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(54) Plastic bucket

(57) The invention relates to a plastic bucket with a bottom and a standing peripheral wall connected thereto, on which peripheral wall an outward extending peripheral flange is present which connects to the peripheral wall at a distance from the mouth rim, 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, on which second flange part are formed two handgrips placed mutually diagonally. Each handgrip is embodied as a cowl-like, outward protruding part of the second flange part, comprising a first handgrip part extending outward relative to the second flange part, a downward extending second handgrip part connecting to the first handgrip part and two support shores which are each connected to the second flange part and the peripheral ends of the first handgrip part and the second handgrip part, wherein the lower edge of the second handgrip part lies substantially in the plane of the lower free end edge.

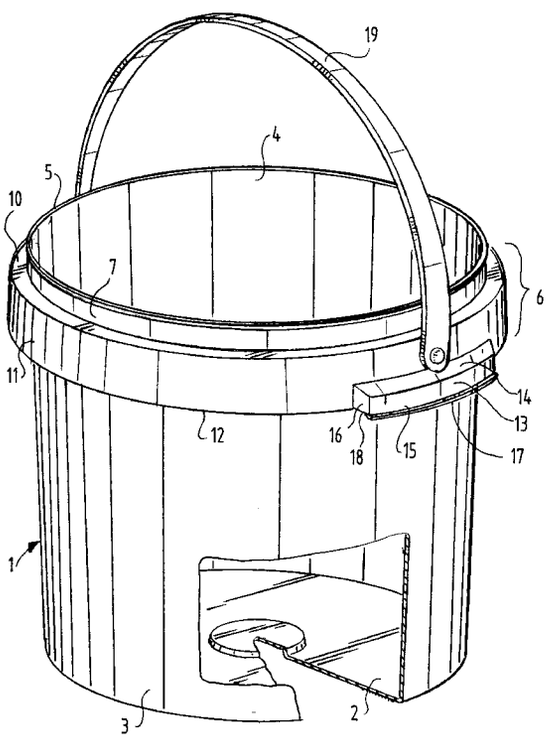

FIG.1

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Description

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.

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.

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.

It is a further object of the invention to embody a plastic bucket such that it has a more attractive appearance.

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.

The above stated objectives are generally realized with a plastic bucket of the type stated in the preamble which has the feature that each handgrip is embodied as a cowl-like, outward protruding part of the second flange part, comprising a first handgrip part extending outward relative to the second flange part, a downward extending second handgrip part connecting to the first handgrip part and two support shores which are each connected to the second flange part and the peripheral ends of the first handgrip part and the second handgrip part, wherein the lower edge of the second handgrip part lies substantially in the plane of the lower free end edge.

A specific embodiment has the special feature that the lower edges of the shores lie in the plane of the lower free end edge.

A preferred embodiment is 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.

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.

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.

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

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

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).

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.

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.

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 pe¶ ripheral 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.

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

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.

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

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.

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

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.

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

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.

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.

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 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,

   characterized in that

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

2. Plastic bucket as claimed in claim 1,

   characterized in that

   the lower edges of the shores lie in the plane of the lower free end edge.

3. Plastic bucket as claimed in claim 1,

   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.

4. Plastic bucket as claimed in claim 1,
characterized in that
the bucket is stackable in nested manner with a similar bucket.

5. Plastic bucket as claimed in claim 1,
characterized in that
strengthening ribs are arranged between the peripheral wall and the peripheral flange.

6. Plastic bucket as claimed in claims 4 and 5,
characterized in 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.

7. Plastic bucket as claimed in claim 1,
characterized in that
the bucket is monolithic.

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

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

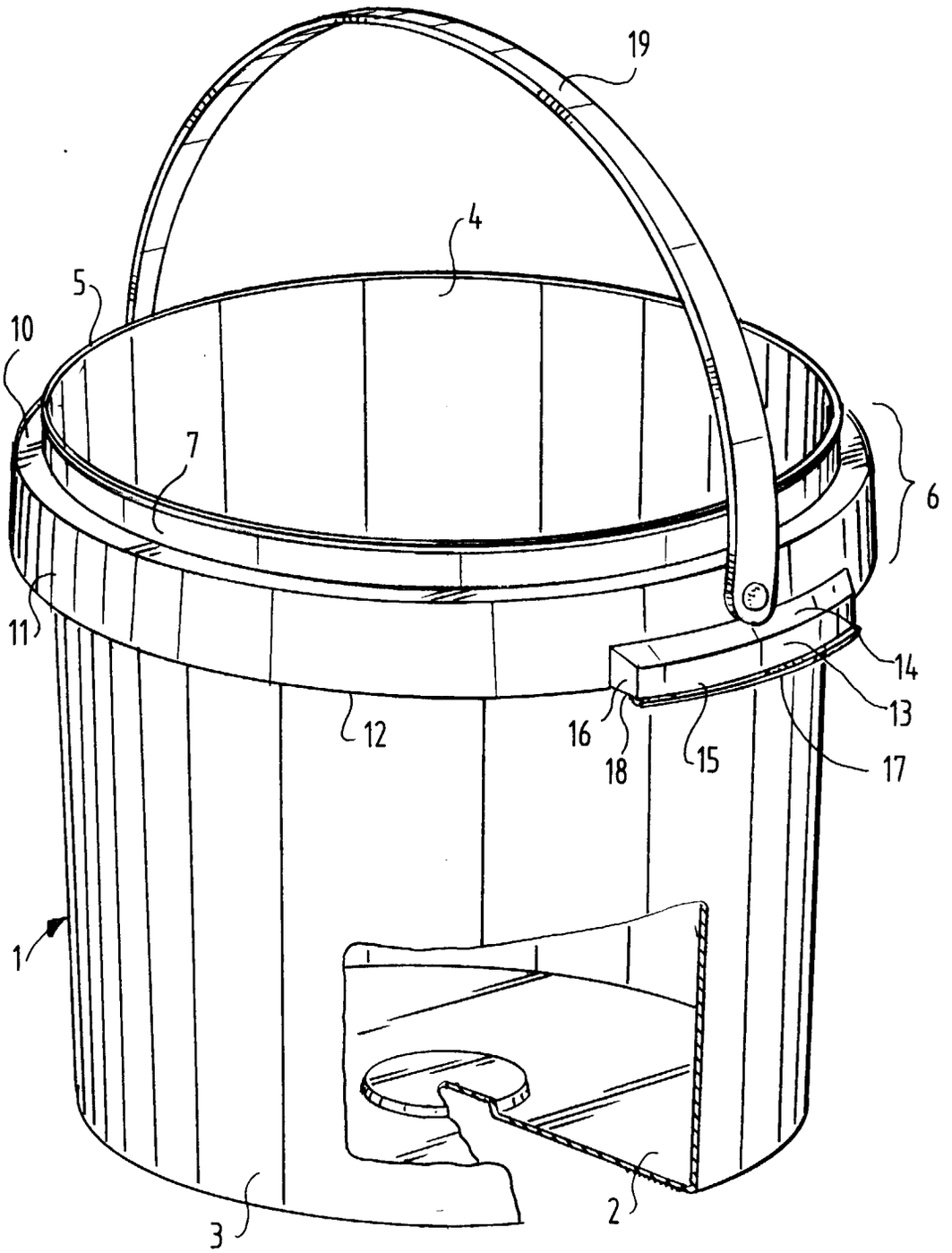

FIG.1

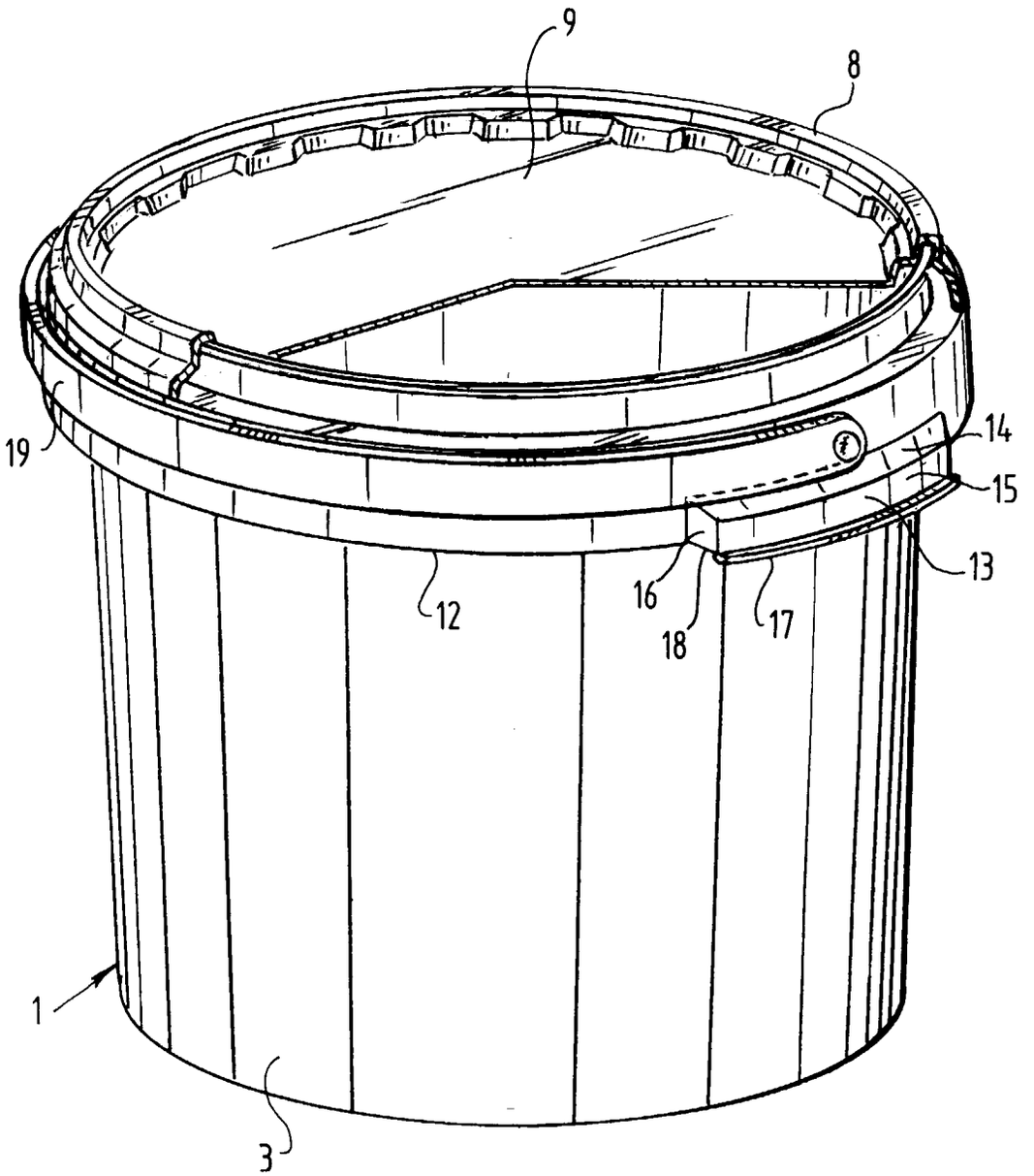

FIG.2

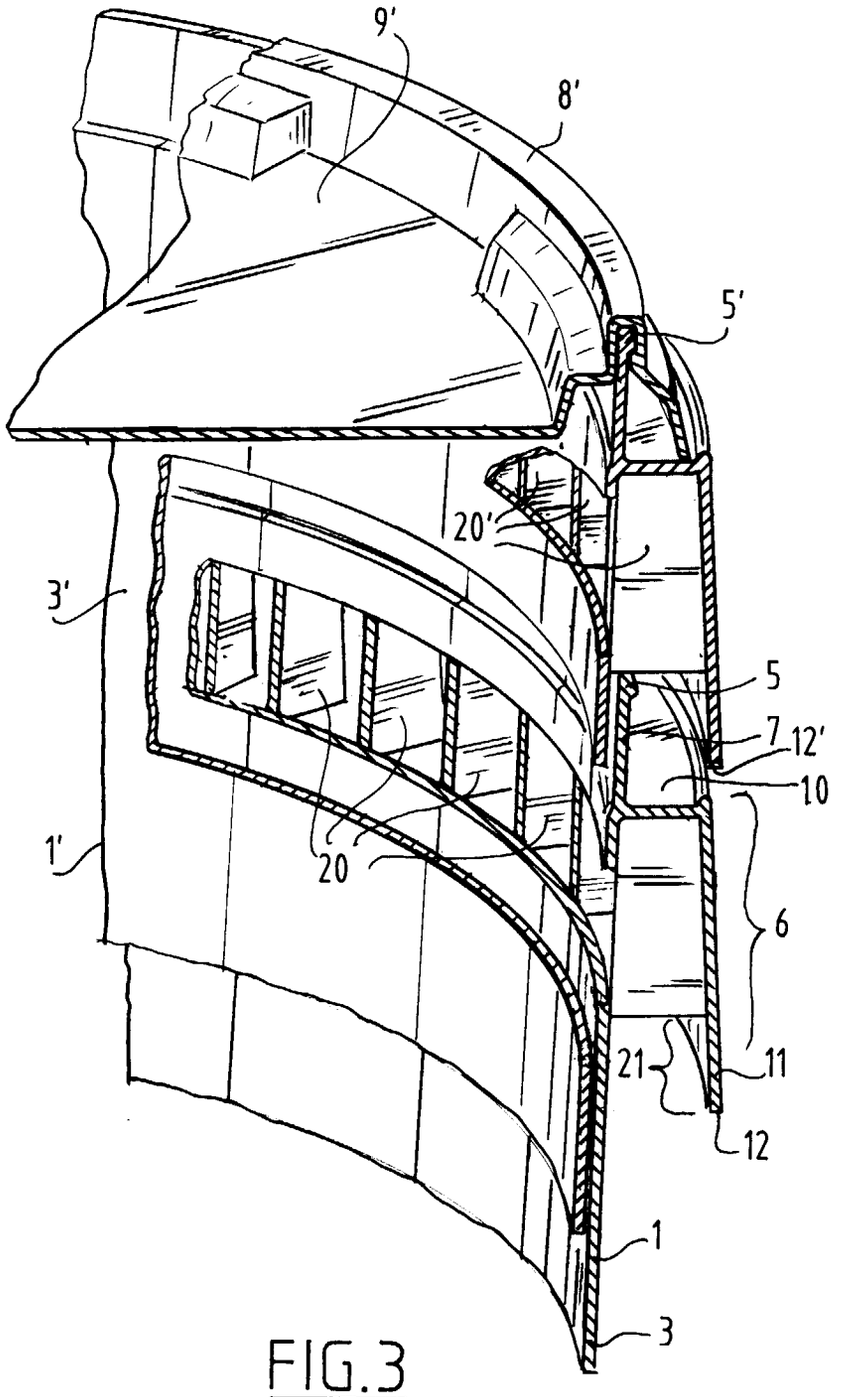

FIG.3

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EUROPEAN SEARCH REPORT

Application Number
EP 98 20 1088

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X A Y	GB 2 271 764 A (MCMATH) 27 April 1994 * page 6, line 14 - line 20; figures 1-3 *	1,2,7 3,6 4,5,8,9	B65D25/28 B65D25/32 B65D43/06
D,A	NL 8 902 650 A (HK-PLASTICS) 16 May 1991 * page 2, line 25 - page 4, line 13; figures 1-5 *	1-9	
X A	NL 6 506 972 A (REXALL DRUG AND CHEMICAL COMP.) 6 December 1965 * page 2, line 34 - page 3, line 3; figures 1-6 *	1,2 3,7-9	
Y A	US 4 293 073 A (YATES) 6 October 1981 * column 2, line 25 - column 4, line 47; figures 1-10 *	4,5,8,9 6	
A	GB 2 012 736 A (LAKHANI) 1 August 1979 * page 1, line 123 - page 2, line 40; figure 1 *	1-9	
A	US 2 851 187 A (HALL) 9 September 1958 * column 1, line 55 - column 2, line 61; figures 1-4 *	1-9	TECHNICAL FIELDS SEARCHED (Int.Cl.6) B65D A47J

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	10 July 1998	Vantomme, M

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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