

July 11, 1933.

F. BLEY

1,917,870

PESSARY

Filed May 27, 1932

2 Sheets-Sheet 1

Fig. 1

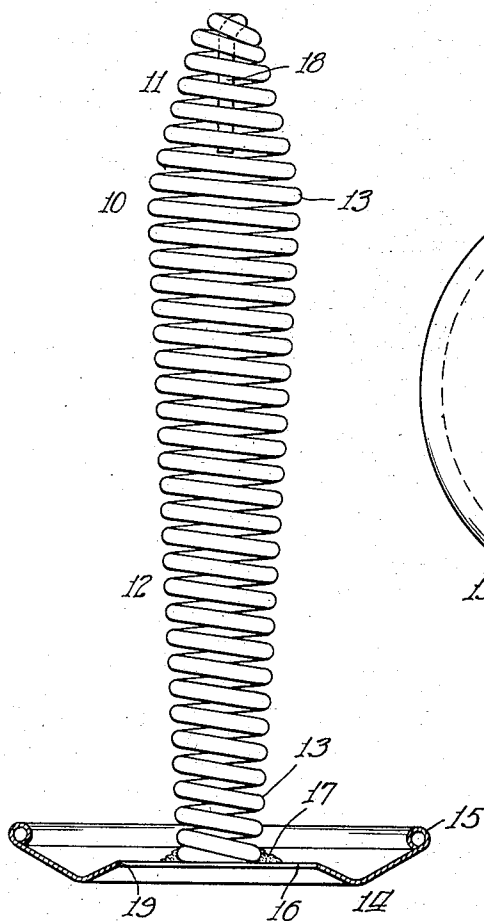
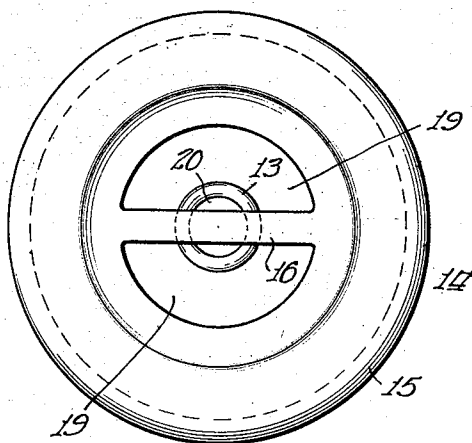


Fig. 2



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Fig. 3

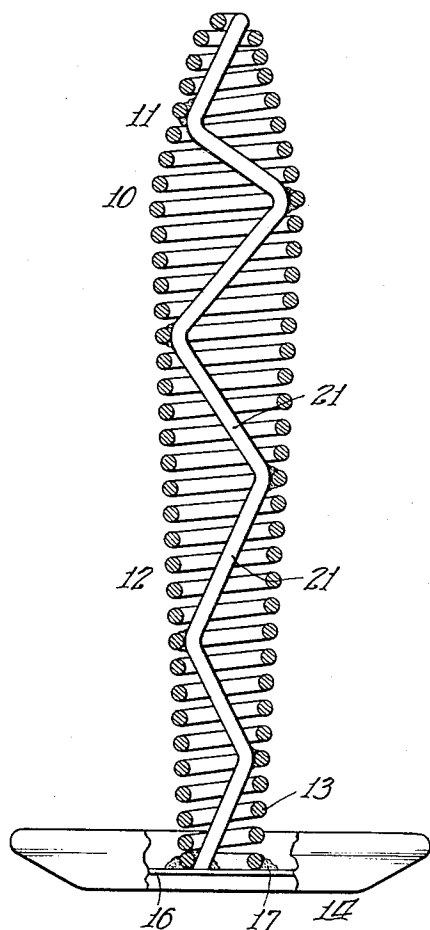
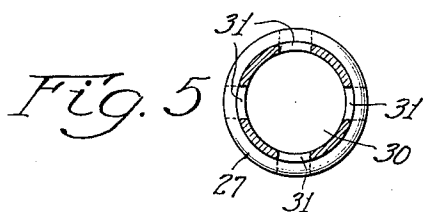
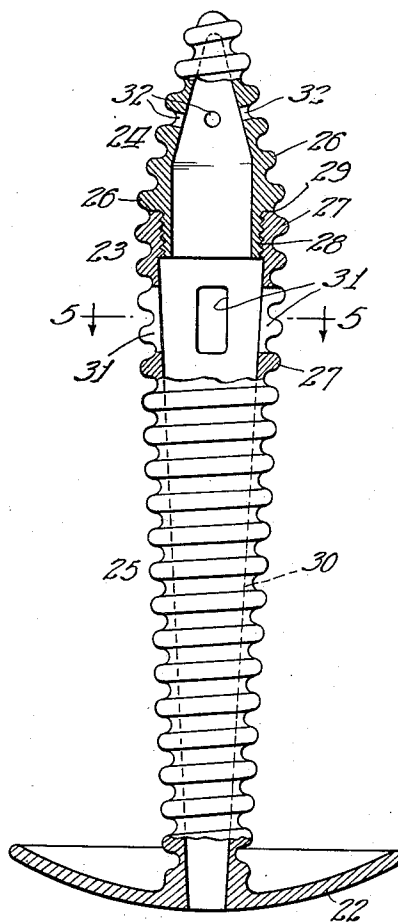


Fig. 4



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UNITED STATES PATENT OFFICE

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PESSARY

Application filed May 27, 1932. Serial No. 613,800.

The invention relates to womb supporting devices or pessaries and more particularly it relates to a device to be inserted into and worn in the womb to correct or remedy and to prevent malposition of the womb.

It is well known to physicians, surgeons and many others that barrenness, painful menstruation and other similar ills of women are frequently the result of malposition of the uterus. Pessaries or similar devices for correcting such malposition by inserting the same into the womb through the vagina have been in use by physicians for a long time. The insertion of such devices as heretofore constructed either requires a preliminary dilation of the parts followed by insertion of the device or the use of force to insert the device without dilation. Either method of insertion tends to lacerate the delicate mucous lining coat of the womb and also tends to strain the muscular coat surrounding the inner mucous coat. In those cases wherein the womb is badly distorted or malpositioned, the insertion of a pessary having sufficient rigidity to correct the malposition produces laceration and sufficient strain of the muscular coat that the use of such a corrective device is inadvisable. After such devices have been in position for sometime, the wall of the uterus closes in and removal of the device can only be accomplished by exerting force tending further to lacerate and strain the delicate membranes and muscular fibres.

The invention provides a device which can be inserted into and removed from a uterus having any degree of malposition or deformation, merely by manipulating the device in the same manner that a screw is threaded into or removed from a close fitting aperture and the objects of the invention include the provision of a device of the kind described which can be inserted into and removed from the uterus without lacerating the lining or straining the muscular coat, which permits unimpeded flow of the secretions, which corrects and prevents malposition of the uterus, which is sanitary and may be worn for an indefinite period, which provides a support maintaining the uterus in correct position, and which is sufficiently resilient to be in-

serted into a badly deformed uterus with the exertion of slight force and by reason of its flexibility adapts itself to the configuration of the distorted organ, its resiliency producing a constant pressure tending to gradually correct the malformation without injury to the delicate fibres of the muscular coat.

Still another object of the invention is the provision of a device adapted to correct malposition causing barrenness and following the use of which pregnancy is possible.

A further object of the invention is the provision of a device of the kind described which is simple, durable, efficient and satisfactory for its intended purpose.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts,

Fig. 1 is a longitudinal elevational view of a device embodying the principles of the invention;

Fig. 2 is an end view of the device shown in Fig. 1;

Fig. 3 is a view partly in section of a modified form of the device shown in Figs. 1 and 2;

Fig. 4 is a partial sectional view of an alternative embodiment of the invention; and

Fig. 5 is a view along the line 5-5 of Fig. 4.

Referring now more particularly to the drawings, the device includes an oblong member 10 comprising a substantially conical end portion 11 and a convergent substantially frustro-conical end portion 12. The oblong member 10 is formed from a filament or wire 13 of any suitable flexible material arranged as a coiled spiral, the spirals all preferably having an equal pitch.

An annular disc shaped member 14 is mounted on the open end of the frustro-conical end 12. The outer edge of the member 14 is turned to provide a smooth closed rim 15. A diametrically extending cross member 16 connects the opposite sides of the disc

14 and provides means for mounting the disc member 14 on the open end of the frusto-conical portion 12. The filament 13 may be fastened to the member 16 in any desired manner and in the drawings is shown as secured by the use of soldering or welding material 17 in sufficient quantity to provide a rigid connection. The disc 14 is concave on the side adjacent the spiral to provide a seat for the end of the cervix when the device is in position as a support for the uterus.

The member 16 bisects the opening 19 in the disc 14 and is sufficiently narrow that the interior open space 20 of the member 10 is in registry with the aperture 19 on each side of the member thereby permitting unimpeded flow of secretions out of the member 10 on each side of the member 16.

Any suitable non-corrosive material inert to the secretions may be used for the member 10 and the disc 14 and also for soldering or fastening means for the disc and the member. White gold has been found in practice to be satisfactory material for the spiral and the disc.

The outer end 18 of the filament 13 is inserted so that the apex of the conical portion 11 is smooth and acts as an entering wedge by the exertion of slight force in the same manner as the end of a screw, and being smooth possibility of laceration is avoided upon insertion of the member 10. Material having a moderate degree of flexibility may be used in forming the filament 13 and as a result the member 10 will yield a substantial amount and adapt itself to the shape of a badly deformed uterus when first inserted therein. Notwithstanding the deformation of the member 10 upon its initial insertion, its resiliency will tend constantly to straighten itself and such tendency to straighten will in the course of time rectify and correct the malposition of the uterus. The filament 13, being arranged to form a coiled spiral having a uniform pitch, may be inserted into and removed from the uterus by rotating the disc member 14 by means of any suitable instrument engaging the member 16. The tapering of the conical portion 11 is gradual and obviously the insertion by threading is accomplished without any laceration of the delicate mucous lining or of any undue distortion producing strains in the muscular coat.

The use of suitable non-corrosive materials adapts the device to be safely left in position indefinitely or until the malposition is corrected. The delicate mucous lining of the cervix closes in around the frusto-conical portion 12 of the device and thereby forms a spiralled socket cooperating with the device which prevents any possibility of accidental displacement. Regardless of the length of time the device may have been in position, it is easily removed by revolving the disc member 14 in a direction opposite to that necessary

for insertion. The equal pitch of the spirals enables the removal to be accomplished without any possibility of laceration of the membranes which have closed in about the frusto-conical portion 12, since the divergence of the latter is gradual and the filament 13 follows the spiralled cooperating membraneous socket.

A modified form of the invention is shown in Fig. 3 which is adapted for straightening a uterus in which the malposition is not excessive and for maintaining the uterus in correct position after it has been straightened in the same manner as described for the device as shown in Fig. 1 and is also adapted for preventing malposition of a normal member. The modified form differs from the form shown in Fig. 1 by the provision of diagonally extending brace members 21 which are welded or similarly fastened at intervals to the filament on opposite sides and imparts substantial rigidity to the otherwise flexible device.

Either of the forms shown in Figs. 1 and 3 permit unimpeded flow of the secretions between the coils throughout the entire length of the member 10 and hence may be left in position for an indefinite length of time without inconvenience or interference with normal or periodic flow of secretions.

An alternative embodiment of the invention is shown in Fig. 4 as comprising an annular disc 22, preferably of spherical configuration, and an oblong member 23 comprising a substantially conical end portion 24 and a substantially frusto-conical end portion 25, the latter being preferably integrally formed with the disc 22. The large end of the conical portion 24 is offset to provide a shoulder 29 and a projecting stem 28 which is threaded into the adjacent end of the frusto-conical portion 25 with the end of the latter in close contact with the shoulder.

The outer periphery of the conical section 24 provides a spiralled corrugation 26 of uniform pitch terminating at the apex and the frusto-conical portion 25 provides a spiralled corrugation 27 of the same uniform pitch, preferably though not necessarily extending its full length. The corrugations 26 and 27 unite at the shoulder 29 to form a smooth continuous spiralled corrugation of the same pitch as the corrugations 26 and 27. The resulting continuous spiralled corrugation enables the device to be threaded into and removed from position in the same manner as described for the embodiments shown in Figs. 1 and 3.

The interior of the sections 24 and 25 provide a chamber 30 closed at the conical end and opening through the disc 22. A plurality of apertures 31 extend through the wall of the frusto-conical section 25 near its junction point with the conical portion 24. The conical portion 24 also provides a plu-

5 rality of apertures or openings 32 which together with the openings 31 permit the normal secretions to enter the chamber 30 and escape through the disc 22. Any suitable non-corrosive material which is unaffected by the secretions may be used in the construction of the alternative embodiment.

10 Thus it will be seen that I have provided a novel device of the kind described having resiliency adapting it for insertion into a badly deformed or malpositioned member without straining or lacerating the member and which by reason of its resiliency tends to rectify the member; and further the invention provides means for both correcting malposition and for maintaining the uterus in correct position, the construction being such that the device may be inserted and removed by a threading or twisting operation without exerting force longitudinally of the member and thereby avoiding possibility of lacerating the membranes or straining the muscular walls thereof.

15 Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence, I do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

20 1. As an improved article of manufacture, the herein described instrument for use as a womb rectifier and support; the same comprising a filament of flexible material providing a spiral arranged to form the wall of an oblong hollow member having one end substantially conical in shape and the other end open, and an annular disc mounted on the open end of said member with its apertured portion in registry with the open end of said member.

25 2. As an improved article of manufacture, the herein described instrument for use as a

womb rectifier and support; the same comprising a filament of flexible material providing a spiral of uniform pitch arranged to form the wall of an oblong member having one end substantially conical in shape and the other end open, said other end of the member taking the form of a frustum of a cone converging towards its open end, and an annular disc mounted on the frustro-conical end of said member with its apertured portion in registry with the open end of said member.

3. As an improved article of manufacture, the herein described instrument for use as a womb rectifier and support; the same comprising a filament of flexible material providing a spiral arranged to form the wall of an oblong hollow member having one end substantially conical in shape and the other end open, and an annular disc mounted on the open end of said member with its apertured portion in registry with the open end of said member, the face of said disc on the side adjacent the spiral being concave to provide a seat for the cervix.

4. As an improved article of manufacture, the herein described instrument for use as a womb rectifier and support; the same comprising a filament of flexible material providing a spiral of uniform pitch arranged to form the wall of an oblong member having one end substantially conical in shape, and the other end open, said other end of the member taking the form of a frustum of a cone converging towards its open end, and an annular disc mounted on the frustro-conical end of said member with its apertured portion in registry with the open end of said member, the face of said disc on the side adjacent the spiral being concave to provide a seat for the cervix.

In witness whereof, I hereunto subscribe my name this 25th day of May A. D., 1932.

FRED BLEY.