

[54] **VIBRATING APPARATUS FOR
TREATMENT OF FEMALE DISORDERS**

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[58] Field of Search **128/32, 24.1, 24.2, 61, 67,**
128/51, 52, 65

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[57] **ABSTRACT**

Female disorders in animals are treated by electrically vibrating in the vagina of the animal a generally penis-shaped instrument having means for gradually releasing and distributing medications, such as hormone gels, antibiotics and the like during the vibration process. The instrument is provided with an elongated slot, preferably sinusoidal in character, containing or adapted to contain the medication desired. The vibrational energy penetrates well beyond the contacting surfaces of the vagina and thus assists in the development or redevelopment of certain lazy or degenerated muscles that appear to be responsible for such disorders as female frigidity, certain menstrual or menopausal disorders and the like.

3 Claims, 5 Drawing Figures

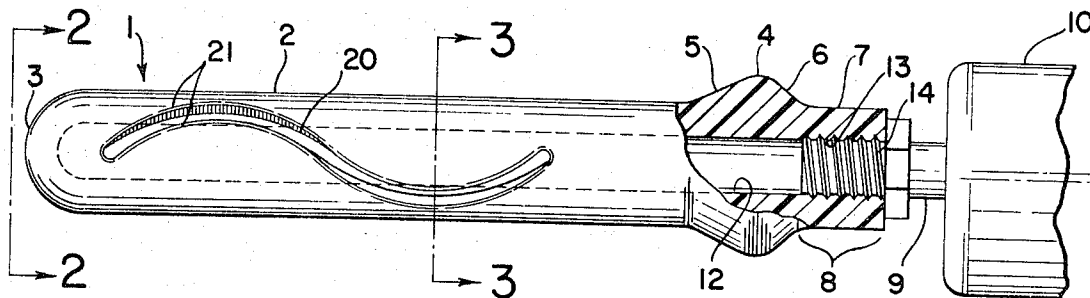
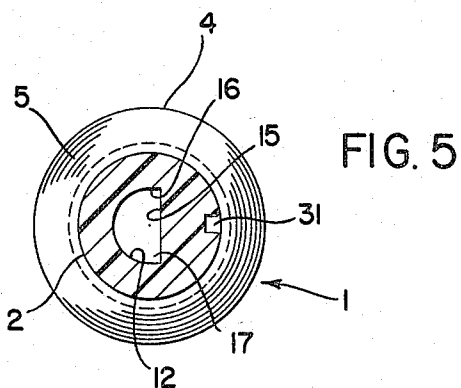
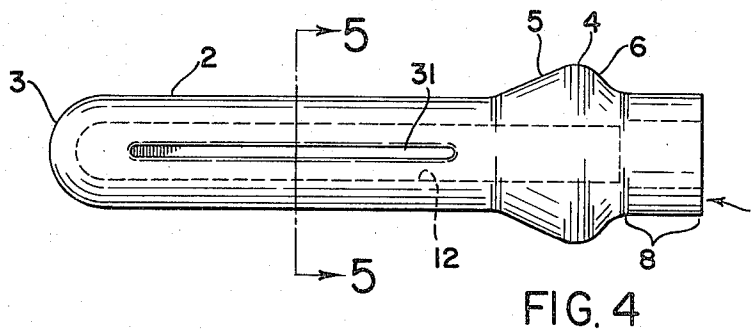
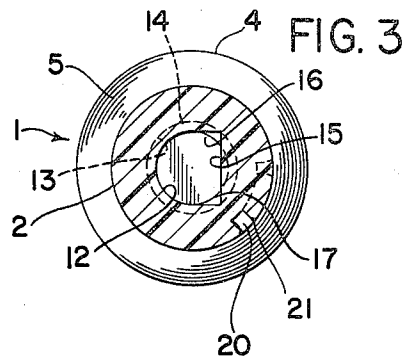
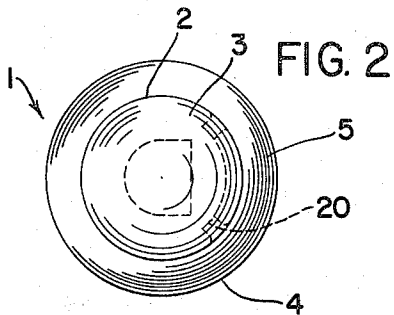
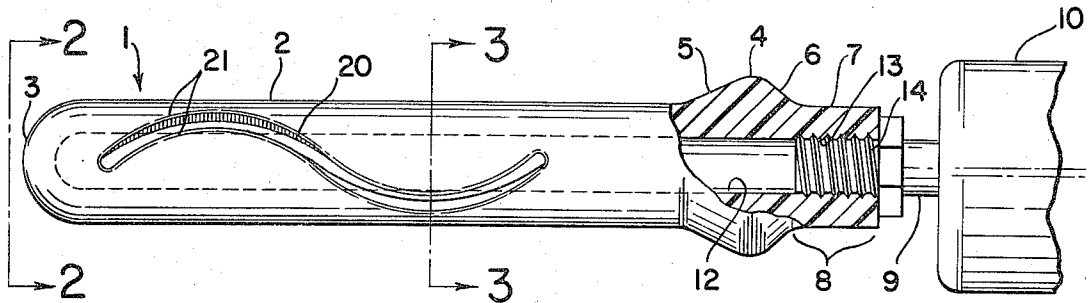


FIG. 1



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VIBRATING APPARATUS FOR TREATMENT OF FEMALE DISORDERS

This invention relates to a method and apparatus for treatment of certain disorders in vaginal regions of female animals. It particularly relates to an electrically vibrated instrument adapted to gradually release and massage through vaginal walls medications desired for the treatment of such female disorders that may occur.

It is an object of the present invention to provide a method of treating female disorders wherein topical applications of medications are made and more effectively absorbed through mucous membranes connected with the vaginal passage of female animals.

It is another object of the present invention to provide an instrument which is capable of vibrational contact with vaginal walls and which has means for gradual release and more effective distribution of medications to cause rapid absorption thereof.

Other objects will be apparent from the following description of the invention, as illustrated by the accompanying drawings, in which:

FIG. 1 is an elevational view, with parts broken away, of an instrument suitable for insertion in the vagina of animals, also showing attached thereto a portion of an electrical vibrator;

FIG. 2 is an end view of the instrument of FIG. 1, as seen in the direction of the arrows 2—2 of FIG. 1;

FIG. 3 is a sectional view on the line 3—3 of FIG. 1;

FIG. 4 is an elevational view of a modified form of instrument suitable for being attached to an electrical vibrator and also embodying the present invention; and

FIG. 5 is a sectional view on the line 5—5 of FIG. 4.

In accordance with the present invention, female disorders are treated by electrically vibrating a substantially rigid, generally penis-shaped instrument in contact with the surfaces of vaginal walls of the animal. The instrument has means, such as one or more slots which are preferably of sinusoidal or curvilinear shape and preferably have portions which are cut at various angles by an axial plane therethrough, for releasing medication gradually during the vibration of the instrument against the vaginal tissues so as to assist in absorption of the medication. The gradual release of medication coupled with the vibratory action increases the area of contact and the period of contact of the medication with the mucous membranes of the vaginal passage. The vibrational energy penetrates well beyond vaginal surfaces and effects stimulation and the redevelopment of somewhat degenerated muscles that may be responsible for such disorders as female frigidity, menopausal troubles and the like.

Referring more particularly to the drawings, in which like parts are designated by like numerals of reference throughout the several views, the instrument 1 to be inserted in the vagina is generally penis-shaped, having an elongated portion 2, generally cylindrical in shape, and preferably approximately 4 to 7 inches or so in length and having a rounded anterior end portion 3, preferably hemispherical in shape. The opposite end portion (the posterior end portion) which is adapted to protrude from the vagina comprises an enlarged portion, also generally round in cross section and having two oppositely inclined, generally frustoconical intersecting surfaces 5 and 6, which are joined in a peak of maximum diameter having a rounded surface 4. The anterior frustoconical surface 5 of the enlarged portion intersects with the outer surface of the cylindrical portion 2 and preferably has an inclination with respect to the cylindrical surface 2, such that an axial plane through the instrument 1 cutting cylindrical portion 2 and the frustoconical surface 5 will provide a line in the surface 5, which preferably makes an angle of about 20° to 30° with the cylindrical surface 2.

Posterior of the peak 4 of the enlarged portion is the oppositely inclined portion having a generally frustoconical surface 6 which intersects with a cylindrical surface 7 of the fastening portion 8 that is adapted to be fastened rigidly onto the shaft 9 of the vibrator 10. The instrument is provided with a longitudinal cavity having a wall 12 that extends from the

posterior end almost to the anterior end of the instrument. The wall of the posterior end of the cavity is provided with fastening means, such as a threaded portion 13 which cooperates with suitable threads 14 on the shaft 9 of the electrical vibrator 10, for fastening the molded plastic instrument to the vibrator 10. The longitudinal cavity preferably has a portion of semi-circular cross section with a wall 12 and a portion of generally rectangular section with walls 15, 16 and 17. Side walls 16 and 17 intersect with the portion of semi-circular cross section so that the molded instrument has a degree of unbalance, which changes the vibrating motion to some extent from a straight axial vibrational movement.

In accordance with the main feature of the present invention, the devices to be inserted in the vagina of the animal are preferably molded of suitably rigid or substantially rigid material, as hereinafter described, and the difference between the outer diameter of cylindrical portion 2 and maximum diameter of the cavity therein is such to provide very thick walls, preferably one-fourth to three-eighths inch in thickness.

In accordance with the main feature of the present invention, a longitudinal slot 20, which is preferably sinusoidal or has portions that make varying angles to longitudinal axial plane therethrough, is provided in the elongated portion 2. The slot 20 has smooth edges 21 at the point of intersection with the surface of the cylindrical portion 2. In the modified form of the device as shown in FIGS. 4 and 5, the slot 31 is straight and replaces the spiral or curvilinear slot shown in the modification of FIGS. 1 to 3, inclusive.

The degree of unbalance caused by the positions of the walls 15 and 12 of the longitudinal cavity is increased in the device of FIG. 5, otherwise the apparatus shown in FIG. 5 is structurally similar to the apparatus for insertion in the vagina as shown in FIGS. 1 to 3.

The molded instrument of the present invention may be made from natural and synthetic materials, such as rubbers and plastics. Typical materials, useful for the purposes of the invention include, among others, natural rubber, butyl rubber, silicone rubber, butadiene-acrylonitrile rubber, styrene-butadiene rubber, chloroprene rubber, etc. Suitable plastic materials, within the purview of the present invention, include among others the vinyl polymers, including polymethyl methacrylate, polystyrene, polyethylene, polypropylene, styrene-isobutylene copolymers, polyvinyl-acetate and polyvinylchloride, and many other plastics, including polycarbonates, urea, phenolic and melamine resins, etc. Transparent resins are preferred, however.

In the operation of the device, the slot 20 or 31 is filled with the medication desired, usually a gel-type material and often a hormone-containing gel, antibiotics, or other material to be used in the treatment. The tubular portion 2 is inserted completely into the vagina of the animal and vibration in a generally axial direction is produced by the vibrator 10. The axial vibratory movement of the device, coupled with the slight unbalance preferably present, causes the medication to gradually migrate along the slotted portion and over the surface of the vibrating instrument, causing a film or layer of medication to be produced thereover. The vibratory movement is found to massage the medication against the contacting walls and also is found to stimulate muscular activity in the adjacent portions of the animal.

I have found that the aforementioned female disorders are successfully treated when the medications are applied as above, and also that cases of extreme female frigidity are corrected by the device. The treatments are usually at least weekly and preferably more often, such as two or three times a week, and generally last 2 to 10 or 15 minutes, 4 to 8 minutes, and usually approximately 5 minutes. The vibrating frequency is preferably from 10 to 40 cycles per second, although frequencies as low as 5 cycles per second have a desirable effect, and as high as 60 cycles per second may be used.

It is to be understood that in accordance with the provisions of the patent statutes, variations and modifications of the specific device herein shown and described for purposes of il-

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lustration may be made without departing from the spirit of the invention.

Having described my invention, I claim:

1. An instrument for treating female animal disorders comprising a unitary molded plastic element suitable for at least partial insertion into the vagina of the animal and means for electrically vibrating said element, said element having an elongated generally cylindrical portion with an anterior end of rounded shape, and a posterior portion having an annular enlargement, and means for attaching said element to said electrical vibrating means, said annular enlargement having anterior and posterior, oppositely sloping annular surfaces intersecting in a smooth annular zone of maximum enlargement, said elongated generally cylindrical portion having an elongated slot therein suitable for receiving medicinal gels, said plastic element having a closed end longitudinal cavity extending from the posterior end to near the rounded anterior end thereof, the axial center of said cavity being displaced from the longitudinal axis of the element whereby unbalance is provided and vibrating motion is changed from straight axial movement and distribution and absorption of said gels is facilitated.

2. The instrument of claim 1 wherein said longitudinal cavity has a portion of semi-circular cross section and one wall of planar shape.

3. The instrument of claim 2 wherein said elongated slot is sinusoidal in shape.

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