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CATAMENIAL RECEPTACLE

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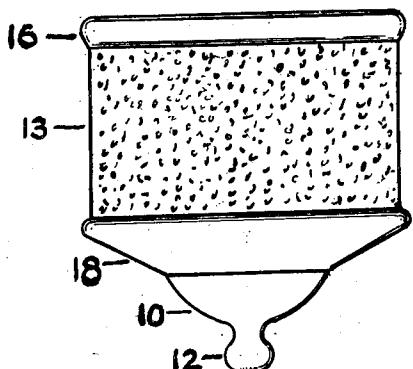


FIG. 1

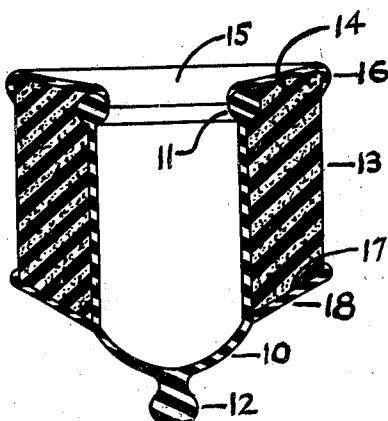


FIG. 3

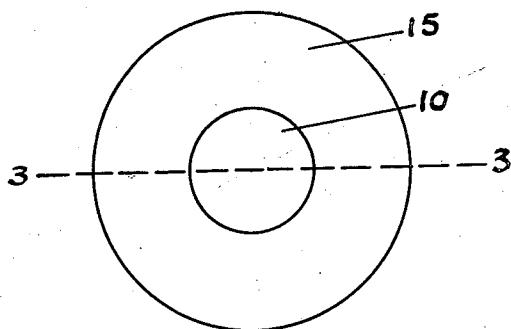


FIG. 2

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## CATAMENIAL RECEPTACLE

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7 Claims. (Cl. 128—285)

This invention relates to an improvement in catamenial receptacles adapted to be inserted in the vagina of the human female for the purpose of receiving and entrapping the menstrual and other vaginal discharges. Catamenial receptacles of this nature are known but are not in general use because they do not effectually prevent the seepage of the menstrual discharge past the receptacle, because they are uncomfortable to wear and difficult to insert, and because they cannot be depended upon to resume their original shape after being compressed for the purpose of insertion.

The reason for the seepage of the menstrual discharge past the former receptacles, even when of the proper shape and size, is that the surfaces of the receptacle which come in contact with the vaginal walls were of homogeneous materials with a smooth exterior which could not adapt themselves to the ridges and folds in the vaginal wall, especially during bodily movements and under the varying internal pressure exerted by the bladder and the intestines.

One object of this invention is to provide a catamenial receptacle which furnishes an effective seal against the escape of the menstrual and other discharges from the vagina.

Another object is to provide such a receptacle which may be worn with comfort and which will remain in place.

Another object is to provide such a receptacle which is easily withdrawn and inserted.

The foregoing objects and others ancillary thereto are accomplished by providing a receiving and retaining cup of relatively small proportions and surrounding its lateral sides with a layer of resilient, sponge-like material.

The novel features considered characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation, together with additional objects and advantages thereof, will be best understood from the following description of a specific embodiment when read in conjunction with the accompanying drawing, in which:

Figure 1 is an elevation of the catamenial receptacle of this invention.

Figure 2 is a plan view of the receptacle.

Figure 3 is a sectional view of the receptacle along the line 3—3 of Figure 2.

Referring now to the drawing, 10 is a cup preferably made of elastic material such as soft rubber. On the rim of the cup 10 is a reinforcing ridge or band 11 which is of such size and re-

siliency that it tends to open the cup 10 against the pressure of the vaginal walls. The base of the cup carries the knob 12 by means of which the receptacle may be conveniently grasped and withdrawn from the vagina and held while cleaning the receptacle.

Surrounding the lateral side of the cup 10, and preferably secured thereto, is a layer of soft sponge rubber 13. Sponge rubber with pores of approximately  $\frac{1}{16}$  inch has given good results. The upper surface 14 of this layer of sponge rubber 13 is preferably inclined to form a funnel shaped surface at the top of the receptacle. To this funnel shaped surface 14 and to the rim 11 of the cup 10 is secured a thin, imperforate covering of soft rubber 15 which covering is preferably continued for a short distance 16 over the outer edge of the sponge rubber 13. In the drawing, the thickness of this covering 15 is exaggerated for the sake of clearness.

The purpose of this covering 15 is to seal the pores on the upper surface 14 of the sponge rubber 13 so that the discharge does not soak into the sponge rubber 13 through this surface 14 but instead will be guided down the funnel into the cup 10. The covering 15 is continued over the edge and down the lateral side of the sponge rubber 13 a short distance 16 to smoothen this edge to facilitate the insertion of the receptacle in the vagina.

To the lower surface 17 of the sponge rubber 13, and attached to the base of the cup 10, may be secured a second thin, imperforate covering of soft rubber 18. The purpose of this covering 18 is to seal the pores of the sponge rubber 13 at the surface 17 to prevent the escape of any discharges and secretions which may have soaked to the bottom of the sponge rubber 13. Under ordinary circumstances, this covering is not required, as none or at most only a small quantity seeps past the upper seal 15.

The catamenial receptacle, comprising the cup 10, the layer of sponge rubber 13, and the rubber coverings 15 and 18, is of such resiliency and softness that it may be compressed with the fingers and inserted through the entrance of the vaginal canal with the mouth of the cup 10 towards the cervix. After insertion, the catamenial receptacle tends to return to its original shape, the rim 11 opening the mouth of the cup 10 even though the sponge rubber 13 may be considerably compressed. At intervals the receptacle may be withdrawn by means of the knob 12, emptied, cleaned, and reinserted.

The sponge rubber 13, because of the relative

freedom of movement of its individual particles, effects an intimate contact with the irregular walls of the vaginal canal and establishes a seal which prevents substantially all seepage along these walls. In most cases the menstrual discharge does not seep past the outer edge 16 of the rubber covering 15. If, because of some unusual condition seepage past the edge 16 occurs, the fluid is thereafter forced to travel through the 10 passages connecting the pores of the sponge rubber 13 and is retained in these pores, cavities, and passages. The passages connecting the pores and cavities of the sponge rubber 13 are minute and offer a substantial resistance to the flow of the 15 discharge so that a retardation of the seepage is effected. In the few cases where the seepage past the edge 16 of the rubber covering 15 is large, the fluid will be retained by the covering 18 on the lower portion of the sponge rubber 13.

20 The sponge rubber 13, because of its resiliency and softness, adapts itself to the shape of the vaginal canal so that the receptacle of this invention is comfortable to the wearer. By absorbing the 25 secretions on the walls of the vagina, the particles on the surface of the sponge rubber 13 are permitted to come into intimate contact with these walls and cling to them so that the device of this invention is not displaced during violent exercise of the wearer.

30 This invention is to be limited neither to the shape nor the materials shown in the specific embodiment of the invention. The use of rubber, for example, is not an essential element of the 35 invention as the cup 10 may be made of other elastic and even rigid materials and for the sponge rubber 13 may be substituted other resilient and porous materials.

A tube with a suitable closing device may be connected to the cup 10 to permit periodic drainage of the cup 10 without removing the receptacle. The cup 10 may also be replaced by an extended tube for continuous drainage. The invention is not to be restricted except in so far as is necessary by the prior art and the spirit of the 45 appended claims.

I claim:

1. A catamenial receptacle comprising a cup, a layer of sponge rubber secured to the outer surface of the side walls of said cup, a covering of 50 thin and imperforate soft rubber extending from the rim of said cup to the outer edge of the surface of said sponge rubber adjacent to said rim, a second covering on said sponge rubber of thin and imperforate soft rubber extending from the 55 base of said cup and over the lower portion of said sponge rubber said sponge rubber and rubber coverings being of a softness to permit compression with the fingers for insertion of the catamenial receptacle into the vaginal canal with the mouth 60 of said cup towards the cervix said sponge rubber being also of a resiliency and size to tend to return to its original shape after insertion against the pressure of the side walls of the vaginal canal and effect a sealing engagement with the side 65 walls of said canal.

2. A catamenial receptacle comprising a cup, a layer of sponge rubber secured to the outer surface of the side walls of said cup, sealing means for closing the pores of the sponge rubber on the

surface adjacent to the rim of said cup said catamenial receptacle being of a softness to permit compression with the fingers for the insertion of the catamenial receptacle into the vaginal canal with the mouth of said cup towards the cervix said catamenial receptacle being also of a resiliency and size to tend to return to its original shape after insertion against the pressure of the side walls of the vaginal canal to distend said canal and effect a sealing engagement with the side walls of said canal.

3. An article of the character described comprising a vessel having an opening at one end and a layer of absorbent and resilient material on the outer sides of said vessel, said article being of a softness to permit of its being compressed with the fingers and inserted in the vaginal canal with said opening towards the cervix said article being also of a resiliency and size to return after insertion to substantially its original form against the normal pressure of the walls of the vaginal canal to distend said canal and effect a sealing engagement with said walls.

4. An article of the character described comprising a cup, a layer of sponge rubber on the outer side of said cup, and means extending from said cup to the outer side of said layer of sponge rubber for sealing the pores of said sponge rubber said article being adapted to be inserted in the vagina with the mouth of said cup towards the cervix and fit snugly against the walls of the vagina to effect a sealing engagement with said walls.

5. An article of the character described comprising a cup, a layer of resilient absorbing material on the outer side of said cup, said material resisting fluid passage through said layer lengthwise of said cup said article being adapted to be inserted in the vagina with the mouth of the cup towards the cervix and fit snugly against the walls of the vagina to effect a sealing engagement with said walls.

6. An article of the character described comprising a vessel having an opening at one end and a layer of sponge rubber on the outer side of said vessel said article being of a softness to permit of its being compressed with the fingers and inserted in the vaginal canal with said opening towards the cervix, said article being also of a resiliency and size to return after insertion to substantially its original form against the normal pressure of the walls of the vaginal canal to distend said canal and effect a sealing engagement with said walls.

7. An article of the character described comprising a cup and a layer of absorbent and resilient material on the outer side of said cup an upper portion of said material being sealed against fluid passage lengthwise of said cup, said article being of a softness to permit of its being compressed with the fingers and completely inserted in the vaginal canal with the open end of said cup towards the cervix, said article being also of a resiliency and size to return after insertion to substantially its original form against the normal pressure of the walls of the vaginal canal to distend said canal and effect a sealing engagement with said walls.

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