

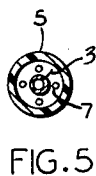
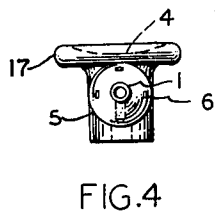
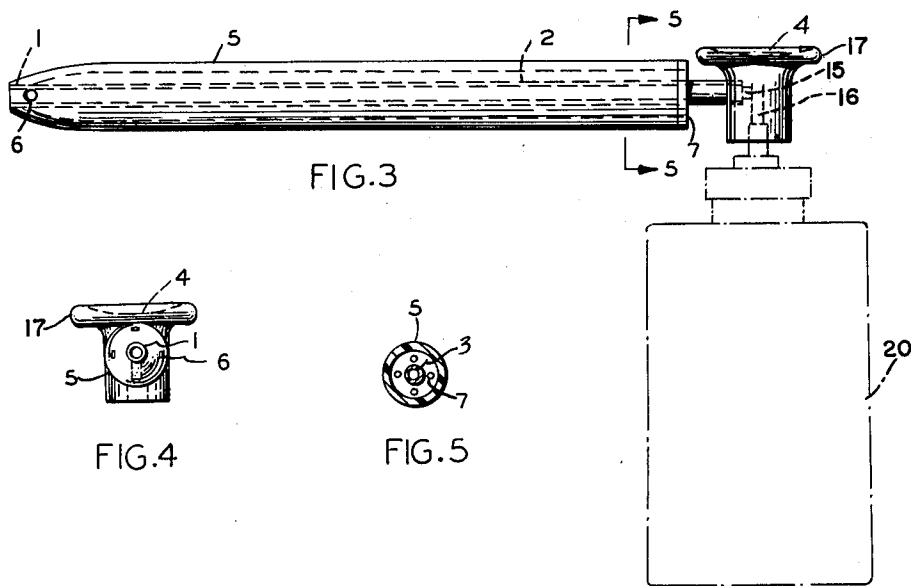
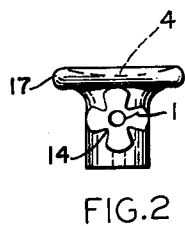
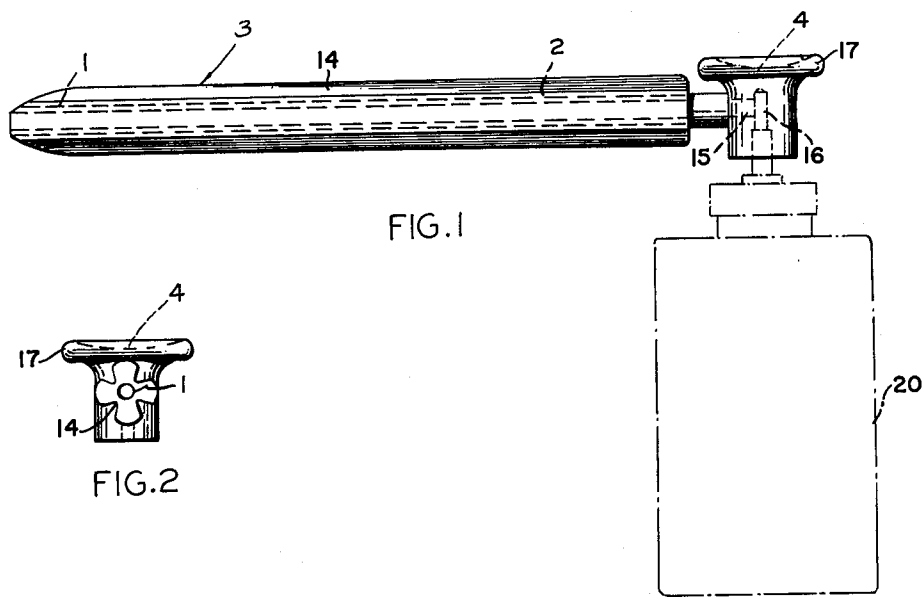
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VAGINAL APPLICATOR

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3,154,075

VAGINAL APPLICATOR

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2 Claims. (Cl. 128—240)

This invention relates to a vaginal applicator designed for use with pressurized containers. More particularly, this invention relates to a vaginal applicator for such preparations as medicated antiseptics, deodorants, and cleansing fluids of varied viscosity.

The object of this invention is to provide a neat, economical and more efficient means of administering fluids within the vaginal tract. By virtue of the present invention, all forms of fluid and semi-fluid vaginal preparations ranging from viscous creams through liquids and aerated foams may be administered directly from a pressurized container without danger or excessive waste. In the past, pressurized containers have not been widely used for the packaging of vaginal preparations because of the danger of a possible build-up of excessive and harmful pressure within the vaginal tract. The vaginal applicator of this invention eliminates this hazard by venting any excessive pressure built up in the vaginal tract during use. Another advantage inherent in the applicator of this invention is the fact that the applicator may be easily removed from the container for rinsing and storage between use.

The vaginal applicator of this invention may be used with any pressurized container having a side or top actuated valve mechanism. Side actuated valve mechanisms are defined herein as those valves which are opened by simply moving the top of the valve stem to either side, i.e., by applying a force in a direction perpendicular to the valve stem opening. A more detailed description of a side actuated valve mechanism is given in copending U.S. patent application SN. 39,519 filed June 29, 1960 now abandoned. The top actuated valve mechanism is distinguished from the side actuated valve in that the valve is opened by force applied directly opposite the direction of the valve stem extension. Both the side and top actuated pressurized containers are self-sealing when the external force upon the valve stem is released. These two types of pressurized containers are well known in the art and are available commercially.

FIGURE 1 represents a side or plan view of the applicator attached to a standard pressurized container (shown by broken lines).

FIGURE 2 represents a front view of the applicator shown in FIGURE 1 above.

FIGURE 3 represents the side or plan view of a preferred design for the applicator of this invention.

FIGURE 4 is a front view of the applicator as shown in FIGURE 3.

FIGURE 5 is a transverse section of the applicator on the lines 5—5 of FIGURE 3 showing the multiple openings 7 in the shell 5 adjacent the butt portion of the tube.

The present invention may be more fully understood by reference to the attached drawings.

In FIGURE 1 the tapered tip portion 1 and middle portion 2 of the substantially cylindrical hollow tube 3 are designed for insertion into the vaginal tract. The tip and middle portion of the tube 3 possess relatively large horizontal grooves 14 as a means of venting any pressure built up within the vaginal tract during use. The butt portion 17 of the elongated tube 3, i.e. the cap or knob extremity of tube 3 which is provided with a hollow interior adapted to receive and hold securely and

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snugly the valve stem 16 of container 20, in a position such that the pressurized fluid held in the container 20 is forced upon its release, directly into and through tube 3, is provided with a single external opening at a right angle to, and contiguous with, the opening 15 of the tube 3. The butt portion is also provided with a rounded concave top member 4 upon which finger pressure may be exerted in a downward or side-wise motion to effect opening of the self-closing, valve stem 16 actuated, pressurized container. The butt portion 17, as depicted in FIGURES 1 and 3, is mounted on the externally extending valve stem 16, which projects from container 20.

In FIGURE 3 the cylindrical hollow tube 3 having a tip 1 and middle portion 2 is surrounded by a tapered shell 5 having an internal diameter substantially larger than the external diameter of said tube. The tapered shell defines multiple openings 6 and 7, at opposite ends of the shell 5 for venting any pressure built up in the vaginal tract during use. The butt portion 17 of the tube 3 has an external opening at a right angle to, and contiguous with, the tube opening 15. The butt portion 17 is equipped with a rounded concave top member 4 adapted to receive finger pressure as is the butt portion of the applicator of FIGURE 1.

The above description is intended to more fully describe the nature of this invention and is not intended to limit or restrict this invention in any way.

What is claimed is:

1. A vaginal applicator for mounting on the external valve stem of a pressurized fluid container, said applicator comprising an elongated tube having a first tapered extremity and a second extremity adaptable to be mounted on said valve stem in activating relationship thereto, said tube having a continuous opening therein from said first extremity to the valve stem mounting in the second extremity and means for controlling the flow of fluids from said container through said valve stem into said continuous opening, said tube having a plurality of peripheral longitudinal grooves parallel to said continuous opening and extending from said first extremity towards and adjacent to said second extremity to permit the excess pressure built up in the vaginal tract to be vented along said grooves.

2. A vaginal applicator for mounting on the external valve stem of a pressurized fluid container, said applicator comprising an elongated first tube having a first extremity, and a second extremity adaptable to be mounted on said valve stem in activating relationship thereto, a continuous opening extending from said first extremity to the valve stem mounting in the second extremity, means for controlling the flow of fluids from said container through said valve stem into said continuous opening, and an elongated tubular shell concentrically mounted on, extending substantially the length of and spaced from, said first tube, said shell having a tapered extremity positioned adjacent to and joining said first extremity of said tube, the tapered extremity being provided with a plurality of openings to permit the pressure built up within the vaginal tract to be vented through the space between said tube and said shell.

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