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M. R. MAYER

2,551,618

PESSARY

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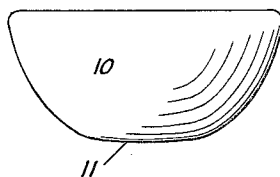


Fig. 1

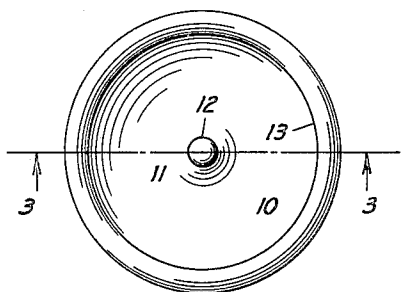


Fig. 2

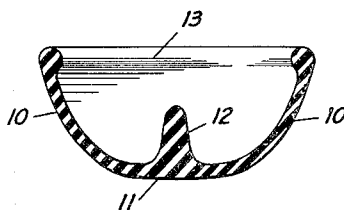


Fig. 3

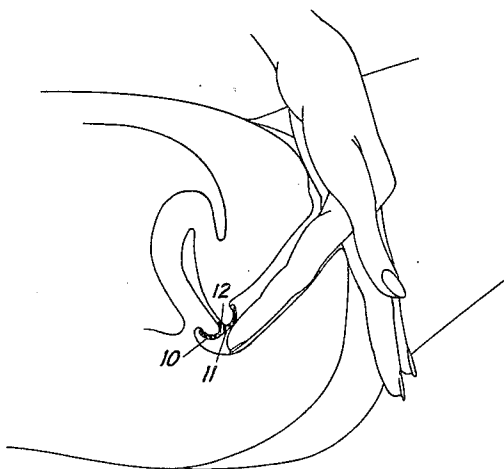


Fig. 4

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2,551,618

PESSARY

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1 Claim. (Cl. 128—131)

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This invention relates to devices applicable to and in closing relation with the mouth of the human uterus for sanitary and hygienic purposes, and has as an object to provide an improved construction and interrelation of elements constituting such a device.

A further object of the invention is to provide an improved pessary convenient of removal and replacement in mouth-closing relation with the human uterus without the aid of instruments and applicators other than the human hand.

A further object of the invention is to provide an improved pessary susceptible of simple, natural, non-injurious retention in position of use.

A further object of the invention is to provide an improved pessary that is wholly and positively free from flesh or membrane lacerating characteristics.

A further object of the invention is to provide an improved pessary conformed to retentively coact with the neck of the human uterus in a dependably practical, comfortable, and healthful manner.

A further object of the invention is to provide an improved pessary that is largely impervious to corrosion or deterioration in use, durable and long lived through a practically unlimited succession of applications and removals, and which is dependably effective in attainment of the ends for which designed.

With the foregoing and other objects in view, my invention consists in the construction, arrangement, and operative combination of elements hereinafter set forth, pointed out in my claim, and illustrated by the accompanying drawing, in which:

Figure 1 is a side elevation of a typical pessary embodying the novel features and principles of the invention. Figure 2 is a top plan view of the showing of Figure 1. Figure 3 is a cross section taken substantially on the indicated line 3—3 of Figure 2. Figure 4 is a conventionalized diagram illustrating the practical application and use of the improvement.

The improved pessary is a relatively stiff-walled, homogeneous unit of suitable resiliently-yieldable, liquid-impermeable, corrosion-resistant material, such as rubber, formed through the exercise of known moulding or dipping techniques in a range of pertinent sizes to exhibit identical proportions and characteristics. In any given size, the improvement has the form of a relatively shallow, wide-mouthed, exteriorly-smooth bowl of uniform wall thickness, save as hereinafter specified, adequate to yieldably resist bowl

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deformation and to normally maintain the unit in the initial form and shape of its manufacture. The bowl shape of the unit exteriorly approximates the modified, semispherical form of the protrusive neck, or cervix, of the human uterus and is hence characterized by a spheroidal annular zone 10 arcuately and smoothly merging toward its normal crown into a coaxial area 11 of much greater radius which, while evidencing a slight convexity, approaches a plane perpendicular to the axis of the zone 10. With the uniformity of wall thickness above mentioned, the unit interior walls parallel the contour of the exterior walls to define a concavity whereof the zone 10 inner surfaces are adapted to embracingly coact with the convexity of the cervix boss and the area 11 inner face is positioned and arranged to engage against and close over the cervix end intersected by the cervical canal.

Interrupting and modifying the smooth concavity of the unit to facilitate application and retention thereof in position of use, an integrally-formed, generally-conical stud 12 of a size and shape to engage within and plug the mouth of the cervical canal upstands axially of the unit from the inner face of the area 11 and terminates in a smoothly rounded end spaced inwardly from the plane of the unit mouth, and a smoothly arcuate rib or bead 13 slightly constricts the unit mouth as an integral, annular projection inwardly from and about the unit free edge or circular margin, thereby to some degree stiffening and reinforcing said margin.

The form and construction of the improvement permits installation thereof in position of use through the sole agency of the human finger, as represented in Figure 4, and without need of recourse to special applicators, and the like. The device is passed inwardly through the vagina with its open end or mouth presented to receive the uterus neck and is then pressed into engagement with the latter by the tip of the finger in the manner shown. As pressure is applied to the unit base area 11, the rounded marginal bead 13 conformably engages about and slides over the cervix boss until the stud 12 finds and enters the mouth of the cervical canal, thereby properly centering the unit for ultimate seating, and further application of pressure to said base area and to the relatively more flexible, spheroidal zone 10 operates to slightly expand the bead 13 into snug engagement about the base of the cervix boss, to slightly wedge the stud 12 within the canal mouth, and to expel entrapped air from between the

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cervix boss and unit walls for the development of a moderate differential pressure effective to maintain the device in place until intentionally removed by retraction of the bead 13 away from its engagement with the cervix.

While the stud 12 and bead 13 cooperate in their respective engagements with elements of the uterus to establish and maintain the differential pressure or vacuum effect retentive of the device in position of use, they further function to provide spaced seals doubly effective against the entrance of matter to and through the cervical canal.

It should be readily apparent that the selection of a particular improved unit for and the fitting thereof to a given user is a matter of some nicety, due to the natural variation in human organ size, hence the devices are provided in an adequate range of slightly varying sizes from which a proper selection may be made in any instance by a qualified and authorized fitter, such as a physician.

Since changes, variations, and modifications in the form, construction, and arrangement of the elements shown and described may be had without departing from the spirit of my invention, I wish to be understood as being limited solely by the scope of the appended claim, rather than by any details of the illustrative showing and foregoing description.

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I claim as my invention:

In a pessary, a cup-shaped body formed of rubber and having an annular wall of even thickness merging into a flat bottom of the same thickness as the wall, the upper marginal edge of the said wall being deflected inwardly and inwardly thickened and forming a bead extending entirely about the upper edge of the wall and circular in cross section and merging into inner and outer surfaces of the wall, and a solid substantially conical stud formed integral with the body at the center of the bottom thereof, said stud being circular in cross section and having its lower end merging into the inner surface of the said bottom, said stud being tapered upwardly throughout its entire length and terminating in a blunt and rounded upper end spaced downwardly from the inwardly projecting bead of the wall, a distance substantially one-half the depth of the body.

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The following references are of record in the file of this patent:

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