

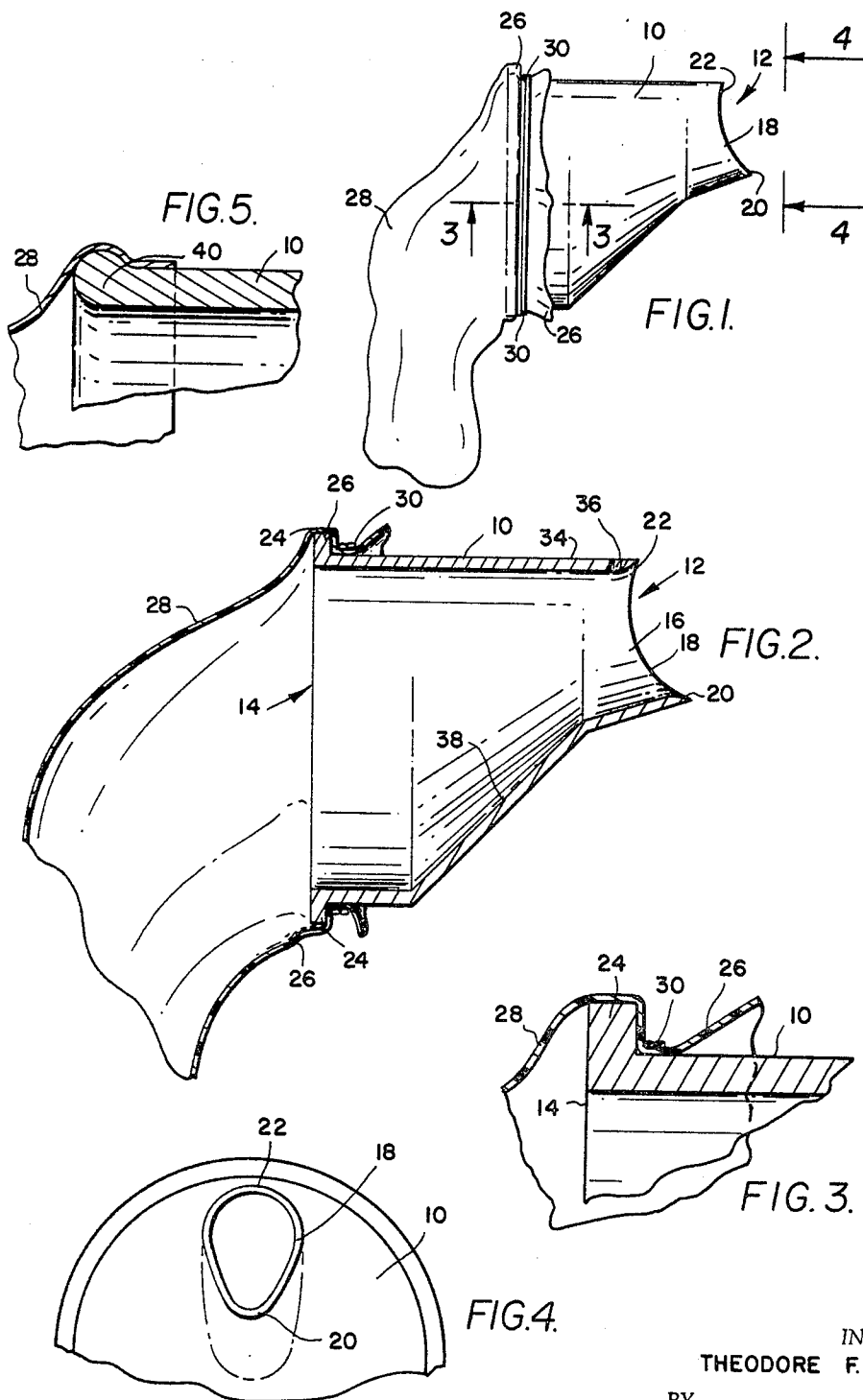
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URINAL

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URINAL

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ABSTRACT OF THE DISCLOSURE

A disposable urinal comprising a substantially cone-shaped, hollow body, having an attachable flexible bag bottom for sealingly enclosing one end of said body; and a genitals engaging open end rim of said body adapted to engage human female and male genitals for facilitating urination, when a human is in supine position; the invention comprising a modification, wherein said body is provided with an extending peripheral flange on its one end, and a flexible urine containing bag compressively engaged on said rim and sealingly coupled thereto.

This invention covers improvements relative to the invention disclosed in my copending application for a urinal, Ser. No. 619,535, filed Feb. 27, 1967.

This invention relates to a urinal, and more particularly, to a disposable urinal which may be used in hospitals, or other areas, to alleviate the cost of maintaining conventional urinals.

Background of the invention

In hospitals, conventional urinals must be stored, transported, sterilized, and thus are not only bulky, but generally costly to maintain. Additionally, due to the maintenance problem, it has been necessary to employ conventional urinals, which of necessity, cannot conform closely to the genitals of humans, especially females. The conventional urinals must have an opening of sufficient size to permit proper cleaning maintenance. Additionally, it has been difficult properly to place such conventional urinals, with respect to male or female patients, in a supine position and to thereby maintain the patient in a comfortable and clean condition during urination.

Additionally, various prior art urinals have been unsuccessful, from a disposable standpoint, due to the economy of producing suitable structural features in a disposable urinal which may be used by human males or females during urination, when said males or females are in supine position. Some prior art urinals have been engageable with the genitals of a human female, but have not properly fitted such genitals in an area extending from the anterior wall of the vagina to an area slightly above the clitoris, when a human female is in the supine position. Furthermore, prior art urinals have not included an economically produceable flexible bag structure in connection with a relatively rigid neck structure having an opening adapted to fit the genitals of a human female.

Summary of the invention

The disposable urinal, in accordance with the present invention, is provided with a flexible, thin, economically produceable plastic bag connected to a relatively rigid, substantially hollow, frusto-conical body structure which may be produced by the foam molding process employing polystyrene beads, or the like.

Accordingly, it is an object of the present invention to provide a very simple and economical disposable urinal, which greatly alleviates the maintenance cost of urinals in hospitals, and further, provides for additional comfort of patients, and particularly female patients, when urinating in a supine position.

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Another object of the invention is to provide a disposable urinal which may be made of very cheap material, which is so designed that the parts thereof may be nested into substantially compact relation to each other, thereby greatly alleviating the overall cost of storage and maintenance of urinals in hospitals or other similar establishments.

Another object of the invention is to provide a disposable urinal of novel construction which also employs a human female genital engaging rim, which extends generally from the anterior wall of the human vagina to a position slightly above the clitoris so as to comfortably fit the human female during urination, and to prevent undue spillage of urine during urination of the human female, when in supine position.

Another object of the invention is to provide a novel disposable urinal comprising a hollow receptable body, which generally diverges from a receiving opening to an open bottom end, and wherein the receiving opening is relatively small, and the open bottom end is relatively large, and wherein flexible bag means is provided for resiliently and frictionally sealing said open bottom, such that the body structures of the urinal may be nested, and whereupon immediately before use or at the time of manufacture, the flexible bag may be frictionally and sealingly attached to the body member to enclose the open bottom of the body member for holding urine.

Brief description of the drawings

Further objects and advantages of the invention may be apparent from the following specification, appended claims, and accompanying drawings, in which:

FIG. 1 is a side elevational view of a disposable urinal in accordance with the present invention;

FIG. 2 is a fragmentary sectional view on a vertical plane with respect to the disclosure of FIG. 1;

FIG. 3 is an enlarged fragmentary sectional view taken from the line 3-3 of FIG. 1;

FIG. 4 is an enlarged fragmentary elevational view taken from the line 4-4 of FIG. 1, showing the inlet opening and rim of the urinal adapted to fit the genitals of a human female; and

FIG. 5 is a view similar to FIG. 3, showing a modification of the present invention.

Description of the preferred embodiments

As shown in FIG. 1 of the drawings, the urinal of the invention is provided with a hollow receptable body 10. This body 10 is generally diverging from a receiving open end 12 thereof to a bottom on opposite end 14 thereof. The receiving end 12 is provided with an opening 16 having a rim 18 surrounding the opening 16, and this rim 18 is adapted to engage genitals of a human female, so as to reach generally from the anterior wall of the vagina to a position slightly above the clitoris. The lower portion 20 of the rim 18 being adapted to engage the anterior wall of the vagina, and the upper portion of the rim, designated 22, being adapted to engage the area slightly above the clitoris, thus, the rim 18 is so designed to sealingly engage the genitals of a human female to permit urination into the interior of the hollow receptacle body 10.

This body 10 is provided with an outwardly directed ledge 24 extending around the perimeter of the body adjacent the end 14 thereof, and resiliently engaged over this ledge or rim 24 is a neck 26 of a hollow, flexible bag 28 which may be made of thin plastic or any other suitable material adapted to hold and/or retain urine.

The neck 26 of the bag 28 is surrounded by resilient rubber, or other suitable holding bands 30, adapted to sealingly clamp the neck 26 compressively around the body 10, and adjacent to the rim or ledge 24 so as to

provide a seal between the neck of the flexible bag 26, and the relatively rigid body 10.

The body 10 may be mold formed of foamed polystyrene beads, or the like, to provide a structure which is relatively rigid, as compared to the thin flexible bag member 28.

It will be understood by those skilled in the art that the bag 28 may conveniently be coupled to the rim 24 by passing rubber bands, or other similar surrounding members 30, around the neck 26 of the bag to clamp it in surrounding relation with the rim or ledge 24, and this attachment of the bag may be accomplished during manufacture or immediately preliminary to the usage of the invention. When attached, the flexible bags may be folded and nested over the respective inlet end portions 12, while the respective body portions 10 of the urinal may be disposed in nested relationship. Accordingly, the invention comprises either the nesting of the body members separately or with the flexible bag members attached.

It will be appreciated that the body 10, at the rim 24, may be considerably larger than the cross-sectional area of the inlet end 12, as shown best in FIG. 4, and that the rim 24 may be annular, if desired, such that the inlet end 12 is offset upwardly relative to the center of the outlet or bottom end 14, as indicated best in FIGS. 2 and 4 of the drawings. In this manner, the urinal, as shown in FIG. 2 of the drawings, is disposed in a proper position to be utilized during urination by a female human, when in supine position.

The body 10 at a neck portion 34 thereof, and closely adjacent to the open end 16, is provided with a vent opening 36 adapted to permit air to escape from the interior of the urinal of the invention, during urination thereinto. This vent opening 36 is necessary since the rim 18, as hereinbefore described, is adapted to make a very close fit and seal relative to the genitals of a human female.

It will be seen that the receptacle body 10 is provided with side walls 38, which diverge from the neck portion 34 toward the open end 14. As shown in FIG. 2, the diverging structure of the hollow receptacle body is offset downwardly relative to the genital engaging rim 18 so as to conduct urine below the level of the female genitals, when a female is urinating into the hollow receptacle body 10.

From the foregoing, it will be appreciated that the body 10 and bag member 28 may be made of various disposable materials, including plastic or combinations thereof with other disposable materials, and that due to the generally diverging character of the hollow receptacle body members, that several of these may be nested to save and conserve space.

The plastic materials of the body 10 have a low rate of heat transfer so as to be comfortable to the user.

The material of which the urinal is made may be disposed of in a conventional incinerator, and once the disposable urinals are used, they may be discarded and burned or collapsed so that the storage problem thereof is reduced to a minimum. The new urinals being nested are quite compact, and do not require much space, and the cleaning and sterilization of urinals in hospitals may thus be completely eliminated and dispensed with.

The downwardly offset disposition of the body of the urinal, as shown in FIG. 2, provides a natural geometry by which the urinal may be located for urinating operations, and further, this offset relation provides a normal orientation for the vent 36.

In the modification, as shown in FIG. 5, the bag 28 may be made of heat shrinkable plastic materials, and

thus may be sealingly heat shrunk onto the perimeter of a modified rim structure 40.

It will be understood, that a male version of the invention may be made to include a receiving open end into which a male genital organ may be received during urination of a male human in supine position.

It will be obvious to those skilled in the art that various modifications of the present invention may be resorted to in a manner limited only by a just interpretation of the following claims.

I claim:

1. In a urinal, the combination of: a hollow receptacle body; a reduced hollow neck for said body; said hollow neck terminating in a receiving opening; said body having an open bottom; and a flexible bag connected to said open bottom of said body; said hollow body generally diverging from said receiving opening to said open bottom, said neck provided with a female genital engaging rim surrounding said receiving opening, said rim being of a size and dimension to extend from the anterior wall of the vagina of a human female to a position slightly above the female clitoris, said bottom of said body provided with an endless rim structure surrounding said open bottom; said bag member having a conforming neck structure frictionally and resiliently engaged over and surrounding said rim structure in sealing connection with said endless rim structure of said body.

2. The invention, as defined in claim 1, wherein: said neck is provided with an air vent opening in the normally upper side thereof.

3. The invention, as defined in claim 2 wherein: said vent opening is spaced from said genital engaging rim.

4. The invention, as defined in claim 1, wherein: said body is offset downwardly relative to said neck.

5. The invention, as defined in claim 1, wherein: said body is made of plastic having a low rate of heat transfer.

6. The invention, as defined in claim 1, wherein: said flexible bag is provided with a neck portion surrounding said body adjacent said open bottom thereof; and a compressive band means surrounding said neck structure of said bag and compressively and sealingly securing said neck structure of said bag peripherally on said body for enclosing said open bottom thereof.

7. The invention, as defined in claim 1, wherein: said flexible bag is of heat shrinkable material, and is heat shrunk in surrounding sealed engagement with said open bottom of said body.

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