United States Patent

[11] **3,626,939**

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[73] Assignee **Said Harry M. Sokolic and Leon Sokolic, by said Martin S. Maltenfort**

[54] **DISPOSABLE DOUCHE WITH NESTING BELLOWS SECTIONS**
3 Claims, 10 Drawing Figs.

[52] **U.S. Cl.** **128/232,** 128/239, 206/69, 150/.5, 222/107, 222/215
[51] **Int. Cl.** **A61m 1/00,** A61m 3/00
[50] **Field of Search** 128/230–232, 239, 248, 251, 224, 227, 260, 261; 206/63.2, 69; 222/215, 107, 106, 209, 92; 150/0.5

[56] **References Cited**

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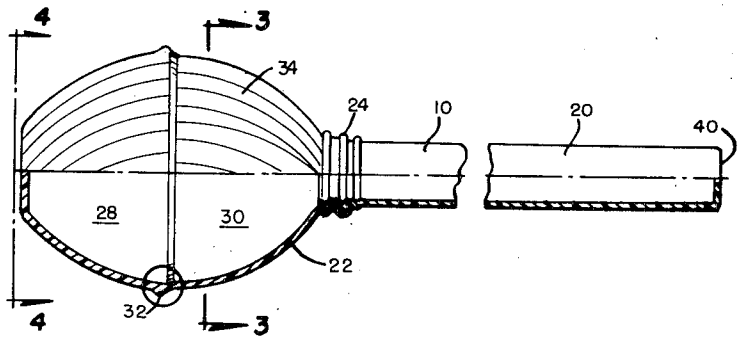
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ABSTRACT: A disposable douche fabricated in a single piece and which can be collapsed into a very small volume and can be carried in a woman's purse.



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SHEET 1 OF 2

FIG. 1.

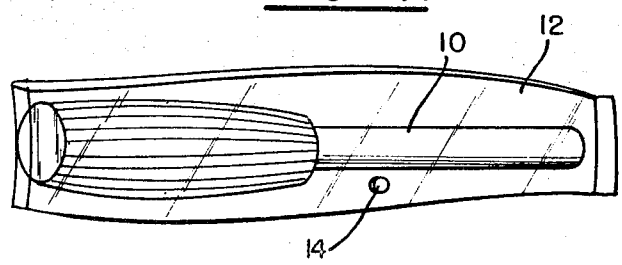


FIG. 2.

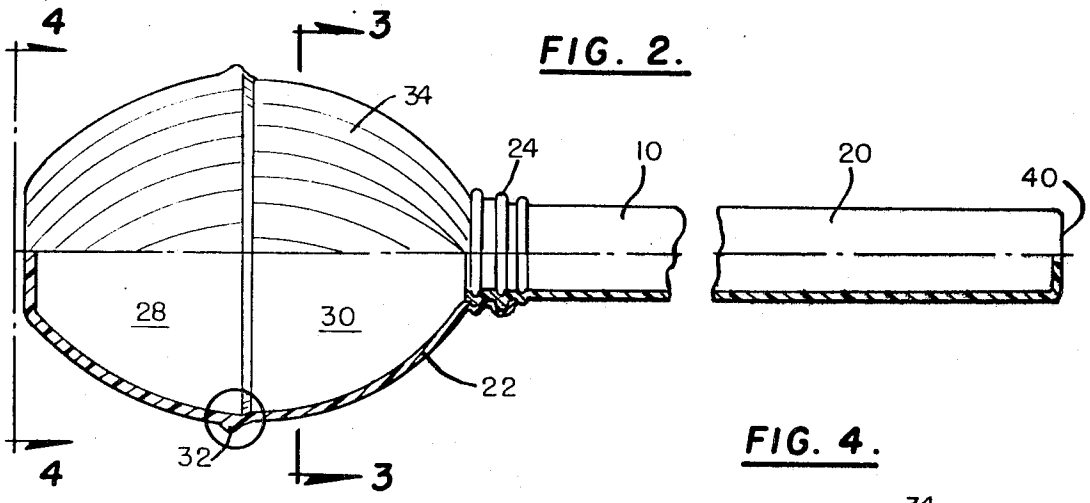


FIG. 3.

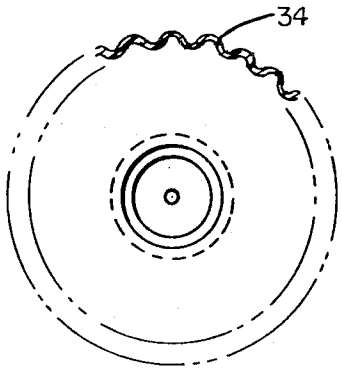
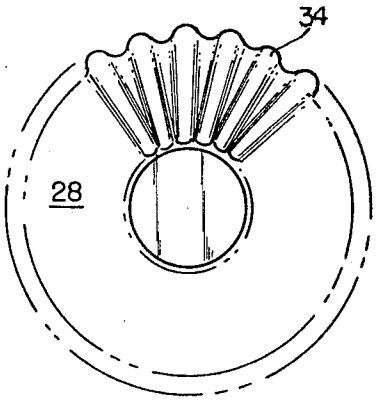


FIG. 4.



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FIG. 5.

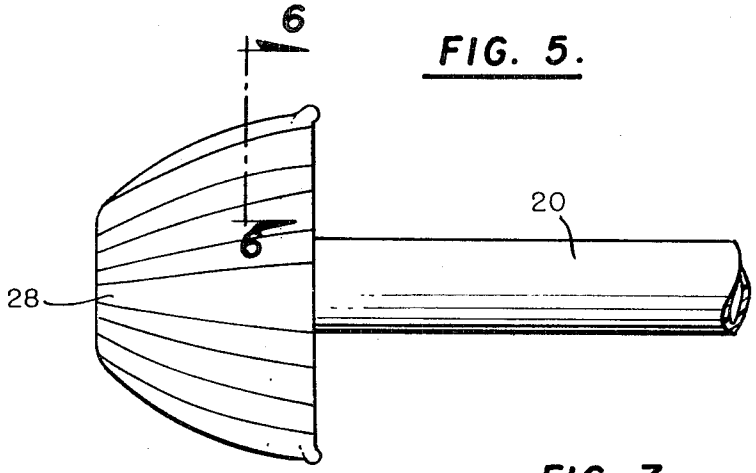


FIG. 6.

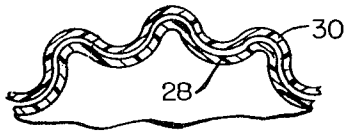


FIG. 7.

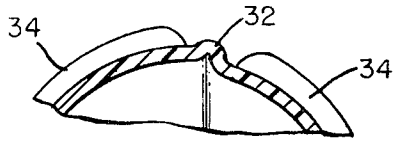


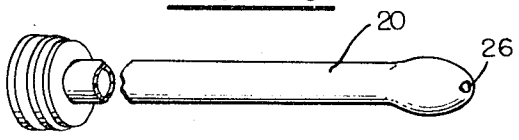
FIG. 8A.



FIG. 8B.



FIG. 8C.



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DISPOSABLE DOUCHE WITH NESTING BELLOWS SECTIONS

This invention relates to douches and more particularly to a douche fabricated in a single piece from low-cost materials yet adapted to assume various configurations adapting it to use under varying conditions. Further, because of its relatively low cost, it is intended that the douche may be discarded after a single use.

One object of the invention is to provide a disposable douche which can be collapsed into a very small volume for storage and transportation—, and which can be readily carried in a woman's purse.

Another object is to provide a douche which is easily filled and which can be manipulated so that it may function whether the user is seated, standing or reclining.

A further object is to provide a douche which is available in a sterile package which can be filled without losing its hygienic cleanliness.

Disposable douches are known, as described in Kempel U.S. Pat. No. 2,664,893; McKenna U.S. Pat. No. 3,057,352; Ellis U.S. Pat. No. 3,144,866, and others, but these are usually devices which must be assembled from several parts, in contrast with the douche of the present invention which preferably consists of a unitary blow molded article.

Other objects of the invention will be pointed out or will become apparent from the description which follows, taken in conjunction with the drawings in which,

FIG. 1 is a side view of the disposable douche of this invention in collapsed form, s it would be sold in a vending machine;

FIG. 2 is a view of the douche of FIG. 1, partly in section and partly broken away, showing the douche in distended condition, as when it has been filled and is about to be used;

FIG. 3 is a view taken along plane 3—3 of FIG. 2;

FIG. 4 is a plan view of the douche of FIG. 2 seen from plane 4—4;

FIG. 5 is a view of the douche of FIG. 1 in a partially expanded condition as it would appear after opening the package and before it is fully expanded;

FIG. 6 is a fragmentary view in section taken along plane 6—6 of FIG. 5;

FIG. 7 is an enlarged view of the hinge portion circled in FIG. 3; and

FIGS. 8*a*, 8*b* and 8*c* are views of various cannula configurations which may be used.

As previously indicated, the douche **10** of the present invention consists of a single-molded article adapted to be collapsed into a very small volume for sale, for example, from coin operated vending machines. The douche **10** seen in FIG. 1 is enclosed in a heat-sealed envelope **12** of cellophane or other inexpensive synthetic polymer. If desired, a medicament can be enclosed in the same packet **12**, e.g. in the form of a pill **14**, or in a separate envelope, or within the receptacle of the douche in the form of a tablet or powder.

Douche **10** which is preferably formed by blow-molding a copolymer of ethylene and vinylacetate, conventional polyethylene or any other inexpensive readily available easily molded synthetic polymer comprises the following:

1 a cannula portion **20**;

2 a bellows portion **22**; and

3 a flexible joint **24** connecting the cannula **20** and the bellows **22**.

The cannula is formed with a generally cylindrical or oval shape of dimensions such that it can be readily inserted into a vagina or other use area. For some purposes it may be preferred to give the cannula a bent shape **20**, as in FIG. 8*b*. Cannula **20** is usually provided with one or more holes **26** or dispensing ports, along with one or more filling openings through which liquid is adapted to be received into the douche.

Bellows **22** is preferably sufficiently thin that it can be readily collapsed, like a balloon. It consists of a rear hemisphere **28** and a front hemisphere **30**, connected through a flexible hinge ring **32**, which facilitates the nesting of the front hemisphere into the rear hemisphere when the douche is empty and while it is being prepared for packaging.

FIG. 6 shows how the pleats **34** or flutes provided in the hemispheres also improve the nesting of the two hemispheres.

In order to improve the convenience of the douche, it is provided with a flexible joint **24** which permits the cannula to be bent relative to the bellows, so as to facilitate use of the douche.

The molding of the douche from a single charge of plastic is readily accomplished by blow-molding, a process in which a hollow parison is received in a mold cavity defining the shape of the desired product, and air or other fluid under pressure is admitted to the interior of the parison while the plastic is heated and readily deformable. In the present instance, the blow pin through which the parison is blown would be inserted into the tip **40** of the cannula **20**.

Use of the douche is effected by removing it from the package, dropping the medicine into the inlet opening **40** and then filling the cannula from a faucet stream of water until the desired volume is received in the bellows. If medicine is prepackaged within the douche, only water need be added.

We claim:

1. A douche comprising a cannula portion, a collapsible bellows portion and a flexible joint connecting said cannula to said bellows, said bellows including a front hemisphere adjacent said cannula and a rear hemisphere distal to said front hemisphere, said hemispheres having spaced apart longitudinally extending flutes, the flutes of one hemisphere being radially offset from the flutes of the other hemisphere so that said one hemisphere is of greater diameter then said other hemisphere whereby inward displacement and compact nesting of said hemispheres one within the other is facilitated to permit significant radial compaction of the nested hemispheres.

2. The douche of claim 1 wherein said front hemisphere is nestable within said rear hemisphere.

3. The douche of claim 1 wherein the cannula is provided with at least one port for filling the douche or for dispensing the contents of the douche after it has been filled.

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