Feb. 17, 1970 A. H. PETERS 3,495,278

DISPOSABLE BAG TOILET

Filed June 12, 1967

Fig. 3.

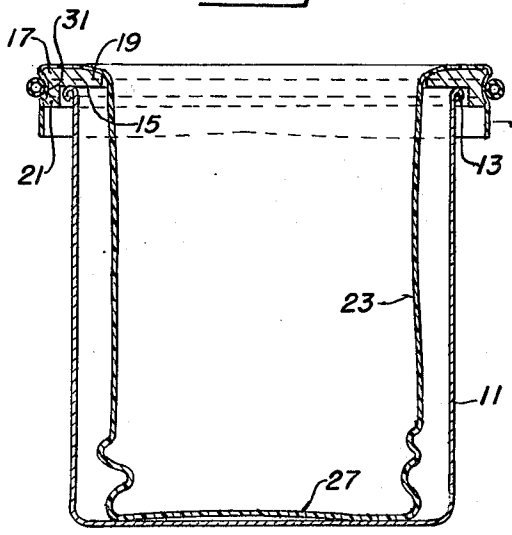


Fig. 5.

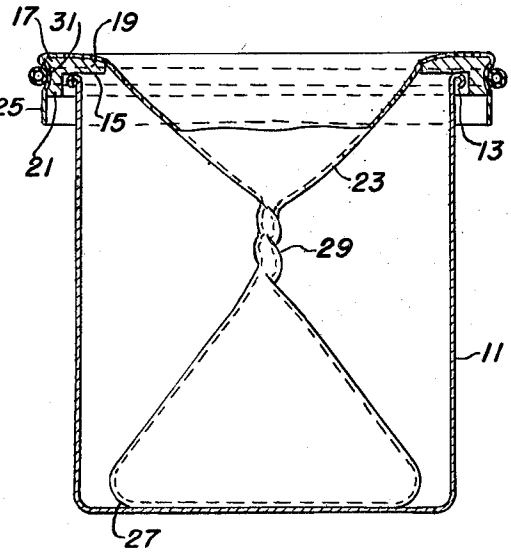
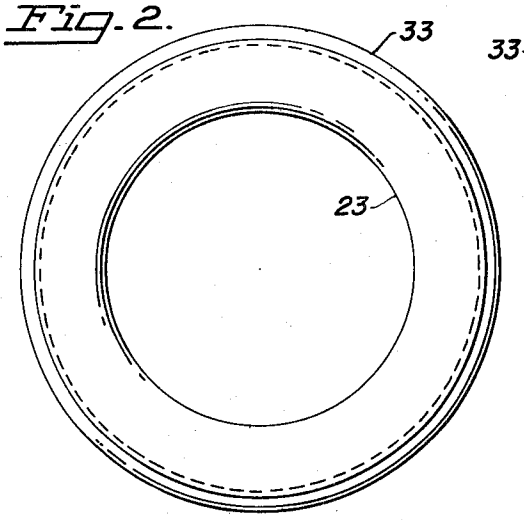


Fig. 2.



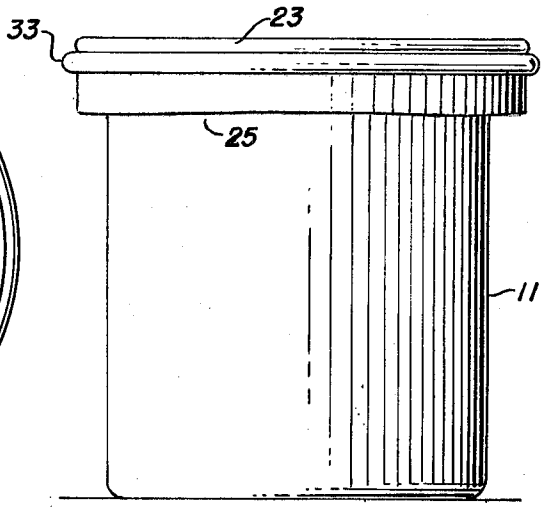


Fig. 4.

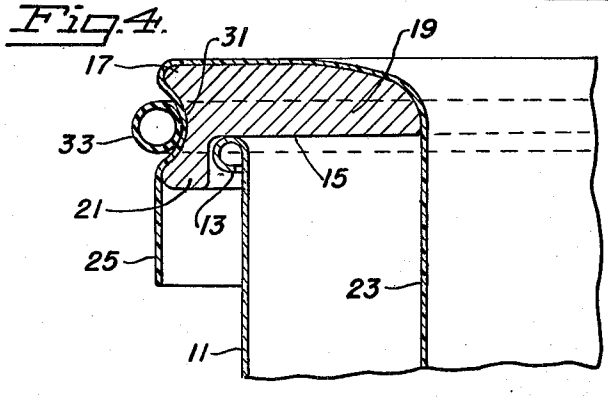


Fig. 1.

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DISPOSABLE BAG TOILET

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ABSTRACT OF THE DISCLOSURE

A disposable bag toilet wherein the bottom of the bag is supported and the top of the bag overlaps and is secured to the seat of the toilet whereby the toilet seat can be rotated to seal the bag after use.

BACKGROUND OF THE INVENTION

Field of the invention

The present invention relates to portable toilets and more particularly to a type of portable toilet utilizing a disposable bag.

Description of the prior art

The three cloests prior art references which have been determined include U.S. Patent No. 3,063,061 to W. H. Bertram for a Portable Toilet; U.S. Patent No. 2,801,426 to G. A. La Gorce et al. for a Disposable Bag Toilet; and U.S. Patent No. 2,376,036 to L. Cotton for a Collapsible Commode.

In the first described reefrence, the disposable bag is secured to the bottom surface of the seat portion of the toilet by means of a retaining ring. The seat portion, in turn, is secured to a pair of leg frames. After the toilet has been used, it is necessary to reach under the toilet and grasp the disposable bag, then release the retaining ring and lift the bag out from under the toilet. The procedure is quite inconvenient and cannot be rapidly effected to immediately close the bag and seal in any odors.

The second cited reference relates to a relatively complicated structure utilizing a relatively expensive structural arrangement having a hinged seat and latching means. In addition, the bag requires drawstrings to be formed integral to the bag to effect closure thereof.

The third cited reference teaches a bag construction which has reinforced apertures disposed around the upper end of said bag. It is supported by hooks which are inserted through the apertures. After use it is necessary to reach under the toilet seat and unhook the bag from each of the hooks. It then can be closed and disposed of.

The present invention provides a disposable bag toilet which is sealed before it is removed from the toilet and which can be temporarily sealed between uses without removing it from the toilet. Secondly, the bag can be easily removed without reaching under the toilet or seat or having to perform any inconvenient motions in order to release the disposable bag from the toilet.

SUMMARY OF THE INVENTION

The present invention is a disposable bag toilet and comprises a seat supporting frame having a circular seat supporting rim; a generally annular seat is rotatably supported by the frame on the rim; a disposable bag is suspended inside the annulus of the seat and has an open upper end overlapping the seat and a closed lower end supported from below against rotation; the bag is of a length to permit rotation of the seat and the upper end of the bag therewith to effect a twist in the bag to seal it. This permits sealing of the bag by simply turning the seat on the rim of the frame. The bag can then be disengaged from the seat and removed up through the annulus of the seat.

It is therefore an important object of the present invention to provide a relatively inexpensive portable toilet of simple construction requiring only four individual parts.

It is another object of the present invention to provide a disposable bag toilet which can be sealed by simply rotating the seat of the toilet.

It is a further object of the present invention to provide a disposable bag toilet which can be used numerous times and the bag sealed between uses to eliminate odors without having to disengage the bag from the toilet.

And yet another object of the present invention is to provide a disposable bag toilet in which the bag can be easily changed without having to reach under the seat of the toilet or inside the toilet itself.

DESCRIPTION OF THE DRAWING

FIGURE 1 is a side elevation of the disposable bag toilet of the present invention;

FIGURE 2 is a plan view of the present invention;

FIGURE 3 is a side elevation in section showing the present invention;

FIGURE 4 is a partial sectional view of the rim and seat portion of the present invention; and

FIGURE 5 is a side elevation in section showing the present invention with the disposable bag sealed.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Reference is made to the drawings for a description of the present invention. There shown is a disposable bag toilet which includes a generally cylindrical pan **11** having an open upper end forming a circular seat supporting rim **13**. Reference to FIGURE 4 shows that the rim is simply rolled in a conventional manner to provide additional rigidity to the upper end of the pan and to form a supporting surface for the seat.

A generally flattened annular seat **15** is supported on the rim. The seat has a softened configuration by being rounded on the outer and inner upper edges **17** and **19** of the annulus with the inner edge having a relatively large radius of generation.

The seat includes a guide means for permitting the seat to be rotated about a vertical axis on the rim. This can be a channel or groove; however, in the present invention it is simply a downwardly depending flange **21** which is disposed around the outer peripheral edge of the seat on the lower surface thereof. It encircles the rim **13** in slightly spaced relation thereto to permit easy rotation of the seat on the rim. The flange could be formed to fit internally of the rim.

A disposable bag **23** having an open upper end **25** overlaps the seat. The closed lower end **27** of the bag is supported by the bottom of the pan. The bag is of a length to permit rotation of the seat on the rim and the upper end of the bag therewith. Rotation of the seat thereby effects a twist **29** in the bag (see FIGURE 5) and seals it generally midlength. It is necessary that the lower end of the bag be supported from below so that rotation of the seat does not cause the lower supported end of the bag to rotate.

The outer peripheral edge of the seat has a slightly concave configuration **31**. This is for positioning of a clamping means which encircles and surrounds the outer peripheral face of the annular seat.

In the preferred embodiment, an elastic band **33**, such as can be made from surgical rubber, encircles the outer peripheral face of the seat in the concave portion thereof and clamps the bag to the seat. Other clamping means could be utilized to secure the bag to the seat; however,

the disclosed embodiment seems to be one of the simplest.

Other frames for supporting the circular rim, other than the cylindrical type pan, can be utilized with the present invention. The only apparent limitation is that the rim must be supported in spaced relation to the supporting surface so that the bottom of the disposable bag rests on the supporting surface, or some portion of the frame, so that the bag is supported against rotation and does not turn when the seat is rotated to twist the bag.

The present invention has numerous advantages over the prior art. It is simple and inexpensive to make and has only four parts: A pan, a seat rim, an elastic band, and the disposable bag. There is no interconnecting structure and no need for it. The bag can be easily removed from the toilet by simply removing the elastic band and lifting the bag straight up out of the toilet. In the prior art, it is often necessary to reach inside the toilet or under the seat in order to disengage the bag from the seat or from the toilet structure. The present invention eliminates any such inconvenient detaching operation and the possibility of messiness which might be associated with removing the bag.

The primary advantage of the present invention is a feature completely untaught by the prior art. It is a means to seal the bag between uses. In the present invention, after the toilet has been used, it is only necessary to simply twist the seat to seal the disposable bag. This eliminates the possibility of odors and any unsightly appearance. The bag can be untwisted for use by reverse rotation of the toilet seat and then retwisted immediately upon completion of any successive use. This cannot be accomplished by any of the prior art devices.

In view of this disclosure, it is also believed the present invention involves a new and novel method of operating a disposable bag toilet which comprises securing the upper end of a disposable bag to the seat of the toilet, supporting the bag from below against rotation, and after using the toilet, rotating the seat to twist the upper end of the bag to seal it.

The new and improved disposable bag toilet of the present invention, in addition to providing a new and novel device, also teaches a method of operating such a toilet and effects a solution to the problems which have existed heretofore in the prior art. It will be apparent from the foregoing description of the invention, in its preferred form, that it will fulfill all of the objects attributable thereto. While it has been illustrated and described in considerable detail, the invention is not to be limited to such details as have been set forth except as may be necessitated by the appended claims.

I claim:

1. A disposable bag toilet comprising:
- a seat supporting frame having a circular seat supporting rim,
- a generally annular seat rotatably supported by said frame on said rim,
- a disposable bag having an open upper end overlapping said seat and a closed lower end supported from below against rotation, said bag being of a length to permit rotation of said seat and the upper end of said bag therewith to effect a twist in said bag to seal it.

2. The disposable bag toilet of claim 1 wherein said seat includes guide means for permitting said seat to be rotated about a vertical axis on said rim.

3. The disposable bag toilet of claim 2 wherein said guide means comprises a flange on the lower surface of said seat disposed continuously adjacent said rim.

4. The disposable bag toilet of claim 1 wherein the upper end of said bag which overlaps said seat is removably secured thereto.

5. The disposable bag toilet of claim 4 wherein said bag is secured to said seat by a clamping means which surrounds the outer peripheral face of said annular seat.

6. The disposable bag toilet of claim 5 wherein said clamping means is an elastic band.

7. The disposable bag toilet of claim 1 wherein said supporting frame is a generally cylindrical pan with an open upper end forming said rim.

8. The disposable bag toilet of claim 1 wherein said seat is of a generally flattened annular configuration having a concave outer peripheral surface and a downwardly depending flange disposed around the outer peripheral edge of said seat on the lower surface thereof encircling said rim.

9. A disposable bag toilet comprising:
- a generally cylindrical pan having an open upper end forming a circular seat supporting rim,
- a generally flattened annular seat supported on said rim and having a downwardly depending flange disposed around the outer peripheral edge of said seat on the lower surface thereof encircling said rim, the outer peripheral surface of said seat having a concave configuration,
- a disposable bag having an open upper end overlapping said seat and a closed lower end supported by the bottom of said pan, said bag being of a length to permit rotation of said seat on said rim and the upper end of said bag therewith to effect a twist in said bag to seal it generally midlength without causing the lower supported end of said bag to turn, and
- an elastic band encircling the outer peripheral face of said seat in said concave portion clamping said bag to said seat.

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