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MEDICINAL APPLICATOR AND DISPENSER
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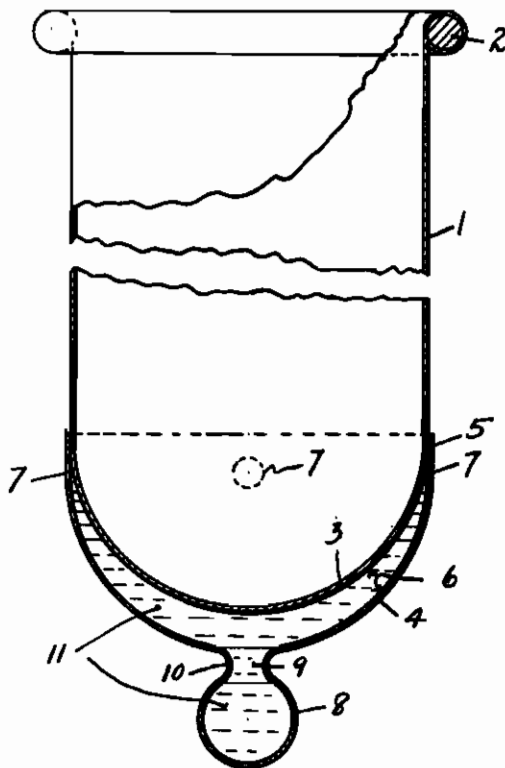


FIG. 1.

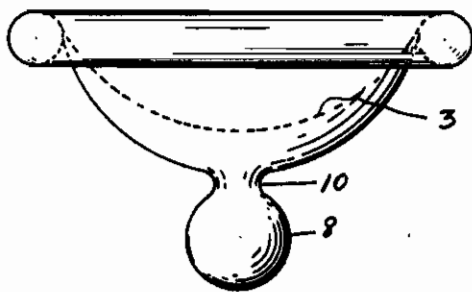


FIG. 2.

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ALIEN PROPERTY CUSTODIAN

MEDICINAL APPLICATOR AND DISPENSER

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This invention relates to a medicinal applicator and dispenser, and has for its objects an improved device for applying a medicine in the form of a liquid or jelly, to internal body cavities for disinfecting such cavities and which device is flexible and elastic and is provided with a socket for fitting over any suitable, relatively rigid projecture, for supporting the same in the desired body cavity during manipulation thereof, and which device also is formed with a supply chamber adapted to contain a supply of such liquid or jelly or the like, that communicates with a delivery or dispensing chamber, for supplying the contents of the supply chamber to the dispensing chamber for ejection from the latter at points where the said contents will be spread by the walls of the device during manipulation of the latter.

Another object is a dispenser and applicator of the above character having a tubular socket, the walls of which are adapted to be rolled up to an apertured dispensing chamber at one end of the socket in which chamber the apertures are sealed by said walls when so rolled, preparatory to use of the device, and which walls are adapted to be unrolled to progressively enclose therein any suitably shaped supporting member, and when so unrolled for use of the device, the openings in the dispensing chamber will be uncovered for dispensing the contents of the chamber.

A still further object is a tubular socket provided with a closure at one end and a chamber outwardly of such closure having flexible walls with discharge apertures opening outwardly of the socket and chamber, and which walls are so formed as to carry a supply of antiseptic, medicine or the like, and to substantially control the delivery of such medicine from the supply chamber to the apertures for discharge from the latter.

Other objects and advantages will appear in the description and drawings.

Fig. 1 is a part sectional, part elevational view of my dispenser and applicator, partially broken in length.

Fig. 2 is an elevational view of my dispenser previous to use when sealed by the socket walls of the device.

In detail, my invention comprises a tubular socket member 1, open at one end and formed with a reinforcing ring 2 at said end.

The opposite end is closed by a concavo-convex imperforate end wall 3, the concave side of which faces into the socket in member 1. This end wall and walls 1 are preferably integral.

Over the convex outer side of wall 3 is a cap 4,

connected at its edges at 5 adjacent the juncture between wall 3 and walls 1.

The cap 4 is also generally concavo-convex, with its concave side facing the convex outer side of end wall 3, but spaced from said end wall, thus providing a chamber 6 between said cap and end wall. Adjacent the connection 5 between the cap and socket member 1, are one or more discharge apertures 7 that open generally radially outwardly of the central axis of the socket member 1. Preferably several of these openings are provided at equally spaced points around the margin of cap 4.

The cap 4 is centrally formed with bulbous chamber 8 projecting axially outwardly of cap 4, and which chamber 8 communicates with chamber 6 by a restricted passageway 9 that is coaxial with member 1. A neck 10 may form the walls of said passageway, and also connect the walls of chamber 6 with the walls of chamber 8.

These chambers 6, 8 may be filled with a germicidal, or antiseptic or medicinal liquid, or jelly 11 through one of openings 7, after which the walls of the socket member 1 are rolled on ring 2 from the open end of the socket member toward the end 3. This rolling is permitted by reason of the fact that the walls 1, as well as end wall 3 and cap 4, including the walls of chamber 8 and neck 10, are of relatively thin, elastic, flexible rubber or the like.

The rolling up of walls of socket member 1 continues until the margins of end wall 3 and cap 4 are included in the annular roll formed by walls 1, and the apertures 7 will then be positively sealed, against leakage of the material 11 from the chamber 6 until the walls 1 are unrolled as shown in Fig. 2.

The socket, being tubular and elastic, is adapted to receive therein, and to tightly embrace any suitable projecture, such as a finger, probe, etc., that is adapted to be inserted in a body cavity. The rolled up dispenser, as indicated in Fig. 2, is readily applied to such projecture by merely placing one end of the latter against the wall 3 and unrolling the walls 1 or skirt portion of chamber 6, in the same manner as a rolled stocking is unrolled on the leg of a wearer. This unrolling of the walls 1, uncovers the apertures 7, and the device, supported on the support enclosed in the socket member, is ready for use.

In operation, when the supported applicator, ready for use, is inserted into any body cavity, tract, or opening, with the chamber 8 leading, it will be seen that some of the contents of the chamber 6 will be ejected through openings 7 on

the lining of such tract or cavity, but this ejection is, many times heretofore, undesirably restricted by the lining itself, or the contents may be completely ejected too quickly to most efficiently sterilize or disinfect the desired area in the tract or cavity. By the provision of chamber 8, even though the contents of chamber 6 may be completely ejected before the discharge openings reach the desired area, there will be a supply remaining in said chamber 8, which will be ejected into chamber 6 through the restricted passageway 9, and from chamber 6 through apertures 7 to the desired area, upon reciprocation or manipulation of the applicator at, or adjacent said area, in a manner to create a pressure against the walls of chamber 8. If the ejection of the contents 11 tends to be blocked by the lining of the body tract or cavity, then similar manipulation of the applicator will force the contents out of apertures 7 and into the cavity or tract. Thus, the chamber 8 is a supply chamber, while cham-

ber 6 is a dispensing chamber from which the contents are ejected through apertures 7, and the apertures 7, being in the margin of wall 4 close to the socket walls 1 and practically parallel with said walls 1, it is manifest that the apertures 7 are sealed on opposite sides by wall 1 and by wall 3 when the ring 2 with walls 1 rolled therein cover apertures 7, and there is no substantial pressure created on the contents enclosed in the dispensing and supply chambers.

The restricted neck 10 controls the passage of the contents of chamber 8 into the dispensing chamber 6, and in most instances, the chamber 8 will carry the contents thereof into a body cavity until the chamber 8 engages the end of such cavity, when said contents will be pumped, as it were, into chamber 8 and out of the discharge apertures 7, thus insuring a dispensing of the material 11 at a point in the cavity remote from its opening.

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