

[54] **STANDUP CONTAINER ADAPTED FOR THE ADMINISTRATION OF ENEMAS**

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[58] Field of Search128/227, 224, 228, 275, DIG. 24; 222/92, 107, 206, 207, 215; 150/50, 1; 229/55; 215/11

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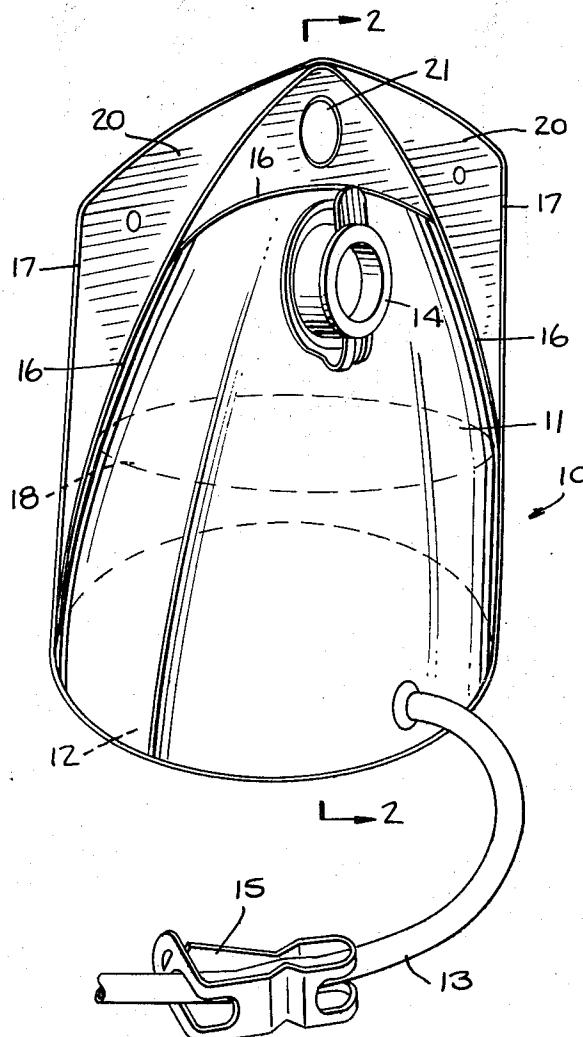
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[57] **ABSTRACT**

There is disclosed a standup container adapted for the administration of enemas, as well as the administration or reception of other fluids and/or compounds. The container consists of a stiffened bottom and flexible, collapsible sidewalls so joined and formed that the container can be made to stand, and such that it assumes a tapered shape, when partially or completely filled. The tapering results in great stability and considerable rigidity of the container when in use, while still preserving the desirable features of flexibility, malleability when filled, and collapsibility when emptied. A simple means for achieving the tapered shape of this container is also disclosed.

6 Claims, 3 Drawing Figures



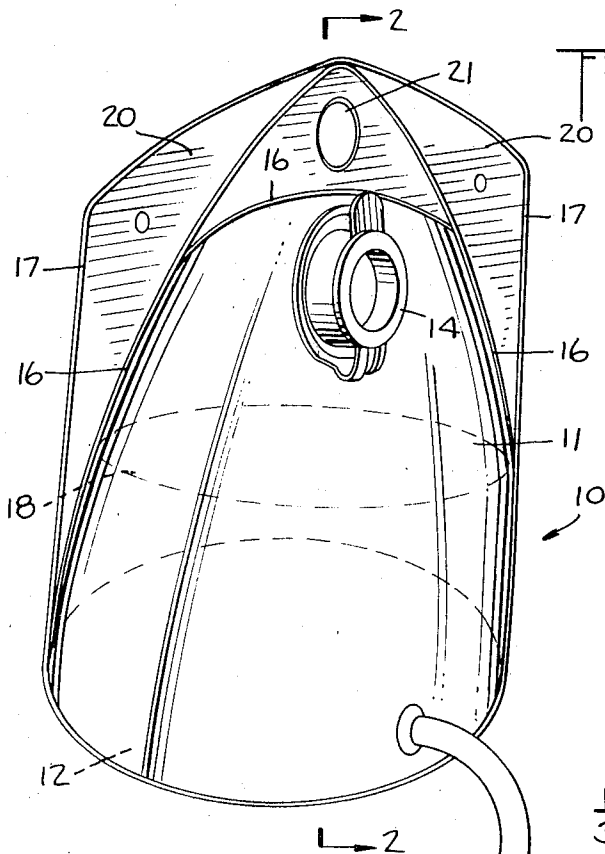


Fig. 1.

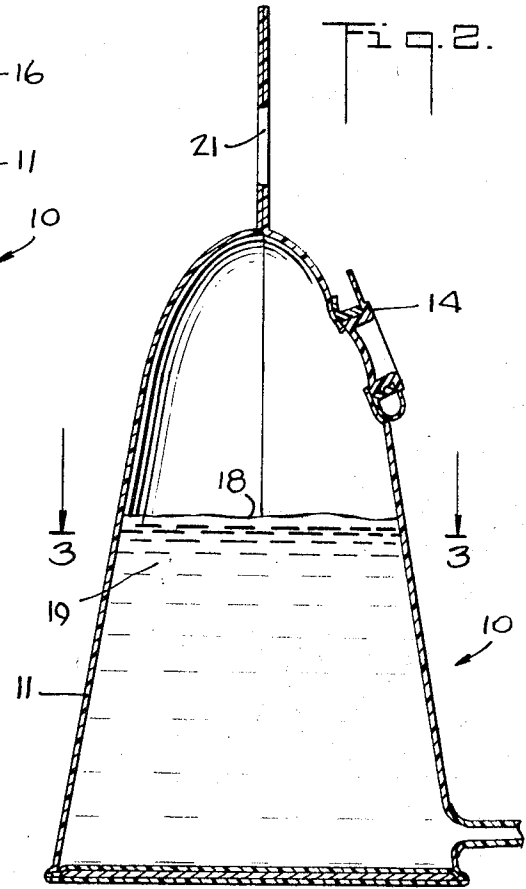


Fig. 2.

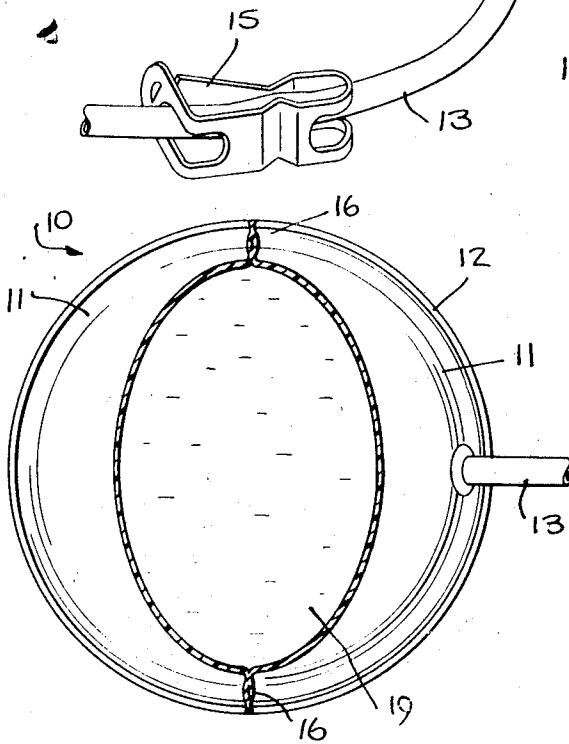


Fig. 3.

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STANDUP CONTAINER ADAPTED FOR THE ADMINISTRATION OF ENEMAS

This invention relates in general to an improved device, adapted among other applications for the administration of enemas, and more particularly to a flexible, collapsible container which can be hung, held, or made to stand in a stable upright fashion for the administration or reception of fluids.

BACKGROUND OF THE INVENTION

Previously known techniques for the administration of enemas have involved almost exclusively the use of rigid buckets placed upon elevated platforms. Plastic bags have also been used, but these have had to be hung, and this has been considered an inconvenience. As a result, buckets have continued to enjoy a widespread and substantial popularity.

Buckets pose several problems, however. They are rigid, and therefore difficult and bulky to store. They are open at the top and usually reused, thus posing problems of sanitation. The open top, furthermore, poses a risk in case the bucket is spilled. Previous art includes plastic bags which are sealed and disposable (for sanitary purposes), collapsible (for easy storage), flexible and malleable (for ease and sanitation in mixing the contents by hand). But such bags, as mentioned, do not enjoy universal popularity because they lack the bucket's rigidity and its ability to stand free. Such plastic bags are also difficult, inconvenient, and clumsy to hold by hand, when such is desired, and compression of the contents is likely in such cases. Furthermore, such bags cannot readily be placed on the floor. Neither can they be used conveniently for such purposes as the reception of urine when sampling or collecting is desired.

It is, therefore, a major purpose of this invention to provide a spillproof container which will rest or stand in a safe, stable, rigid and upright fashion on flat surfaces.

It is a further purpose of this invention to provide such a stable and upright container which also combines the properties of flexibility, collapsibility, and disposability for ease of storage and for sanitation.

It is a still further purpose of this invention to provide such a container which can easily be used in any of the most common methods: resting on a flat surface, held by hand, or suspended as from a hook.

It is a further purpose of this invention to accomplish the above objects and purposes with a configuration that permits an improved and simplified method of fabrication.

It is a still further purpose of this invention to accomplish all of the above objects and purposes in a convenient, simple, and inexpensive device.

BRIEF DESCRIPTION OF THE INVENTION

Briefly, one embodiment of this invention includes a container having flexible, collapsible sides and a stiffened bottom. The stiffened bottom, or base, enables the container to stand in an upright fashion. The container has an outlet tube passing through the collapsible side and adjacent to the base. A clamp is provided to close off the outlet tube. There is also an opening near the top of the container through which the desired fluids and solids may be introduced. The opening is fitted with a cap which, when closed, completely seals the container except for the outlet tube. The top of the container is provided with flaps, or panels, by which the container may be held by hand. In a center panel of these flaps there is provided a hole which does not communicate with the interior of the container and by means of which the container may be hung. Finally, the sides and top of the container are tapered such that the circumference of the contents decreases as the height increases.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and purposes of this invention will become apparent from the following detailed description and drawings, in which:

FIG. 1 is a perspective view of an embodiment of this invention;

FIG. 2 is a longitudinal cross section view of the FIG. 1 device, taken along the plane 2—2 of FIG. 1, in which the tapering of the container is apparent; and

FIG. 3 is a transverse cross-sectional view of the FIG. 1 embodiment taken along the plane 3—3 of FIG. 2.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the drawings, all drawings are of the same embodiment. As may be seen therein, the device of this invention includes a plastic bag, or container 10, the base 12 of which is made of a flat stiffened material such as stiff plastic or cardboard sealed in plastic, thus providing a firm, flat base on which the container may stand. The ability of the container to stand provides an important and desirable alternative means of use. The walls 11 of the container 10 are of a flexible, collapsible, plastic material, thus enabling the container 10 to be folded flat upon the stiffened base 12. The walls 11 are sealed to the base 12, usually by means of a heat seal. A tube 13 is attached to the base of one of the walls 11, usually by means of a heat seal. This tube 13 communicates with the interior of the container 10 and can serve either as an outlet tube, as when fluids are being administered, or as an inlet tube, as when fluids are being collected.

A clamp 15 which can be operated by finger pressure is provided on the tube 13, enabling the user of the container 10 to close off the tube 13. This prevents the entry or exit of fluids, material, or contamination. The clamp 15 also provides a simple and easy means of controlling or regulating the dosage which flows through the tube 13.

A plastic cap 14 is sealed, usually by means of a heat seal, to the upper portion of one of the walls 11 of the container 10. The cap 14 allows for easy introduction of fluid and/or other compounds when open, and seals tightly when closed. When both the cap 14 and clamp 15 are closed, the interior of the container 10 is completely sealed.

The walls 11 of the container 10 are joined together along a heat seal 16. The heat seal 16 is shaped in such a fashion that the line described by this seal 16 tends to curve inward and away from the edges 17 of the plastic material 11 as the distance from the base 12 increases. The line of the heat seal 16, in this preferred embodiment, thus curves in an arclike fashion and thereby tapers the top and upper portions of the container 10. As can be seen both in the external view of the filled container, FIG. 1, and in the sectional view of FIG. 2, the effect of shaping the sidewall heat seal 16 in this fashion is that, as a result of this taper, when the container 10 is at least partially filled, the transverse cross-sectional area of the interior of the container 10, defined by the walls 11, decreases as the distance from the base 12 of the container 10 increases. This tapering of the filled container 10 results in an increased rigidity and a considerably increased resistance to sag and collapse. Likewise, the taper and the resulting decreased diameter of the interior of the container 10 at the top make it much less likely that the upper portion of the container 10 will collapse or tip over when the container is only partly filled. Further, the increased rigidity of the filled or partly filled container 10, in combination with the decreased diameter of the surface 18 of the contained liquid 19, means that waves or motion of the surface 18 of the contained liquid 19 will be confined to a narrower region more centrally located over the base 12. These characteristics of increased stability and rigidity, when combined with the stiffened base 12, allow this otherwise flexible container 10 to stand upright in a stable fashion.

The contents 19 can be mixed in a sanitary fashion within the container 10 by means of manual manipulation of the flexible walls 11 as described in U.S. Pat. No. 3,177,871. Thus the desirable properties of collapsibility and flexibility, for easy storage and preparation, are combined in this invention with the desired properties of stability and rigidity when in use.

A simple means of achieving the tapered shape of this container 10 consists of placing two flat sheets of the flexible

sidewall material one on top of the other, and then heat sealing them while still flat along the heat seal line 16 as previously described. No special three-dimensional forming or shaping devices are required. Neither is it necessary to cut or form the sidewall material to any special shape. Once the two side material pieces are joined in this fashion the container 10 will automatically assume a tapered configuration as previously described when filled.

Alternate means for lifting, supporting, or holding the container 10 are provided by upwardly extending panels 20 of the plastic sidewall material, which extend beyond the heat seal 16. These upwardly extending panels 20 are flaps which provide a simple and convenient means of grasping the container 10 without at the same time compressing the contents 19. In the central portion of these panels 20 an opening 21, or hole, is provided by means of which the container 10 may be hung or suspended. These alternate means for lifting, supporting, or holding the container 10 are especially important where it might otherwise be very awkward and difficult to lift the container 10 without unduly compressing the contents 19.

A nonskid surface is preferably provided on the bottom (exterior) surface of the base 12 in order to enhance further the stability and usefulness of the container 10.

Although this invention has been described in connection with one preferred embodiment, it should be obvious that certain changes can be made in the invention as described without departing from the spirit and scope of the invention.

What is claimed is:

1. An improved standup device adapted for the administration of enemas, comprising:

a container having first and second collapsible side walls and a stiff flat base, the up-standing edges of said first sidewall being sealed to only the up-standing edges of said second sidewall to provide first and second seal lines along said sidewalls,

said first and second seal lines extending upwardly from said flat base and extending inwardly toward each other, the horizontal distance between said seal lines decreasing over most of the length of said seal lines as a function of the distance above said flat base,

said sidewalls extending upwardly from said flat base and extending inwardly toward each other and, when said container is substantially full, the horizontal distance between the upward medial line of each sidewall decreasing over most of the length of said medial lines as a function of the distance above said flat base,

thereby providing a container that tapers inwardly along most of the intersection between any vertical plane and the container walls as the distance from the base increases,

the base edge of each of said sidewalls being sealed to only said stiff flat base, and

an outlet tube sealed to the lower portion of one of said sidewalls of said container and communicating with the interior thereof,

said container being completely closed except for access to the interior thereof through said outlet tube.

2. The device of claim 1 further characterized by:

an opening in one of said sidewalls, and

an openable cap sealed therein, said cap when closed sealing the container, except for said outlet tube, said cap when open allowing the introduction of the desired fluids and compounds.

3. The device of claim 1 further characterized by:

a continuation of the sidewall material at the top beyond the junction where the material is joined, thus forming outwardly extending flaps which serve as an alternate means of grasping the container.

4. The device of claim 3 further characterized by:

a continuation of the sidewall material at the top beyond the junction where the material is joined, thus forming outwardly extending flaps which serve as an alternate means of grasping the container.

5. The device of claim 1 further characterized by:

a clamp located on the outlet tube, openable by finger pressure, and capable of closing said tube when so desired.

6. The device of claim 2 further characterized by:

a clamp located on the outlet tube, openable by finger pressure, and capable of closing said tube when so desired.

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