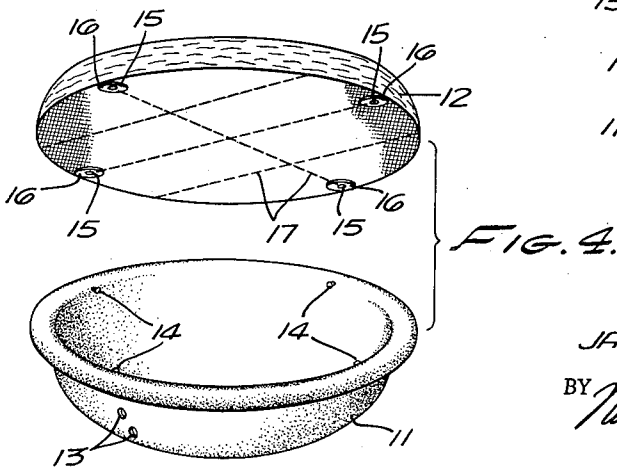
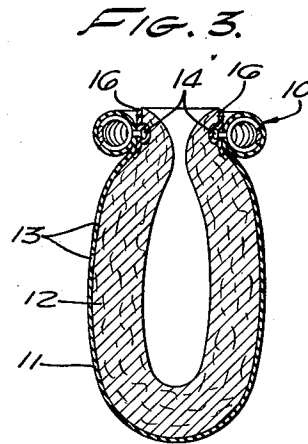
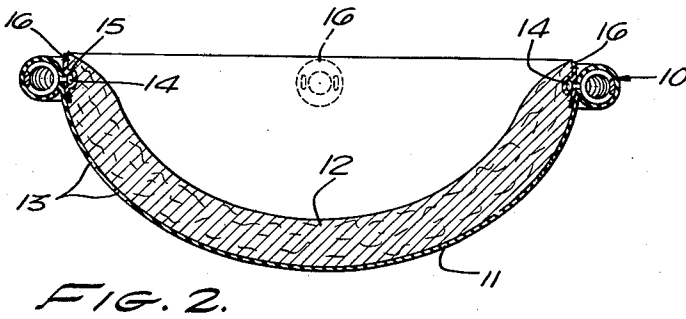
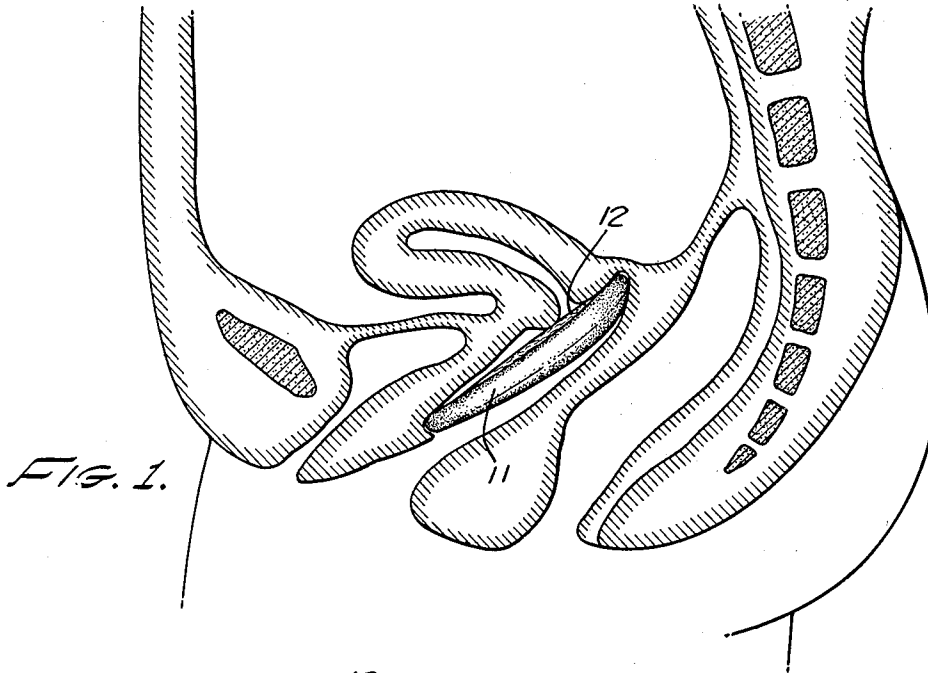


April 14, 1964

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VAGINAL TAMPON DEVICE INCORPORATING MEMBRANE FOR  
SUBSTANTIALY BLOCKING INFLOW OF WATER  
Original Filed June 16, 1959

3,128,767



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3,128,767

## VAGINAL TAMPON DEVICE INCORPORATING MEMBRANE FOR SUBSTANTIALLY BLOCKING INFLOW OF WATER

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Continuation of application Ser. No. 820,702, June 16, 1959. This application July 16, 1962, Ser. No. 212,184  
1 Claim. (Cl. 128—285)

This invention relates to a catamenial device, and more particularly to a combination vaginal tampon and means to prevent inflow of water thereto. This application is a continuation of co-pending application Serial No. 820,702, filed June 16, 1959, now abandoned, for Vaginal Tampon Device Incorporating Membrane for Substantially Blocking Inflow of Water.

The object of this invention is to provide a superior vaginal tampon adapted to substantially insure against discharge of menstrual fluid from the vagina, and to extend greatly the activities which the wearer may perform during menstrual periods without offending her aesthetic sensibilities, such activities including swimming, tub baths, and marital relation.

These and other objects and advantages of the invention will be more fully set forth in the following specification and claims, considered in connection with the attached drawing to which they relate.

In the drawing:

FIGURE 1 is a diagrammatic view illustrating the tampon device in mounted position;

FIGURE 2 is an enlarged transverse sectional view illustrating the absorbent pad in assembled position relative to the membrane and spring rim;

FIGURE 3 is a sectional view illustrating the positions of the parts after the spring rim is squeezed together for purposes of insertion; and

FIGURE 4 is an exploded perspective view illustrating the absorbent pad prior to mounting in the membrane and spring rim.

Stated generally, the present apparatus comprises a highly-flexible annular spring means 10 having a sufficient diameter to extend from the posterior fornix (vaginal region rearwardly adjacent the cervix) to the sub-pubic portion of the upper vaginal wall. Spring means 10 serves to maintain in position a substantially impermeable membrane 11 and a relatively large-area absorbent pad or tampon 12. The pad or tampon 12 is positioned on the side of membrane 11 which is adjacent the cervix, and performs the function of absorbing menstrual fluid emitted therefrom. The membrane 11 serves to insure against discharge of menstrual fluid from the vagina except during unusual periods when fluid pressure may build up between the membrane and the cervix to a point which is physiologically undesirable. During such unusual periods, menstrual fluid may drain through opening means 13 (FIGURE 2) which are provided in the membrane 11 and are adapted to be relatively remote from the cervix when the device is in mounted condition. The opening means 13 are relatively small, so that the membrane 11 may perform the important function of preventing substantial quantities of water from contacting the absorbent pad 12.

Stated in greater detail, the illustrated apparatus comprises an annular spring means 10 formed as a tightly-

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wound helix of an appropriate spring metal wire. The membrane 11 comprises a thin and generally cup-shaped element, formed of highly flexible latex rubber or plastic, and having its rim portion bonded around the spring means in order to provide a seal thereat and also prevent contact of the spring with the wearer. The pad or tampon 12 is generally disc-shaped, having a size corresponding generally to that of the membrane 11, and may be formed of a suitable cotton or gauze material.

Means are provided to removably secure the edge portion of the pad 12 to spring means 10 in order that the pad will remain in proper mounted condition during insertion and use but may be readily disposed of thereafter. Such means is illustrated to comprise a plurality of small ball-shaped elements 14 which may be formed of metal and may be rigidly secured to the spring means 10. The ball-shaped elements 14 extend through the membrane and are removably snapped into suitable sockets 15 formed in plastic inserts 16. The inserts 16 are sewed or otherwise secured to the peripheral portions of one surface of pad 12, suitable stitches in such pad being indicated schematically at 17. As previously indicated, ball elements 14 and sockets 15 are cooperatively related in such manner that the balls may be snapped into the sockets and will remain therein until intentionally removed.

In operation, the pad 12 is inserted into the spring rim 10 and membrane 11, the balls 14 are snapped into sockets 15 as illustrated in FIGURES 2 and 3. Thereafter, opposed portions of the spring rim 10 are squeezed together, to the position shown in FIGURE 3, in order that the device may be inserted in the manner of a vaginal diaphragm. It is pointed out that the pad 12 is then contained within the membrane 11 and does not come into contact with the wearer. As previously stated, such insertion is performed in a manner causing the opening means 13 to be positioned forwardly, relatively remote from the cervix.

After the device has been inserted as specified, the wearer may safely swim, or take a tub bath. She may also perform a simple vaginal douche to cleanse the vagina of menstrual fluid without effecting saturation of pad 12 with water to thus impede its function of absorbing menstrual fluid.

The device is readily removed in the manner of a diaphragm, following which the pad 12 may be separated from the spring rim 10 and membrane 11 and disposed of.

It is within the scope of the invention to secure the membrane 11 to pad 12 instead of the spring rim 10, so that the membrane may be disposed of together with the pad.

It is within the scope of the invention to form membrane 11 with a 360° peripheral passage, and to make rim 10 with a suitable joint at one point, so that the rim may be inserted through an opening in the wall of said passage, in the manner of threading a curtain rod into a curtain, and then jointed. The pad is glued to the membrane, and all but the spring is disposed of subsequent to use.

The term "membrane," as employed in the specification and claims, includes a water-impermeable coating or layer on absorbent pad 12.

It is to be understood that the device is to be manufactured in various diameters, such as 70 mm., 80 mm., etc., in accordance with the range of vaginal sizes.

Various embodiments of the present invention, in ad-

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dition to what has been illustrated and described in detail, may be employed without departing from the scope of the accompanying claim.

I claim:

A vaginal tampon device adapted to permit marital relations during the menstrual periods of the wearer without offending her aesthetic sensibilities, which comprises a resilient ring having an over-all diameter such that said ring will seat in the vaginal of an adult human female in contact with both the posterior fornix and the sub-pubic portion of the upper vaginal wall, the cross-sectional diameter of said ring being sufficiently small to prevent said ring from extending a substantial distance away from the sub-pubic portion of the upper vaginal wall when the device is in mounted condition, a substantially impermeable dome-shaped membrane having its peripheral portion associated with said ring, the diameter of said peripheral portion of said membrane being substantially the maximum diameter thereof and corresponding generally to the over-all diameter of said ring, said membrane being thin said membrane being provided with relatively small opening means at one portion thereof to per-

mit escape of menstrual fluid in the event of building up of excessive fluid pressure between said membrane and the cervix, and flexible and characterized by the absence of stiffening elements or braces, and a large-area absorbent pad mounted in said membrane parallel to and adjacent only the inner concave surface thereof, said pad being disposed adjacent the crevix when the device is in mounted condition, said pad having sufficient thickness to absorb substantial quantities of menstrual fluid but insufficient thickness to cause said membrane to come into substantial engagement with the lower vaginal wall when the device is in mounted condition, the outer convex surface of said membrane remote from the cervix being smooth and characterized by the absence of absorbent means.

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UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,128,767

April 14, 1964

James J. Nolan

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, line 9, for "vaginal" read -- vagina --; same column 3, line 21, to column 4, line 3, strike out "said membrane being provided with relatively small opening means at one portion thereof to permit escape of menstrual fluid in the event of building up of excessive fluid pressure between said membrane and the cervix," and insert the same before "and a" in line 4, column 4.

Signed and sealed this 3rd day of November 1964.

(SEAL)

Attest:

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