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3,374,939

DISPOSABLE CONTAINERS WITH LIQUID TRAP

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Fig. 1

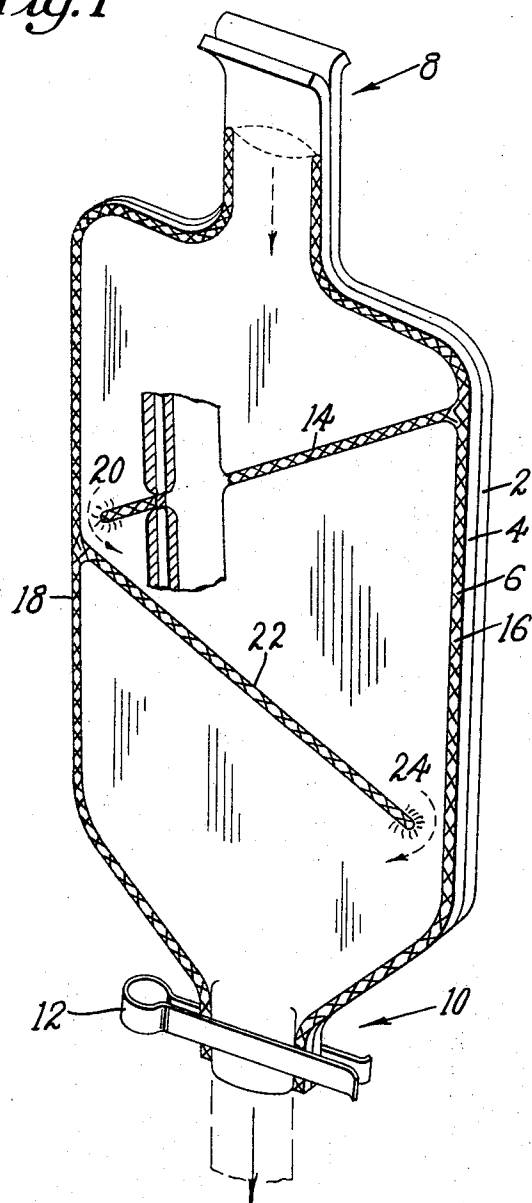


Fig. 2

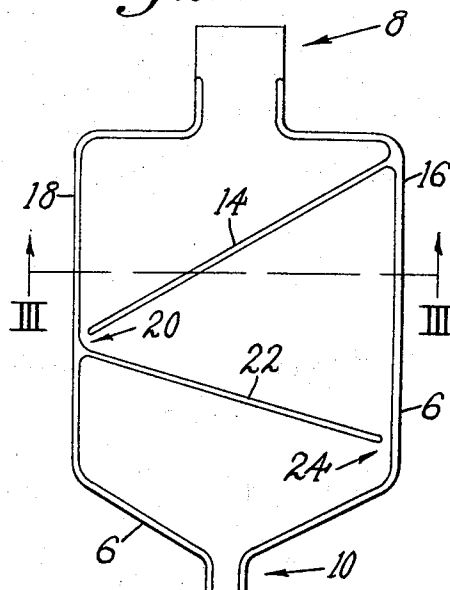


Fig. 4

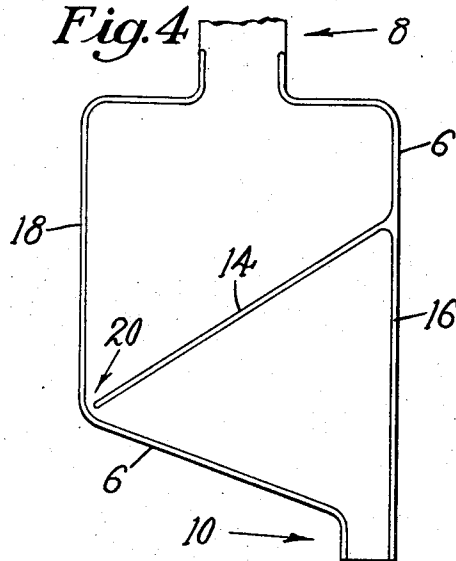
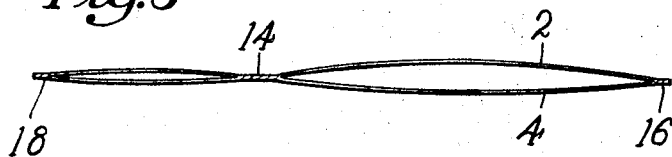


Fig. 3



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DISPOSABLE CONTAINERS WITH LIQUID TRAP

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ABSTRACT OF THE DISCLOSURE

A flexible disposable container having first and second sides formed of plastic and joined around their peripheries by heat sealing, the container being provided with an inlet and an outlet, first and second baffle means formed in said container by joining the sides by heat sealing, the baffle means cooperating to permit the flow of liquid from the inlet to the outlet, but acting to substantially obstruct flow in the reverse direction.

This invention relates to sanitary devices and is directed more particularly to a sanitary urinal for male patients afflicted with urological ailments.

Disposable sterile bags are useful in hospitals and the like for receiving urine from patients having ailments which impair their ability to control the release of urine. If the patient is not bed-ridden, the bag is ideally one which may be worn by the patient while he moves about. Generally, the bag is plastic and is attached to the patient, by means known in the art, so that urine passed by the patient enters the upper portion of the bag. The lower portion of the bag is usually provided with an opening to which there may be attached a clip or the like for closing the opening when the patient is not in bed. When the patient is resting in bed, however, the lower opening generally is connected to a tube which is in turn connected to a collection tank beneath, or close to, the bed.

Containers of the type described above are known in the art and have been used in hospitals for some time. A common problem, however, has been the backflow of liquid in the bag when the patient moves from an upright position to a substantially horizontal position. Such backflow causes an unsanitary condition and in addition can inflict some discomfort upon the wearer.

Recently, there have been attempts to overcome this problem by providing such bags with one-way valves or the like, thereby permitting flow from the inlet of the bag to the outlet, but not in the opposite direction. While devices of this character are presently known, they have proved rather costly, discouraging to a large degree the desirable disposable feature of the bag.

Accordingly, it is an object of the present invention to provide a urinal bag which permits flow from the inlet to the opposite end of the bag, but does not allow substantial flow in the reverse direction.

It is a further object of the invention to provide a bag having one-way flow and in which the one-way flow means is so economically manufactured that the overall cost of the bag remains substantially unchanged over that of the manufacture of an ordinary urinal bag not having the one-way flow provision.

With the above and other objects in view, as will hereinafter appear, the present invention in one aspect thereof contemplates a bag adapted to be attached to a male patient. The bag is made of two sheets of plastic material joined together substantially about their peripheries by the application of heat in a known manner. A portion at one end of the bag is left open, or not heat sealed, for the admittance of the patient, this being known as the inlet end, and a portion of the opposite end is left open for the discharge of collected liquid, this being known as the outlet end. In addition to the usual heat joining

about the peripheries of the two sides of the bag, a heat-sealed juncture is imposed upon the bag extending from a first edge to a point short of a second edge, thereby forming a baffle within the bag. The baffle is slanted generally toward the outlet end of the bag. Thus, fluid entering the bag strikes the baffle and is directed thereby through an opening between one end of the baffle and the second edge of the bag, to the outlet end of the bag. In the preferred embodiment a second baffle, or heat-sealed juncture, extends from the second edge to a point short of the first edge, the baffle extending generally in a direction toward the outlet end of the bag. The two baffles insure that liquid in the outlet portion of the bag does not reach the inlet portion.

Since certain obvious changes may be made in the illustrative device without departing from the scope of the invention, it is intended that all matters contained herein be interpreted in an illustrative and not a limiting sense.

Reference is made to the accompanying drawings in which there is shown illustrative embodiments of the invention from which its novel features and advantages will be apparent.

In the drawings:

FIG. 1 is a perspective view of a preferred form of container embodying the invention and including a cut-away portion to more clearly illustrate the invention;

FIG. 2 is an elevational view of a preferred embodiment of the invention;

FIG. 3 is a sectional view taken along line III—III of FIG. 2; and

FIG. 4 is an elevational view of an alternative embodiment of the invention.

Referring to the drawings, it may be seen that the illustrative container includes a first side 2 and a second side 4, the sides being formed of a plastic material and being joined together, as at 6, by heat sealing. The container is provided with an inlet 8 for receiving the patient and an outlet 10 for the discharge of fluid collected in the container. The outlet 10 may be provided with a clip 12, or any like means, for opening and closing of the outlet. The outlet 10 is also adapted to engage a tube (not shown) connecting the urinal bag to a collecting tank.

Referring to FIG. 4, it may be seen that a heat sealed juncture, or seam 14, extends from one edge 16 to a point short of the opposite edge 18. The seam 14 comprises a baffle slanting from the edge 16 generally toward the outlet end of the container. The baffle 14 permits liquid striking thereagainst to flow through an opening 20 into the outlet end of the bag. A baffle 14 arranged in the same manner is also shown in FIGS. 1 and 2.

Referring to FIGS. 1 and 2, it is preferred that the device have a second seam or baffle 22 extending from the edge 18 to a point short of the edge 16 and slanting from the edge 18 generally toward the outlet end of the bag. An opening 24 permits passage of liquid further toward the outlet 10.

The baffles 14, 22 are easily formed simultaneously with the sealing together of the two sheets 2, 4. Thus, the manufacturing cost of the device is scarcely more than the cost of the basic joining of the bag halves. Yet, the bag is provided with an effective one-way fluid flow arrangement. Because of the low cost of the device it is readily disposable without undue expense to the patient.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A flexible disposable container comprising

(A) first and second sides

(1) formed of a plastic material and

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- (2) joined substantially around their peripheries
 (a) by heat sealing,
 (B) an inlet at one end of said container,
 (C) an outlet remote from said end of said container,
 (D) a first baffle 5
 (1) formed by joining of said first and second sides
 (a) by heat sealing,
 (2) said baffle extending from a first edge of said container to a point short of a second edge of said container 10
 (a) to form a first opening between the second edge of the container and the nearest end of the first baffle,
 (3) said baffle extending in a direction from said first edge generally toward said second edge and said outlet, 15
 (E) a second baffle
 (1) formed by joining of said first and second sides 20
 (a) by heat sealing,
 (2) said second baffle extending from said second edge
 (a) at a point adjacent said first opening
 (b) to a point short of said first edge 25
 (c) to form a second opening between the

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- first edge of the container and the nearest end of the second baffle,
 (3) said second baffle extending in a direction from said second edge generally toward said first edge and said outlet,
 (F) said first and second openings being in positions remote from the longitudinal centerline of the container
 (1) and being in positions separated from each other by substantially the width of the container,
 (G) whereby said first and second baffles cooperate to permit flow of liquid from said inlet to said outlet but substantially obstruct flow in the reverse direction.

References Cited

UNITED STATES PATENTS

2,640,484	6/1953	Johnson	128—295
2,866,488	12/1958	Thompson.	
3,149,772	9/1964	Olsson	229—62
3,186,625	6/1965	Mead	229—53

FOREIGN PATENTS

863,295	3/1961	Great Britain.
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