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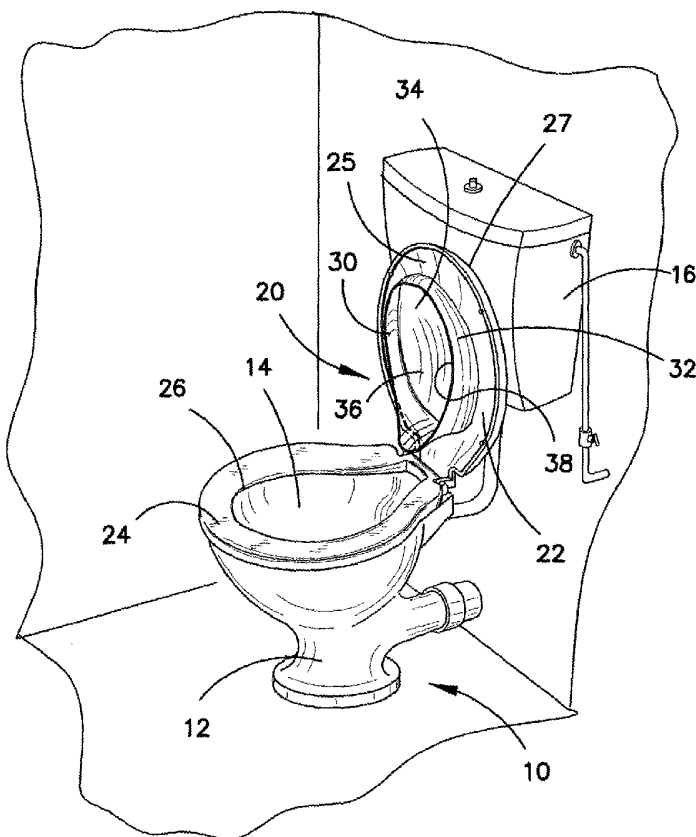
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(54) Title: TOILET SEAT LID



(57) Abstract: A toilet seat lid is disclosed which comprises a lid cover (22) having an inner surface (25) and an outer surface (27). A urinal (30) is located on the inner surface (25) and is defined by a peripheral wall (32), a rear wall (34) formed by the lid cover (22) and an opened front opposite the rear wall (34). The peripheral wall (34) locates in opening (14) of the bowl (12) when the lid cover is closed. The toilet seat lid also includes a seat portion (24) having an opening (26) in which the peripheral wall (32) is also accommodated when the lid cover (22) is closed.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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TOILET SEAT LIDField of the Invention

This invention relates to a toilet seat lid for a toilet
5 having a bowl and an upper opening.

Background Art

Conventional toilets which are used by both men and women
generally comprise a bowl, a seat and a lid. In some
10 public male toilets, a separate urinal is also provided.
However, in many public places, the same toilets are used
by men and women.

When toilets which generally comprise a lid and bowl are
15 used by men, particularly in public places, where not so
much care may be taken, the bowl of the toilet provides a
relatively small target area, and as a consequence, it
often happens during use that the bowl is missed. This
problem is exacerbated if the toilet is used at night
20 where it may be difficult to see, or if the toilet is used
by men in an inebriated condition, which may often occur
at sporting events.

The result of this is that a significant mess can be left
25 behind which needs to be cleaned by attendants at a later
date. In some public places where the toilets are used
only intermittently, the user is often asked to clean the
mess before departing.

Summary of the Invention

30 The object of the invention is to provide a toilet seat
lid which alleviates this problem.

The invention provides a toilet seat lid for a toilet
35 having a bowl and an upper opening, the lid comprising:
a lid cover having an outer surface and an inner
surface;

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a urinal on the inner surface, the urinal comprising:

- (a) a peripheral wall;
 - (b) a rear wall formed by the lid; and
 - 5 (c) an open front opposite the rear wall; and
- wherein, when the lid is used on the toilet, and the lid is open and the toilet is used by a male in a standing position, liquid is able to flow from the urinal into the bowl, and when the lid is closed, the peripheral
- 10 wall locates in the upper opening so liquid can drain from the peripheral wall and rear wall into the bowl.

The provision of the urinal on the rear wall provides a sufficiently increased target area for men, and also

15 directs the liquid into the toilet bowl, thereby decreasing the likelihood of creating a mess around the toilet. When the lid is closed, the liquid is able to flow from the peripheral wall into the bowl, and therefore the urinal can properly drain without the liquid coming

20 into contact with the remainder of the upper part of the toilet which may be used in a seated position.

Preferably the peripheral wall is slightly curved so that the peripheral wall from the interior of the urinal is

25 concave.

Preferably the rear wall is also curved so the rear wall is also concave.

30 Preferably the peripheral wall includes a lower spout region for facilitating draining of liquid from the urinal into the bowl.

Preferably the toilet seat lid further comprises a seat

35 portion, the lid being hinged with respect to the seat portion for movement relative to the seat portion, the seat portion having an opening, and wherein the peripheral

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wall locates both in the seat opening and the upper opening of the bowl when the lid and seat are in a closed position.

- 5 The seat portion may have an open rear portion to accommodate the spout closely to the bowl.

Preferably the hinge is a friction hinge so that the toilet lid can be raised to a desired position, and will
10 hold in that position to thereby locate the lid cover at a desired angle relative to the toilet bowl.

Brief Description of the Drawings

Preferred embodiments of the invention will be described,
15 by way of example, with reference to the accompanying drawings in which:

Figure 1 is a view of a toilet seat lid located on a toilet according to one embodiment of the invention;

Figure 2 is a view of the lid according to the
20 embodiment of Figure 1;

Figure 3 is a cross-sectional view of the lid in a closed position;

Figure 4 is a cross-sectional view of the lid in an open position;

25 Figure 5 is an enlarged view of part of the embodiment of Figure 4; and

Figure 6 is a view of a second embodiment.

Detailed Description of the Preferred Embodiments

30 With reference to Figure 1, a toilet 10 is shown which comprises a toilet bowl 12 which has an upper opening 14 and a toilet seat lid 20. The toilet 10 includes a cistern 16 for providing water to flush the toilet.

35 The toilet seat lid 20 according to the preferred embodiment of the invention comprises a lid cover 22 and a seat portion 24. The seat portion 24 has an opening 26

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and rests on the upper periphery of the bowl 12, as is well known. Thus, the upper opening 14 of the bowl and the opening 26 of the seat generally define the same region when the seat portion 24 is in the closed position.

5

The lid cover 22 has an outer surface 25 and an inner surface 27. The surface 27 is provided with a urinal 30 which is defined by a peripheral wall 32, a rear wall 34 and an open front 36 opposite the wall 34 and which is generally defined by the area which is delimited by the outer edge 38 of the wall 32.

10

The peripheral wall 32 is generally curved in configuration so that from within the urinal 30, it is generally concave. Also, rear wall 34 is slightly curved so that it is also concave.

15

The peripheral wall 34 has a lower spout 40 which protrudes outwardly from the lid cover 22. As is most clearly shown in Figures 2, 3 and 4, the spout portion 40 is not concave with respect to the interior part of the urinal 30, but is rather convex so as to form a spout which will direct liquid from the urinal 30 over rear part 24a of the seat portion 24 and into the bowl 12 through the openings 14 and 26.

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As is best shown in Figure 3, when the seat portion 24 and the lid cover 20 are closed, the urinal 30 locates within the openings 14 and 26 so that the edge 36 is below the seat portion 24. Therefore, liquid which may be retained within the urinal will drain from the peripheral wall 30 directly into the bowl 12 without contaminating the seat portion 24. This relative disposition of the size of the urinal 30 to the seat 24 also enables the lid 20 to be closed flush with the seat 24, as in a conventional toilet.

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The seat portion 24 is provided with a relatively narrow back 24a, so as to provide room for the spout 40 when the lid cover 20 is closed. This also enables the urinal 30 to be made as large as possible, and for the spout 40 to be located as close as possible to the openings 26 and 14 when the lid cover 20 is in the open position.

Most preferably the lid cover 20 is opened to an angle of 30° with respect to the vertical, as is best shown in Figure 4, and if the toilet is provided with a cistern 16, the cistern 16 will generally stop the lid at about this position. This provides a suitable angle for use by a male in a standing position, and also will locate the urinal 30 out of the way when the toilet is to be used in a seated position.

When the toilet is to be used by a male in a standing position, both the lid cover 20 and the seat 24 are raised, and the urinal 30 therefore provides, together with the opening 26, an increased target area. Any liquid coming into contact with the interior of the urinal 30 will remain in the urinal 30 because of the peripheral side wall 32 and will drain from the spout 40 directly into the bowl 12. When the lid cover 20 is lowered or closed, the peripheral wall 32 will locate through the opening 26 in the seat 24, and also in the opening 14 of the bowl 12, as is shown in Figure 3, and any excess liquid can drain directly into the bowl 12.

In the preferred embodiment, the lid cover 22 is hinged to the rear portion 24a of the seat by a friction hinge which includes an anchor bolt 50 at each side of the hinge and a pivot pin 54. Such hinges are well known, and therefore need not be described in any detail herein. Suffice it to say that the lid cover 22 has a pair of lugs 37 (only one shown in Figure 2) through which the hinge 49 passes. As is best shown in Figure 4 and Figure 5, the hinge 49

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includes mounts 59 (only one shown) which are connected to the bowl 12 by the bolts 40. The friction hinge will allow the lid cover 22 to be raised or opened and to stop at the required angular position by virtue of the friction within the hinge 49 so that if the toilet does not include an exterior cistern 16, the lid cover 22 can nevertheless be located in a desired angular position for use, and will remain in that position whilst the toilet is in use.

As is obvious, the hinge 49 also allows independent movement of the cover lid 22 and seat portion 24 between the raised and lower positions.

As is shown in Figure 6, the seat portion 24 may be provided with an open back 29 by simply removing the portion 24a away from the seat to provide more space for accommodating the spout 40 when the lid cover 22 is in the lowered position. In such an embodiment, the lid cover 22 is hinged direct to the side portions 24b of the seat portion 24.

After use, the lid cover 22 can be closed and when the toilet is flushed, some of the flushing water will splash up against the urinal 30, thereby providing a cleaning effect. In further embodiments, some of the water from the cistern 16 can be directed to the urinal for cleaning purposes.

In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word "comprise", or variations such as "comprises" or "comprising", is used in an inclusive sense, ie. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

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Since modifications within the spirit and scope of the invention may readily be effected by persons skilled within the art, it is to be understood that this invention is not limited to the particular embodiment described by
5 way of example hereinabove.

Claims

1. A toilet seat lid for a toilet having a bowl and an upper opening, the lid comprising:
- 5 a lid cover having an outer surface and an inner surface;
- a urinal on the inner surface, the urinal comprising:
- (a) a peripheral wall;
- 10 (b) a rear wall formed by the lid; and
- (c) an open front opposite the rear wall; and
- wherein, when the lid is used on the toilet, and the lid is open and the toilet is used by a male in a standing position, liquid is able to flow from the urinal
- 15 into the bowl, and when the lid is closed, the peripheral wall locates in the upper opening so liquid can drain from the peripheral wall and rear wall into the bowl.
2. The lid according to claim 1 wherein the
- 20 peripheral wall is slightly curved so that the peripheral wall from the interior of the urinal is concave.
3. The lid according to claim 2 wherein the rear wall is also curved so the rear wall is also concave.
- 25
4. The lid according to claim 1 wherein the peripheral wall includes a lower spout region for facilitating draining of liquid from the urinal into the bowl.
- 30
5. The lid according to claim 1 wherein the toilet seat lid further comprises a seat portion, the lid being hinged with respect to the seat portion for movement relative to the seat portion, the seat portion having an
- 35 opening, and wherein the peripheral wall locates both in the seat opening and the upper opening of the bowl when the lid and seat are in a closed position.

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6. The lid according to claim 1 wherein the seat portion may have an open rear portion to accommodate the spout closely to the bowl.

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7. The lid according to claim 5 wherein the hinge is a friction hinge so that the toilet lid can be raised to a desired position, and will hold in that position to thereby locate the lid cover at a desired angle relative to the toilet bowl.

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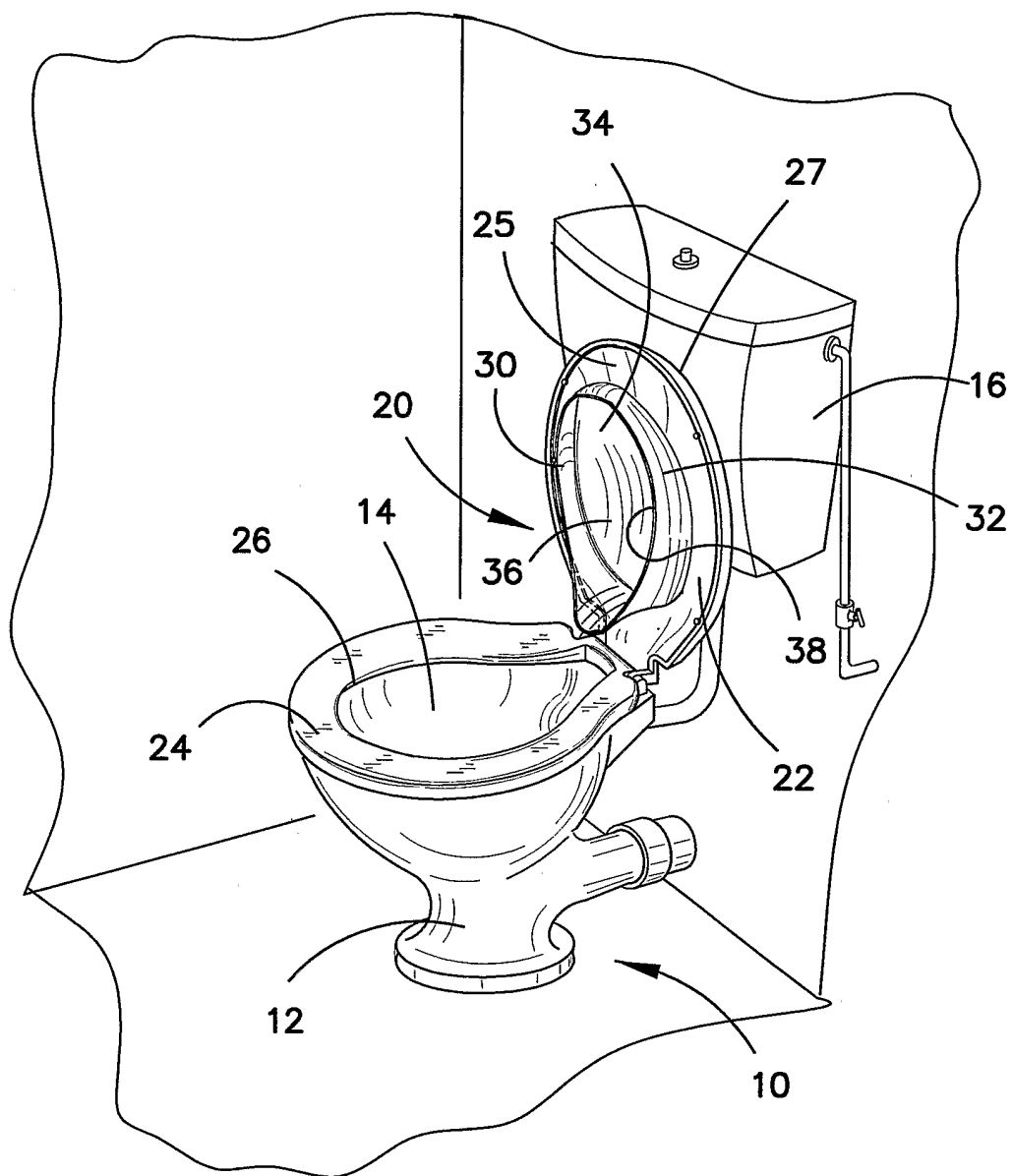


FIGURE 1

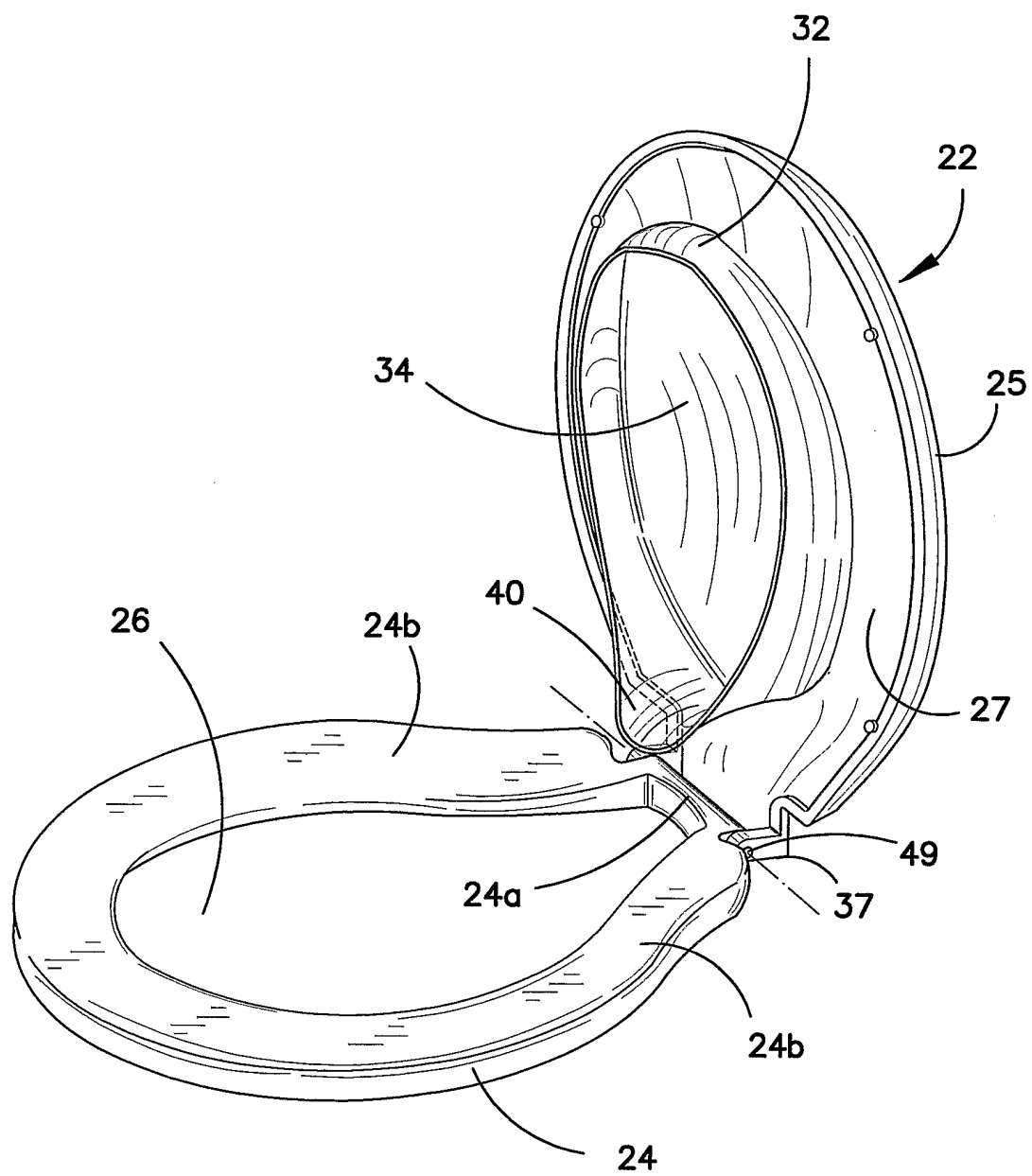


FIGURE 2

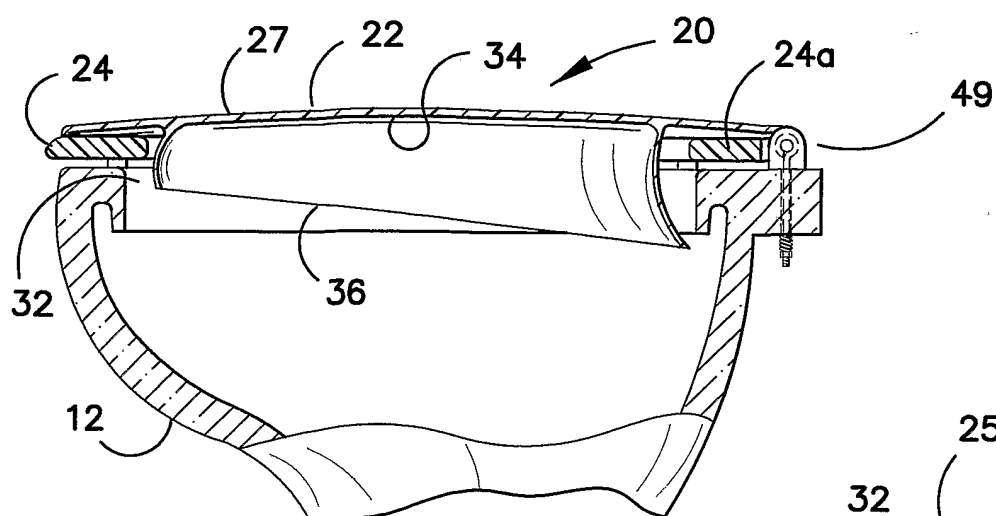


FIGURE 3

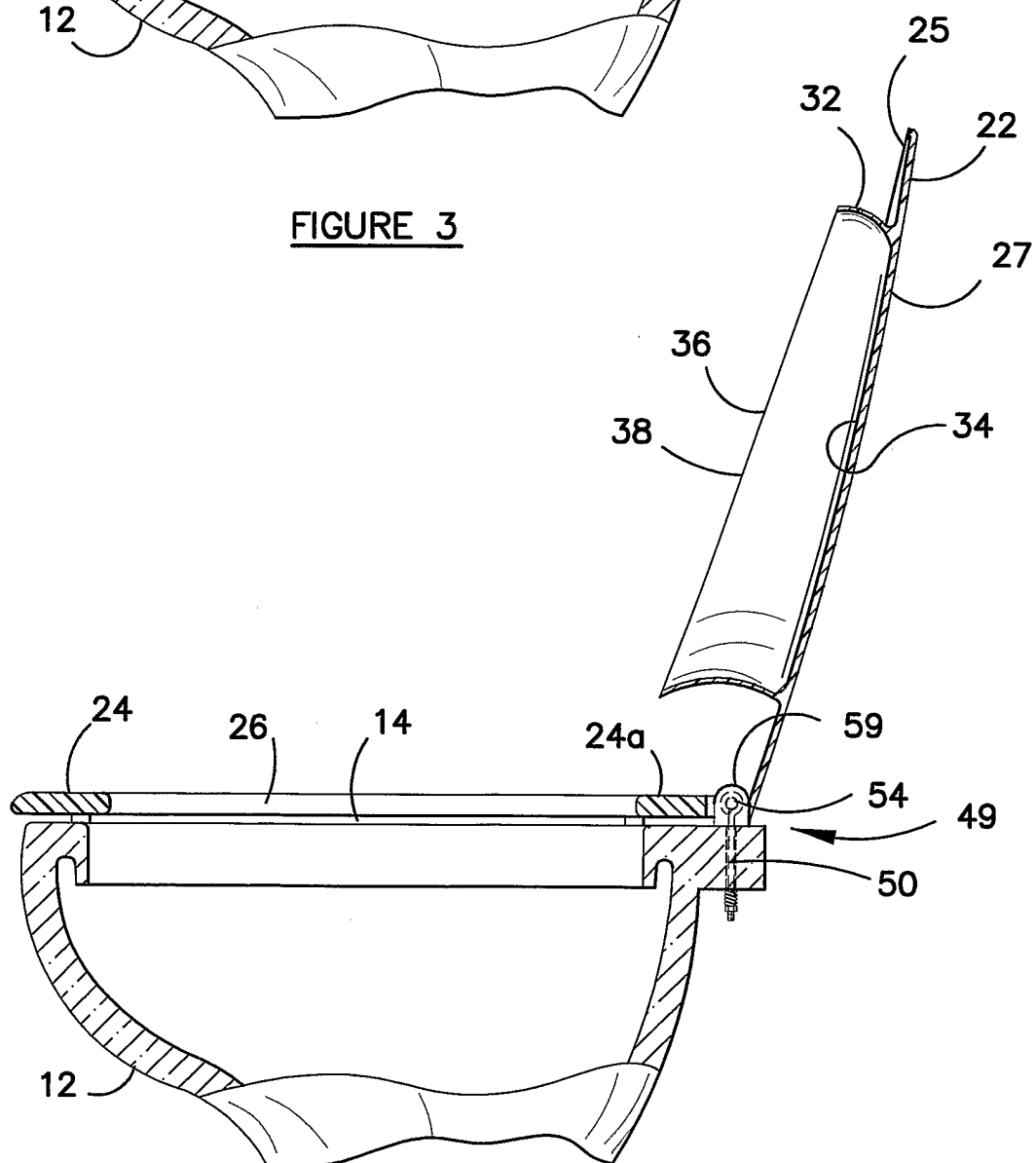
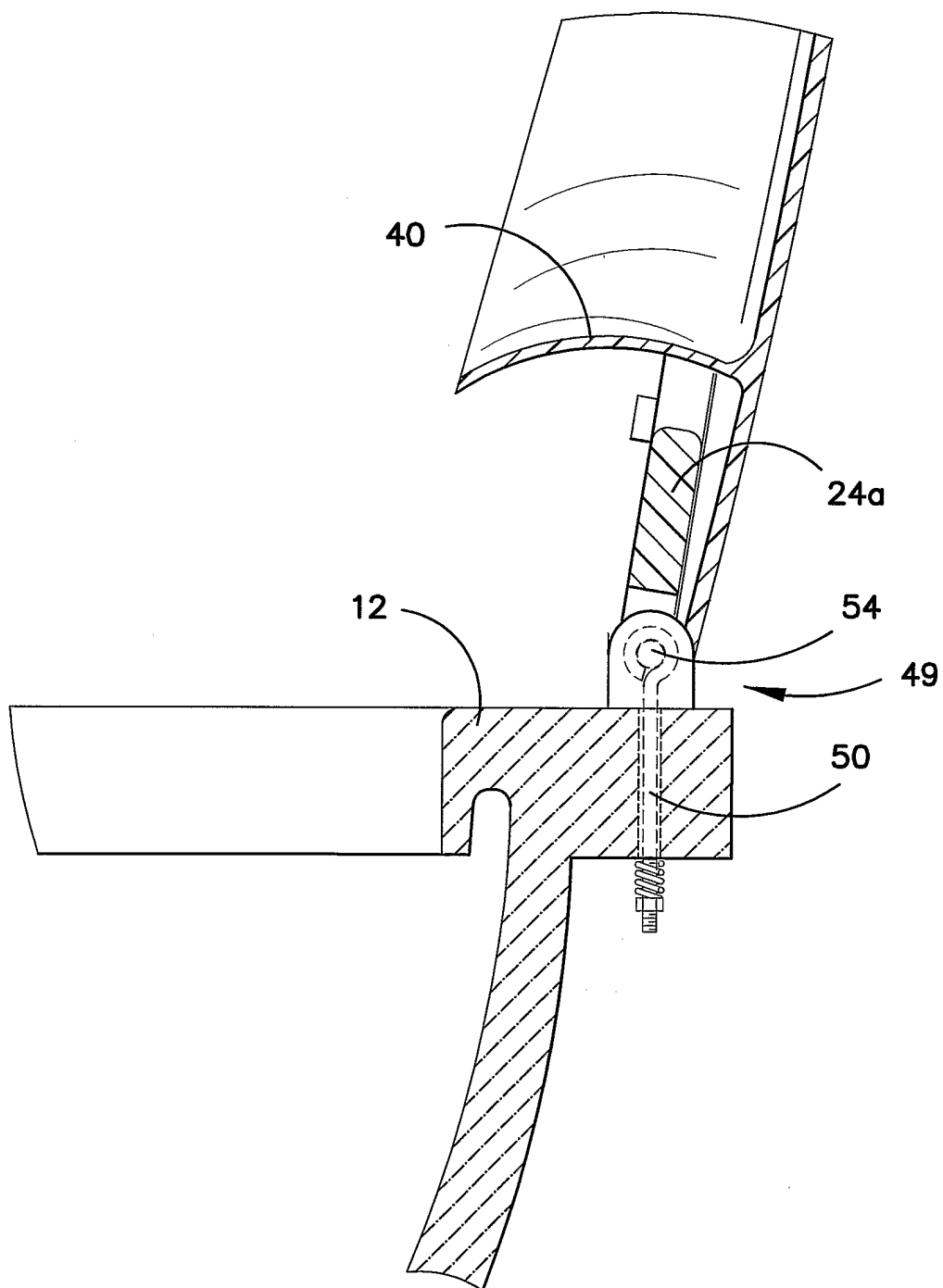


FIGURE 4

FIGURE 5

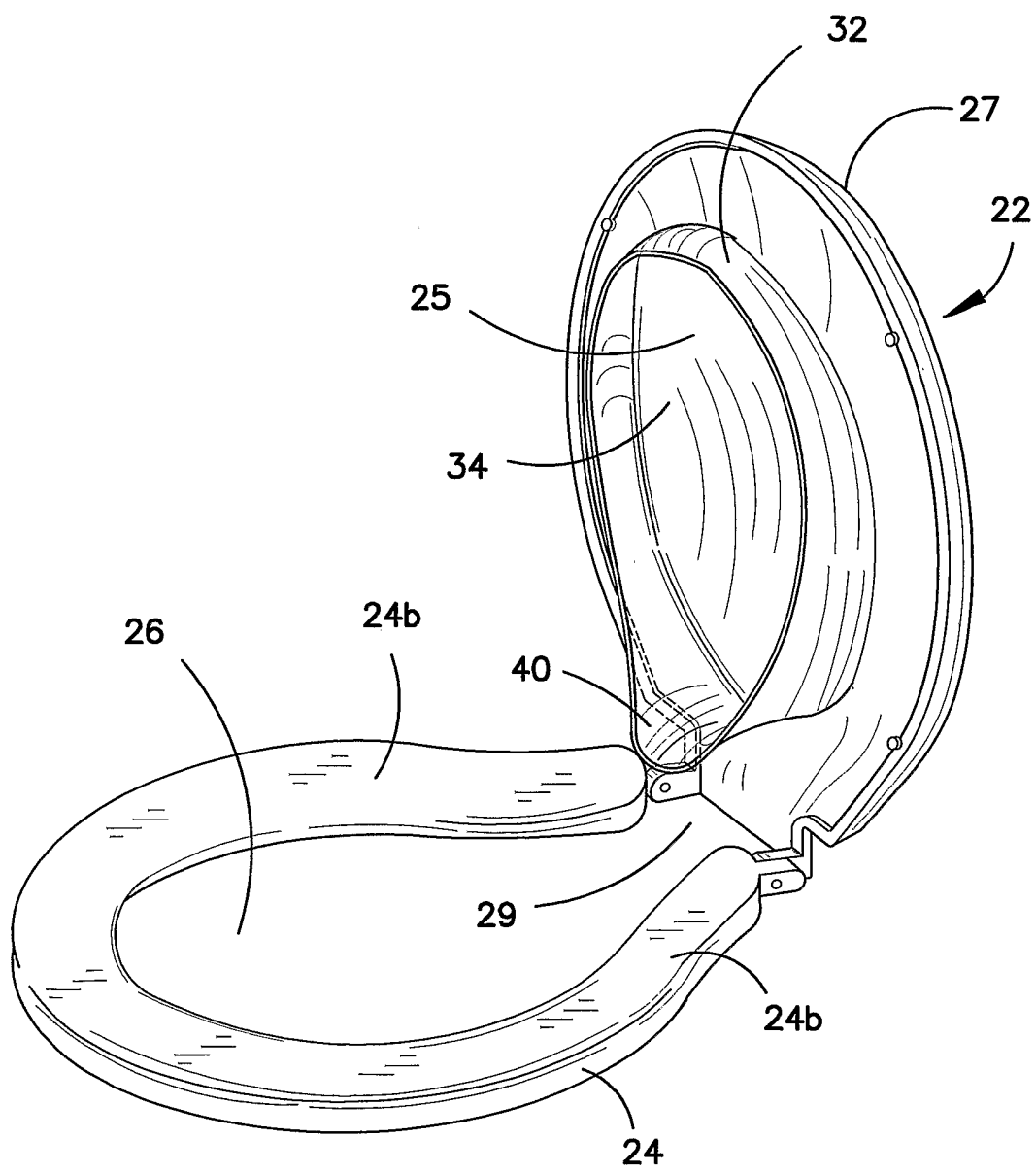


FIGURE 6

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: A47K 13/00, 13/08, E03D 11/00

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPAT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	FR 2663526 A (LEBORGNE) 27 December 1991 Abstract	1 - 6 7
X Y	Derwent Abstract Accession No. 99-002974/01, Class Q42, JP 10276936 A (YASUI) 20 October 1998 Abstract	1 - 6 7
A Y	FR 2555885 A (PAVEC) 7 June 1985 Abstract	1 7
P, A P, Y	EP 1312295 A (MAYER) 21 May 2003 Abstract	1 7

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/00912

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
FR	2663526	NONE	
JP	10276936	NONE	
FR	2555885	NONE	
EP	1312295	DE	10156608
END OF ANNEX			