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E. FORTI ETAL
CONTRACEPTIVE MEANS
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3,170,464

Fig. 1

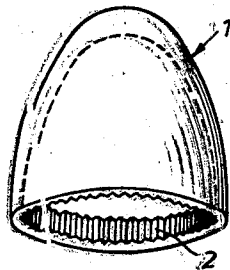


Fig. 2

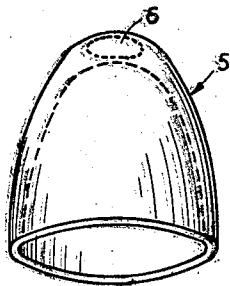


Fig. 3

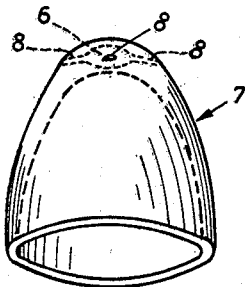


Fig. 4

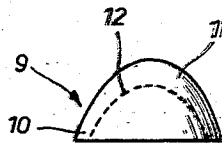


Fig. 6

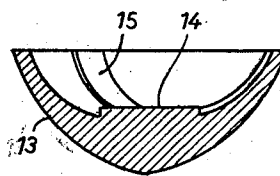


Fig. 5

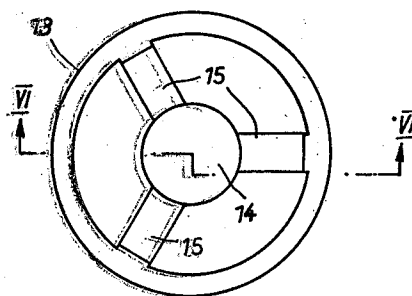
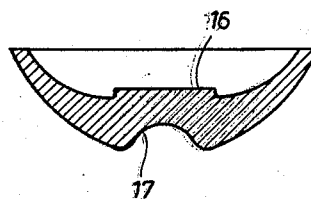


Fig. 7



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CONTRACEPTIVE MEANS

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1961, 17,137/61

1 Claim. (Cl. 128—271)

The present invention relates to means applicable by the male and having a mechanic, antiseptic and orthogenic protective and preventive action, and to a method of producing such means.

As is generally known, the prevention of infection with diseases in sexual intercourse and also the necessity of a sufficient protection for eugenic reasons represent actual problems. Various means are already known which provide the effects referred to by mechanical or chemical means. Such means or agents comprise for example tablets, globules, pessaries, diaphragms, little sponges, tampons, creams and the like, which must be introduced into the vagina and which thus shift the severe responsibility for hygienics and also for the prevention of conception entirely to the female. This fact often causes psychic difficulties due to the sensitiveness of female emotions; in addition, often the aid of a third person must be asked, e.g. in case of introducing pessaries or diaphragms.

On the other hand, means applicable by the male are already known such as e.g. condoms which, however, being a foreign body, have the disadvantage of exerting an irritating and desensibilizing effect and of necessitating subsequent removal. In addition, therapeutic medicaments must also often be introduced into the vagina, against which necessity there exist again prejudices and psychic scruples.

It is an object of the present invention to overcome these drawbacks by providing an agent applicable by the male, which agent can be transmitted to the female in the most simple manner. This agent offers the desired action at great reliability and neither for the male nor for the female partner represents a foreign substance having an irritating and desensibilizing effect. In particular, it imposes upon the male the duty to share with the female partner the responsibility for eventual consequences of sexual intercourse.

The present means representing a contraceptive consists of an element having the shape of an ellipsoid of revolution adapted to the shape of the glans penis, which element consists of pure glycerinated gelatine or comprises a gelatine substance containing medicaments or other additives, e.g. spermicides; this means during sexual intercourse is brought into the vagina, where it is deposited on the os uteri and subsequently will be dissolved owing to the temperature of the human body. Said element may be formed so as to entirely or partly cover the glans penis.

Such a contraceptive means is effective in safeguarding against infections diseases transferable by sexual organs and can wholly or partly replace the customary therapeutic means to be introduced directly into the vagina. Owing to its properties and its advantages referred to above, such an element effectively fits in the scope of social and hygienic progress.

The present invention will now be described in more detail with reference to the accompanying drawings illustrating, by way of example, several embodiments of the invention, and in which:

FIGURE 1 is a perspective view of the contraceptive means according to the invention;

FIGURES 2 and 3 are perspective views of further embodiments;

FIGURE 4 is an end view of an additional embodiment;

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FIGURE 5 shows a further form of construction viewed from below;

FIGURE 6 is a section on the line VI—VI of FIGURE 5, and

FIGURE 7 shows a section through a further embodiment of the invention.

As shown in the drawings the contraceptive means according to the invention has the shape of a cap conforming to the glans penis. The cap has a wall thickness dependent on the composition of the material and consists of a gelatine substance which in addition may also contain medicaments.

The cap 1 is elastic and due to the body heat melts within the vagina; according to FIGURE 1 the inner end of the cap wall is provided with a knurled marginal portion 2 which contributes to an improved adhesion of the cap on the glans penis.

In a modification according to FIGURE 2 the cap 5 is provided at its closed end in the interior of the wall with a centrally arranged cavity 6, serving for the reception of medicaments or additives which thus are localized at a predetermined point instead of being dispersed in the entire gelatine mass. Even though the entire gelatine mass contains already medicaments or spermicides, an additional quantity thereof may also be contained in the cavity 6.

In another cap 7 according to FIGURE 3, the cavity 6 communicates with the outside by means of two ducts 8.

The contraceptive means according to FIGURE 4 has a more hemispherical shape so that the entire glans penis is not covered, whereby a more universal utilization is possible. The required adhesion to the glans penis is in this case obtained by applying an adhesive on the internal surface of the cap.

The cap thus formed affords the advantage that it can also be introduced into the vagina on a finger for therapeutic purposes by the female herself. Thereby the possibility is practically eliminated of contaminating and injuring the vagina, resulting into subsequent infection.

Towards the base of the cap 9 the wall 10 of the cap 9 is thinner, while the wall thickness is greater at 11.

The middle portion 12 of the interior of the cap is covered with an adhesive, so that the cap is in fixed position at least while introducing it into the vagina. The elasticity of the cap material results in that the cap closely fits the particular organs without being damaged and that the introduction of the cap into the vagina is brought about in a painless and natural manner.

According to FIGURES 5 and 6 the internal surface of the cap is provided in the middle with a round and plane bulge 14 from where three flat ribs 15 extend radially until the edge of the cap. These ribs 15 act to reduce the adherence to the lateral parts of the cap, so that the cap in the vagina comes off easier from the glans penis.

In the embodiment according to FIGURE 7 a round and plane bulge 16 is provided on the internal side of the cap in the middle thereof. At the outside of the cap and situated opposite the bulge 16, a recess 17 is arranged which, on the one hand, protects the os uteri since it conforms to its shape, and which, on the other hand, reduces the weight of the cap without impairing the strength thereof.

In the manufacture of the cap, for instance gelatine is melted in glycerine in a container placed in water-bath. In this molten mixture 2–4% by wt. of Vaseline of pharmaceutical grade are incorporated. This mass is thoroughly mixed while producing vortices.

In a separate process e.g. phenyl mercury nitrate and hydroxyquinoline sulphate or another disinfectant are mixed and diluted with a small amount of glycerine. The whole mass is then thoroughly mixed, in order to render

the suspension homogeneous. The homogeneous suspension is then added to the molten mixture while being continuously stirred. With further continuous agitation the still warm mass is cast in moulds preliminarily coated with Vaseline oil and cooled. After the mass has set the articles are removed from the mould and, if desired, are subsequently covered on the inside with an adhesive, as before described.

The means thus produced can be positioned on the glans penis or introduced by means of a finger into the vagina. The shape and the chemical composition of the cap result in a ready removal of the cap as soon as the latter has arrived at the os uteria, and thus affords a protection. The cap is now deposited on the os uteri and exerts already in this state a mechanical protection. By the process of dissolution a thin layer consisting of the medicaments or additives contained in the cap will be formed across the entire surface of the walls of the vagina; thus it is possible, according to the present invention, to combine said mechanical action with other desired effects in the most efficient manner. Thus agents preventing infection, contraceptive expedients and the like may be dispersed in the entire mass or contained in the cavity 8, which agents will be released after a short time by the dissolution of the cap within the vagina. In the case of the cap 7 shown in FIGURE 3 the ducts 8 act in carrying away the agents which are disposed in the cavity 8 and which are forced out by the pressure exerted upon the cap, so that the desired effect is produced in the vagina immediately and not gradually.

The contraceptive means can be produced in various diameters and in different colours.

We claim:

A contraceptive comprising an element having a mass of shape-retainable material meltable at body temperature in the shape of an ellipsoid of revolution and conforming to the shape of the glans penis, said element having a wall with a thickness which increases centrally of said element, an internal-flat central bulge on the wall of said element, at least two ribs extending from the central bulge towards the edge of the element and projecting inwardly from the wall of the element and an adhesive substance on and restricted to said bulge in a quantity sufficient to temporarily secure the element on the glans penis while permitting the element to be subsequently released in the vagina, where the element is retained for being dissolved.

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