

(No Model.)

F. C. FERGUSON.
INTRA UTERINE STEM.

No. 533,120.

Patented Jan. 29, 1895.

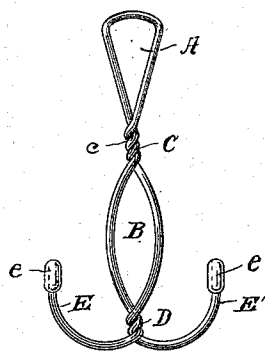


Fig. 1

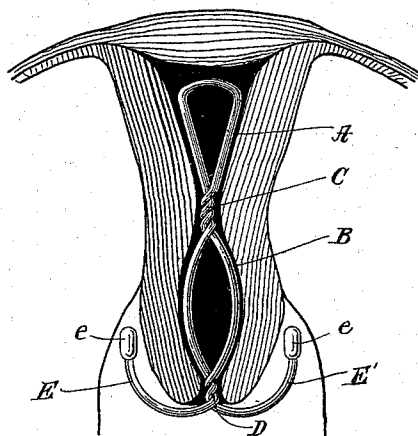


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK C. FERGUSON, OF INDIANAPOLIS, INDIANA.

INTRA-UTERINE STEM.

SPECIFICATION forming part of Letters Patent No. 533,120, dated January 29, 1895.

Application filed March 19, 1894. Serial No. 504,155. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. FERGUSON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Intra-Uterine Stems; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in intra-uterine stems for the treatment of flexions and displacements of the womb, painful menstruation, chronic metritis, endometritis, and for drainage in cases of suppuration of the fallopian tubes, and for sterility.

The objects of the invention are, first, to provide an instrument for insertion into the uterine cavity, so constructed that it will be self-supporting without requiring a vaginal pessary to retain it in place and will conform to the general contour of the uterine cavity; second, to construct an instrument that can be worn continuously without pain and can be worn during menstruation and for months or years if necessary; third, to distend and separate the folds of the endometrium so as to facilitate drainage and to prevent irritation arising from the accumulation of irritating discharges; fourth, to conform to the natural contour of the uterine cavity; fifth, to provide an unobstructed channel through the internal and the external os through which uninterrupted drainage may be had; sixth, to provide a stem of noncorrosive material, that will be inexpensive and can be bent before insertion to conform to the natural anti-curvature of the womb and that will be free from all sharp angles or projections that could cause irritation; seventh, to construct a stem that will not make injurious pressure upon the point of flexion; eighth, to construct a stem that will permit of the normal movements of the uterus during expiration and inspiration; ninth, and finally, to effect a permanent cure by the restoration of the normal circulation within the walls of the uterus and its appendages.

I accomplish the objects of this invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of my improved stem, and Fig. 2 is a view in longitudinal section of the uterus showing the stem inserted into its cavity.

Similar letters refer to like parts throughout both views of the drawings.

A represents the triangular portion of my improved stem which rests above the internal os and within the cavity of the body of the womb and is given this triangular shape in order to correspond with the downwardly tapering contour of the cavity. The length of this triangular portion A should be such as to extend almost but not quite the entire length of the cavity so as to leave a clearance of at least one fourth of an inch between the top of the triangle and the fundus. The upper corners of the triangle will be well rounded off as shown in the drawings to prevent injury to the parts with which it is brought into contact.

B is the spindle portion which rests within the cavity of the neck of the womb and in size and outline is shaped to conform to the natural contour of that cavity.

C represents the constriction which unites the parts A and B of my improved stem and rests within the internal os. It is provided with the circumferential channels *c* which serve as drainage canals through the os. In the drawings the channels are shown as spiral grooves but they might with equal advantage be made straight instead of spiral so far as their efficiency for drainage purposes is concerned.

It will be seen that the shape of the two sections A and B not only affords comfort to the wearer of my improved stem but that the stem itself is retained in its position within the uterus by the natural conformation of the interior of that organ.

D represents a second constriction which in this case rests within the external os and connects the spindle portion B with laterally projected arms E and E'. These arms are formed with an upward curvature by which they are made to embrace the sides of the cervix and also prevents the stem from being forced too far into the womb. Each of the arms terminate in a bulbous portion *e* in order to prevent irritation or wounding of the vaginal or cervical mucous membrane. This

bulbous terminal may be formed integral with the material of the arms or may be made from a separate piece which is secured by being riveted to the end of the arm or may be screwed onto the arm. Fig. 1 shows the terminal formed in separate piece and secured by being screwed onto the ends of the arms, the dotted lines indicating the arms.

The constriction D is also channeled to allow free egress of discharges from the womb.

In the construction of my stem I will preferably use wires which will be bent to form the triangle and the spindle and the projected ends of the wire will form the arms. The constricted portions with their spiral channels will be produced by twisting the wires together at the points C and D. By the use of wire I am able to produce a stem in which the edges will all be rounded off and in which the inside area of the triangle and spindle will be open and therefore produce an instrument much lighter in weight than if those parts were solid. However I do not wish to limit this invention to use of wire in the construction of the stem. In the selection of materials I have found the metal aluminum to be far superior to anything else on account of its light weight, its strength and because of its non-corrosive qualities, all of which are important in the construction of an instrument such as I have here described and for the purposes intended.

To insert the instrument the womb is drawn down with a tenaculum and the neck dilated one half inch. The instrument is then inserted into the cavity of the womb, the triangular portion first, and pushed along the canal until the spindle enters the cavity of the cervix and the neck rests upon the arms, which extend upward along the sides of the cervix to the extent of one half or three fourths of an inch.

I claim—

1. An intra-uterine stem having an upper triangular shaped portion adapted to be in-

serted into the cavity of the womb, a spindle shaped portion to occupy the cavity of the cervix and a constricted portion connecting the two and adapted to rest within the internal os, said parts forming an instrument that will be self supporting without the use of a vaginal pessary or other external support, substantially as described.

2. An intra-uterine stem having an upper triangular shaped portion adapted to be inserted into the cavity of the womb, a spindle shaped portion to occupy the cavity of the cervix, arms extending outside of the womb to engage the cervix-uteri and remaining free in the vagina and constricted portions connecting the upper triangle with the spindle and connecting the spindle with the arms, said constricted portions adapted to rest in the internal and the external os respectively, and both portions having channels by which unobstructed drainage of the parts of the uterus may be had.

3. An intra-uterine stem having a body portion to be inserted into the womb and having one or more arms connected with said body portion and extending outside of the womb and curved up so that the neck of the cervix-uteri will rest in the bend of the arms and the said arms terminating in a bulbous expansion for the purposes as described and specified.

4. An intra-uterine stem constructed of aluminum and having a body portion conforming to the contour of the general uterine cavity and having arms connected with said body portion and extending into the vagina and curved to engage the cervix-uteri, said arms terminating in bulbous expansions substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK C. FERGUSON.

Witnesses:

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F. C. HEATH.