Feb. 9, 1943. E. L. YOUNKINS 2,310,564

PESSARY

Filed March 31, 1941

Fig. 1

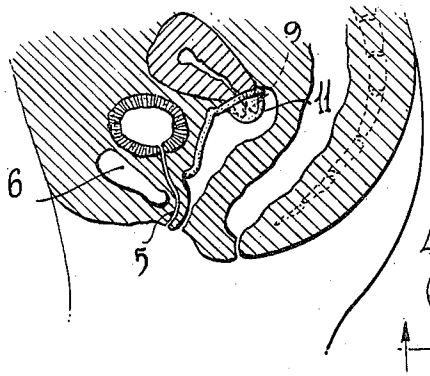


Fig. 5

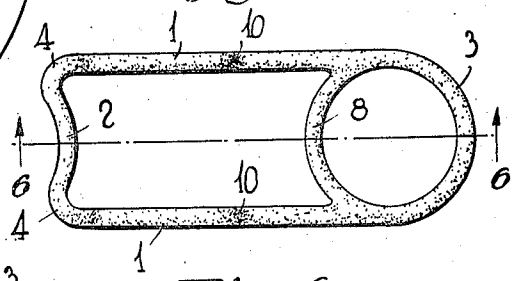


Fig. 2

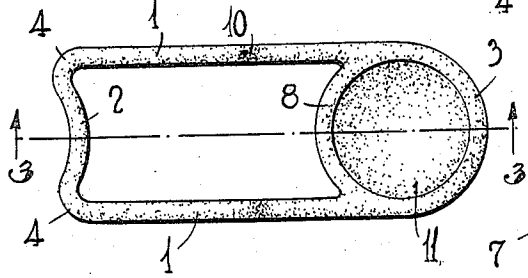


Fig. 6

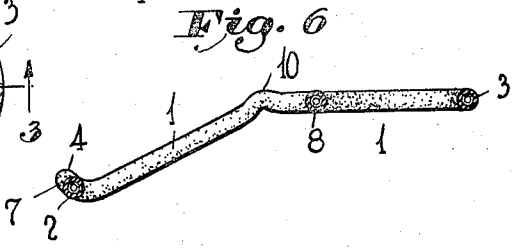


Fig. 3

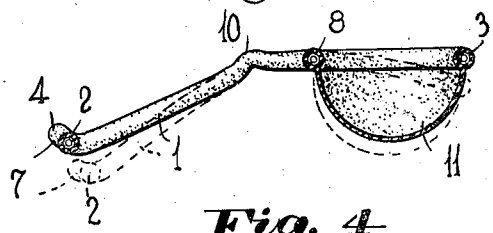


Fig. 7

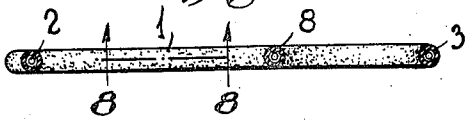


Fig. 8

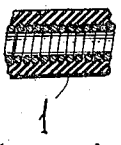
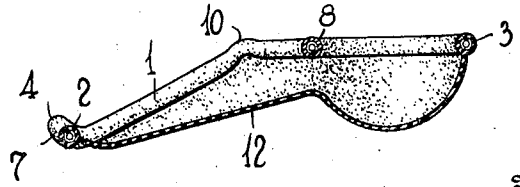


Fig. 4



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PESSARY

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Application March 31, 1941, Serial No. 386,135

11 Claims. (Cl. 128—127)

This invention relates to an improved form of pessary which is also suitable for the purpose of receiving uterine discharges.

One feature of the invention is the flexible nature of the pessary frame as a result of which it will conform to the normal shape of the cavity between the posterior fornix and the pubic bone, whereby it tends to remain in position and requires a minimum of technical skill to adjust it in position.

Another feature of the pessary of this invention is the provision of a receptacle for the reception of uterine discharges.

Still another feature of the pessary of this invention is its relatively flat shape whereby it may be easily inserted and removed by the wearer without the use of instruments or supplemental accessories.

The above and additional features and advantages of the improved pessary of this invention are further described in detail in the following specification and claims and illustrated in the accompanying drawing, in which:

Fig. 1 is a sectional view showing the pessary in place in the vagina;

Fig. 2 is a plan view showing the pessary with a diaphragm at one end;

Fig. 3 is a sectional view of the pessary shown in Fig. 2, taken on the line 3—3 of Fig. 2;

Fig. 4 is a longitudinal sectional view of the pessary, showing a diaphragm extending the entire length of the pessary frame;

Fig. 5 is a plan view of the pessary frame but without any diaphragm;

Fig. 6 is a longitudinal sectional view of the pessary frame shown in Fig. 5, taken on the line 6—6 of Fig. 5;

Fig. 7 is a sectional view of a modified form of the pessary frame; and

Fig. 8 is a fragmentary cross section of a portion of the frame showing the construction of the flexible side portions of the pessary, taken on line 8—8 of Fig. 7.

Like reference characters identify like parts in the several figures of the drawing.

Referring in detail to the drawing, the pessary of the present invention includes, as shown in Fig. 5, a continuous flexible substantially oblong frame member of such length as may be flexed or bent. The term "oblong" is used because the sides are substantially parallel and are longer than the ends, and even though the device has rounded corners and the end portions joining the two sides are not straight. The flexible nature of the frame member is important for its introduction into the desired position between the posterior fornix and the pubic bone. The frame, which has been identified as substantially oblong, as may be noted from Figs. 2 and 5, is preferably constructed of coiled spring wire having a protective coating of latex or rubber provided on the outer surface, but the frame may be constructed of any flexible material which tends to return to its original shape after being flexed, and the surface of which is adequately hygienic.

The frame has side portions 1 and opposite ends 2 and 3. The corners of the oblong frame member are rounded; those at the end 2 being slightly rounded, whereas the opopsite end 3 extends between the side members 1 in substantially the arc of a circle. As shown, the arc is substantially a half circle.

The end 2 of the frame is inwardly curved toward the opposite end 3, as illustrated. Thus the end portions of the end member 2 at the juncture with the end portions of the side members 1, extend slightly outward, or the reverse of the inward curve of the cross member 2, and provide projections or protrusions 4. The purpose of the inward curve of the cross member 2 is to relieve the pressure on the urethra 5 (see Fig. 1). The protrusions 4 engage with the pubic bone 6 to support the pessary at one end when it is in the proper position, and the pressure is exerted through the protrusions, whereas if the end member 2 was straight, pressure might be exerted undesirably on the urethtra.

The end portions of the sides 1 of the frame adjacent to the end 2 are bent upwardly out of the plane of the remainder of the frame, as indicated at 7. The bent ends 7 serve to give a more positive engagement with the pubic bone 6 and to prevent the pessary from slipping out of place during use.

The end 3 of the frame, opposite the end 2, is preferably curved outwardly, as explained, and is adapted to engage with the surface of the posterior fornix.

A cross member 8 is integrally affixed to and extends between the frame side members 1 intermediate their length and forms a continuous substantially circular secondary frame with the ends of the longer sides 1 adjacent thereto and the outwardly curved end 3. This continuous secondary frame is adapted to fit over and encircle the cervix, indicated at 9, when the pessary is in use. Although the secondary frame is illustrated as circular, in Figs. 2, 3 and 5, it will be

understood that it may have any shape desired to conform to the cervix.

By reference to Figures 2 and 5, it will be observed that the arms 1 extend substantially parallel to each other from substantially diametrically opposite sides of the circular ring formed by the elements 8 and 3 and which ring is adapted to be fitted over the cervix. By reference to Figures 3, 4, 6 and 7, it will be observed that the ring formed by the portion 8 and 3 lies in the same plane with the adjacent portions of the arms 1, which project from the ring.

When in use, the pessary of the present invention may be curved or arched upwardly intermediate its length, and this feature is deemed highly desirable to insure the open condition of the vagina. To make certain that this curvature is effected in the proper direction and in order that the curve may be maintained while the pessary is in place, the longer sides 1 of the pessary frame are preferably provided with a slight angle 10 intermediate their length. As shown in dotted lines in Fig. 3, under compression applied at its ends, the ends will be moved toward each other and will cause the pessary frame to be partially bent before insertion. The pessary of this invention is so formed that endwise compression will tend to flex the frame on one face only. In other words, the pessary frame, as shown in Figs. 1–6, is susceptible to normal flexing toward one face only, that face being toward the open side of the angle 10. Thus, when endwise compression is exerted on the pessary, as shown in Fig. 3, the effect is to bend the frame so that the opposite ends are closer together, as indicated by the dotted line position shown in Fig. 3. Upon release of the compressive force, the pessary will tend to resume the position indicated in full lines in Fig. 3. It will be impossible for the frame to remain flexed in an opposite direction, if it could be assumed that some force had been applied to bend the pessary frame toward the opposite direction from the position shown in dotted lines in Fig. 3. The dotted line position shown in Fig. 3 approximates the extent of the flexure normal to the flexure of the pessary frame when the device is in use and it is fitted snugly to exert slight pressure at one end against the posterior fornix and at the opposite end against the pubic bone. Actually, during the time that the article is being inserted, the extent of flexure may be somewhat greater than that indicated in dotted lines in Fig. 3.

The pessary carries a flexible diaphragm 11, which may be made of latex, rubber or other suitable material impervious to the passage of secretions, discharges, or the like. The pessary illustrated in Fig. 2 shows such a diaphragm of circular contour secured to the secondary continuous frame. The diaphragm may be molded to the frame or otherwise carried by the frame. There should be a relatively tight and fluid proof connection between the diaphragm and the supporting continuous secondary frame.

In Fig. 4, there is illustrated a modified form of flexible fluid impervious diaphragm 12 which differs from that illustrated in Figs. 2 and 3 in that the diaphragm closes the entire area of the pessary frame. That type of larger diaphragm may be desirable to accommodate greater flow of fluids. As described in connection with the diaphragm 11, the diaphragm 12 should be secured to the peripheral frame of the pessary completely therearound to avoid leakage.

In either the diaphragm 11 or the diaphragm 12, a suitable absorbent material, not shown, may be positioned to absorb discharges.

In Figs. 5 and 6, the construction of the pessary frame is illustrated without the above mentioned diaphragms, the frame shown according to Figs. 5 and 6 being substantially identical with the frames shown in Figs. 1–4, inclusive.

In Fig. 7, there is illustrated a modified frame having the essential characteristics of the frame shown in Figs. 1–6, inclusive, but differing only in that it is substantially flat and free from any angles when viewed from one side. The face or plan view of the pessary frame shown in Fig. 7 does not differ substantially from that shown in Figs. 2 and 5.

The structure of the frame member is substantially the same throughout the several sides and ends and is characterized by the use of a coiled spring wire, the adjacent turns of the coils being close together and provided with an outer coating of latex or rubber. Fig. 8 illustrates a fragmentary sectional view somewhat enlarged, as taken on the line 8—8 of Fig. 7.

In use, the pessary is introduced into the vagina by holding the ends of the frame member between the fingers, the end 3 being first introduced. During the introductory movement, the device is preferably held with its longer sides in a plane lengthwise of the body of the user. After introduction into the vagina, the pessary is turned 90° so that the upper face is in position; then the end 3 is pushed gently against the posterior fornix and with the same gentle pressure, the end 2 is pushed upward and backward behind the pubic bone so that the portions 4 come into the desired position. The inward pressure on the end 3 causes the pessary frame to flex slightly or bend and the tendency of the flexible frame to return to its normal position holds the frame against the posterior fornix at one end and the pubic bone at the opposite end of the frame. The continuous secondary frame adjacent the end 3 of the pessary fits over and embraces the cervix, thereby tending to support the latter.

It will be noted that the apex of the angle indicated at 10 extends in the same direction as the extreme end portions of the arms 1 extend as at 4 in Figures 3, 4 and 6.

It will be apparent from the foregoing that the pessary of this invention is of simple configuration and construction; also that it may be readily introduced into place and after introduction, being maintained under some endwise compression, will be bowed upwardly and will tend to thus support the wall of the vaginal cavity immediately forward of the cervix.

I claim:

1. A pessary comprising a substantially oblong shaped continuous frame member, the side portions and end portions of which are flexible throughout their length, each of said side portions being provided with an angle intermediate its length, whereby when the ends of the frame member are subjected to endwise compression, the said frame is flexed in such a way that its ends are brought closer together on that side only of the frame opposite to which the apex of the angles project, said pessary being adapted to be held in place between the posterior fornix and the pubic bone by the tendency of the frame

member to extend after having been compressively flexed.

2. A pessary comprising a substantially oblong shaped continuous frame member, the side portions and end portions of which are flexible throughout their length, each of said side portions being provided with an angle intermediate its length, whereby when the ends of the frame member are subjected to endwise compression, the said frame is flexed in such a way that its ends are brought closer together on that side only of the frame opposite to which the apex of the angles project, said pessary being adapted to be held in place between the posterior fornix and the pubic bone by the tendency of the frame member to extend after having been compressively flexed, the end portions of the side portions of said flexible frame member at one end thereof extending in a short curve away from the line of the adjacent main length of said arms in the general direction in which said angle projects.

3. A pessary comprising a substantially oblong shaped continuous frame member, the side portions and end portions of which are flexible throughout their length, each of said side portions being provided with an angle intermediate its length, whereby when the ends of the frame member are subjected to endwise compression, the said frame is flexed in such a way that its ends are brought closer together on that side only of the frame opposite to which the apex of the angles project, and a cross member extending between the side portions of said frame member intermediate their length and at one side of said angle and forming with the next adjacent end of said frame member opposite to said angle a continuous frame to be fitted over the cervix, said pessary being adapted to be held in place between the posterior fornix and the pubic bone by the tendency of the frame member to extend after having been compressively flexed.

4. A pessary comprising a substantially oblong shaped continuous frame member, the side portions and end portions of which are flexible throughout their length, each of said side portions being provided with an angle intermediate its length, whereby when the ends of the frame member are subjected to endwise compression, the said frame is flexed in such a way that its ends are brought closer together on that side only of the frame opposite to which the apex of the angles project, and a cross member extending between the side portions of said frame member intermediate their length and at one side of said angle and forming with the next adjacent end of said frame member opposite to said angle a continuous frame to be fitted over the cervix, and an elastic fluid impervious diaphragm affixed to the said continuous frame member, said pessary being adapted to be held in place between the posterior fornix and the public bone by the tendency of the frame member to extend after having been compressively flexed.

5. A pessary comprising a substantially oblong shaped continuous frame member, the side portions and end portions of which are flexible throughout their length, each of said side portions being provided with an angle intermediate its length, whereby when the ends of the frame member are subjected to endwise compression, the said frame is flexed in such a way that its ends are brought closer together on that side only of the frame opposite to which the apex of the angles project, and a cross member extending between the side portions of said frame member intermediate their length and at one side of said angle and forming with the next adjacent end of said frame member opposite to said angle a continuous frame to be fitted over the cervix, and an elastic fluid impervious diaphragm affixed to the said continuous frame member, that end of said oblong shaped member opposite to the end to which said diaphragm is affixed being adapted to engage the pubic bone and that end intermediate its length being curved inwardly, said pessary being adapted to be held in place between the posterior fornix and the pubic bone by the tendency of the frame member to extend after having been compressively flexed.

6. A pessary comprising a substantially oblong shaped continuous frame member, the side portions and end portions of which are flexible throughout their length, each of said side portions being provided with an angle intermediate its length, whereby when the ends of the frame member are subjected to endwise compression, the said frame is flexed in such a way that its ends are brought closer together on that side only of the frame opposite to which the apex of the angles project, and a cross member extending between the side portions of said frame member intermediate their length and at one side of said angle and forming with the next adjacent end of said frame member opposite to said angle a continuous frame to be fitted over the cervix, and an elastic fluid impervious diaphragm affixed to the said continuous frame member, that end of said oblong shaped frame member opposite to the end to which said diaphragm is affixed being adapted to engage the public bone and that end intermediate its length being curved inwardly, the end portions of the side arms of said frame member adjacent that end which is curved inwardly extending in a short curve away from the line of the adjacent main length of said arms in the general direction in which the apex of said angles project, said pessary being adapted to be held in place between the posterior fornix and the public bone by the tendency of the frame member to extend after having been compressivly flexed.

7. A pessary comprising a substantially circular frame having a central opening and adapted to be fitted over the cervix, parallel arms extending one each from substantially diametrically opposite sides of said circular frame and in substantially the same plane with said circular frame, said parallel arms at their ends distant from said frame having a connecting end arm extending between them in a position opposite to said circular frame.

8. A pessary comprising a substantially circular frame having a central opening and adapted to be fitted over the cervix, parallel arms extending one each from substantially diametrically opposite sides of said circular frame and in substantially the same plane with said circular frame, said parallel arms at their ends distant from said frame having a connecting end arm extending between them in a position opposite to said circular frame, the circular frame, arms and connecting end being flexible throughout and firmed of coated helical wire.

9. A pessary comprising a substantially circular frame having a central opening and adapted to be fitted over the cervix, parallel arms extending one each from substantially diametrically op-

posite sides of said circular frame and in substantially the same plane with said circular frame, said parallel arms at their ends distant from said frame having a connecting end arm extending between them in a position opposite to said circular frame, the circular frame, arms and connecting end being flexible throughout and formed of coated helical wire, and an elastic fluid impervious membrane affixed to said circular frame member therearound.

10. A pessary comprising a substantially circular frame having a central opening and adapted to be fitted over the cervix, parallel arms extending one each from substantially diametrically opposite sides of said circular frame and in substantially the same plane with said circular frame, said parallel arms at their ends distant from said frame having a connecting end arm extending between them in a position opposite to said circular frame, the circular frame, arms and connecting end being flexible throughout and formed of coated helical wire, and an elastic fluid impervious membrane secured at its edges to said flexible frame member completely around the peripheral edge of the same.

11. A pessary comprising a substantially circular frame having a central opening and adapted to be fitted over the cervix, parallel arms extending one each from substantially diametrically opposite sides of said circular frame and in substantially the same plane with said circular frame, said parallel arms at their ends distant from said frame having a connecting end arm extending between them in a position opposite to said circular frame, the circular frame, arms and connecting end being flexible throughout and formed of coated helical wire, said connecting end arm being curved inwardly toward said circular frame.

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