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H. A. SEGAL

3,471,869

RECEPTACLE

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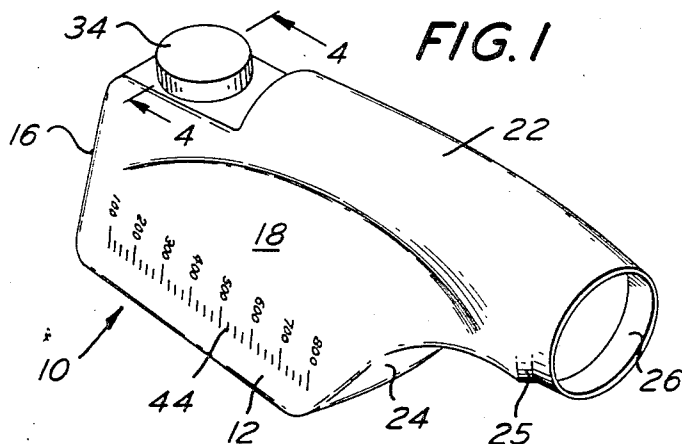


FIG. 1

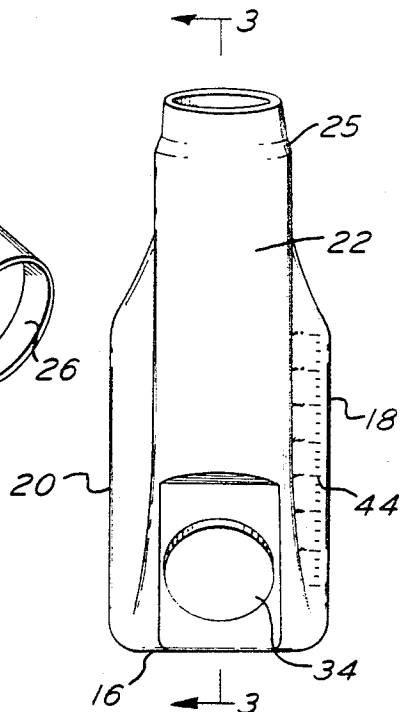


FIG. 2

FIG. 3

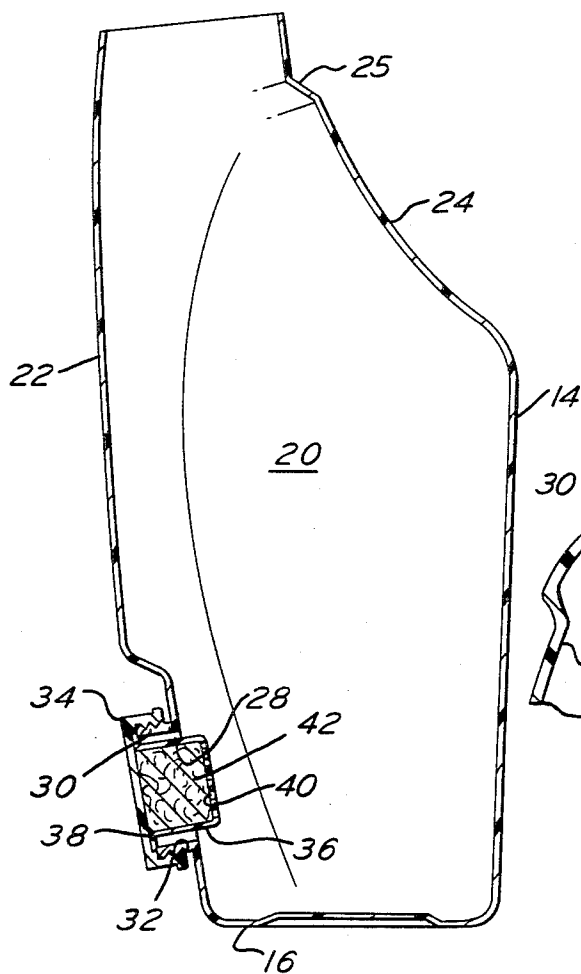
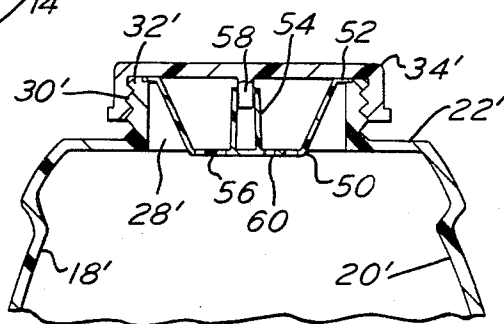


FIG. 4



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ATTORNEYS.

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Continuation-in-part of application Ser. No. 622,962,
Mar. 14, 1967. This application Oct. 16, 1967, Ser.
No. 675,486

Int. Cl. E03d 13/00

U.S. Cl. 4—110

9 Claims

ABSTRACT OF THE DISCLOSURE

A urinal having a deodorant retainer unit removably supported in a wall thereof other than an end wall is provided. The urinal body has graduations positioned so as to be readable when the end wall, which is opposite the spout, is substantially horizontally disposed. The deodorant retainer unit is clamped to the urinal body by means of a cap surrounding an opening in the urinal body through which the deodorant retainer unit extends.

This application is a continuation-in-part of my copending application Ser. No. 622,962 filed on Mar. 14, 1967 and entitled Excrement Receptacles.

This invention relates to a receptacle. More particularly, this invention relates to an excrement receptacle such as a urinal. Many devices such as urinals, potties, bedpans, garbage pails and the like require a disinfectant or deodorant. This invention relates to an improvement in such receptacles. The invention is described with respect to a urinal, but it has a general application to many types of receptacles.

The urinal is structurally interrelated in a manner so that it may be readily molded from a plastic such as polypropylene at low cost and a high rate of production. The urinal is very functional and yet appealing to the eye. Urinals are primarily, but not exclusively, used in hospitals, nursing homes and similar institutions where patients are confined to a bed. The urinals used heretofore are subject to a variety of objections. Thus, many urinals are not structurally interrelated to facilitate rapid manufacture at low cost, do not have a sufficiently low center of gravity and therefore are subject to being tipped with spilling of the excrement.

Another objection to urinals utilized heretofore is the odor. If a urinal is not immediately removed after use, the odor soon permeates the entire room. This objection is particularly noticeable if the patient has a urinary disease. In accordance with the present invention, a urinal is provided with a removable unit adapted to retain a disinfectant and/or deodorizing material which will be in direct communication with the interior of the urinal. The disinfectant and/or deodorant removes or substantially reduces the odor to an acceptable level.

Another objection to urinals utilized heretofore is the inability of personnel to accurately ascertain the contours or liquid level in the urinal. This objection is also overcome by a translucent urinal with graduations.

The urinal of the present invention is appealing to the eye and hence does not have any negative psychological affect on the patient.

It is an object of the present invention to provide a novel urinal structurally interrelated in a manner so that it may be inexpensively produced at high speeds.

It is another object of the present invention to provide a novel urinal provided with means for removably supporting a deodorizing and/or bacteriocidal substance.

It is another object of the present invention to provide

a novel urinal designed so as not to spill its contents when tipped.

Other objects will appear hereinafter.

For the purpose of illustrating the invention, there is shown in the drawings a form which is presently preferred; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities shown.

FIGURE 1 is a perspective view of the urinal of the present invention.

FIGURE 2 is an elevation view of the urinal in FIGURE 1 supported in an upright position.

FIGURE 3 is a sectional view taken along the line 3—3 in FIGURE 2.

FIGURE 4 is a sectional view of a second retainer unit and a portion of the urinal side wall.

Referring to the drawing in detail, wherein like numerals indicate like elements, there is shown in FIGURE 1 a perspective view of a urinal designated generally as 10. The urinal 10 has a body designated generally as 12 made from a tough lightweight polymeric plastic material capable of being autoclaved, such as polypropylene.

The body 12 is structurally interrelated in a manner so that it may be inexpensively molded from plastic with a high rate of production. The body 12 includes a flat bottom wall 14 having a length which is approximately two-thirds the length of the entire urinal 10. The body 12 is widest at the bottom wall 14 and is molded in one piece so as to have an end wall 16 and upwardly converging side walls 18 and 20 which merge into a curved top wall 22. A front wall 24 is curved upwardly from the bottom wall 14 and merges into the curved top wall 22 to form a generally cylindrical spout having an opening 26. The front wall 24 is joined to the top wall 22 by a shoulder 25 which forms a step like liquid barrier between the front wall 24 and the spout. If the urinal is not overfilled, the barrier 25 normally will prevent liquid spillage when the urinal is tipped forwardly. The body 12 is narrow enough at the top wall 22 so that it may be grasped.

As shown more clearly in FIGURE 3, the top wall 22 is provided with a planar portion in which is located an opening 28. The opening 28 is defined by an outwardly extending cylindrical portion 30 on which are formed the male threads 32. Threads 32 cooperate with an internally threaded cap 34 which may be screwed down tightly to close the opening 28. The cap 34 may, if desired, be made of the same plastic material as the body 12. It can be made of a different material which may or may not be autoclavable.

Positioned within the cap is a cylindrical basket 36 which includes an outwardly depending flange 38. The outer diameter of flange 38 is larger than the inner diameter of cylinder 30 so that it overlies the top wall thereof. In this manner, the basket 36 may be retained within the opening 28 by tightening down the cap 34 so as to clamp the basket between it and the cylinder 30. Basket 36 is also made of a plastic material which may or may not be autoclavable. As is explained below, it is intended that the basket 36 and cap 34 be disposed of after each use.

Basket 36 is provided with a plurality of holes 40 in its bottom wall. As thus constructed, the basket 36 defines a cavity adapted to receive a deodorizing or disinfecting material 42. With the basket secured in position by the cap 34, the effect of the disinfecting or deodorizing material is directed into the interior of the urinal 10 through the openings 40.

The basket 36 is designed to retain a deodorant or a bacteriocidal agent or chemical whose action is effective over a period of time. The agent is placed in the basket and the basket inserted in the opening 28. The cap is

screwed into position thereby retaining the agent in basket as explained above. The material within the basket acts upon the contents of the urinal 10 to either remove the odor or disinfect the interior. The time of reaction can be controlled by the size of the holes 40 in basket 36.

There are several types of materials available on the market which can be used. If desired, a deodorizing material in the form of a solid wafer or disc sold commercially as Solidaire by Airkem, Inc., New York, N.Y. may be used. In addition, a deodorant gel made by the same company may also be used. If desired, the deodorant and disinfectant qualities of these products may be combined in a single substance. An humectant may also be placed in the basket.

In accordance with the present invention, it is intended that the cap 34 and basket 36 be disposed of after the deodorant and/or bactericide have been exhausted. This facilitates rapid interchange of parts without the necessity of autoclaving the same.

As best shown in FIGURE 3, the design of the urinal 10 with the curved corners and rounded top wall 22 is such as to provide a minimum number of areas where bacteria can collect. Moreover, the device is designed to be manufactured by a single-blow-molding operation so that there are no seams where bacteria can collect.

The urinal 10 is preferably made of a translucent plastic material. By making the material translucent, it is possible to observe the quantity of liquid contained therein. In the embodiment shown in FIGURES 1 and 2, the side wall 18 is provided with a graduated scale and indicia 44 indicative of the amount of liquid in the urinal when it is positioned on its end wall 16.

The urinal 10 may be supported on its flat bottom 14 or on the end wall 16. As best shown in FIGURE 1, the body 12 is constructed in a manner so that it has a low center of gravity which reduces the possibility of inadvertently tipping it over. This is accomplished by placing the opening 28 and the structure associated with it adjacent the back of the top wall 22 so that the weight added by this structure is near the bottom when the urinal is in the position shown in FIGURE 3. By making the side walls 18 and 20 diverge outwardly, the urinal is highly stable when in the position shown in FIGURE 1.

Referring now to FIGURE 4, there is shown a second embodiment of the present invention. This second embodiment includes a modification of the basket supported in opening 28. For purposes of describing this second embodiment, elements similar to those described with respect to the embodiment shown in FIGURES 1, 2 and 3 have been designated by the same number but with a prime. As shown, the side walls 18' and 20' merge into the planar portion of top wall 22'. The opening 28' is defined by the cylindrical member 30' which is provided with the threads 32'. The cap 34' is internally threaded and matingly engages threads 32' to close the opening 28'. A basket 50 is retained in the opening 28' by clamping its flange 52 between the member 30' and the cap 34'.

Basket 50 has a frusto-conical shape and is provided with a central longitudinal sleeve 54. Sleeve 54 is closed at its lower end by the web 56 which defines the bottom wall of basket 50. Cap 34' is provided with a central longitudinal stud 58 which is resiliently engaged by sleeve 54 to provide accurate centering of the basket 50. Web 56 is provided with a plurality of holes 60 which function in the same manner as the holes 40 described above. The basket 50 will retain a deodorizer or bactericide as described above. The cap 34' and basket 50 may be made of a disposable material in the same manner as cap 34 and basket 36.

From the foregoing, it should be apparent that this has described a new and unobvious container in the form of a urinal. The container is extremely functional both in use and manufacture, and also it is appealing to the eye. Those skilled in the art will also recognize that the urinal 10 is but one example of a receptacle. As used herein, the word urinal could include other recep-

tacles such as bedpans, commode pots, children's potties, diaper pails, and garbage pails. The device could be used for any receptacle where there is a need for supporting a deodorant or bactericide within the container.

The device could also be used for buckets where the basket would retain a detergent. Thus, many refills of water could be applied to the bucket without having to add detergent from a separate container. A further use for the device is to retain an humectant in a container where the purpose is to keep the moisture content at a minimum. Humectants are often used with pharmaceuticals to reduce moisture. This invention eliminates the danger of a patient swallowing the humectant where it is one of many capsules in a container.

The curved top wall may have a transverse dimension of approximately 2½ inches so that it can be used as a hand grip.

I claim:

1. A urinal comprising a portable body having a spout opening at one end, said body having a generally flat bottom wall so that the body may be supported thereby, said bottom wall being substantially shorter than the length of the body, said body having upwardly converging side walls merging into a top wall, said body having a flat end wall disposed opposite said spout opening, a wall of said body other than said end wall having an opening therein, an imperforate cap, a means on said body for supporting said cap in a position overlying said opening, a basket supported within said opening, said basket including a flange, said basket being retained in said opening by clamping action between said flange and said cap, said basket containing a deodorant substance, said basket having openings for exposing said substance to the interior of the cavity of said body, and graduations on said body progressing in a direction from said end wall towards said spout opening so that the graduations are readable when said end wall is disposed substantially horizontal.

2. A urinal in accordance with claim 1 wherein said body is made from a rigid polymeric plastic material.

3. A urinal in accordance with claim 2 wherein said plastic material is translucent.

4. A urinal in accordance with claim 1 wherein a stud extends from a central portion of the inner surface of said cap, said basket including a sleeve of resilient material slidably telescoped over the end of said stud, said basket having a frustoconical shape, a web closing the smaller diameter end of said basket, and said web having a plurality of openings.

5. A urinal in accordance with claim 1 wherein said substance is a solid deodorant.

6. A urinal in accordance with claim 1 wherein said substance is a deodorant and a bactericide.

7. A receptacle comprising a portable seamless body having a cavity therein, said body having a spout opening at one end and a solid end wall opposite said spout opening, a projecting cylindrical portion on a wall of said body adjacent said end wall, said cylindrical portion defining a basket opening in said wall adjacent the end wall, a basket within said basket opening, said basket having a flange overlying a portion of said cylindrical portion, an imperforate cap, said cap being coupled to said cylindrical portion on the outer periphery thereof and clamping said flange to said cylindrical portion, said basket containing a substance selected from the group consisting of a deodorant and a bactericide, said basket having openings for exposing said substance to the interior of the cavity, and said body having graduations disposed generally parallel to said end wall so that the graduations are readable when the end wall is horizontally disposed.

8. A urinal in accordance with claim 7 wherein said body includes a generally flat bottom wall and a top wall opposite and narrower than said generally flat bottom wall thereof, said top wall being the wall of said body from which said cylindrical portion projects and in which said opening is disposed.

9. A urinal in accordance with claim 7 wherein said

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bottom wall extends from said end wall for a distance of about two-thirds the length of said body, said body having an inclined wall extending from said spout opening to said bottom wall.

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