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SYRINGE BAG

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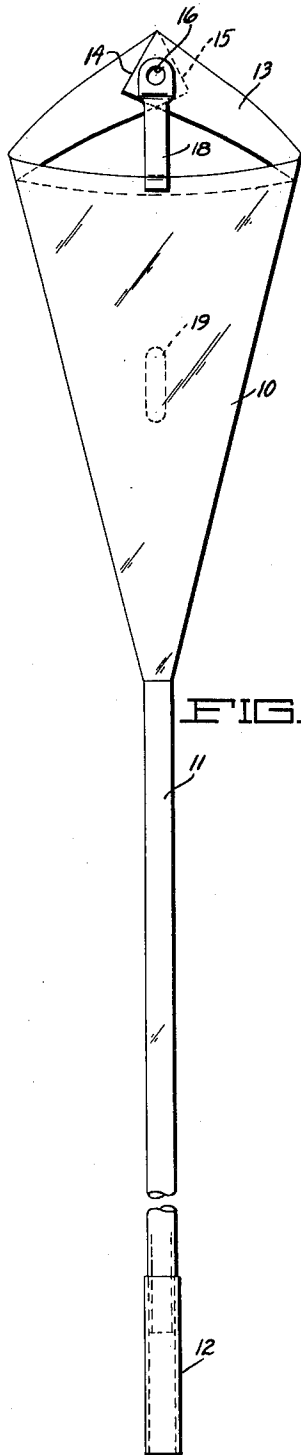


FIG. 1.

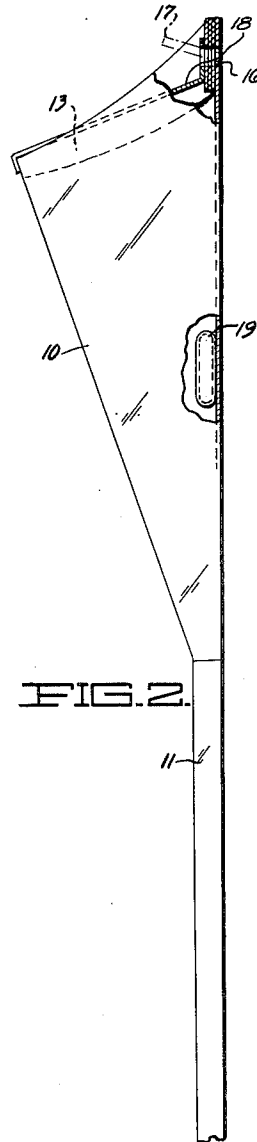


FIG. 2.

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## UNITED STATES PATENT OFFICE

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## SYRINGE BAG

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3 Claims. (Cl. 128—227)

1

This invention relates to syringes for the purpose of administering fluids such as antiseptic or medicinal solutions.

The principal object of the invention is to provide an inexpensive disposable syringe which may be discarded after use.

Another object is to provide a disposable syringe which may be contained in a compact package of minimum size and weight.

Another object is to provide a disposable syringe of thin, relatively fragile, membranous material, the syringe being so formed as to enable suspending of the same even when filled with fluid.

A further object is to provide a disposable syringe having self-contained means for applying an antiseptic or medicinal agent to a fluid when filling the syringe.

The manner in which the above and other objects of the invention are accomplished will be readily understood upon reference to the following specification when read in conjunction with the accompanying drawings, wherein:

Fig. 1 is a front view of a syringe embodying a preferred form of my invention.

Fig. 2 is a side view of the syringe, with parts broken away, illustrating the same in suspended condition.

Referring to the drawings, the syringe illustrated therein comprises a conical reservoir or container 10 which is integral, at the lower end thereof, with a tube 11. The container and tube are preferably formed or molded into a one piece element but may also be separately formed and later joined in any suitable manner such as by cement or the application of heat.

Both the reservoir 10 and tube 11 are formed of a very thin, flexible, membranous material, preferably transparent and of the order of .002 to .005 inch in thickness. Cellulose and other plastic materials such as those known under the trade names of "cellophane," "Pliofilm" and "Vinylite" may be used.

The tube 11 is elongated to a desired length and is of a uniform diameter equal to the diameter of the lower end of the reservoir 10.

The lower end of the tube 11 is integrally attached to the interior of a cylindrical nozzle or tip 12 of a relatively stiff material.

The upper end of the container 10 is open and the edge forming this opening is inclined upwardly toward the rear. Also, the upper edge is turned or bent inwardly upon itself to form a strengthening flange or lip 13.

The lip 13, instead of being formed of equal

2

width throughout, is formed shorter at the front of the container than at the rear. Because of this particular shape of the lip, and because of the rearward inclination of the upper lip, a surplus of material is obtained in the rear portion of the lip. This material is folded over on itself to form four thicknesses of material resulting in the two divergent edges 14 and 15.

The overlapping portions of the lip are suitably cemented together and to the body portion of the container, and a hole 16 is formed through the resulting four thicknesses to enable the syringe to be suspended from a suitable hook or the like as at 17, extending from a wall without tearing the fragile material even when the syringe is filled with liquid.

Suitable valving or clamp means (not shown) may be applied to the tube 11 anywhere along its length to close off the flow of fluid therethrough when desired.

By inclining the top edge of the reservoir, the lip 13 will be placed in tension in order to aid in supporting the syringe and to reduce the tendency of the fluid to burst the reservoir, particularly near the top, upon filling. Also, a flexible tie piece 18 of the same or similar material is preferably cemented or otherwise attached at its ends between the front and rear portions of the container to aid in preventing undue distension of the upper part of the container due to the weight of the fluid. The piece 18 also forms a handle to enable carrying of the syringe from place to place when filled with fluid. The rear end of the piece 18 is bent upwardly to form a tab which is suitably cemented to the overlapped portions of the lip 13 and the hole 16 is passed therethrough, thereby further strengthening the portion surrounding the hole against the possibility of tearing.

A capsule 19 of antiseptic or medicinal agent may be cemented or otherwise attached to the interior of the reservoir 10, the capsule being formed of a fluid soluble material so as to dissolve upon filling the reservoir and thereby admix the agent in the fluid.

In packaging the syringe, the tube 11, and then the reservoir 10, is wrapped in successive layers over the nozzle 12 into a compact package convenient for handling and carrying. By virtue of the resulting small package into which the syringe may be formed, it can be readily distributed in vending machines, and the cost of packing and shipping is materially reduced.

In view of the transparency, or at least translucency, of the membranous material forming

3

the syringe, a person may readily determine the liquid level and inspect the liquid or solution.

The container and tube may be formed of either seamless or seamed material without departing from the spirit or scope of the invention as set forth in the appended claims.

Having thus described the invention, what I desire to secure by United States Letters Patent is:

1. A disposable syringe comprising a fluid container of membranous material open at the top thereof, an elongated tube of membranous material integral at one end thereof with the bottom of said container, the top of said container being inclined to the horizontal and having a part bent over to form a flange extending into the interior of said container, the portions of said part adjacent the highest point of said container being overlapped, and a hole extending through said overlapped portions whereby to suspend said syringe on a suitable support.

2. A disposable syringe comprising a fluid container of membranous material open at the top thereof, an elongated tube of membranous material integral at one end thereof with the bottom of said container, the top of said container being inclined to the horizontal and having a part bent over to form a flange extending into the interior of said container, the portions of said part adjacent the highest point of said container being overlapped, a handle piece extend-

4

ing between opposite portions of said container, said piece having a tab attached to said overlapped portions, and a hole extending through said overlapped portions and said tab whereby to suspend said syringe on a suitable support.

3. A disposable syringe comprising a conical fluid container of membranous material open at the top thereof and converging downwardly, an elongated tube of membranous material integral at one end thereof with the bottom of said container, the top of said container being inclined to the horizontal and having a part bent over to form a flange extending into the interior of said container, the portions of said part adjacent the highest point of said container being overlapped, and a hole extending through said overlapped portions whereby to suspend said syringe on a suitable support.

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