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(56) Documents Cited:
GB 2024781 A **GB 1583058 A**
WO 1992/015503 A1 **JP 2006062737 A**
JP 2002001893 A **US 5881901 A**

(58) Field of Search:
UK CL (Edition X) **B8P**
INT CL **B65D**
Other: **online: epodoc, wpi**

(54) Abstract Title: **Wash bowl**

(57) An open receptacle such as wash bowl 10 is made from paper pulp and has a base wall 12 and an enclosing wall 14 extending upwardly from the base wall. The enclosing wall has a number of recesses 34, 36 forming grip means for facilitating handling. There may also be inwardly-directed projections, either the said recesses having lips 38, 40 forming shoulders (42, 44, Fig. 1) or other recesses 46, 48, 54 all of which indicate the level of liquid corresponding to predetermined volumes. The container can be recycled by maceration.

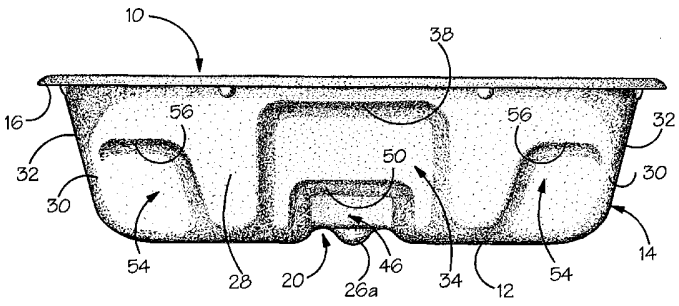

FIG.4.

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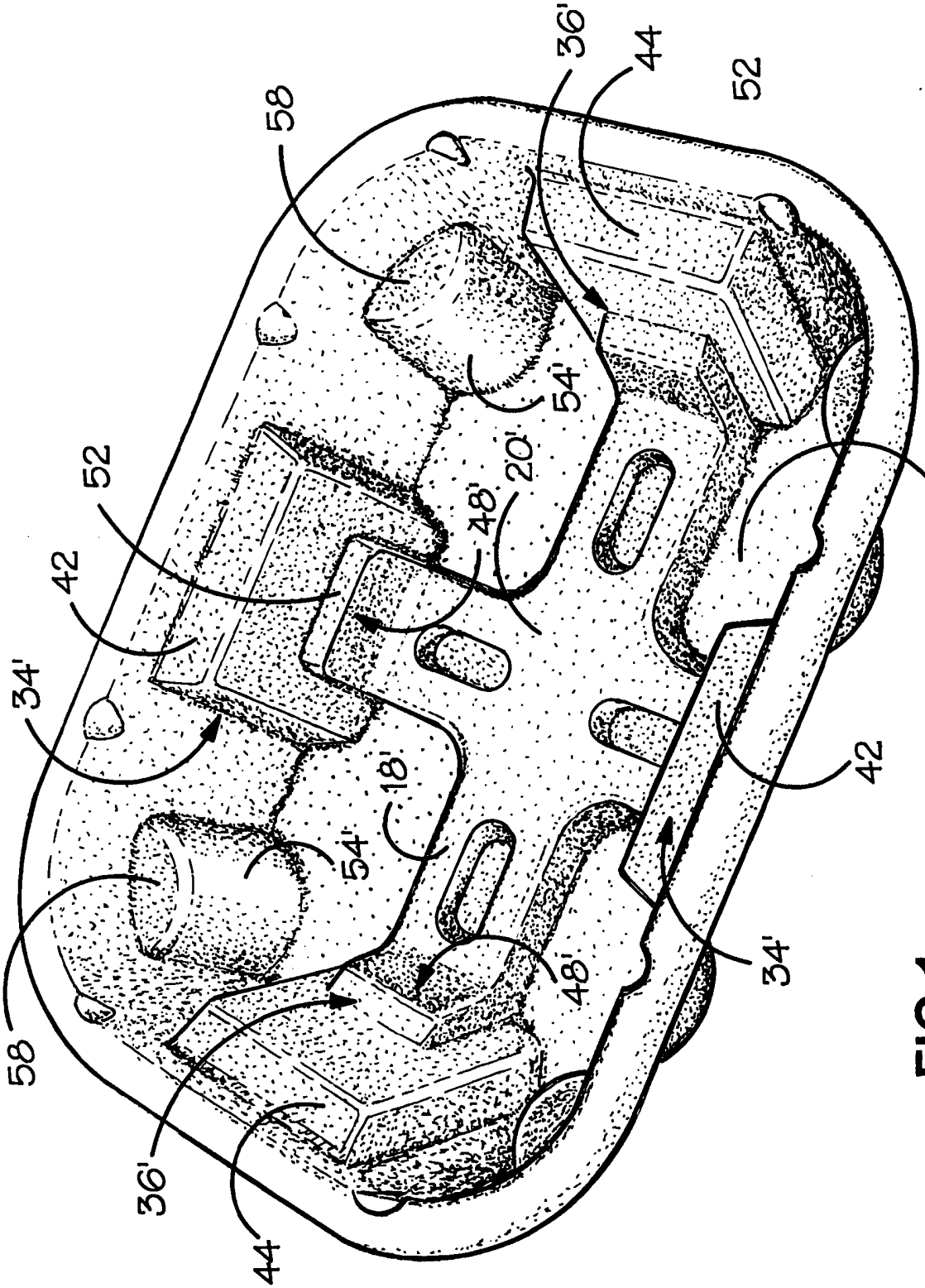

FIG.1.

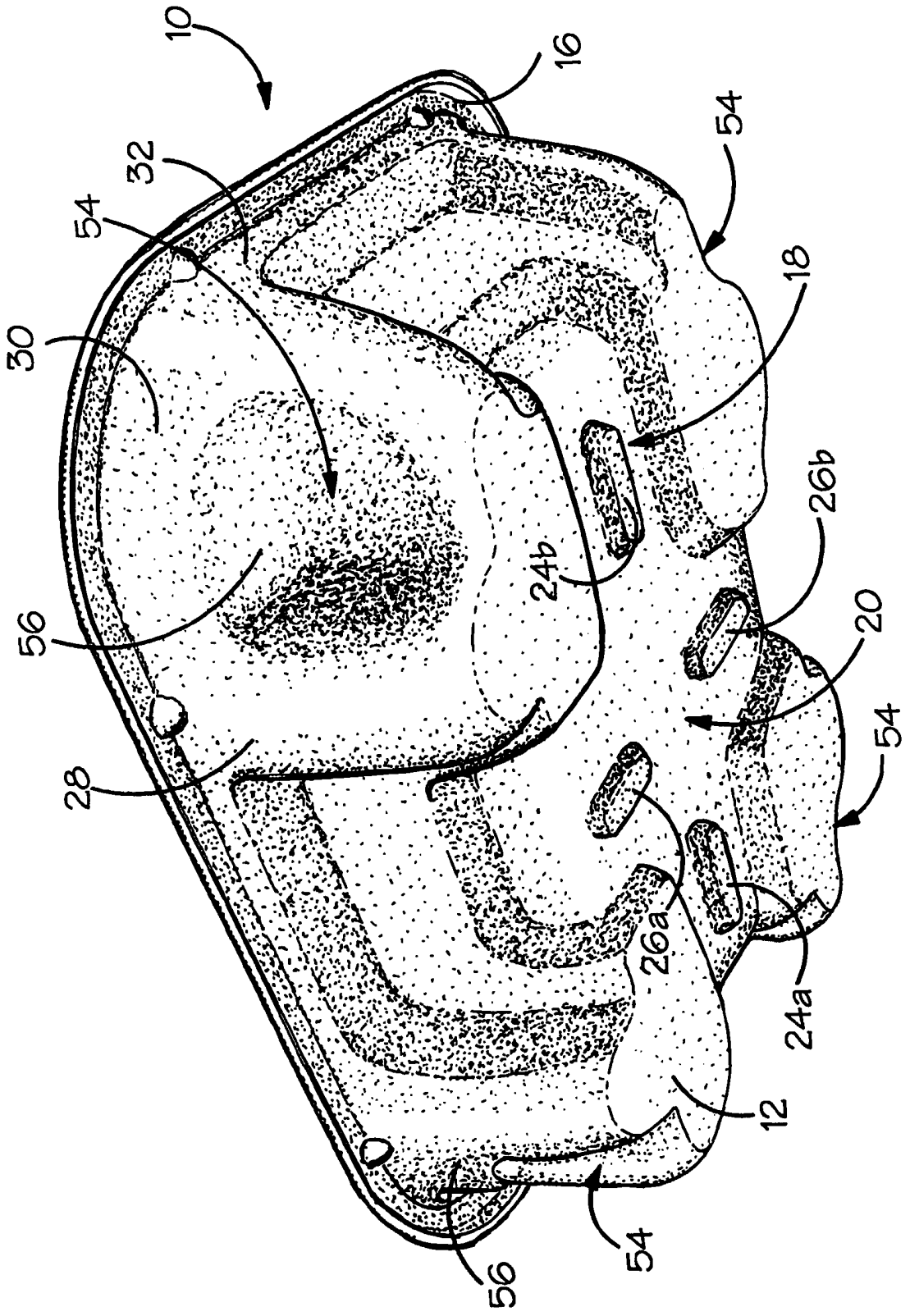

FIG.2.

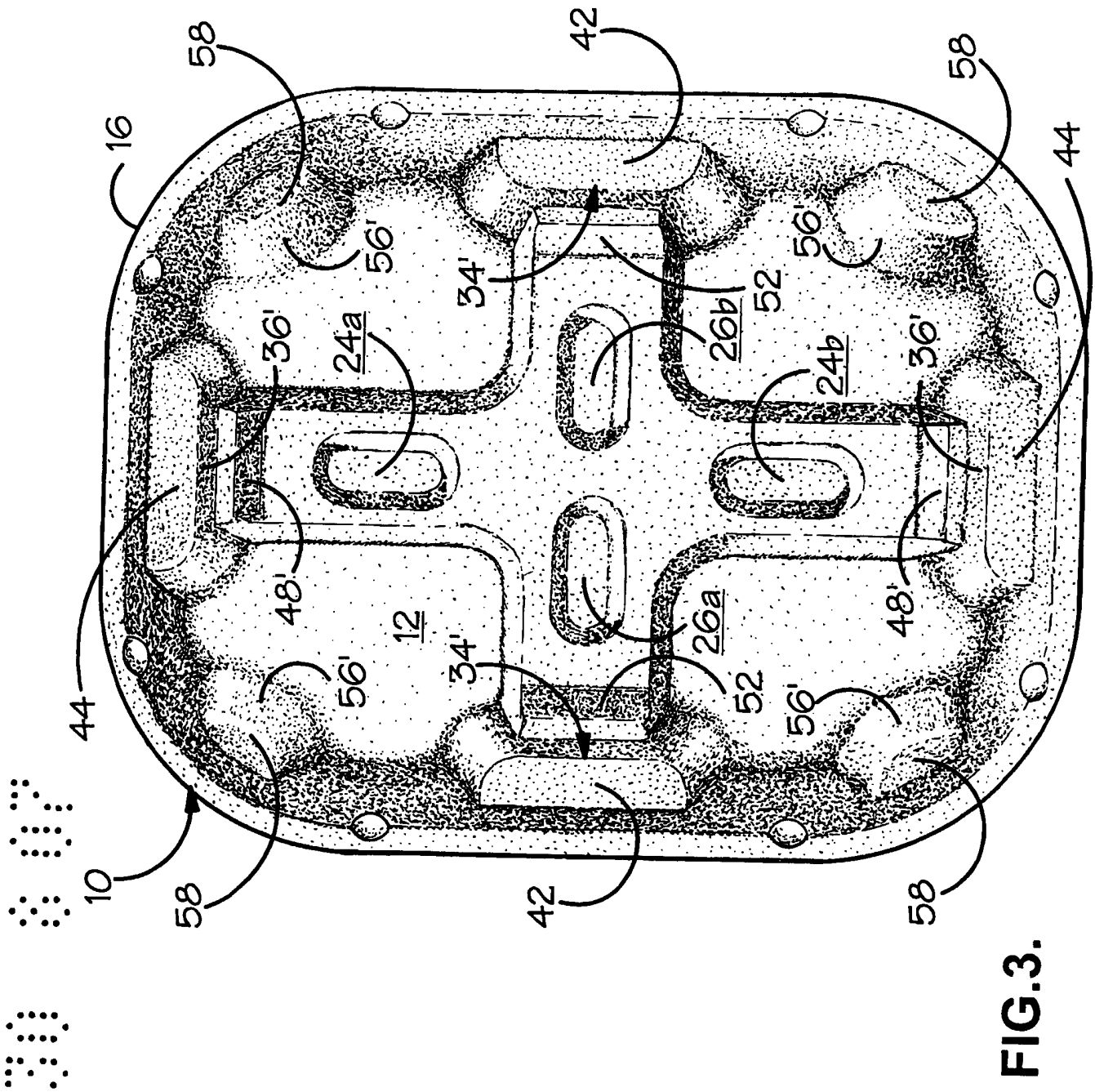

FIG.3.

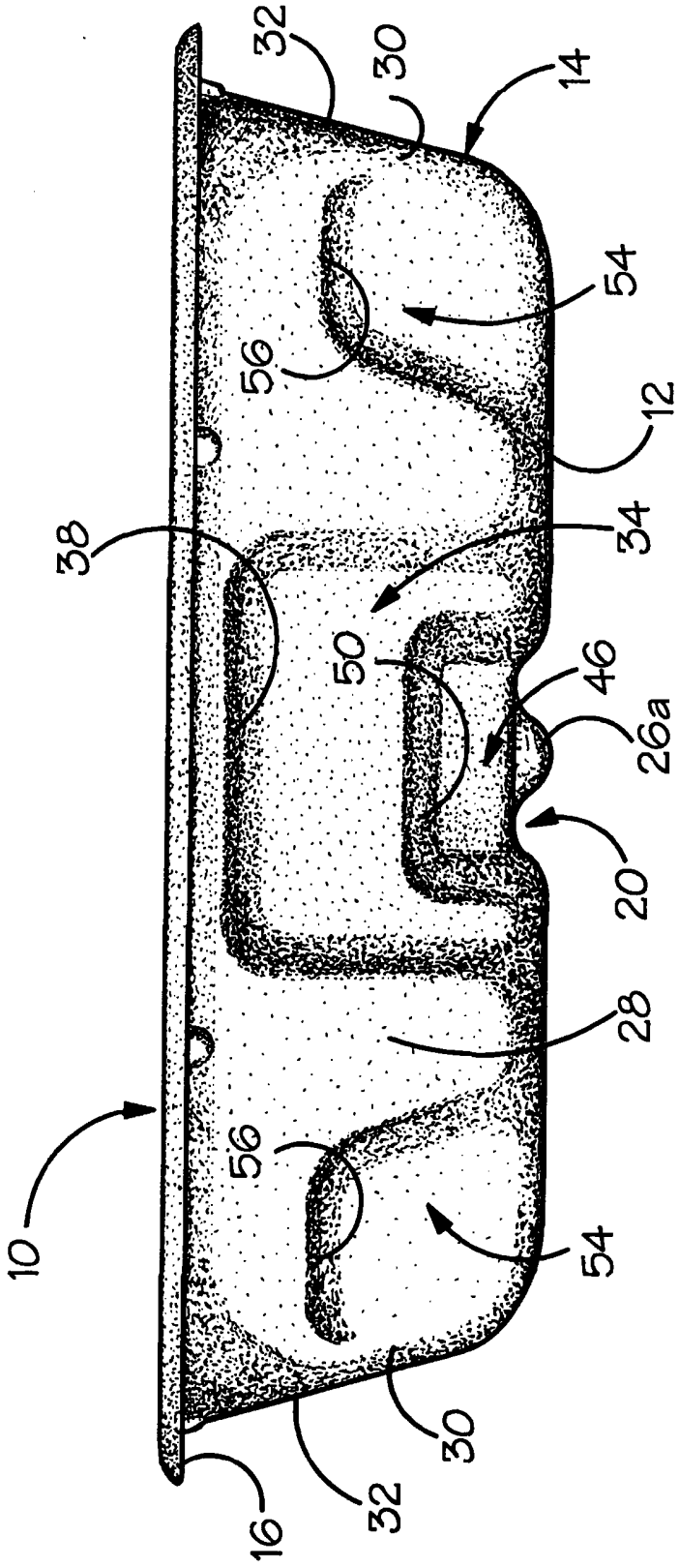

FIG.4.

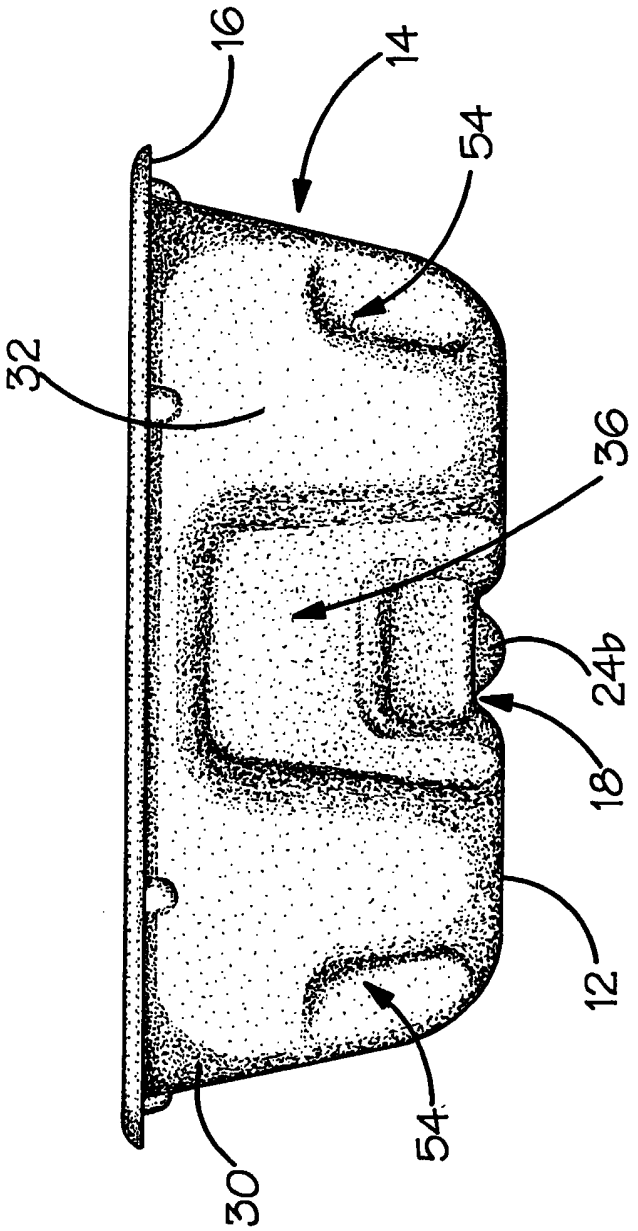

FIG.5.

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DESCRIPTION

RECEPTACLE

The present invention relates to receptacles and in particular, but not exclusively, to receptacles for use as wash bowls in hospitals, nursing homes and the like.

Patients who are confined to bed find it difficult or impossible to visit a bathroom in order to carry out basic cleaning functions such as washing the hands and face. In such circumstances, a wash bowl is brought to the patient in bed and is filled with water and cleaning agents (e.g. soap or detergent) to allow the patient to wash. Conventional wash bowls take the form of a generally planar circular base from the periphery of which an upstanding, slightly outwardly-flaring frusto-conical wall projects upwardly. The upper end of the wall is formed into an outwardly-turned overhanging peripheral lip in order to facilitate lifting of the bowl, particularly when it is wet. Such bowls are moulded from common plastics such as polyethylene.

After each use of a wash bowl, it is necessary to clean the bowl thoroughly in order to reduce cross-contamination and cross-infection between patients. However, it is not possible to eliminate such risks completely and even with very thorough cleaning, the risk of cross-infection remains.

It is known to form disposable urine bottles, bed pans and the like from paper pulp which, after use, can be placed in a macerator to reduce the particles to a size where they can be discharged into the normal sewer

system. However, if a disposable wash bowl were to be made from paper pulp in the same shape and dimensions as the conventional plastics wash bowls, problems would arise.

In particular, the wash bowl is intended to hold a considerable amount of liquid, of the order of 4 litres, and whilst this would not present too many problems when the bowl is in use, problems are likely to be encountered when it becomes necessary to lift a paper pulp bowl when filled with water. In particular, if the bowl is lifted by the rim, a moulded paper pulp bowl is unlikely to have sufficient strength and would almost certainly rupture.

It is therefore an object of the present invention to provide a receptacle, such as a wash bowl, which can be made from disposable material such as paper pulp but which can be lifted easily and without fear or disintegration.

In accordance with a first aspect of the present invention, an upwardly-open receptacle comprises a base wall and an enclosing wall extending upwardly from the periphery of the base wall and defining a liquid receiving volume, the enclosing wall comprising a plurality of recesses forming grip means for facilitating handling.

By providing recesses in the enclosing wall, it is not necessary to rely on a peripheral lip in order to lift the bowl when full and thus the likelihood of disintegration of a filled bowl is greatly reduced. In addition, by having recesses in the enclosing wall, a more rigid structure is produced.

Preferably, the said recesses project inwardly, into said liquid-receiving volume.

In one embodiment, the enclosing walls comprises two recesses, located on opposite sides of the liquid-receiving volume.

The recesses preferably comprise an overhanging, finger-engaging lip portion.

The overhanging lip portion may conveniently form a shoulder within the liquid-receiving volume which indicates a level of liquid which corresponds to a predetermined volume of liquid.

Preferably, the receptacle comprises a generally planar base and an upstanding enclosing wall extending upwardly from the periphery of the base.

The enclosing wall may comprise two opposed side walls, which may extend in a direction substantially parallel to each other.

Alternatively, or in addition, the receptacle may comprise two opposed end walls, which may extend in a direction substantially parallel to each other.

Each pair of opposed walls preferably comprises two of said recesses, one located in each of the pair of opposed walls.

Preferably, the enclosing wall is inclined outwardly.

The receptacle may further comprise an inwardly-directed projection which indicates a level of liquid which corresponds to a predetermined volume.

There may be a plurality of said inwardly directed projections.

The receptacle may comprise a plurality of projections indicating the same level of liquid.

The receptacle may comprise a plurality of projections indicating different levels of liquid corresponding to different predetermined volumes.

Preferably, the receptacle comprises maceratable material, preferably dried moulded paper pulp.

In accordance with a second aspect of the invention an upwardly open receptacle comprises a base wall and an enclosing wall extending upwardly from the base wall and defining a liquid-containing volume, the enclosing wall comprising an inwardly-directed projection which indicates a level of liquid which corresponds to a predetermined volume.

Preferably, there is a plurality of said inwardly directed projections.

There may be a plurality of projections indicating the same level of liquid.

There may be a plurality of projections indicating different levels of liquid corresponding to different predetermined volumes.

By way of example only, a specific embodiment of the present invention will be now be described, with reference to the accompanying drawings, in which:-

Fig. 1 is a perspective view from above of an embodiment of receptacle in accordance with the present invention;

Fig. 2 is a perspective view from below of the receptacle of Fig. 1;

Fig. 3 is a plan view of the receptacle of Fig. 1;

Fig. 4 is a side view of the receptacle of Fig. 1; and

Fig. 5 is an end view of the receptacle of Fig. 1.

Figs. 1 to 5 illustrate a receptacle in the form of a wash bowl 10. The wash bowl is moulded from paper pulp material in a known manner.

The wash bowl 10 comprises a generally planar, rectangular base wall 12 and an upstanding slightly outwardly-flaring enclosing wall 14 extending upwardly from the periphery of the base wall and terminating in a peripheral overhanging lip 16 at its upper end. As shown in the Figures, the base wall 12 is provided with a central, inwardly-projecting longitudinally-extending elongate indent 18 and an intersecting central, inwardly-projecting laterally-extending elongate indent 20 which form inwardly-projecting reinforcing ribs 18', 20' into the bowl, to increase the strength of the base. The ribs themselves are provided with a plurality of outwardly-projecting indentations such as 24a, 24b and 26a, 26b to improve the strength of the structure still further. However, the indentation 24a, 24b, 26a, 26b may be omitted if desired.

The upstanding peripheral wall comprises two generally planar longer side walls 28 which are inclined with respect to one another but which extend parallel to one another in the longitudinal direction of the wash bowl. The side walls merge at rounded corners 30 with two parallel shorter end walls 32.

As illustrated in the Figures, each of the side walls 28 and end walls 30 is provided with an inwardly-projecting recess 34. 36 respectively which project inwardly into the interior space of the wash bowl in the form of a

projection 34', 36' respectively. In particular, the uppermost part of each recess is formed into an overhanging lip 38, 40 which greatly facilitates lifting and manoeuvring of the wash bowl, as will be explained. As it projects into the interior of the bowl 10, the lips 38, 40 form shoulders 42, 44 which are designed to indicate the level of liquid which corresponds to a predetermined volume, for example 4 litres. In other words, if the level of liquid within the wash bowl reaches the level of the shoulders 42, 44 corresponding to the overhanging lip 38, 40 of the handle recesses, approximately 4 litres of liquid are contained within the washbowl.

It will also be observed that a further indentation 48 is provided towards the lower end of each of the recesses 34, 36and is formed into a further overhanging lip 50 and corresponding internal projection 48, and internal shoulder 52. The height of the should 52 indicates the level of liquid within the wash bowl which corresponds to a different, smaller predetermined volume, such as 1 litre.

It will also be observed that in each corner of the wash bowl, a further inwardly-directed recess 54 (and corresponding internal projection 54') is provided with an overhanging lip and corresponding internal shoulder 58. Again, the internal shoulder 58 indicates the level of liquid within the wash bowl which corresponds to a predetermined volume, for example 2 litres.

As mentioned previously, the enclosing walls of the wash bowl flare outwardly in the upward direction, as best seen in Figs. 4 and 5. In addition, all of the recesses 34, 36, 46, 54 as described previously project

inwardly into the interior volume of the wash bowl. This not only facilitates moulding of the article without the use of complicated movable dies but it also allows one wash bowl to be nestable within another whereby a stack of wash bowls may be provided ready for use in a relatively small volume.

In use, a wash bowl is given to a patient and is filled with water to the desired level. As explained previously, if an approximate amount of water is required, then it can be poured in until it reaches the required level indicating shoulder 50, 58, 42, 44. The patient may then use the wash bowl 10 as desired.

When the wash bowl 10 has been finished with, it may be removed and disposed of in a macerator. As explained previously, the grip facility afforded by the recesses 34, 36 in opposite walls of the wash bowl 10 greatly facilitate lifting and manoeuvring of the wash bowl particularly when full. In particular, the fingers of a person lifting the wash bowl may be engaged with the overhanging lip 38, 40 of two opposed recesses 38, 40 without risk of disintegration of the wash bowl. In addition, the recesses afford a steady grip, particularly if the wash bowl is wet, as is likely to occur in use.

Moreover, the inwardly-directed projections 34, 36, 46, 54 form internal shoulders indicating levels corresponding to predetermined volumes of liquid allow approximate volumes to be measured into the wash bowl, if desired.

The invention is not restricted to the details of foregoing embodiment. In particular, although the invention has been described with

respect to wash bowls, it is applicable to other receptacles, particularly other receptacles which are intended to hold significant volumes of liquid. Examples include receptacles for used engine oil, used cooking oil, emulsion paint and wallpaper paint. Moreover, although the invention has been described with reference to wash bowls made from moulded dried paper pulp, it is equally applicable to any material, including reusable materials such as plastics.

CLAIMS

1. An upwardly open receptacle comprising a base wall and an enclosing wall extending upwardly from the periphery of the base wall and defining a liquid-receiving volume, the enclosing wall comprising a plurality of recesses forming grip means for facilitating handling.

2. A receptacle as claimed in claim 1, wherein the said recesses project inwardly, into said liquid-receiving volume.

3. A receptacle as claimed in claim 1 or claim 2, comprising two recesses, located on opposite sides of the liquid-receiving volume.

4. A receptacle as claimed in any of the preceding claims, wherein the recesses comprise an overhanging, finger-engaging lip portion.

5. A receptacle as claimed in claim 4, wherein the overhanging lip portion forms a shoulder within the liquid-receiving volume which indicates a level of liquid which corresponds to a predetermined volume of liquid.

6. A receptacle as claimed in any of the preceding claims, comprising a generally planar base and an upstanding enclosing wall extending upwardly from the periphery of the base.

7. A receptacle as claimed in claim 6, wherein the enclosing wall comprises two opposed side walls.

8. A receptacle as claimed in claim 7, wherein the two opposed side walls extend in a direction substantially parallel to each other.

9. A receptacle as claimed in claim 7 or claim 8, comprising two opposed end walls.

10. A receptacle as claimed in claim 9, wherein the opposed end walls extend in a direction substantially parallel to each other.

11. A receptacle as claimed in any of claims 7 to 10, wherein each pair of opposed walls comprises two of said recesses, one located in each of the pair of opposed walls.

12. A receptacle as claimed in any of the preceding claims, wherein the enclosing wall is inclined outwardly.

13. A receptacle as claimed in any of the preceding claims, further comprising an inwardly-directed projection which indicates a level of liquid which corresponds to a predetermined volume.

14. A receptacle as claimed in claim 13, comprising a plurality of said inwardly directed projections.

15. A receptacle as claimed in claim 14, comprising a plurality of projections indicating the same level of liquid.

16. A receptacle as claimed in claim 14 or claim 15, comprising a plurality of projections indicating different levels of liquid corresponding to different predetermined volumes.

17. A receptacle as claimed in any of the preceding claims, formed from maceratable material.

18. A receptacle as claimed in any of the preceding claims, formed from dried moulded paper pulp.

19. An upwardly open receptacle comprising a base wall and an enclosing wall extending upwardly from the base wall and defining a liquid-containing volume, the enclosing wall comprising an inwardly-directed

projection which indicates a level of liquid which corresponds to a predetermined volume.

20. A receptacle as claimed in claim 19, comprising a plurality of said inwardly directed projections.

21. A receptacle as claimed in claim 19 or claim 20, comprising a plurality of projections indicating the same level of liquid.

22. A receptacle as claimed in claim 20 or claim 21, comprising a plurality of projections indicating different levels of liquid corresponding to different predetermined volumes.

23. A receptacle substantially as herein described with reference to, and as illustrated in, the accompanying drawings.

24. A receptacle as claimed in any of the preceding claims, comprising a wash bowl.

Amendments To The Claims Have Been Filed As Follows

1. An upwardly open wash bowl manufactured from maceratable, dried moulded paper pulp, the wash bowl comprising a base wall and an enclosing wall extending upwardly from the periphery of the base wall and defining a liquid-receiving volume, the enclosing wall comprising a plurality of recesses forming grip means for facilitating handling.

2. A bowl as claimed in claim 1, wherein the said recesses project inwardly, into said liquid-receiving volume.

3. A bowl as claimed in claim 1 or claim 2, comprising two recesses, located on opposite sides of the liquid-receiving volume.

4. A bowl as claimed in any of the preceding claims, wherein the recesses comprise an overhanging, finger-engaging lip portion.

5. A bowl as claimed in claim 4, wherein the overhanging lip portion forms a shoulder within the liquid-receiving volume which indicates a level of liquid which corresponds to a predetermined volume of liquid.

6. A bowl as claimed in any of the preceding claims, comprising a generally planar base and an upstanding enclosing wall extending upwardly from the periphery of the base.

7. A bowl as claimed in claim 6, wherein the enclosing wall comprises two opposed side walls.

8. A bowl as claimed in claim 7, wherein the two opposed side walls extend in a direction substantially parallel to each other.

9. A bowl as claimed in claim 7 or claim 8, comprising two opposed end walls.

10. A bowl as claimed in claim 9, wherein the opposed end walls extend in a direction substantially parallel to each other.

11. A bowl as claimed in any of claims 7 to 10, wherein each pair of opposed walls comprises two of said recesses, one located in each of the pair of opposed walls.

12. A bowl as claimed in any of the preceding claims, wherein the enclosing wall is inclined outwardly.

13. A bowl as claimed in any of the preceding claims, further comprising an inwardly-directed projection which indicates a level of liquid which corresponds to a predetermined volume.

14. A bowl as claimed in claim 13, comprising a plurality of said inwardly directed projections.

15. A bowl as claimed in claim 14, comprising a plurality of projections indicating the same level of liquid.

16. A bowl as claimed in claim 14 or claim 15, comprising a plurality of projections indicating different levels of liquid corresponding to different predetermined volumes.

17. An upwardly open wash bowl manufactured from maceratable, dried moulded paper pulp, the wash bowl comprising a base wall and an enclosing

wall extending upwardly from the base wall and defining a liquid-containing volume, the enclosing wall comprising an inwardly-directed projection which indicates a level of liquid which corresponds to a predetermined volume.

18. A bowl as claimed in claim 17, comprising a plurality of said inwardly directed projections.

19. A bowl as claimed in claim 17 or claim 18, comprising a plurality of projections indicating the same level of liquid.

20. A bowl as claimed in claim 18 or claim 19, comprising a plurality of projections indicating different levels of liquid corresponding to different predetermined volumes.

21. A bowl substantially as herein described with reference to, and as illustrated in, the accompanying drawings.

22. A bowl as claimed in any of the preceding claims, comprising a wash bowl.

Intellectual Property Office

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Application No: GB0615074.2 **Examiner:** Mr Pablo Cappellini

Claims searched: 1-18 & 23 and 24 in part **Date of search:** 6 June 2007

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1-3, 6-15	GB 2024781 A (S & J FAERCH PLAST A/S) - See protrusions 10.
X	1-10 & 12-15	GB1583058 A (DART INDUSTRIES) - See protrusions 24
X	1-10 & 12-15	US 5881901 A (HAMPTON) - See recesses 24a
X	1-10, 12, 15 & 16	WO 92/15503 A1 (LEVY) - See recesses 36 and inwardly directed projection 32

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC[X] :

B8P

Worldwide search of patent documents classified in the following areas of the IPC

B65D

The following online and other databases have been used in the preparation of this search report

online: EPODOC, WPI

International Classification:

Subclass	Subgroup	Valid From
B65D	0001/22	01/01/2006
B65D	0001/34	01/01/2006
B65D	0025/28	01/01/2006

Intellectual Property Office

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Application No: GB0615074.2 **Examiner:** Mr Pablo Cappellini

Claims searched: 19-22 & 23 and 24 in part **Date of search:** 6 June 2007

Patents Act 1977
Further Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	19	JP2006062737 A (RENGO CO LTD) - See Figs 2 & 3. Note inwardly directed projection (step) in wall 4.
X	19	JP2002001893 A (JAPAN PLUS KK) - See Figs 1-2. Note inwardly directed projection (step) on wall 4
X	19-21	GB1583058 A (DART INDUSTRIES) - See Fig.2. Note inwardly directed projections 24.
X	19-21	WO 92/15503 A1 (LEVY) - Note pair of inwardly directed projections 36 indicating a first possible level.

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC[X] :

B8P

Worldwide search of patent documents classified in the following areas of the IPC

B65D

The following online and other databases have been used in the preparation of this search report

online: EPODOC, WPI

International Classification:

Subclass	Subgroup	Valid From
B65D	0001/22	01/01/2006
B65D	0001/34	01/01/2006

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Subclass	Subgroup	Valid From
B65D	0025/28	01/01/2006