United States Patent [19]

Denkinger

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[54] **FEMININE HYGIENE PROTECTIVE SHIELD**

[76] Inventor: **Marian C. Denkinger,** 88-35 Elmhurst Ave., Elmhurst, N.Y. 11373

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[52] **U.S. Cl.** **128/285;** 128/157; 128/130

[51] **Int. Cl.**..... **A61f 13/00;** A61f 5/46; A61f 13/20

[58] **Field of Search** 128/285, 270, 130, 157, 128/290

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Primary Examiner—Aldrich F. Medbery

Attorney, Agent, or Firm—Thomas B. Graham

[57] **ABSTRACT**

The device consist of a thin protective pad, preferably of gauze, for use for feminine hygiene purposes which is small enough to be completely enclosed within the outer labia of the vulva and is equipped at its central functional spot with an essentially hollow cone-shaped protrusion of absorbent material for insertion into the vaginal orifice so as to develop immediate contact with any slight discharge.

5 Claims, 8 Drawing Figures

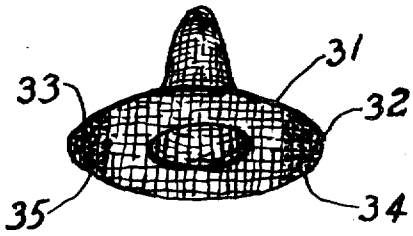


FIG. 1

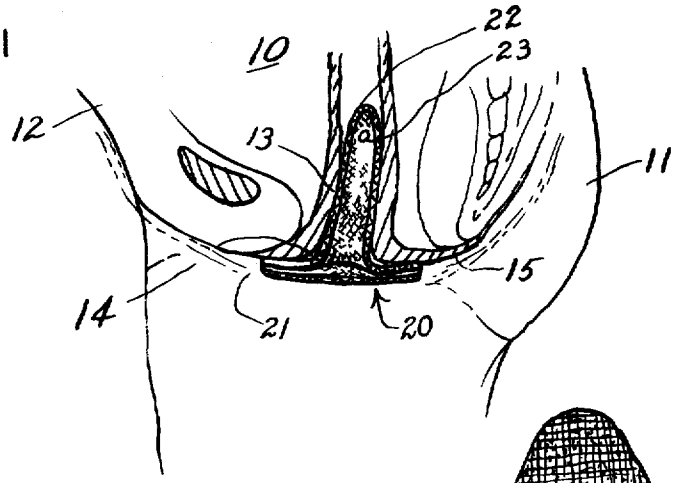


FIG. 2

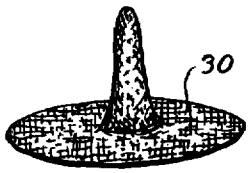


FIG. 2A

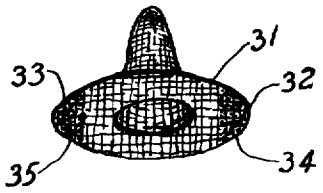


FIG. 3

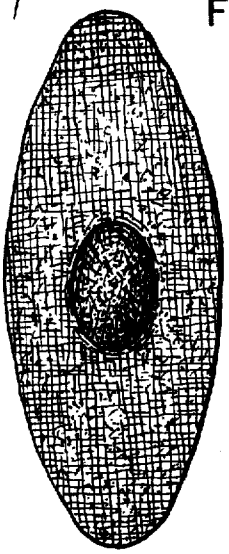


FIG. 4



FIG. 5

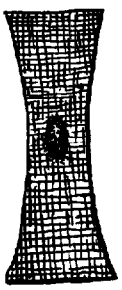


FIG. 6



FIG. 7



FEMININE HYGIENE PROTECTIVE SHIELD

THE INVENTION

This invention is concerned with an appliance in the form of a protective shield for use by females in the period between menstrual cycles. The device is adapted for positioning and fitting within the vaginal orifice with external part to be retained in place by the inner labia of the vulva.

BACKGROUND OF THE INVENTION

At any one time, a substantial fraction of the female polulation in the reproductive age bracket is in a menstrual period, more technically called the "oestrus cycle." There are available a variety of devices limited only by the ingenuity of women and men who have expended design effort to the purpose for handling the flow during the active 5 to 6 days when a cycle occurs. Reference to commercial and trade hygiene literature provides ample annotation of the problem.

However, little attention has been paid to the matter of the interval between flows in the menstrual cycle, namely, the period when the female is not flowing. Actually, this condition is technical because the genital area of the female is principally a mucous membrane, which means that it is constantly moist, with the consequence that there is always in the area, a discharge of slight volume. Bacterial infections are common and in these days of tight fitted garments of synthetic fabrics, they are made more common through lack of ventilation. These conditions are not serious but a female cannot take care of matters without inconveniences. There are conditions, borderline conditions, in which there is a sensible flow, too small to justify the use of one of the heavier catamenial pads normally associated with the menstrual cycle, yet large enough that it can cause discomfort and general dissatisfaction, because it interferes with the individual's daintiness. Vaginitis, trichormoniasis, vulvavaginal condidiasis are common bacterial infections which must be met.

It is accordingly a basic object of this invention to provide a device which will be of a form such that the woman can carry it with her in her purse, which will be adapted for quick and easy insertion to the vaginal orifice to take care of this problem.

It is the second object of the invention to provide a device which can be wholly enclosed within the vulva even within the internal labia of the vulva and provide the absorbent capacity needed by the discharge, and further to provide for deodorization as well.

Other objects in the advantages of the invention will in part be obvious and in part appear thereinafter.

DETAILED DESCRIPTION OF THE INVENTION

The invention accordingly is embodied in a construction which is characterized by its being formed of a layer, or plurality of layers, of light gauze absorbent to form a small protective pad approximately of the dimensions of the internal labia of the vulva, said pad having fastened to a central area, thereof an essentially hollow protrusion, generally of cylindrical or conical shape, extending upwardly perpendicularly to the pad itself, for a distance of a few centimeters, and being of a diameter at its base of about a centimeter or two. The protrusion, or mound, is formed of gauze, or cotton, or cellulose fibers, or a combination of these, intermingled, and formed to hold their shape when dry, or

slightly wet, so that the protrusion can be fitted in the opening of the vaginal orifice. Alternatively, and actually preferable, enclosed within the conical protrusion is a capsule of deodorant chemical material of any kind, which will react or dissolve when contacted by the moist discharge, and neutralize any odor thereof. Since generally bodily fluids are carrying a certain amount of protein discharge, particularly mucous membranes carry a proteinaceous discharge which in some conditions may be in a state of decomposition, fluid discharge originating in this part of the female can be of a rather strong obnoxious odor. It is this latter reason which impels the female who desires to maintain a high level of daintiness to proceed with an absorbent pad, or some other improvisation when she senses a discharge of this type.

It is in this period of utility where this structure finds its greatest application.

In order to understand better the details of the invention, consideration of the following drawings is in order:

FIG. 1 represents a sectional view of the female showing the relationship of the buttocks, anus, vulva, and vagina for an insert of the instant design, shown in section, in place;

FIG. 2 shows a semi-perspective view of the device made in accordance with this invention; FIG. 2A is a section;

FIG. 3 is a plan view of the device made in accordance with this invention;

FIGS. 4, 5, 6, and 7 illustrate variant shapes of the device made in accordance with this invention.

The concept is readily understood by reference to FIG. 1, wherein 10 presents Female Trunk, 11 the buttocks, 12 the pubis, 13 the vagina, 14 the labia, and 15 the anus. The device 20, shown in section consists of the gauze laminated base 21 on which the conical protrusion 22 is formed. In section, 22 is shown in FIG. 1 enclosing the pellet 23 of the deodorant material. The manner in which 22 is affixed to the gauze base can be by adhesive, or a few simple stitches. Actually, a practical method of formation is to form material from which to make a cone as a piece which is spread on the laminated back, stitched into place, and then the cone formed from the material, thus sewed in place. This, of course, is the most secure and desirable form of the construction.

The hollow form makes it of finger size and consequently convenient for insertion to the extent shown in FIG. 1.

Reference to FIG. 2 illustrates another variant, 30. Here the basic gauze base 31 is made long enough so that it can have adhesive areas, 32 and 33 on its ends, these being merely very slightly adhesive so that the ends 34 and 35 can be pulled forward and to the rear for adhesion to adjacent parts of the anatomy, or clothing, if that is desired.

For fitting the anatomy, FIGS. 3, 4, 5, 6, and 7 illustrate forms of the invention. In FIG. 4, an oval form with a rather elongated oval base and conical projection. This is dimensioned to substantially match the size of the organ involving the inner labia. FIG. 5 is a form which takes into account the possibility that the individual may have heavy thighs. Accordingly, it is constricted at its center. FIGS. 6 and 7 for whatever advantage they may have, are shaped somewhat differently, largely to satisfy the personal preferences or prejudices

of the user. All are adapted or adaptable to be held in place by the inner labia.

As materials of construction, the absorbent conical protrusion in the center can be made of cotton, cotton fiber, cellulose fiber, or any mixture thereof. All of these materials are extremely inexpensive and available in quantity, and of a nature such that with little or no binder that can be formed to shape and handled. In fact, there is substantial experience in the preparation of surgical dressings from materials of these kinds. Typical are the various materials and constructions for use in manufacture of menstrual pads and tampons. Since the conical protrusion is only a few centimeters in height (2–10 approximately) 1–5 centimeters at its base, or less, it is a small item and can be quickly formed or molded to a relatively firm condition so that it can be handled, inserted, and fastened in place, or held in place by the labia of the organ itself.

A preferred form of the invention of course involves the inclusion of a deodorant pellet within the cone or actual impregnation of the material of which the cone is made, with a deodorant powder or medicinal chemical. Of these there are a variety on the market for treatment of various vaginal disorders. It goes without saying that they must be non-caustic, non-irritating, non-acid, and generally compatible with the mucous tissues encountered in the genital area. Here, too, there is ample experience with the formulation of compositions for use in this area, and accordingly, the chemical deodorant is consistent therewith.

It will be apparent from this description that the deodorant, or the deodorant device, or medicinal device, will have its great usefulness among the females. Largely because it is so small the woman will be able to carry a few with her in her purse. She will be able to dispose of the used ones quickly and conveniently in the ordinary flush toilet. Where it is desired, the gauze backing can be extended so that the adhesive tabs on the ends can be used for application to the panties. Since the device is entirely internal, it is obviously not bulky and does not involve significant use of material.

Since the cause of various conditions is bacterial and the conditions are aggravated by the wearing of unventilating clothing (such and pantyhose, etc. . .), pregnancy, use of oral contraceptive and diabetes mellitus, the very prevalence of the condition demands means for symptomatic relief. It is apparent this device is a real aid in that direction.

Its contribution to the female daintiness is obvious if it stops any leakage of fluid. It provides the woman with the comfort and protection she desires.

What is claimed is:

1. A tampon adapted for insertion between the internal labia of the vulva for sole support therein, in longitudinal relationship to the vaginal orifice, a tampon means for absorbing body fluids comprising

a support pad of gauze material for insertion between the labia at the vaginal orifice,

said pad being of absorbent material,

an essentially hollow conical upstanding absorbent gauze projection, attached to said gauze pad and suitably shaped for insertion into the vaginal orifice.

2. A device in accordance with claim 1 in which the projection is medicated.

3. A device in accordance with claim 1 in which the projection is supplied with deodorant.

4. A device in accordance with claim 1 in which the pad has extendible ends supplied with adhesive for attachment to adjacent support means.

5. A device in accordance with claim 1 in which the pad is elongated shaped so as to be held in place by the labia.

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