

Jan. 5, 1954

G. P. KEMPEL
DISPOSABLE DOUCHE

2,664,893

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2 Sheets-Sheet 1

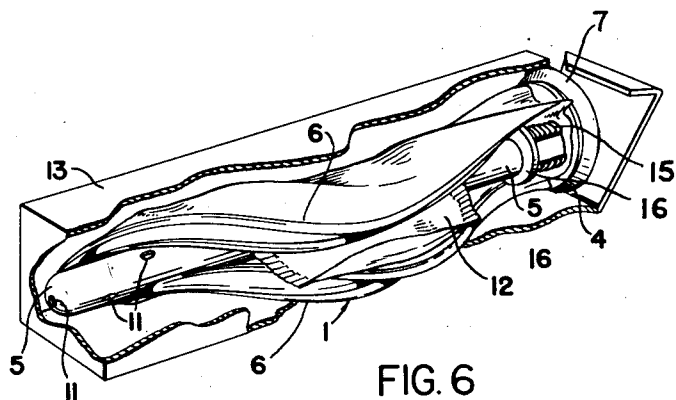
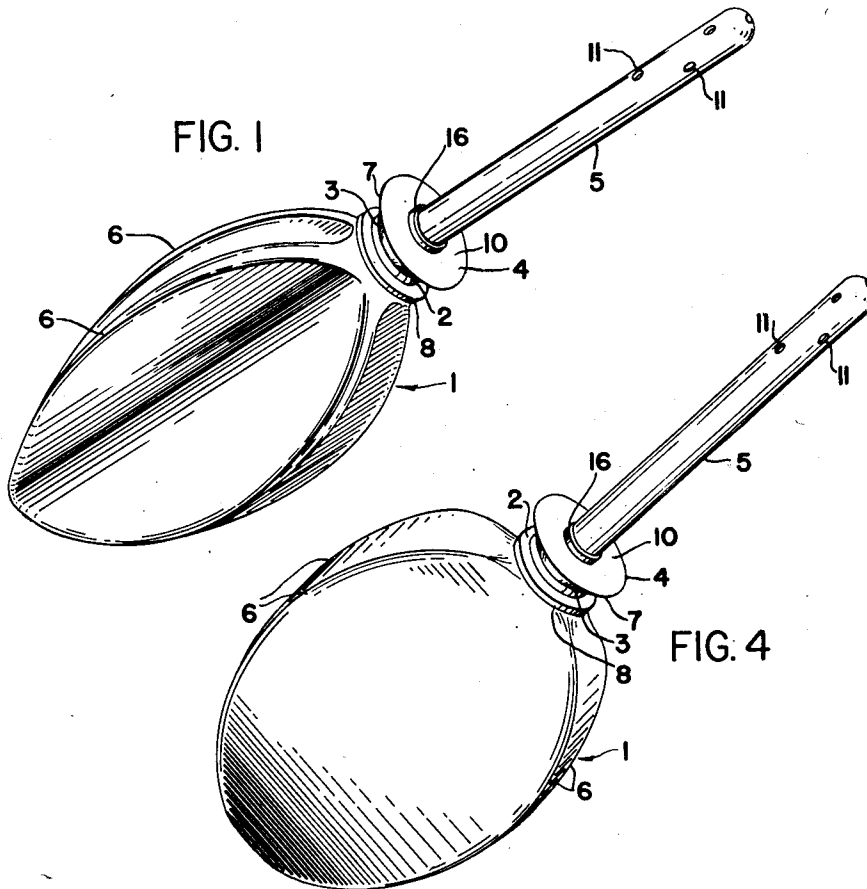


FIG. 6

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FIG. 2

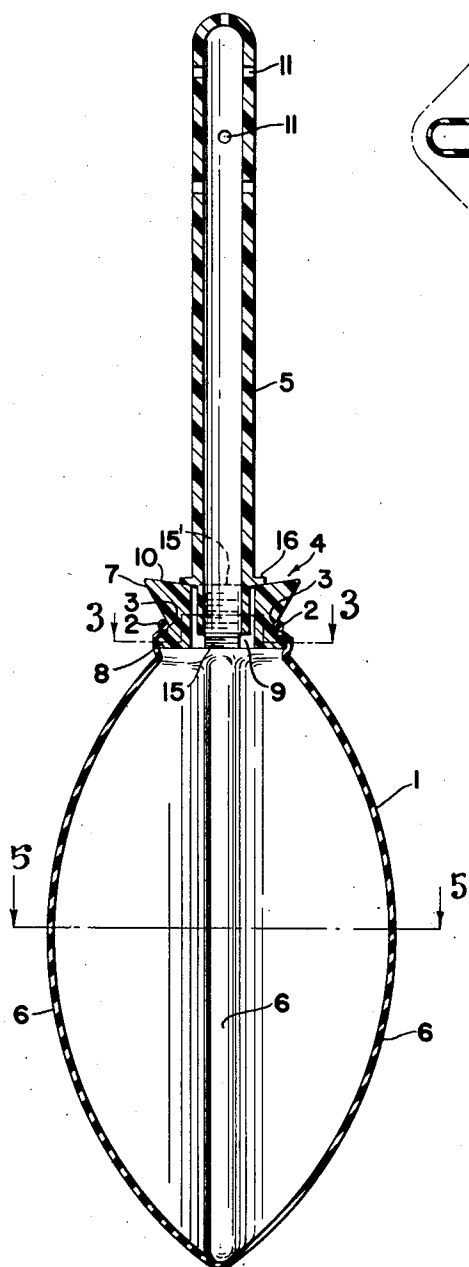


FIG. 5

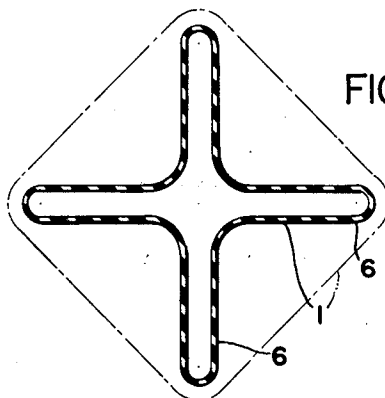


FIG. 3

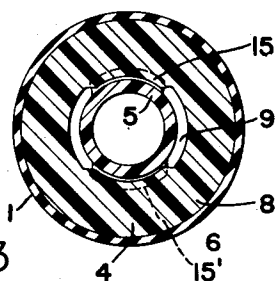
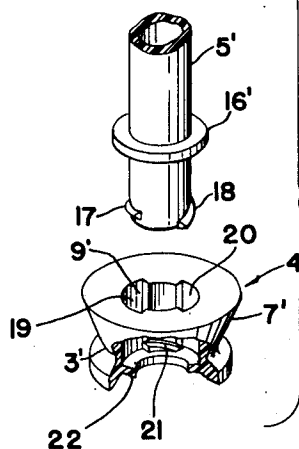


FIG. 7



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DISPOSABLE DOUCHE

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5 Claims. (Cl. 128—232)

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This invention relates to syringes and, in particular, to a douche bag capable of easy fabrication from low-cost materials, so that it may be discarded after a single use.

Douche bags have become a matter of necessity, according to modern standards of feminine hygiene, to such an extent that they are generally considered a necessary implement even during travel. To this end, manufacturers have striven to make the bags in such manner that they may be easily stored in a minimum of space. Despite such facilitation, however, and for various reasons, it quite frequently happens that a party finds herself embarrassed for need of one of these items when away from her domicile. In such a case, it is not a welcome solution to purchase an extra bag of the type capable of long-term use. According to the present invention, there is provided a syringe which can be sold at low cost and may, therefore, be discarded after a single use. Also, being composed largely of thin rubber, it may be folded into a small, compact, inconspicuous bundle, so that one or several packages may be included in a traveling bag, or even a hand bag, without seriously compromising the storage capacity available for other articles.

It is, therefore, an object of the invention to provide a douche which is low in cost, so as to be disposable after a single use. A further object is to provide a douche which may be consolidated into a comparatively small volume for carrying purposes and easy merchandising.

A still further object is to provide for a syringe having easy manipulation whereby filling is facilitated and positive closing of the filler opening is easily accomplished, permitting evacuation of the bag by manual pressure thereon.

These and other objects, which will be apparent, are attained by the invention, a preferred form of which is described in the accompanying specification and illustrated in the drawings, in which:

Fig. 1 is a perspective view of the assembled douche.

Fig. 2 is an axial sectional view of the douche.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 1, showing the bag as filled with liquid.

Fig. 5 is a sectional view taken along the line 5—5 of Fig. 2, showing the distended position of the bag in broken lines.

Fig. 6 is a perspective view of a package containing the disassembled douche, the package

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being partly broken away to show the contents, and

Fig. 7 is a perspective view, showing a modified thread arrangement between the nozzle and plug.

Referring to the drawings by characters of reference, there is shown a douche bag assembly comprising a bag 1 of dipped rubber having a beaded neck 2, defining a filler opening, received in a groove 3 of a rigid plug 4, into which is threaded a spray-stem 5.

The bag 1 may be made of ordinary rubber stock such as is employed for toy rubber balloons, but should be somewhat thicker than balloon stock for proper handling when filled with water. A wall thickness of about .02 inch has been found to be suitable for the bag. The bag, conveniently, has a capacity of about one pint.

Ejection of the contents, by manual manipulation is facilitated by a bag structure resulting from formation on a bladed mandrel with 90 degree faces, to provide a bag which is generally cruciform, or stellate, in cross-section, when empty, with vane-like projections 6. When filled, such a bag assumes a form which is generally square in cross-section, which, as seen in the broken line position of Fig. 5, renders hand manipulation easier.

The upper half 7 of plug 4 has a frusto-conical outer surface, the maximum diameter thereof being considerably in excess of that of the flange 8 of the bottom portion. This provides a good purchase for holding the bag as its weight increases during the filling operation.

Plug 4 has an axial passage 9 for filling the bag, this passage being threaded, as at 15, for reception of stem 5 which has mating threads 15' on its lower end and has a flange 16 which engages top 10 of the plug to provide a liquid seal. Preferably an interrupted thread system, consisting of two 90° sectors, as seen in Fig. 3, will be employed to minimize the time during which the filled bag must be held while the stem is attached. The upper surface 10 of plug 4 is dished to give a funnel effect for the filling operation.

The stem 5, which has perforations 11 to provide the fountain or spray, may be formed of polyethylene. The plug 4, however, should be formed of a somewhat harder material, such as polystyrene, so that more intimate union may be had in the threaded connection. The rolled rim 2 of the bag should be secured to plug 4 by glue or other suitable adhesive, to prevent leakage of the contents when pressure is applied.

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When packaged for sale, the parts are conveniently folded, as shown in Fig. 6, and a hermetically sealed package 12, containing the germicide or other conditioning chemical, is placed with the parts in the package 13.

In use, the contents of package 12 are placed in bag 1 through opening 9 of plug 4, water is introduced through opening 9 and stem 5 is screwed into place. After kneading and shaking the bag to dissolve the chemical, the assembly is ready for its hygienic employment. Subsequent washings may be effected with the same bag, using water alone. After use, the douche may be thrown away.

In Fig. 7 there is shown a modified thread arrangement wherein the thread ribs are reduced in number. As shown, the spray stem 5' has a single pair of oppositely disposed threads 17, 18, each extending for 90° of the periphery of the stem. Bore 9' has arcuate recesses 19, 20, through which threads 17, 18 may be passed, and oppositely disposed helical grooves 21 are provided near the bottom of bore 9' to receive thread ribs 17, 18. At the bottom of plug 4', a flange 22 extending inwardly of bore 9' provides a stop for tube 5' which positions the latter with thread ribs 17, 18 opposite thread grooves 21. As the threads are engaged, flange 22 is bent downwardly and flange 16' is brought into fluid-sealing relationship with the top of plug 4'.

Whereas the bag 1 has been described as having a thickness of .02 inch, obviously this figure is susceptible of considerable variation without approaching the wall thicknesses of conventional syringes or hot water bottles, for instance, the main essentials being that the bag be cheaply and easily made, and be highly flexible so that it may be stowed in a small package.

While a preferred embodiment has been shown and described, obviously changes may be made without departing from the spirit or scope of the appended claims.

What is claimed is:

1. A douche comprising a rubber bag having a single, reduced opening with a beaded edge, a plug having a peripheral groove receiving said edge and having an axial passage, and a tubular stem releasably held in said passage and having

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perforations in its walls, said bag when filled with liquid having a form such that cross-sectional areas perpendicular to the axis of said opening are substantially rectangular.

2. A douche comprising a rubber bag having a single, reduced opening with a beaded edge, a plug having a peripheral groove receiving said edge and having an axial passage, and a tubular stem releasably held in said passage and having perforations in its walls, said bag when unfilled and in relaxed condition having a form such that its cross-sectional profiles in planes perpendicular to the axis of said opening are stellate.

3. A douche comprising a rubber bag having a single, reduced opening with a beaded edge, a plug having a peripheral groove receiving said edge and having an axial passage, and a tubular stem releasably held in said passage and having perforations in its walls, said stem and said plug having a connection consisting of interrupted threads.

4. A disposable syringe comprising a rubber bag of the order of thickness of .05 inch or less, said bag having a beaded filler opening, a filler plug having an axial passage and an outer, annular groove received in said bag opening, said passage having interrupted threads, and a flange on said plug at the bottom of said passage extending inwardly of said threads.

5. In a douche as in claim 3, a collar on said stem above its threads, adapted to contact the top of said plug when the threads are engaged.

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