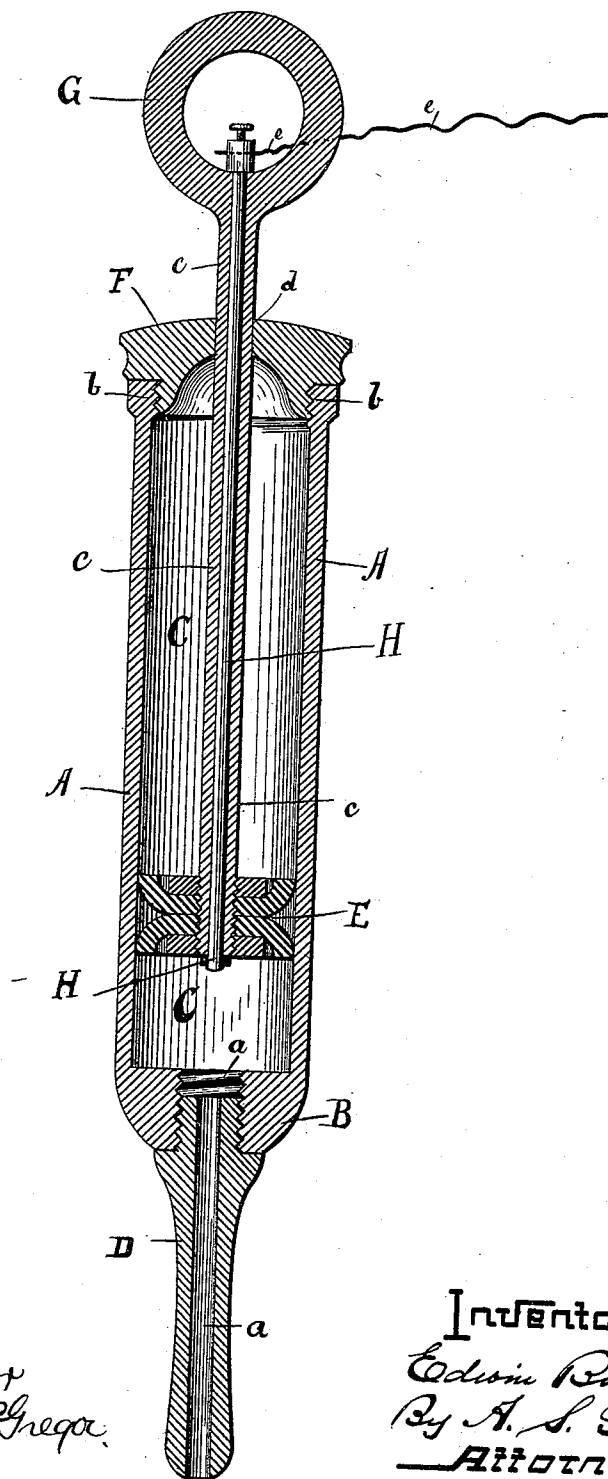


(No Model.)

E. BARTSCH.
ELECTRO THERAPEUTIC SYRINGE.

No. 449,651.

Patented Mar. 31, 1891.



Witnesses

E. L. O'Connor
Frederick M. Grege.

Inventor

Edwin Bartsch
By A. S. Paré
Attorney

UNITED STATES PATENT OFFICE.

EDWIN BARTSCH, OF SAN FRANCISCO, CALIFORNIA.

ELECTRO-THERAPEUTIC SYRINGE.

SPECIFICATION forming part of Letters Patent No. 449,651, dated March 31, 1891.

Application filed June 28, 1890. Serial No. 357,127. (No model.)

To all whom it may concern:

Be it known that I, EDWIN BARTSCH, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Syringes; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

The first part of my invention relates to the use of electricity in conjunction with fluid through the medium of an ordinary medical syringe, more especially adapted for the treatment of female diseases, and the object of this part of my invention being when in use to cure ulceration of the womb, nervous diseases, &c.

The second part of my invention relates to improvements in the suction-aperture. The object is to provide means whereby a set of accessories can be securely and readily attached to the syringe, and to prevent the said accessories whenever in use from being accidentally detached or falling down. I attain these objects by the construction and arrangement illustrated in the accompanying drawing, which forms a part of this specification, and in which—

The letter A represents the body or cylindrical portion of the syringe; B, its bottom. Said bottom and body are constructed in the usual manner and of any suitable material. Within the body is provided the annular chamber C, which is intersected by the suction-aperture *a*, formed centrally within the bottom B.

Attached within the suction-aperture *a* and connected therewith in any suitable manner is a straight nozzle or tube D, which extends outwardly from the bottom of the syringe. This nozzle is made independently of the body of the syringe, so that it can be removed whenever it is necessary, and a suitably-shaped nozzle may be attached to the aperture, as the case may be.

If it is preferable to use the syringe without nozzles, a plug can be attached to the aperture in the same manner as the nozzle, thus straightening said aperture. I prefer to carry out this feature of my invention in the man-

ner shown in the drawing, where it will be seen that the aperture *a* has female threads cut therein for receiving the threaded end of the nozzle. Fitted in this manner, the most accurate adjustment of the nozzles can be effected. The upper end of the body A is cut away so as to form the inwardly-projecting annular flange *b*, which has the inner female threads cut thereon.

The piston is indicated by the letter E, and is operated in the usual manner by the piston or plunger rod *c*, which passes the aperture *d*, formed centrally within the cap or cover F, and is provided with the usual finger-ring G.

Placed within the piston or plunger rod *c*, and connected thereto in any suitable manner, is an electric conductor H, which extends through the piston-rod from end to end, and is connected at the upper end with an electric conductor *e*. The lower end of said conductor H projects outwardly from the piston E into the chamber C, thus connecting the conductor to the fluid, when the syringe is charged.

It is obvious from the above description that numerous changes can be made in the connection of the electric conductor to the fluid without departing from the scope of my invention—as, for instance, the electric conductor might be secured to the cap or cover F by the usual binding-screw or on the side of the body of the syringe near the upper end and the same connected to an electric conductor placed in the inner chamber C. I therefore do not wish to confine myself to any peculiar mode of construction.

I am aware that prior to my invention medical syringes have been constructed integral with suitably-shaped nozzle or tube for the treatment of leucorrhœa, menorrhagia, dysmenorrhœa, inflammation of the mouth and neck of the womb, or any other part of the vagina; also, breast-pump and aspirators for ulceration, &c., thus making a complete syringe for the treatment of any of the above diseases. I therefore do not claim such construction, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. A medical syringe composed of a cylindrical case or shell having a chamber formed therein, and suitable means to charge said

chamber with electricity, substantially as set forth, and for the purpose described.

2. A medical syringe composed of a cylindrical case or shell having a chamber formed therein, a cut-away end, a suction-aperture, and suitable means to charge said chamber with electricity, substantially as set forth, and for the purpose described.

3. A medical syringe composed of a cylindrical case or shell having a chamber formed therein, a cut-away end, a suction-aperture, a piston provided with a rod or plunger working in said chamber, and suitable means to charge said chamber with electricity, substantially as set forth, and for the purpose described.

4. A medical syringe composed of a cylindrical case or shell having a chamber formed therein, a suction-aperture, a piston provided with a rod or plunger working in said chamber, an electric conductor placed in said chamber, and means to connect said conductor to an

electric battery, substantially as set forth, and for the purpose described.

5. A medical syringe composed of a cylindrical case or shell having a chamber formed therein, an electric conductor placed in said chamber, a suction-aperture, a suitably-shaped nozzle adapted thereto and rigidly secured within said aperture and connected therewith, substantially as set forth, and for the purpose described.

6. A medical syringe constructed in any suitable manner and of any suitable material, having means to electrify fluid within the syringe for medical treatment, substantially as set forth, and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

EDWIN BARTSCH. [L. S.]

In presence of—

A. S. PARÉ,

E. L. O'CONNOR.