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PESSARY AND MANIPULATING HANDLE ASSEMBLY

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FIG. 1.

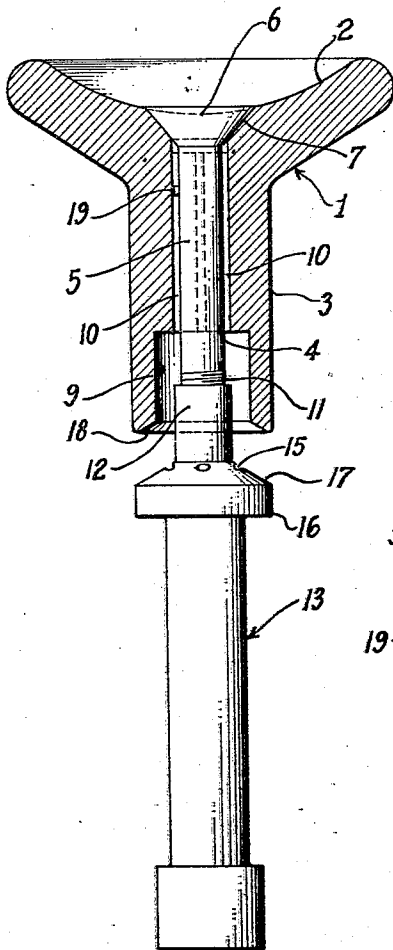


FIG. 2.

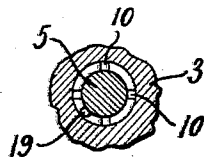
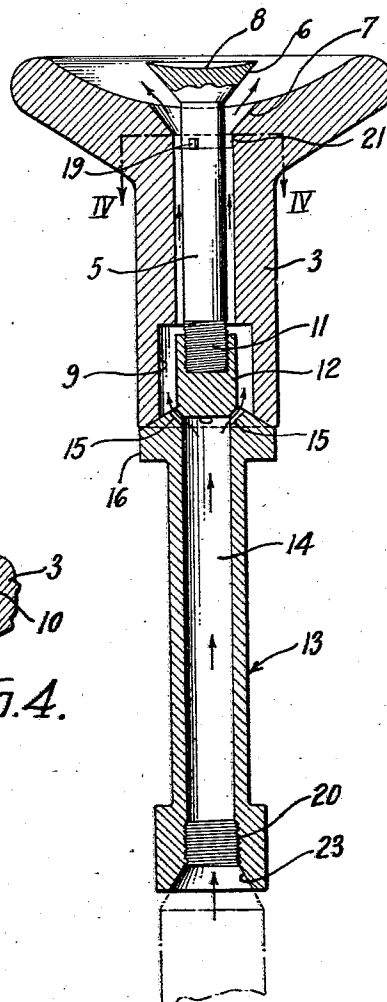
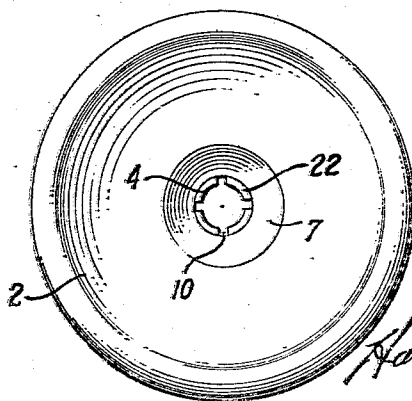


FIG. 4.

FIG. 3.



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PESSARY AND MANIPULATING HANDLE
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5 Claims. (Cl. 128—127)

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This invention relates to pessaries and has particular reference to a pessary and manipulating handle assembly especially adapted for the treatment of uterine prolapse, in which the pessary is required to remain within the vaginal cavity over relatively long periods of time.

In the treatment of uterine prolapse, it is frequently desirable to provide an artificial support for the uterus which will hold the uterus in its normally retracted position for a sufficiently long period of time to permit restoration of the muscles to a condition in which they can naturally support the uterus.

In other instances it is found that it is necessary to maintain the artificial support for an indefinite period of time where the muscular development and restoration are insufficient to provide the necessary normal support.

In the treatment of such cases, it has heretofore been the practice to utilize a pessary adapted to be inserted into the vaginal cavity a sufficient distance to engage the exposed end of the uterus, the pessary then being pressed upwardly to position the uterus in its normal position, the pessary remaining in this position, engaging the vaginal walls with sufficient force to prevent a falling of the uterus back to its abnormal position.

Where such pessaries are required to remain in place over any appreciable period of time, it is desirable to remove the pessary from time to time for the purpose of permitting the physician or surgeon to determine whether or not a cure has been effected and considerable difficulty is encountered in removing pessaries of known construction due to the fact that body secretions tend to cement the pessary to the uterus, such that removal of the pessary causes the uterus to be pulled downwardly out of its normal position by its adhesion to the surfaces of the pessary.

In order to permit removal and readjustment of the pessary, it is, therefore, desirable to insure severance of any adhesion between the pessary and the uterus prior to the exertion of any outward pull on the pessary. In addition, it frequently occurs that the accumulation of body secretions above the pessary is of such volume as to require frequent irrigation, which is difficult, if not impossible, with known types of pessaries employed for this purpose.

It is, therefore, an object of this invention to

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provide a pessary of the character described, which may be readily inserted and removed, and which is provided with a positive means for separating the pessary from the tissues engaged thereby prior to the exertion of any outward pull on the pessary.

Another object of this invention is to provide a pessary of the character described, wherein the body of the pessary is provided with an irrigation opening, through which irrigation fluids may readily be passed from the exterior of the body to the portions of the pessary engaging the surrounding body tissues.

Another object of this invention is to provide a pessary of the character described, in which the irrigation opening is normally closed by means of an outwardly movable valve, and in which means is provided for positively opening the valve in order to insure the breaking of any adhesion between the outer end of the uterus and the adjacent surfaces of the body of the pessary.

Another object of this invention is to provide a pessary of the character described in the preceding paragraph, in which in addition to the manipulation of the valve to open and close the irrigation opening through the body of the pessary, the valve is adapted to be rotated relative to the body to insure the breaking of any adhesion between the surface of the valve and the adjacent surfaces of the body tissues.

Another object of this invention is to provide a pessary of the character described in the preceding paragraph, in which the valve when moved from a closed to open position may be substantially locked in the open position to permit irrigation either by continuous flow through the body or by alternate injection and removal of irrigation fluids through the same opening in the pessary body.

Other objects and advantages of this invention will be apparent from a study of the following specifications read in connection with the accompanying drawings wherein:

Fig. 1 is a vertical sectional view through a pessary constructed in accordance with this invention and illustrating the manner in which a manipulating handle may be adapted thereto;

Fig. 2 is a view similar to Fig. 1 but illustrating the handle in section and illustrating the posi-

tion of the pessary parts when the parts are in position for irrigation;

Fig. 3 is a top plan view of the pessary body with the valve removed; and

Fig. 4 is a detailed fragmentary sectional view taken along line IV—IV of Fig. 2.

Referring to the drawings herein, there is illustrated in Fig. 1 a pessary body 1 which is preferably constructed as a substantially large diameter cup portion 2, from which extends a downwardly depending stem 3.

The cup portion 2 is of sufficient diameter to spread the walls of the vagina as the body is inserted therein, the surrounding vaginal walls tending to hold the body in place against the protruding end of the uterus and to hold the uterus in its retracted position against accidental prolapse.

The upper surface of the cup portion 2 is concaved, as illustrated in Fig. 1, to conform with the convexity of the protruding end of the uterus, and is preferably polished to present a smooth non-irritating surface to the engaged tissues.

The stem 3 is preferably cylindrical and of sufficient extent to provide a relatively great area of contact with the surrounding vaginal walls to provide a further support for holding the pessary in the retracted position.

The stem 3 is provided with a central axial bore 4 communicating with the concaved inner surface of the cup 2 and with the outer end of the stem to provide a guide for the stem 5 of a valve 6 which is adapted to close upon a conical valve seat 7 extending from the concaved surface of the cup 2.

The upper surface of the valve 6 is preferably concaved, as indicated at 8, to conform with the concavity of the cup 2 and to provide with the upper surface of the cup 2 a continuous unbroken curved surface.

The stem 5 of the valve 6 is preferably sufficiently long to extend into a counter bore 9 formed in the lower end of the body stem 3, the counter bore 9 being of considerably greater diameter than that of the guide bore 4, while the guide bore 4 is provided with one or more grooves or channels 10 extending throughout the length of the bore to provide one or more fluid passages past the valve stem 5.

The lower end of the valve stem 5 is provided with coupling means such as threads 11, adapted to be engaged by a complementary coupling 12 formed upon and constituting a part of a manipulating handle 13 by which the pessary and valve assembly may be inserted into or removed from its position within the vaginal cavity and by which irrigation through the pessary and valve assembly may be obtained.

The handle 13 is preferably constructed as an elongated tubular member having a bore 14 extending from its lower end to a position immediately below the coupling 12, the bore 14 constituting a fluid passage which communicates with the space within the counter bore 9, as by means of a plurality of angularly extending ports 15. The ports 15 are preferably formed with their outer ends immediately adjacent the coupling 12, the ports being formed through an enlargement 16 of the tubular handle member 13, the upper surface of which enlargement is preferably tapered, as indicated at 17, to seat against a correspondingly tapered surface 18 formed at the lower end of the body stem 3.

By referring particularly to Fig. 2, it will be observed that when the handle member 13 is

pressed upwardly toward the outer end of the body stem 3, the meeting of tapered surfaces 17 and 18 will form a substantial seal, such that irrigation fluids passing through the handle bore 14 will readily pass into the counter bore 9 and upwardly through the grooves or channels 10 to the upper side of the cup 2, while escape of such fluids at the junction of the enlargement 16 and the end of the stem 3 will be prevented.

It will be observed also that the coupling member 12 extends above the enlargement 16 a sufficient distance that when the coupling 12 is engaged with the threads or other coupling means 11 on the valve stem 5 and the handle member 13 is moved upwardly to engage the tapered surfaces 17 and 18, the valve 6 will be positively lifted from its seating relation upon the seat 7. Hence, the manipulating handle 13 provides a positive means by which the valve 6 may be moved to its open position with positive assurance that the valve will so move and separate the contiguous concaved surfaces of the cup and valve.

With the construction thus far described, it will be apparent that the assembled body and valve may be readily engaged with a manipulating handle, and the handle is then used for insertion of the pessary into its proper position to retract the uterus and to position the body in a position to hold the uterus in its retracted location. Further, the handle 13 being positively engaged with the valve 6 may be utilized to draw the valve downwardly into its closed position without imposing any substantial outwardly directed forces upon the body. After the body and valve have been properly positioned, rotational movement of the handle will disconnect the handle from the valve and permit removal of the handle, leaving the pessary assembly in place.

The handle may be reinserted and re-engaged with the valve by inserting and rotating the handle member and after the handle has been re-coupled to the valve an inward movement of the handle will cause a positive movement of the valve from its closed to its open position.

To facilitate the disengagement of the handle from the valve stem 5 and its re-engagement therewith by a rotary movement, we prefer to provide the valve stem 5 with a projecting lug 19 adapted to extend radially into one of the channels or grooves 10 to prevent rotary movement between the valve stem 5 and the body stem 3 while permitting ready axial sliding movement between these members.

With the construction thus far described it will be apparent that whenever the handle is engaged with the valve, the engagement is a positive one, which will permit the movement of the valve to open and closed positions and will permit the removal of the pessary with absolute assurance that the valve 6 will be removed with the body. Thus, there is no danger of accidental disengagement of the valve with the body or the possibility of removing the body while leaving the valve in place within the cavity.

Entirely aside from the use of the handle and valve for irrigation purposes, as will be hereinafter more fully described, the positive engagement between the handle and the valve permits the manipulation of the valve to retract the central portions of the end of the uterus from surface contact with the concaved inner surface of the body cup and thus tend to break any adhesion between the uterus and the surface of the cup, while a rotational movement may be imparted to the valve which will also tend to break

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any adhesion between the valve and contacting surface tissues. Thus, irrespective of whether or not irrigation fluids are employed, a positive release of the pessary from the contacting tissues may be accomplished prior to the withdrawal of the pessary from its innermost position within the cavity.

By referring particularly to Fig. 2, it will be observed that the outer end of the handle member 13 is provided with attachment mechanism, such as threads 20, by which a suitable syringe may be connected to the handle for irrigating the cavity when the handle member is attached to the pessary unit, and to insure that the fluid passage will remain open during the period of irrigation, we prefer to provide a counterbore 21 at the upper end of the guide bore 4 to provide shoulders 22 against which the lug 19 on the valve stem 5 may rest after the valve has been moved to its open position and rotated through a partial revolution to dispose the lug 19 at a position intermediate adjacent channels 10. Thus the valve is locked in its open position until a rotational movement is imparted to the handle 13 to realign the lug 19 with one of the channels to permit the retraction of the valve 6 back toward its closed position.

If desired, the extreme lower end of the handle member 13 may be tapered, as indicated at 23, to receive the tapered end of a syringe or other device through which the irrigation fluid is to be passed into and through the handle.

It will be apparent from the foregoing that we have provided a pessary which may be inserted and left in position over an indefinite length of time, but which may be readily removed at any time by the insertion of the handle member 13 and its coupling with the valve stem 5.

It will also be noted that by employing the construction described herein, not only is there a positive breaking of any adhesion between the body tissues and the pessary by mechanical manipulation of the valve 6, but the construction permits of the ready employment of irrigation fluids to further release any adhesion which might occur.

It will also be apparent that the manipulation of the valve 6 by means of the handle 13 permits the ready irrigation of the cavity without requiring the removal of the pessary, with the result that the pessary may remain in the cavity for appreciably greater lengths of time than is possible with the existing types of devices.

While there has been shown and described the preferred embodiment of the present invention, the same is not to be limited to any of the details of construction shown or described herein, except as defined in the appended claims.

What is claimed as new is:

1. A pessary, comprising a unit including a body member having a concave tissue engaging depression in one of its surfaces, a valve bore extending through said body and communicating with said concave surface and having a valve seat formed therein adjacent said surface, a valve member having a stem extending through said bore and adapted to seat upon said valve seat, the surface of said valve exposed at the concave surface of said body being concaved to conform with and continue the cavity of the body surface, said valve having a stem extending into and guided by said bore and one or more longitudinal grooves extending along said bore to define passage for fluid about the stem of said valve.

2. A pessary, comprising a unit including a

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body member having a concave tissue engaging depression in one of its surfaces, a valve bore extending through said body and communicating with said concave surface and having a valve seat formed therein adjacent said surface, a valve member having a stem extending through said bore and adapted to seat upon said valve seat, the surface of said valve exposed at the concave surface of said body being concaved to conform with and continue the cavity of the body surface, said valve having a stem extending into and guided by said bore, one or more longitudinal grooves extending along with bore to define passage for fluid about the stem of said valve, and a lug on the stem of said valve projecting into said groove to resist rotary motion between said valve and said body.

3. In a pessary and manipulating handle assembly the combination of a pessary unit, including a body member having an inner surface adapted to engage and press upon the uterus, a valve bore extending through said body member away from said surface and having a valve seat formed therein adjacent said surface, a valve member adapted to seat upon said surface and having a stem extending through said bore, said stem having coupling means thereon at the end thereof remote from said surface, a manipulating handle including coupling means engageable with the coupling means on said stem to positively connect the manipulating handle with said valve stem, said body having means defining a fluid passage parallel to said valve stem and said handle having a fluid passage extending therethrough and communicating with the fluid passage in said body.

4. In a pessary and manipulating assembly the combination of a pessary unit, including a body member having an inner surface adapted to engage and press upon the uterus, a valve bore extending through said body member away from said surface and having a valve seat formed therein adjacent said surface, a valve member adapted to seat upon said surface and having a stem extending through said bore, said stem having coupling means thereon at the end thereof remote from said surface, a manipulating handle including coupling means engageable with the coupling means on said stem to positively connect the manipulating handle with said valve stem, said body having means defining a fluid passage parallel to said valve stem and said handle having a fluid passage extending therethrough and communicating with the fluid passage in said body, and means for interengaging said handle and said body when said handle has moved said valve to open position for sealing said stem and said body together to prevent escape of fluid except through said fluid passages.

5. In a pessary and manipulating assembly the combination of a pessary unit, including a body member having an inner surface adapted to engage and press upon the uterus, a valve bore extending through said body member away from said surface and having a valve seat formed therein adjacent said surface, a valve member adapted to seat upon said surface and having a stem extending through said bore, said stem having coupling means thereon at the end thereof remote from said surface, a manipulating handle including coupling means engageable with the coupling means on said stem to positively connect the manipulating handle with said valve stem, said body having means defining a fluid passage parallel to said valve stem and said handle having a fluid passage extending therethrough and com-

municating with the fluid passage in said body, means for interengaging said handle and said body when said handle has moved said valve to open position for sealing said stem and said body together to prevent escape of fluid except through said fluid passages, and means at the outer end of said handle for connecting a supply of irrigation fluid to said handle.

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