No. 635,004. Patented Oct. 17, 1899.

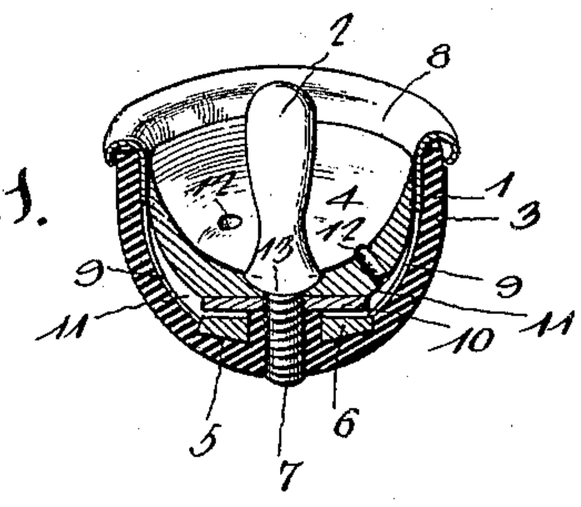
C. H. L. SOUDER.

UTERINE BATTERY.

(Application filed Jan. 30, 1899.)

(No Model.)

Fig. 1.



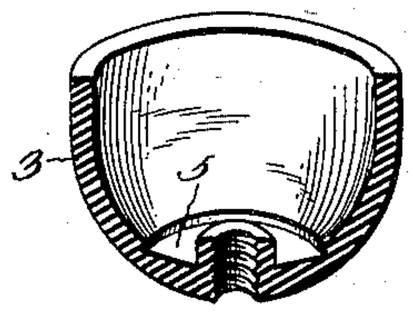
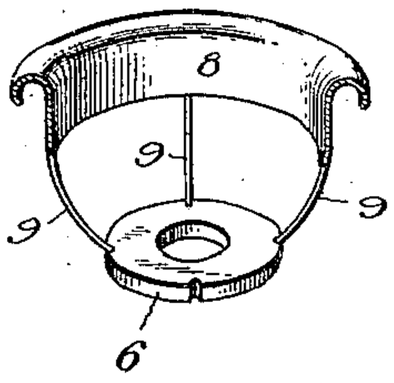


Fig. 2.

Fig. 3.



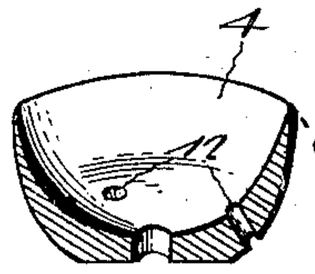
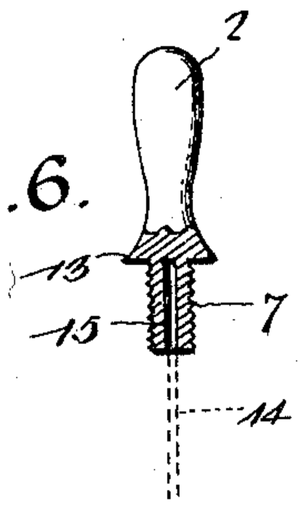


Fig. 4

Fig. 6.



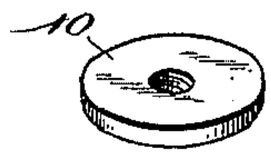


Fig. 5.

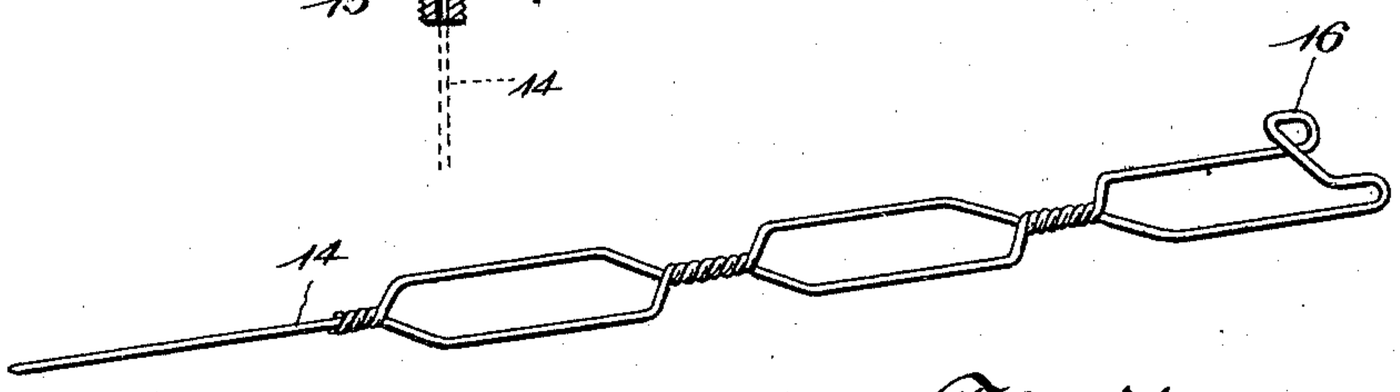


Fig. 7.

Witnesses
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C. H. L. Souder, Inventor.

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

CHARLES H. L. SOUDER, OF CHICAGO, ILLINOIS.

UTERINE BATTERY.

SPECIFICATION forming part of Letters Patent No. 635,004, dated October 17, 1899.

Application filed January 30, 1899. Serial No. 703,897. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. L. SOUDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Uterine Battery, of which the following is a specification.

This invention is designed to provide a battery for treating disorders of the uterus peculiar to females and to stimulate the parts to a normal action and which will insure the passage of the current through the walls of the womb.

A vital feature of the invention is a cup constructed of hard rubber, celluloid, or other equivalent composition inclosing a battery with intra and extra uterine pole or electrode pieces electrically insulated with reference to the cup and electrically connected with the respective battery elements.

A further object of the invention is to have the device of as light construction as possible, so it will remain in position without requiring external supporting means and which will be free from external corrosive contacting parts and capable of being easily and thoroughly cleaned.

Other objects and advantages will suggest themselves in the course of the following description when taken in connection with the drawings hereto attached.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a sectional perspective view of a uterine battery constructed in accordance with this invention. Fig. 2 is a sectional detail of the outer cup. Fig. 3 is a sectional detail view of the extra-uterine electrode or pole and battery element connected therewith. Fig. 4 is a sectional detail view of the inner cup. Fig. 5 is a detail view of the other battery element. Fig. 6 is a view in elevation of the intra-uterine electrode pole or stem, the lower portion being in section. Fig. 7 is a perspective view of the instrument for positioning and removing the battery.

The uterine battery comprises a body 1 and a centrally-disposed stem 2. The body is composed of an outer cup 3 and an inner cup 4, constructed of hard rubber, celluloid, or other equivalent composition generally used in devices of this character. The bottom of the outer cup 3 is formed with an annular groove 5 to form a seat for a battery element 6 and is centrally apertured, the aperture being internally threaded to make screw-thread connection with the threaded shank 7 of the stem 2. A metal band 8 is fitted to the upper marginal portion of the cup 3, and its upper edge portion is recurved, so as to extend over and embrace the top edge of said cup 3, and this band constitutes the extra-uterine electrode of the battery. Aluminium is preferred for the construction of the extra-uterine annular electrode 8 because of its lightness and capability of resisting corrosive action, although other metal might be used to make said electrode 8. The element 6 is connected with the part 8 by a series of arms or wires 9, which are curved to conform to the outline of the inner wall of the cup 3, so as to lie close thereagainst. By having the parts 8 and 6 rigidly connected by means of the wires or arms 9 a perfect connection is made between the element 6 and electrode 8 and the latter is prevented from displacement after the elements have been properly assembled and secured by means of the stem 2 in the manner presently to be described.

The battery element 10 in the form of a disk and approximating the size of the element 6 is placed above and out of contact with the latter and is centrally apertured to admit of the shank 7 screwing therein, making perfect connection between the element 10 and electrode 2. The elements 6 and 10 bear the relation of positive and negative battery elements, so as to set up a galvanic action and create a current, which is utilized in the manner and for the purpose set forth.

The inner cup 4 is of less height than the outer cup 3, and its walls taper upwardly to an edge, so as to fit smoothly against and

within the lower portion of the extra-uterine electrode 8 and avoid any projecting part which would be liable to chafe and set up irritation. The bottom side of the cup is flattened to rest upon the element 10, and an annular space 11 is formed between the opposing sides of the inner and outer cups exterior to the elements 6 and 10 for the reception of secretions and mucous fluid. A series of openings 12 are formed in the lower portion of the cup 4 and communicate with the chamber 11 and constitute ducts for the passage of the fluids from within the cup 4 to the chamber 11.

The stem or intra-uterine electrode 2 may be of any desired length, according as special cases may require, and its lower end is reduced, forming a shank 7, which is externally threaded to make screw-thread connection with the element 10 and the central opening of the cup 3. An outer shoulder 13 is formed at the base of the threaded shank 7 and overlaps the portion of the cup 4 bordering upon the central opening formed therein, whereby the parts 4 and 10 are clamped between the shoulder 13 and the raised inner-wall portion of the groove 5, thereby positively spacing apart the two battery elements. This stem is of metal, aluminium being preferred, and being in electrical connection with the battery element 10 constitutes the intra-uterine pole or electrode thereof.

The battery may be placed in position in any of the ways commonly practiced; but for convenience an instrument 14 is provided, one end being pointed and the opposite end bent to form a hook 16 to engage over the upper edge portion of the body, so as to dislodge it when it is required to remove the device for any purpose. An opening 15 is formed in the lower end of the stem 2 to receive the pointed end of the instrument 14 when the latter is used for placing the device in position. The instrument 14 is constructed of wire of small gage, so as to be sufficiently flexible to conform readily to the passage when introducing the instrument therein, thereby avoiding injurious contact of the instrument with the walls of said passage. The wire from which the instrument is constructed is folded upon itself, forming parallel members, and the latter are intertwisted at intervals, so as to secure a mutual bracing and strengthening of the members, as most clearly indicated in Fig. 7. The intertwisting of the parallel members forms, in effect, alternately-disposed open links and twisted bars and provides an instrument of appreciable width and possessed of stiffness and lightness.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a device of the character set forth, a body comprising inner and outer cups, battery elements arranged between said cups, and intra and extra uterine electrodes connected with the respective battery elements, substantially as and for the purpose set forth.

2. In a device of the class described, a cup-body, a pair of battery elements arranged within said body, an intra-uterine electrode-stem connected with one of the battery elements, and a marginal extra-uterine electrode fitted to the cup-body and connected with the other battery element.

3. In a device of the character specified, a cup-shaped body, a battery located in the bottom of the body, a centrally-disposed stem, forming the intra-uterine electrode connected with one of the battery elements, and a metallic band applied to the upper inner marginal portion of the cup and constituting the extra-uterine pole electrode, said band being connected with the other battery element, substantially as set forth.

4. In a device of the class described, a cup-shaped body, a battery placed within the bottom of the cup, a centrally-disposed intra-uterine electrode, and an annular extra-uterine electrode snugly fitted against the upper and inner marginal portion of the cup and having its upper edge portion recurved to extend over the top edge of the cup and embrace the inner and outer sides thereof, said intra and extra electrodes being respectively connected with separate battery elements, substantially as described.

5. In a device of the character specified, the combination with the cup-shaped body, and an intra-uterine electrode having a battery element connected therewith, of an extra-uterine electrode of annular form to be fitted to the upper marginal portion of the body and also having a battery element connected therewith, substantially as set forth.

6. In a device of the character set forth, a body formed of inner and outer cups inclosing a chamber between them, the inner cup having a central opening, and ducts establishing communication with the said chamber, a battery located in the chamber, a centrally-disposed intra-uterine electrode connected with an element of the battery, and an annular extra-uterine electrode applied to the marginal portion of the cup and connected with the other battery element, substantially as set forth.

7. In combination, an outer cup, having its bottom grooved, a battery element seated in said groove, an annular extra-uterine electrode applied to the upper edge portion of the cup and electrically connected with said battery element, a second battery element arranged above and out of contact with the first-mentioned element, an inner cup having its walls tapering to provide a smooth joint with the upper portion of the outer cup, and a stem clamping the several parts and electrically connected with the upper battery element, substantially as described.

8. In combination with a device of the char-

acter set forth having a centrally-disposed opening, an instrument pointed at one end and provided with a hook at its opposite end, said instrument being constructed of wire which is doubled upon itself forming parallel members and having the latter intertwisted at intervals in their length, substantially as shown for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. L. SOUDER.

Witnesses:
ALPHEUS FOX,
W. H. BRAY.