

[54] **DUAL CONTRACEPTIVE DEVICE**

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[52] **U.S. Cl.** **128/130**

[51] **Int. Cl.** **A61f 5/46**

[58] **Field of Search** 128/130, 127, 128, 131, 128/348, 325, 326, 332, 335.5, 336; 259/99, 102, 103; 343/792.5

[56] **References Cited**

UNITED STATES PATENTS

897,050	8/1908	Beck	128/127
1,896,071	2/1933	Clark	128/130
2,564,177	8/1951	Schmitt	128/131
3,308,470	3/1967	Bell	343/792.5
3,454,004	7/1967	Leininger	128/130
3,467,089	9/1969	Hassen	128/130
3,513,848	5/1970	Winston	128/335
3,598,115	8/1971	Horne	128/130

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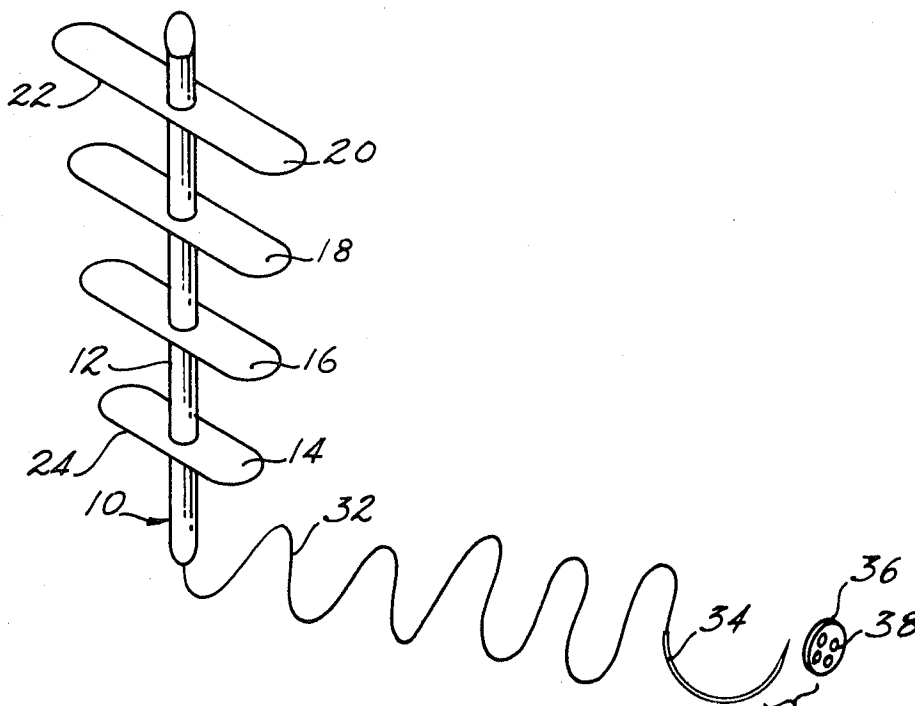
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[57] **ABSTRACT**

A dual contraceptive device of the intra-uterine device or IUD type which is inserted inside the uterus to assist in preventing unwanted pregnancy. An elongated rod-like member made from plastic, stainless steel or the like and approximately less than the internal length of the uterus in which it is inserted is bendable into a shape corresponding approximately with the curvature of the internal shape of the uterus. A flexible suture thread made of inert material such as braided silk or plastic material has one end attached to the lower end of the elongated member and the other end provided with a suture needle. Thin, flat leaves project outwardly from the elongated member at spaced locations therealong and are in alignment generally conforming to the over all tapered shape of the inside of the uterus and provide barriers to interfere with and impede the travel of the spermatazoa. After appropriate dilating and sounding of the uterus the elongated member would be approximately pre-shaped by bending and then inserted into the uterine cavity and the suture thread and the needle would still be exposed. Using a needle holder instrument the needle would then be passed through the mouth of the cervix and a small button of soft inert material such as plastic like polyethylene is advanced on the thread to secure it against the side of the cervix. A special lock loop is placed to permit the button to advance but not to recede. The remaining excess thread with the needle is cut and removed. The length of thread remaining is only long enough to allow very limited movement of the elongated member and to prevent it from becoming dislodged and expelled which is not unusual in the case of other IUD.

gated rod-like member made from plastic, stainless steel or the like and approximately less than the internal length of the uterus in which it is inserted is bendable into a shape corresponding approximately with the curvature of the internal shape of the uterus. A flexible suture thread made of inert material such as braided silk or plastic material has one end attached to the lower end of the elongated member and the other end provided with a suture needle. Thin, flat leaves project outwardly from the elongated member at spaced locations therealong and are in alignment generally conforming to the over all tapered shape of the inside of the uterus and provide barriers to interfere with and impede the travel of the spermatazoa. After appropriate dilating and sounding of the uterus the elongated member would be approximately pre-shaped by bending and then inserted into the uterine cavity and the suture thread and the needle would still be exposed. Using a needle holder instrument the needle would then be passed through the mouth of the cervix and a small button of soft inert material such as plastic like polyethylene is advanced on the thread to secure it against the side of the cervix. A special lock loop is placed to permit the button to advance but not to recede. The remaining excess thread with the needle is cut and removed. The length of thread remaining is only long enough to allow very limited movement of the elongated member and to prevent it from becoming dislodged and expelled which is not unusual in the case of other IUD.

5 Claims, 3 Drawing Figures



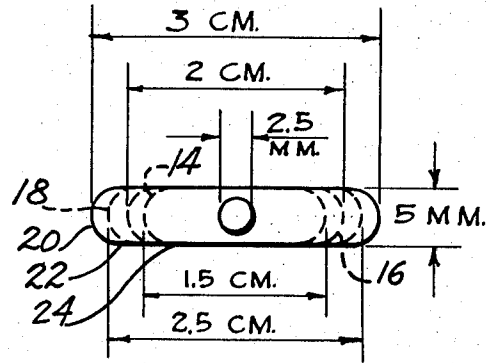
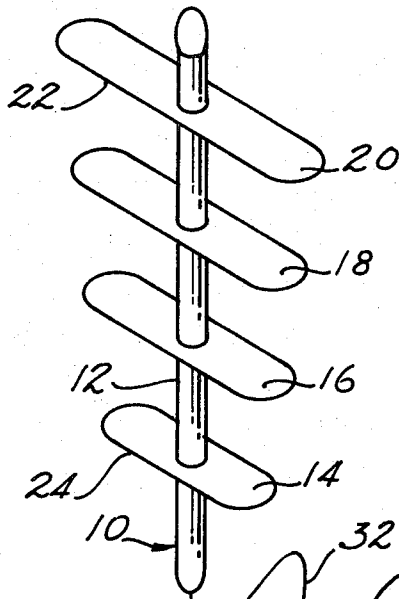


Fig. 2

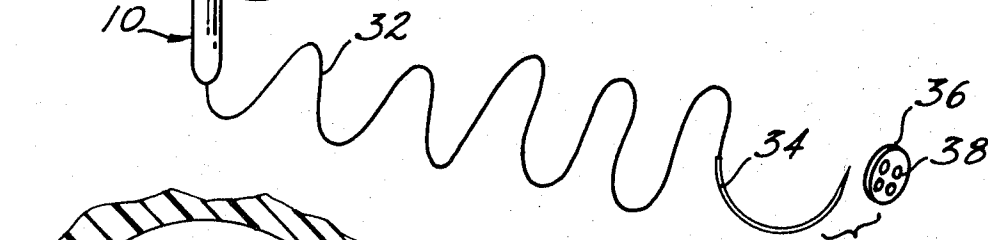


Fig. 1

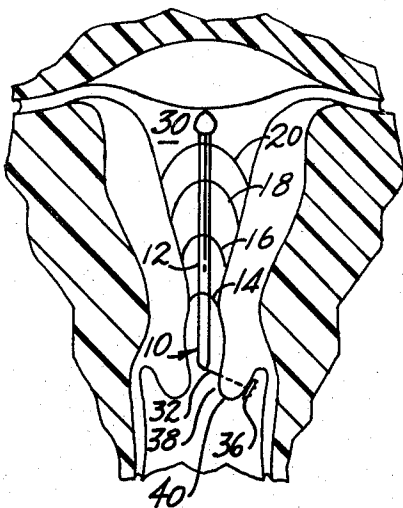


Fig. 3

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DUAL CONTRACEPTIVE DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

Contraceptive devices particularly intra-uterine devices, (IUD) in the general field of medical appliances and attachments.

2. Description of the Prior Art

The prior art includes the Lippe's loop which is a flat, sinuous and spring member which is elongated for insertion into the uterus and then permitted to return to its sinuous condition. The use of foreign agents placed in the uterus is quite old in the art and is known to prevent pregnancy but it is not known exactly how or why it is done and probably results from a natural function to reject pregnancy when there are foreign objects in the uterus. The Lippe's loop apparently does not lock or obstruct the spermatazoa to prevent it from reaching the ovum in the tube for conception to take place and probably functions after conception has taken place in a tube to prevent the fertilized ovum from attaching itself to the wall of the lining of the uterus which is necessary to a proper pregnancy. The Lippe's loop is not infallible and pregnancy can and has occurred in spite of the presence of the loop. Also, for reasons not entirely known the uterus will reject the loop and it becomes dislodged or displaced and must be reinserted.

SUMMARY OF THE INVENTION

The present IUD is an elongated member which can be bent to be preshaped and is installed in the uterus and tacked in place by a small suture so that it cannot become displaced under normal conditions. Also, it has small leaf-like branches which project from each side and which are shorter near one end and longer near the other and progressively longer from the shorter end so as to offer obstruction to the spermatazoa itself thereby tending to prevent some of the spermatazoa from reaching the ovum. The present device not only serves the usual function of an IUD to prevent pregnancy in some instances from its mere presence within the uterus but in addition offers the dual advantage of preventing some of the spermatazoa from reaching a point of conception. Perhaps a principal advantage of the present IUD resides in solving the problem of dislodgement or displacement which is common to other IUD's.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of the form of the present invention prior to installation.

FIG. 2 is a top plan view of the IUD shown in FIG. 1 with dimensions to illustrate typical size.

FIG. 3 is a diagrammatic view of a section through the uterus showing the present device of FIG. 1 installed therein and with the excess suture thread removed after installation.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The device is designated generally by reference numeral 10 and comprises an elongated member 12 which may be made from stainless steel, plastic, plastic coated metal wire or any other suitable material which has the characteristic of being bendable or deformable so that it can be shaped prior to installation and will re-

tain its shape. If a plastic material is used it would have as a characteristic not returning to original shape and therefore in the terminology of the plastic plate having little memory.

Positioned on the elongated member 12 at different places in spaced relationship therealong is a plurality of limbs, leaves or baffles 14, 16, 18 and 20 which are progressively longer as you go from the bottom leaf 14 to the top leaf 20 and which are substantially in alignment so that the edges on the opposite sides such as the edge 22 on leaf 20 or the edge 24 on leaf 14 are in the same plane. The leaves or walls 14, etc. are preferably made from material such as heavy plastic film which is soft and easily bent so as to be comfortable and to conform to the space within the uterus designated generally by reference numeral 30 in FIG. 3.

Elongated member 12 has initially a long suture thread 32 attached thereto to which is attached a suture needle 34 to be used with a separate surgical button 36 having four suture openings 38 therein. The IUD 10 is installed to its position shown in FIG. 3 in the following manner:

1. After appropriate dilating and sounding of the uterus the IUD 10 is inserted and the suture thread 32 would extend from the uterus opening 38.

2. Using a needle holder surgical instrument (not shown) the needle 34 is manipulated to be passed through the mouth 40 of the cervix.

3. The small surgical button 36 of soft inert material, such as polyethylene plastic, is advanced on the thread from the needle 34 to secure it against the side of the cervix and a special lock loop is placed to permit the button 36 to advance but not to recede.

4. The remaining thread of the suture thread 32 is cut and removed and the device will remain in place indefinitely even for many years.

The following advantages of the device 10 are noted:

1. Preparation for coitus would be unnecessary, since the device is always present without further preparation.

2. The conventional IUD although not requiring preparation for coitus has the following undesirable effects which are not present in any noticeable amount in the present device.

a. The spontaneous expulsion rate varies from 8 percent to 15 percent whereas the expulsion rate for the proposed device is minimal and perhaps even zero if properly installed and constructed.

b. The conventional intra-uterine device occasionally has been known to perforate the uterine wall and mingle with the intestines and although this is a rare occurrence and a dangerous complication it should be virtually eliminated with the present device.

c. Annoying, irregular, and unpredictable bleeding often follows the insertion of the conventional intra-uterine device and this should be diminished and reduced to a minimal amount with the present device.

d. It is believed that the present device will perform the dual effect previously described which includes the blockage of the spermatazoa.

It is recognized that the device 10 may take a little more time and perhaps a little more skill to place than with other IUDs. There could be more impediment to

- a. a flexible elongated member of a size and shape to fit inside the uterus and which elongated member is bendable into a pre-selected shape prior to installation in the uterus,
- b. a plurality of projecting members at different locations on said elongated member for contacting the inside of said uterus at different locations,
- c. and a flexible, filament-like member such as a

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said leaves are substantially straight, planar members constructed from heavy film or the like and project from opposite sides of said elongated member in spaced relation from one end to the other.

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