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M. E. SIMMONS ET AL

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BAG

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FIG. 1

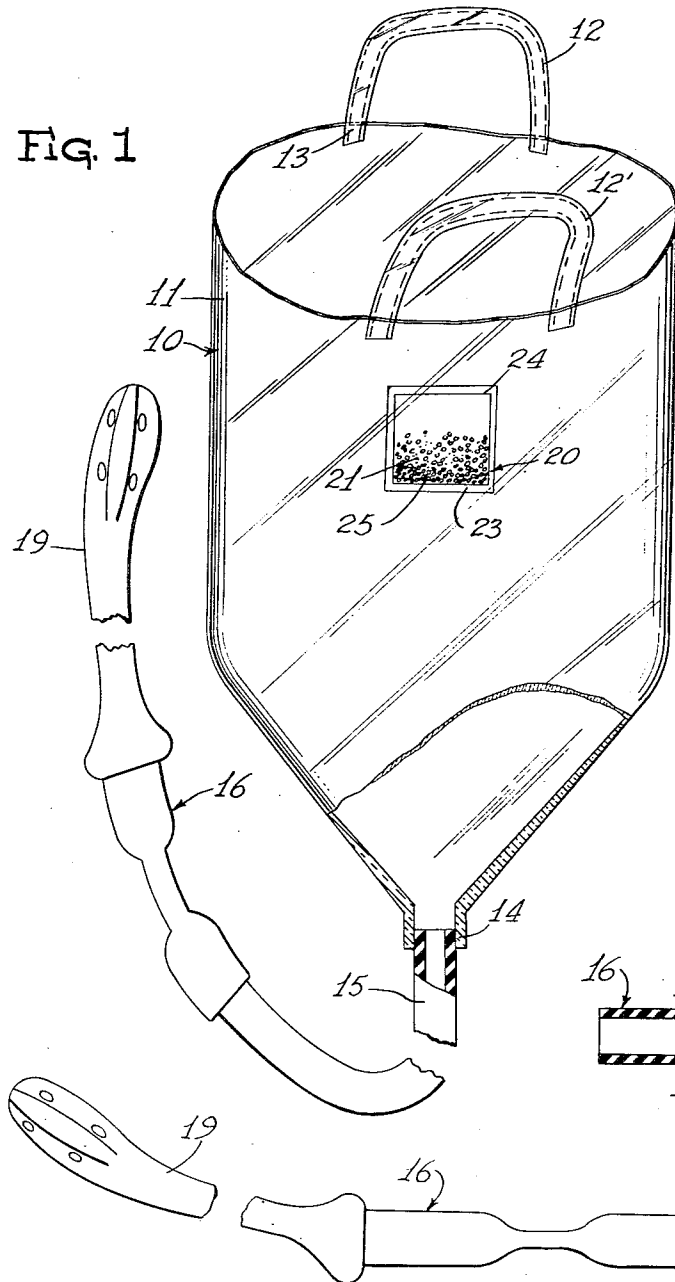


FIG. 4

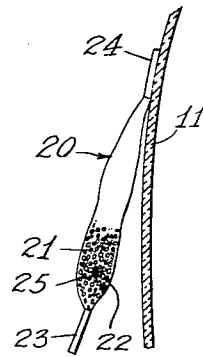


FIG. 3

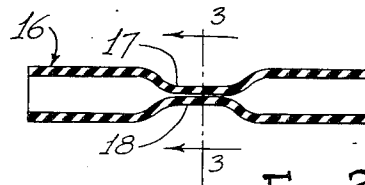
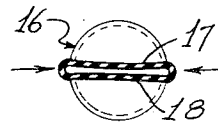
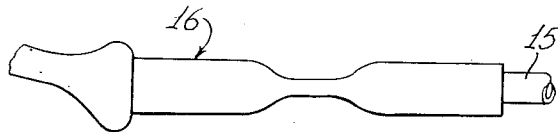


FIG. 2

FIG. 5



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The present invention relates to a douche bag and more particularly to a douche bag the side walls of which are of extreme thinness so that the bag is extremely compact and of small cost so that the device may be transported with convenience and disposed of after a single use.

An object of the invention is to provide a douche bag which is manufacturable at such low cost that it can be discarded after a single use.

A further object of the invention is to provide a douche bag having side walls of extreme thinness together with means to support the bag when filled with liquid prior to use.

Another object is to provide a low cost douche bag combination comprising a bag having walls of extreme thinness, a connecting tube, a valve and a nozzle.

Still another object is to provide an open mouth douche bag containing an active material such as an antiseptic permanently positioned therewithin in such manner as to be readily dissolved in the liquid which is poured into the bag to form a douche solution.

It is also an object of the invention to provide a one-piece finger manipulated valve which serves to connect a nozzle with the tube which communicates with the bag.

Other and further objects of the invention will be apparent from the description which follows.

The invention will now be described, reference being had to the accompanying drawing in which:

Fig. 1 is a perspective view, partly broken away, of a douche bag in accordance with the invention showing the bag, the connecting tube, the one-piece valve and the nozzle;

Fig. 2 is an elevation in section of a one-piece valve constructed in accordance with the invention;

Fig. 3 is a cross-section taken on the line 3—3 of Fig. 2;

Fig. 4 is a partial view in section taken on an enlarged scale showing the side wall of the bag and the antiseptic container secured thereto; and

Fig. 5 is an elevational view, in section, of the nozzle, valve, and tube assembly.

Referring to Fig. 1, the numeral 10 indicates the douche bag generically, the bag itself being indicated by the numeral 11. The bag 11 is shown as being cylindrical, the bottom of the bag tapering inwardly and possessing gradually increasing thickness.

The bag 11 may vary in configuration from that shown in that it may be oblong instead of circular in section and in that it may taper throughout its length rather than only at the bottom. In accordance with the invention, the bag 11 is composed of flexible plastic material of extreme thinness, preferably having a thickness of between .001" and .002". Many plastic compositions are suitable, as for example, polyethylene, flexible polyvinyl chloride formulations, polyvinylidene chloride, polyvinyl butyral and similar vinyl acetal derivatives, highly plas-

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ticized ethyl cellulose, plasticized cellulose acetate butyrate, elastomers including the acrylonitrile rubbers, the butadiene-styrene rubbers, and natural rubber.

The bag 11 is produced by blowing an extruded tube of the plastic composition to conform to the interior of a mold cavity having the desired configuration. Naturally, the blowing of the extruded tube decreases the thickness of the walls in proportion to the extent to which the diameter of the tube is expanded. Hence, the tapered lower end of the bag 11 has a progressively increasing thickness.

Opposed handles 12 and 12' are secured to the top of the bag 11 at 13, it being preferred to employ a heat and pressure seal to effect securement with the heat being electronically generated as by means of a high frequency alternating current in known manner. The handles 12 and 12' are tubular and hence are resistant to tearing when used to support the filled douche bag of the invention.

A tube 15 is secured to the lower open end of the bag 11, as for example, by the heat seal indicated at 14. A one-piece valve indicated generally by the numeral 16 is fitted on the end of the tube 15 removed from the lower end of the bag 11. A nozzle 19 is fitted within the far end of the one-piece valve 16.

Referring to Figs. 2 and 3, the valve 16 consists of a tubular member having a central flattened portion 17, the closing surfaces of the valve being indicated by the numeral 18. It will be observed that the surfaces 18 of the flattened portion 17 are normally closed to prevent flow of liquid from the bag 11 to the nozzle 19. When it is desired to open the valve 16, the valve is squeezed as indicated by the arrows in Fig. 3 to separate the surfaces 18 and permit flow of liquid past the valve.

If it is desired to enhance the closing action of the valve 16, the surfaces 18 may be coated with a pressure sensitive adhesive which will serve to seal the tube shut in the flattened portion 17, the sealing action of the pressure sensitive adhesive being overcome by finger manipulation of the valve as diagrammatically indicated in Fig. 3. Additionally, it will be observed that the valve action can be improved by the user by folding over either the valve 16 or the tube 15 or by the use of a mechanical clamp. It will also be appreciated that the valve 16 may be eliminated and auxiliary clamping means employed in its place although the present invention preferably includes as part of the combination, the one-piece valve shown in Figs. 2 and 3.

As is evident from Figs. 1 and 5 of the drawing, the valve 16 is interposed between the tube 15 and the nozzle 19, the tube and nozzle being fitted within the ends of the valve 16.

Referring again to Fig. 1 and also to Fig. 4, it will be observed that a container is provided, the container being indicated generally by the numeral 20. The container 20 may be formed in various ways, the invention being illustrated by a container comprising foraminous fibrous sheets 21 and 22 which are sealed to one another at their periphery 23 to enclose a powder or paste which, in accordance with the invention, possesses antiseptic or germicidal characteristics.

In accordance with the invention, and referring to Figs. 1 and 4, the foraminous container 20 is secured to the side wall of the bag 11. Preferably, the container 20 is secured to the bag 11 at one end only as for example by means of a heat seal at the portion indicated by the numeral 24. More preferably, the container 20 is secured to the bag at the upper third thereof, as shown in Fig. 1, so that the contents 25 of the foraminous container 20 may be dissolved by projecting liquid thereagainst as the bag 11 is filled.

Since only one edge of the foraminous container 20

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is secured to the bag 11, the antiseptic or germicidal contents 25 are subject to attack by the liquid in the bag 11 from both sides of the container 20 and this facilitates dissolution of the contents 25 in the liquid in the bag. It will be appreciated that a single sheet of foraminous fibrous material may be employed to secure the material 25 to the bag 11, as by positioning the contents 25 in a single heap on the side walls of the bag 11 and sealing the foraminous fibrous sheet to the bag 11 around the heap of contents 25. However, it is preferred, in accordance with the invention, to secure the contents 25 in a fixed position to the bag 11 in the manner indicated in Figs. 1 and 4 of the drawing.

The contents 25 may be the usual antiseptic or germicidal materials either in solid or paste form and examples of suitable compositions are mercury bichloride, hexachlorophene, boric acid, oxy-quinoline, potassium permanganate, chrome alum, tannic acid, etc. It is desired to point out that regulation of the quantity of the contents 25 in the foraminous container 20 enables the user to be confident that the resulting solution will be of appropriate strength.

It is desired to point out that it is possible to form the bag 11 by blowing only the end of an extruded tube so that the tube 15 shown in Fig. 1 can be formed integral with the bag 11.

We claim:

1. A disposable douche bag comprising an open ended plastic cylindrical bag of extreme thinness, the lower end of said bag tapering to an outlet of reduced diameter, the thickness of the walls of said bag gradually increasing as they approach said outlet, said bag being provided with opposed handles secured to the upper end thereof.

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2. A disposable bag as recited in claim 1 in which said handles comprise plastic tubes the lower ends of which are heat sealed to the walls of said bag.

3. A disposable douche bag comprising an open ended plastic cylindrical bag of extreme thinness, the lower end of said bag tapering to an outlet of reduced diameter, the thickness of the walls of said bag gradually increasing as they approach said outlet, said bag being produced by blowing an extruded tube of plastic material.

4. A disposable douche bag comprising a plastic bag of extreme thinness, the lower end of said bag tapering inwardly to an outlet of increased thickness, an elongated tube secured to said outlet and a nozzle communicating with the end of said tube removed from said outlet, said nozzle comprising a resilient tube the central portion of which is flattened.

5. A disposable douche bag comprising a plastic bag of extreme thinness, the lower end of said bag tapering inwardly to an outlet of increased thickness, an elongated tube secured to said outlet and a nozzle communicating with the end of said tube removed from said outlet, the closing surfaces of the flattened portion of said valve being coated with a pressure sensitive adhesive.

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