March 18, 1969 T. F. SCHWARTZ 3,432,864

URINAL

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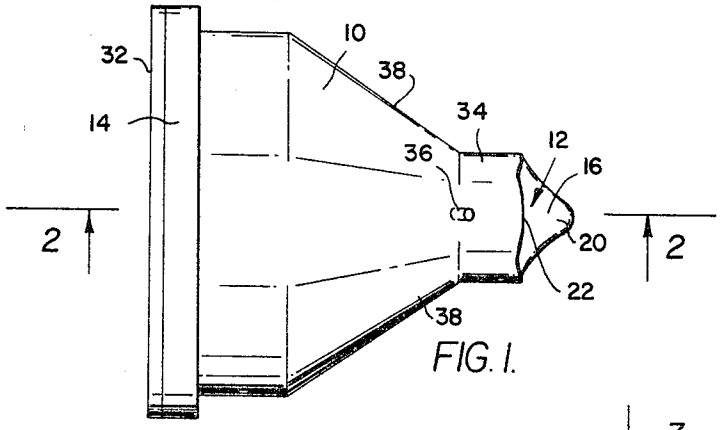


FIG. 1.

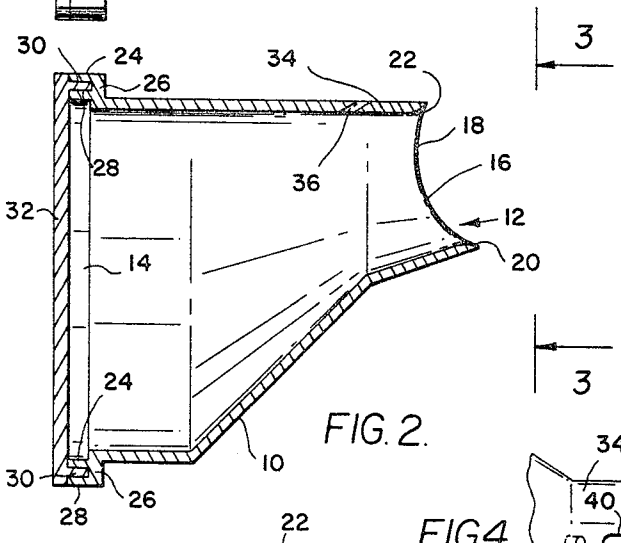


FIG. 2.

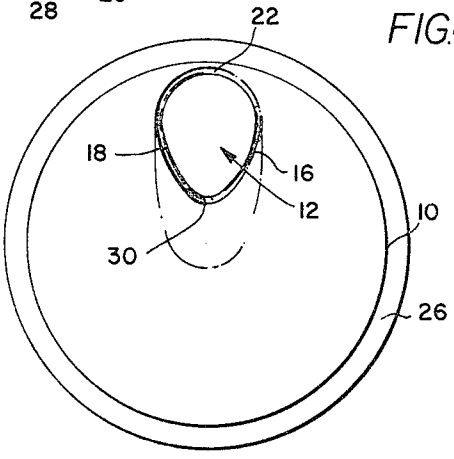


FIG. 3.

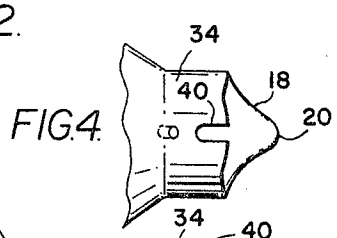


FIG. 4.

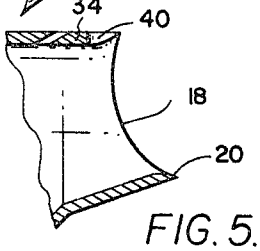


FIG. 5.

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URINAL

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Int. Cl. E03d *13/00;* A47k *11/02*

ABSTRACT OF THE DISCLOSURE

A disposable urinal for female patients in supine position, the urinal having an opening adapted to fit the genitalia of the patient from the anterior wall of the vagina to a position above the urethral orifice; the urinal also having a urine receiving container extending at an angle downwardly below the engagement of said opening with said anterior wall of said vagina.

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.

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 human females. The conventional urinals must have an opening of sufficient size to permit proper cleaning maintenance, which it has been difficult with such urinals to properly place them with respect to female patients in a supine position, and to thereby maintain the patient in a comfort needed condition during urination.

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.

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 receptacle 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 means is provided for resiliently frictionally sealing the bottom open end by means of a bottom member, such that the body structures of the urinal may be nested, and whereupon immediately before use, the bottom members may be frictionally and sealingly attached to the bottom members to enclose the open bottom of the body member for holding urine.

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 top or plan view of a urinal, in accordance with the present invention;

FIG. 2 is a sectional view, taken from the line 2—2 of FIG. 1;

FIG. 3 is a view taken from the line 3—3 of FIG. 2, showing the receiving end of the urinal;

FIG. 4 is a fragmentary view similar to FIG. 1, showing the receiving end of a modified form of the invention; and

FIG. 5 is a fragmentary view similar to the right hand portion of FIG. 2, but showing the modified structure of FIG. 4 in section.

As shown in FIG. 1 of the drawings, the urinal of the invention is provided with a hollow receptacle body **10**. This body **10** is generally diverging from a receiving end **12** thereof to a bottom 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** at its open end **14** is provided with an endless rim **24** having an endless channel structure **26** provided with a groove or recess **28** therein, which frictionally and resiliently holds and grips an inwardly directed annular rim or flange structure **30** of the receptacle bottom **32**. Thus, the open bottom **14** is sealingly enclosed by the bottom member **32**, as hereinbefore described, so as to permit substantial nesting of a plurality of the hollow diverging receptacle bodies, and to permit the bottom members **32** to be engaged and sealed relative thereto immediately before use.

An annular shelf **41** of the channel structure **26** projects outwardly from the body **10** to provide ease of handling by human fingers for pressing the bottom **32** into frictional sealing connection with the body **10**, as hereinbefore described.

The body **10** at a neck portion **34** thereof 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 contain urine below the level of the female genitals, when a female is urinating into the hollow receptacle body **10**.

In the modification, shown in FIGS. 4 and 5, the neck **34** is similar to that shown in FIGS. 1 and 2, and the rim **18** is also similar, while the vent opening, designated **40** in FIGS. 4 and 5, forms a notch in the rim **18**, and thus is modified with respect to the vent opening **36**, hereinbefore described, which is spaced from the rim **18**.

From the foregoing, it will be appreciated that the body **10**, and bottom member **32** may be made of various disposable materials, including plastic or combinations thereof with paper or other fibrous 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, and that the bottom members **32**

may be forced into place sealingly to enclose the open bottom end **14** of the respective receptacle body **10** immediately before use.

Said plastic materials may 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.

It will be understood that the bottom member **32** is flat, and provides a base upon which the urinal may be rested to contain urine, and preliminary to the emptying and disposing of the urine therefrom, 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** or the vent **40** of the modified structure, shown in FIGS. 4 and 5.

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; said body having an open bottom; a reduced hollow neck for said body; said hollow neck terminating in a receiving opening; said neck provided with a female genital engaging rim surrounding said opening, said rim being of a size and dimesion to extend from the anterior wall of the vagina of the human female to a position slightly above the female clitoris; said receptacle further characterized by a removably attached bottom member frictionally and sealingly connected to said open bottom; said hollow body generally diverging from said receiving opening to said open bottom and a wall structure of said neck extending downwardly from said anterior wall, when engaged with a female in supine position.

2. This 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 **1**, wherein: said open bottom of said body is provided with an endless rim structure; said bottom member having a conforming endless rim structure frictionally, and resiliently deflectable into sealing connection with said endless rim structure of said body.

4. The invention, as defined in claim **2**, wherein: said vent opening comprises a notch in said genital engaging rim.

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

6. The invention, as defined in claim **3**, wherein: said endless rim structure of said open bottom being a channel provided with an endless recess therein, and wherein said bottom member, at its endless conforming rim structure, is disposed in the endless recess of said channel structure at said open end of said body; said channel recess being of a dimension slightly less than the endless rim of said bottom member to thereby provide frictional, and sealing engagement of said bottom member with said endless rim structure at said open bottom of said body.

7. The invention, as defined in claim **1**, wherein: a plurality of said hollow bodies may be substantially nested within each other.

8. The invention, as defined in claim **2**, wherein: said body is offset downwardly relative to said neck, when said rim is engaged with a human female in supine position.

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

10. The invention, as defined in claim **6**, wherein: said channel projects outwardly relative to said body to form a finger engaging shelf for use in manually pressing said bottom into connection with said body.

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