have this facility. For support of the carrying handle specific protrusions are required, which make the injection mould more complicated and are moreover aesthetically less attractive.

[0008] A specific embodiment has the special feature that the bucket is stackable in nested manner with a similar bucket. It will be apparent that in order to obtain said stackability the peripheral wall serving as body must have a certain conicity. Such a conicity is very usual per se in injection moulded articles of this type, in order to ensure easy release from the mould.

[0009] A specific embodiment has the special feature that strengthening ribs are arranged between the peripheral wall and the peripheral flange. These ribs not only enhance the form retention and mechanical strength of the peripheral flange but can also serve to co-act during stacking with the mouth rim of a bucket of the same type placed thereunder. For this purpose a preferred embodiment of the bucket according to the invention has the special feature that the ribs lie at a distance from the plane of the free end edge which is a chosen amount smaller than the distance between the plane of the mouth rim and the main plane of the first flange part. With this embodiment the free lower edge of the second flange part of a bucket placed on top remains clear of the upper part of the second flange part of a bucket placed thereunder.

[0010] A preferred embodiment has the special feature that the bucket is monolithic.

[0011] This embodiment can particularly have the feature that the bucket is manufactured by injection moulding.

[0012] Specific choices of material for the plastic bucket according to the invention herein entail that the bucket consists of polypropylene (PP), particularly when the bucket is used for foodstuffs, or polyethylene (PE).

[0013] The invention will now be elucidated with reference to the annexed drawings. Herein:

figure 1 shows a partly broken-away perspective view of a bucket according to the invention in ready-to-use situation with an upward extending handle;
figure 2 shows a partly broken-away perspective view of the bucket of figure 1 closed with a cover and with folded down handle; and
figure 3 shows a partly broken-away perspective view of a part of two buckets mutually stacked in nested manner.

[0014] Figure 1 shows a PP bucket 1 according to the invention. This bucket comprises a bottom 2 and a standing peripheral wall 3 which is formed monolithically therewith and which bounds on its free side remote from bottom 2 a mouth opening 4 with a mouth rim 5, on which peripheral wall 3 an outward extending peripheral flange 6 is present which connects to peripheral wall 3 at some distance from mouth rim 5 such that an end part 7 of peripheral wall 3 remains free and is available for coupling to a clamping edge 8 of a PP cover 9, which clamping edge co-acts clampingly with the widened mouth rim 5. Peripheral flange 6 comprises a first flange part 10 extending more or less transversely of peripheral wall 3 and, connecting thereto, a downward extending second flange part 11 with a lower free end edge 12, wherein the main plane of the bottom 2 and the planes through the mouth rim 5 and the lower free end edge 12 are all substantially flat and substantially mutually parallel.

[0015] Formed on second flange part 11 are two handgrips 13 placed mutually diagonally. Each handgrip

13 is embodied as a cowl-like, outward protruding part of second flange part 11 and comprises a first handgrip part 14 extending outward relative thereto, a downward extending second handgrip part 15 connected thereto and two support shores 16 each connected to second flange part 11 and the peripheral ends of first handgrip part 14 and second handgrip part 15, wherein the lower edge 17 of second handgrip part 15 lies substantially in the plane of the lower free end edge 12.

[0016] The lower edges 18 of shores 16 also lie in the plane of lower free end edge 12.

[0017] A carrying handle 19 is pivotally connected to second flange part 11. A simple embodiment has the special feature that in the region of the handgrips 13 the second flange part 11 has through-holes into which a widened pin is placed which is connected to handle 19 to thus pivotally connect handle 19 to second flange part 11.

[0018] As shown in figure 2, the handle 19 can be folded down and support on handgrips 13 in this folded-down position.

[0019] The lower edge 17 can preferably take a slightly widened or rounded form. A filled bucket 1 can hereby be carried manually more easily by the user.

[0020] Figure 3 shows that bucket 1 is stackable in nested manner with a similar bucket 1'.

[0021] Figure 3 also shows that strengthening ribs 20 are arranged between peripheral wall 3 and peripheral flange 6. These ribs 20 lie at a distance 21 from the plane of the free end edge 12 which is a chosen amount smaller than the distance between the plane of mouth rim 5 and the main plane of first flange part 10. As shown in figure 3, a certain intermediate space thus remains between the free end edge 12' of the upper bucket and the upper region of the second flange part 11 of the lower bucket.

[0022] It will be apparent that the invention is not limited to the described embodiment.

[0023] The bucket according to the invention can be embodied in different dimensions. The relevant range of contents can amount for instance to 0.3-50 litres.

[0024] The option shown clearly in figures 1 and 2 of carrying handle 19 supporting on handgrips 13 is very practical for various reasons. In usual buckets, where this option is not provided, the carrying handles can hang in uncontrolled manner along and over the body of the bucket. Particularly during stacking (figure 3), printing of the body of a bucket and general machine-handling of a bucket, this can be extremely troublesome and result in uncontrolled situations which can even cause disruption.

[0025] In respect of the material from which the bucket can be manufactured, it is further noted that, as well as for foodstuffs, the bucket is also suitable for other substances, for instance non-food substances such as paint. For use with foodstuffs it will of course be necessary to comply with a food compatibility standard. In this case polypropylene is generally a suitable choice. If desired, the bucket according to the invention can be manufactured from another material and optionally be provided with an internal coating coming into contact with the food product and compatible therewith.

Claims

1. Plastic bucket (1) with a bottom (2) and a standing peripheral wall (3) connected thereto and bounding on its free side remote from the bottom a mouth opening (4) with a mouth rim (5), on which peripheral wall (3) an outward extending peripheral flange (6) is present which connects to the peripheral wall (3) at a distance from the mouth rim (5) such that an end part (7) of the peripheral wall (3) remains available for coupling to a clamping edge (8) of a cover (9) which engages thereover, which peripheral flange comprises a first flange part (10) extending at least more or less transversely of the peripheral wall (3) and, connecting to the first flange part (10) , a downward extending second flange part (11) with a first free end edge (12), wherein the main plane of the bottom (2) and the planes through the mouth rim (5) and the lower free end edge (12) are all substantially flat and substantially mutually parallel, on which second flange part (11) are formed two handgrips (13) placed mutually diagonally,

each handgrip (13) is embodied as a cowl-like, outward protruding part of the second flange part (11), comprising a first handgrip part (14) extending outward relative to the second flange part (11), a downward extending second handgrip part (15) connecting to the first handgrip part (14) and two support shores (16) which are each connected to the second flange part (11) and the peripheral ends of the first handgrip part (14) and the second handgrip part (15), wherein the lower edge (17) of the second handgrip part (15) lies substantially in the plane of the lower free end edge (12),

characterized by

a carrying handle (19) which is pivotally connected to the second flange part (11) by means of two hinge connections situated above the handgrips (13) such that in lying position the carrying handle (19) can rest on the handgrips (13).

2. Plastic bucket as claimed in claim 1,

characterized in that

the lower edges of the shores (16) lie in the plane of the lower free end edge (17).

3. Plastic bucket as claimed in claim 1,

characterized in that

the bucket (1) is stackable in nested manner with a similar bucket (1).

4. Plastic bucket as claimed in claim 1,

characterized in that
strengthening ribs (20) are arranged between the peripheral wall (3) and the peripheral flange (6).

5. Plastic bucket as claimed in claims 3 and 4,
characterized in that
the ribs (20) lie at a distance (21) from the plane of the free end edge (12) which is a chosen amount smaller than the distance between the plane of the mouth rim (5) and the main plane of the first flange part (10).

6. Plastic bucket as claimed in claim 1,
characterized in that
the bucket (1) is monolithic.

7. Plastic bucket as claimed in claim 1,
characterized in that
the bucket (1) is manufactured by injection moulding.

8. Plastic bucket as claimed in claim 1,
characterized in that
the bucket (1) consists of polypropylene (PP) or polyethylene (PE).

Patentansprüche

1. Plastikeimer (1) mit einem Boden (2) und einer aufrecht stehenden Aussenrundwand (3), die mit diesem Boden verbunden ist und an ihrer freien Seite, entgegengesetzt vom Boden, in einer Mundöffnung (4) mit einem Mundrand (5) endet, an dessen Aussenrundwand (3) sich ein nach aussen sich ausdehnender peripherischer Kragen (6) befindet, der sich so in einem Abstand von dem Mundrand (5) mit der Aussenrundwand (3) verbindet, dass ein Endteil (7) der Aussenrundwand (3) verfügbar bleibt, um sich koppelbar mit einer Klemmkante (8) eines Deckels (9) zu verbinden, der sich darüber einrasten lässt, dessen peripherischer Kragen (6) ein erstes Kragenteil (10), das sich wenigstens mehr oder weniger quer zur Aussenrundwand (3) ausdehnt, und, verbindend mit dem ersten Kragenteil (10), ein sich nach unten ausdehnendes zweites Kragenteil (11) mit einer ersten freien Endkante (12) umfasst, wobei die Hauptfläche des Bodens (2) und die Ebenen durch den Mundrand (5) und durch die untere freie Endkante (12) alle im wesentlichen eben und im wesentlichen gemeinsam parallel zueinander sind, auf dessen zweitem Kragenteil (11) zwei Handgriffe (13) geformt sind, die diagonal gegenüber plaziert sind, jeder Handgriff (13) ist als ein haubenähnlicher, nach aussen ragender Teil des zweiten Kragenteiles (11) ausgeführt, umfassend ein erstes Handgriffteil (14), das sich bezogen auf das zweite Kragenteil (11) nach aussen ausdehnt, ein nach unten sich ausdehnendes zweites Handgriffteil (15), verbunden mit dem ersten Handgriffteil (14), und zwei Stützstreben (16), die jede mit dem zweiten Kragenteil (11) und den peripherischen Enden des ersten Handgriffteils (14) und denen des zweiten Handgriffteils (15) verbunden sind, wobei die untere Kante (17) des zweiten Handgriffteiles (15) im wesentlichen in der Ebene der unteren freien Endkante (12) liegt,
gekennzeichnet durch
einen Tragebügel (19), der drehbar **durch** zwei Scharnierverbindungen mit dem zweiten Kragenteil (11) verbunden ist, die so oberhalb der Handgriffe (13) gelegen sind, dass der Tragebügel (19) in ruhender Position auf den Handgriffen (13) aufliegen kann.

2. Plastikeimer wie beansprucht in Anspruch 1, **dadurch gekennzeichnet, dass** die unteren Kanten der Stützstreben (16) in der Ebene der unteren freien Endkante (17) liegen.

3. Plastikeimer wie beansprucht in Anspruch 1, **dadurch gekennzeichnet, dass** der Eimer (1) ineinander passend stapelbar mit einem gleichartigen Eimer ist.

4. Plastikeimer wie beansprucht in Anspruch 1, **dadurch gekennzeichnet, dass** Verstärkungsrippen (20) zwischen der Aussenrundwand (3) und dem peripherischen Kragen (6) angeordnet sind.

5. Plastikeimer wie beansprucht in Ansprüchen 3 und 4, **dadurch gekennzeichnet, dass** die Rippen (20) in einem Abstand von der Ebene der freien Endkante (12) liegen, der einen ausgewählten Betrag kleiner ist als der Abstand zwischen der Ebene des Mundrandes (5) und der der Hauptebene des ersten Kragenteiles (10).

6. Plastikeimer wie beansprucht in Anspruch 1, **dadurch gekennzeichnet, dass** der Eimer (1) monolithisch ist.

7. Plastikeimer wie beansprucht in Anspruch 1, **dadurch gekennzeichnet, dass** der Eimer (1) im Spritzgussverfahren hergestellt ist.

8. Plastikeimer wie beansprucht in Anspruch 1, **dadurch gekennzeichnet, dass** der Eimer (1) aus Polypropylen (PP) oder aus Polyethylen (PE) besteht.

Revendications

1. Seau en matière plastique (1) avec un fond (2) et une paroi périphérique dressée (3) connectée à ce-

lui-ci et délimitant sur son côté libre à l'écart du fond une ouverture de gueule (4) avec un rebord de gueule (5), sur laquelle paroi périphérique (3) se trouve une bride périphérique (6) s'étendant vers l'extérieur qui est reliée à la paroi périphérique (3) à une certaine distance du rebord de gueule (5) de sorte qu'une partie d'extrémité (7) de la paroi périphérique (3) reste disponible au couplage avec un bord de serrage (8) d'un couvercle (9) qui se met en prise sur celle-ci, laquelle bride périphérique comprend une première partie de bride (10) s'étendant au moins de manière plus ou moins transversale par rapport à la paroi périphérique (3) et, reliée à la première partie de bride (10), une seconde partie de bride s'étendant vers le bas (11) avec un premier bord d'extrémité libre (12), dans lequel le plan principal du fond (2) et les plans traversant le rebord de gueule (5) et le bord inférieur d'extrémité libre sont tous sensiblement plats et sensiblement mutuellement parallèles, sur laquelle seconde partie de bride (11) sont formées deux poignées (13) placées mutuellement en diagonale,

chaque poignée (13) étant réalisée comme une partie sous forme de tablier se projetant vers l'extérieur de la seconde partie de bride (11), comprenant une première partie de poignée (14) s'étendant vers l'extérieur par rapport à la seconde partie de bride (11), une seconde partie de poignée s'étendant vers le bas (15), reliée à la première partie de poignée (14) et deux étais de support (16), qui sont chacun reliés à la seconde partie de bride (11) et aux parties périphériques de la première partie de poignée (14) et de la seconde partie de poignée (15), dans lequel le bord inférieur (17) de la seconde partie de poignée (15) repose sensiblement dans le plan du bord inférieur d'extrémité libre (12), **caractérisé par**

une anse (19) qui est reliée de façon pivotante à la seconde partie de bride (11) au moyen de deux connexions à charnière situées au-dessus des poignées (13) de manière à ce qu'en position couchée l'anse (19) puisse reposer sur les poignées (13).

2. Seau en matière plastique selon la revendication 1, **caractérisé en ce que**

les bords inférieurs des étais (16) reposent sur le plan du bord inférieur d'extrémité libre (17).

3. Seau en matière plastique selon la revendication 1, **caractérisé en ce que**

le seau (1) peut être empilé de manière emboîtée avec un seau similaire (1).

4. Seau en matière plastique selon la revendication 1, **caractérisé en ce que**

des nervures de renforcement (20) sont agencées entre la paroi périphérique (3) et la bride périphérique (6).

5. Seau en matière plastique selon les revendications 3 et 4, **caractérisé en ce que**

les nervures (20) reposent à une certaine distance (21) du plan du bord d'extrémité libre (12), distance qui est inférieure, selon une valeur choisie, à la distance séparant le plan du rebord de gueule (5) et le plan principal de la première partie de bride (10).

6. Seau en matière plastique selon la revendication 1, **caractérisé en ce que**

le seau (1) est monobloc.

7. Seau en matière plastique selon la revendication 1, **caractérisé en ce que**

le seau (1) est fabriqué par moulage par injection.

8. Seau en matière plastique selon la revendication 1, **caractérisé en ce que**

le seau (1) est constitué de polypropylène (PP) ou de polyéthylène (PE).

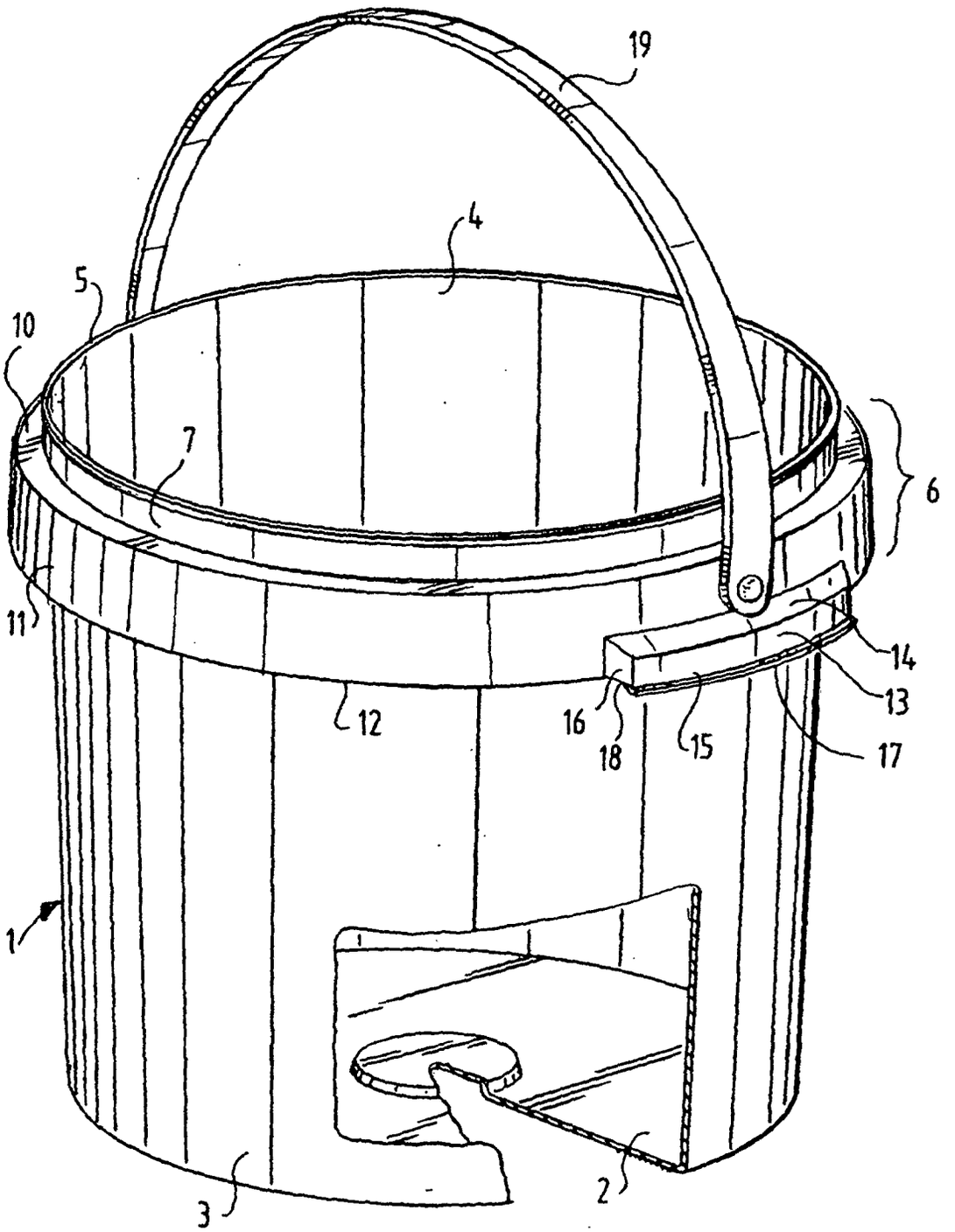


FIG.1

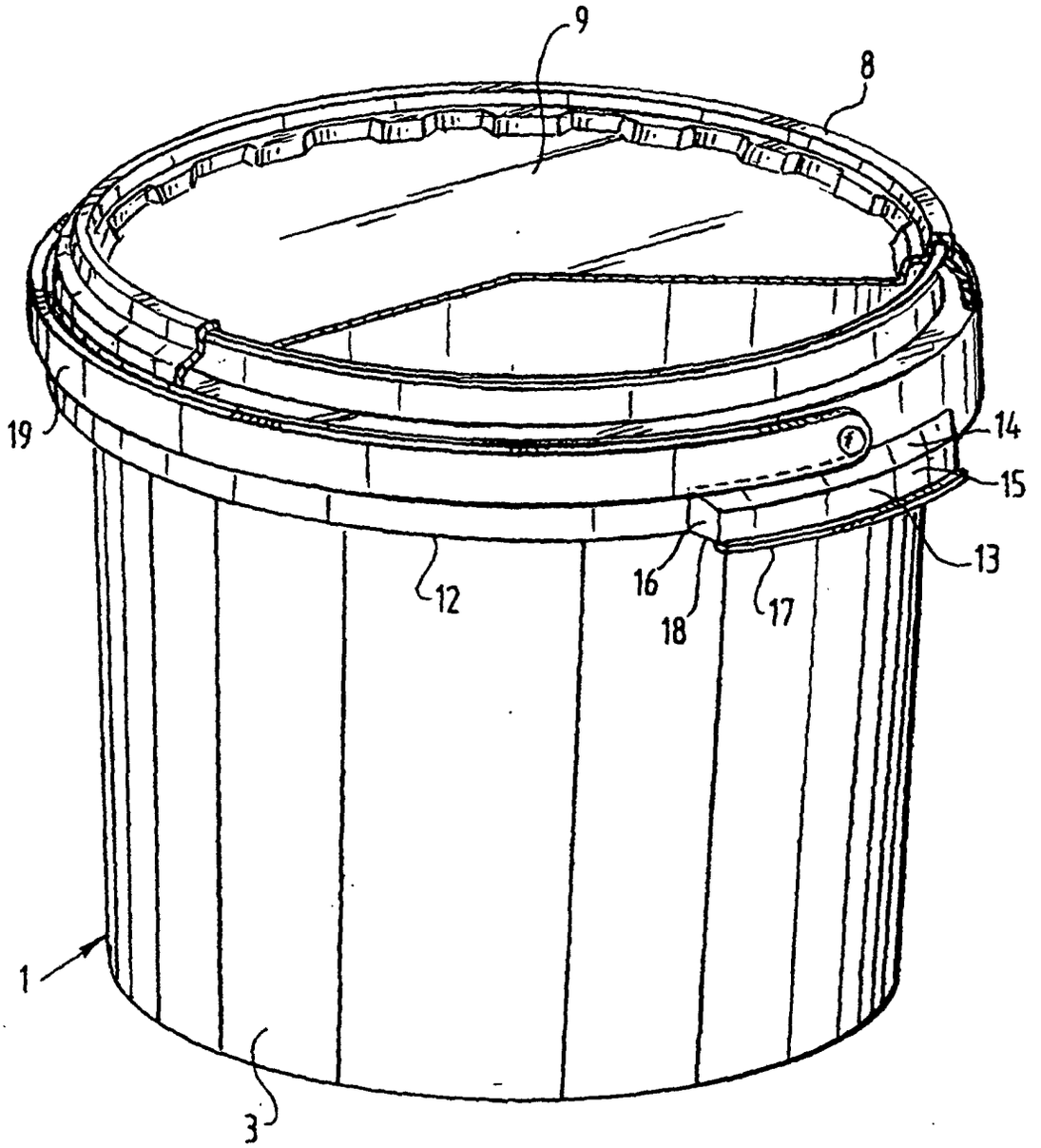


FIG.2

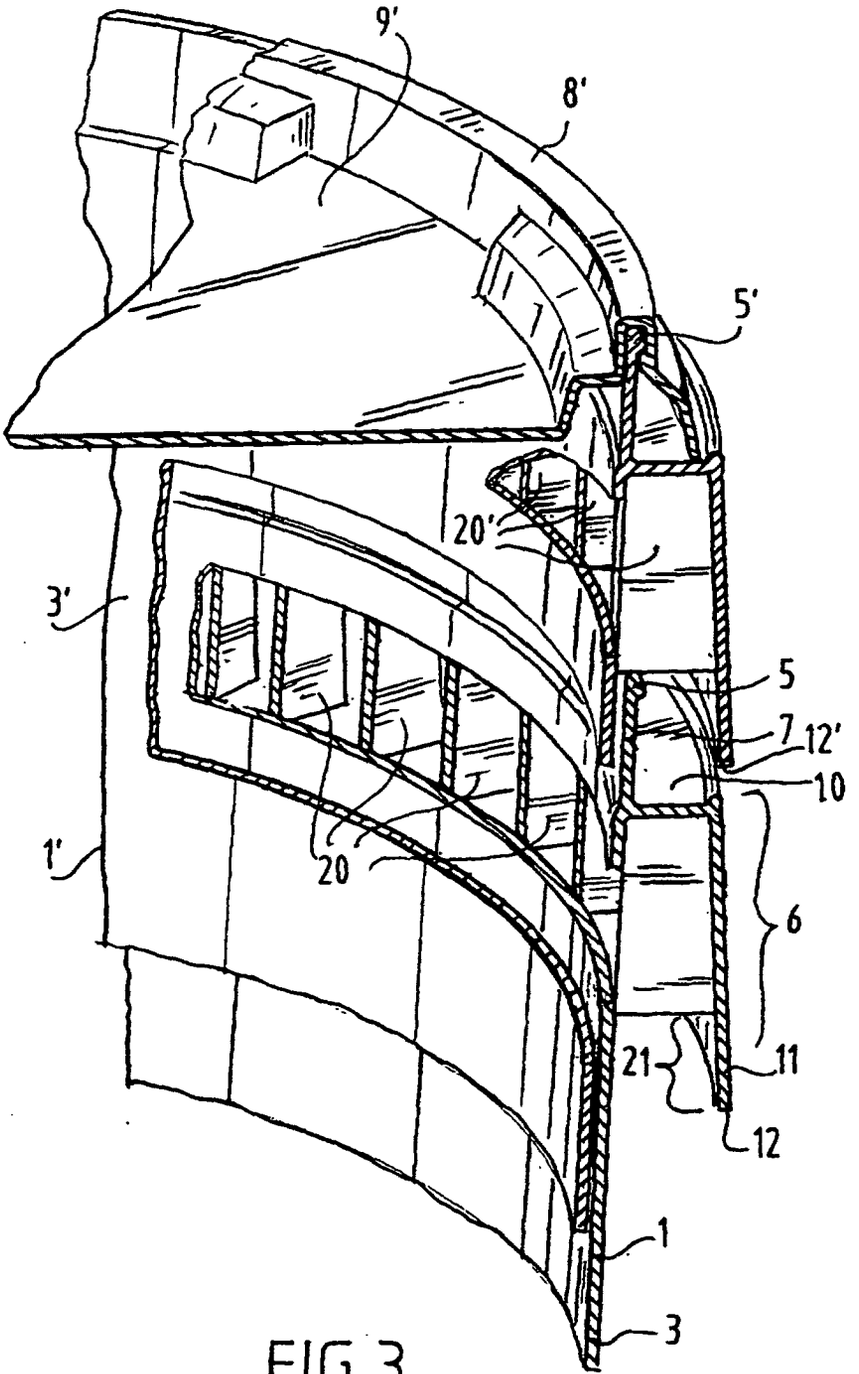


FIG.3