No. 706,602. Patented Aug. 12, 1902.

I. E. SHAFFER.

THERAPEUTIC ELECTRICAL APPARATUS.

(Application filed Nov. 27, 1901.)

(No Model.)

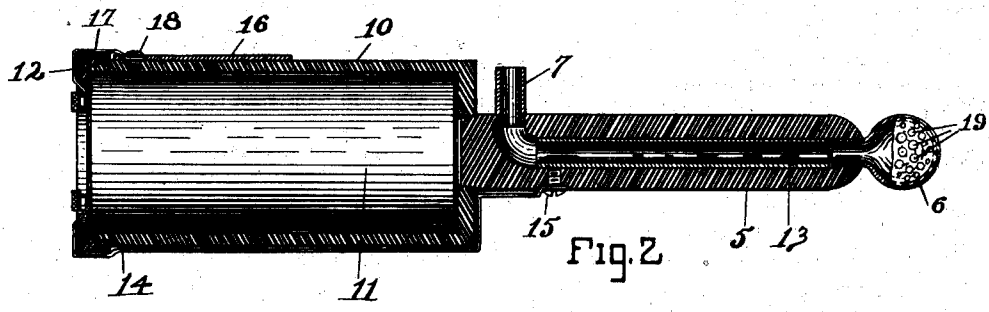
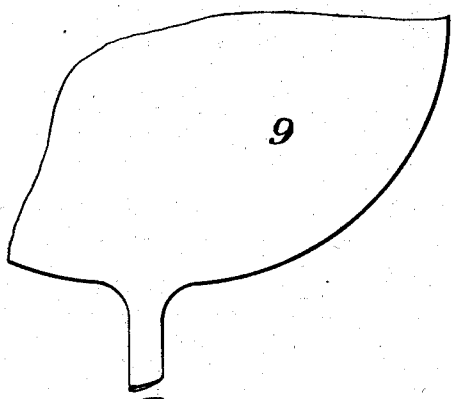


Fig. 2



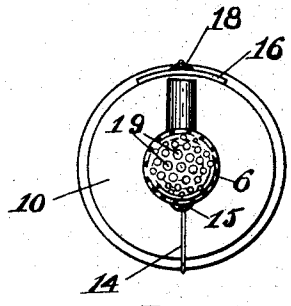


Fig. 3

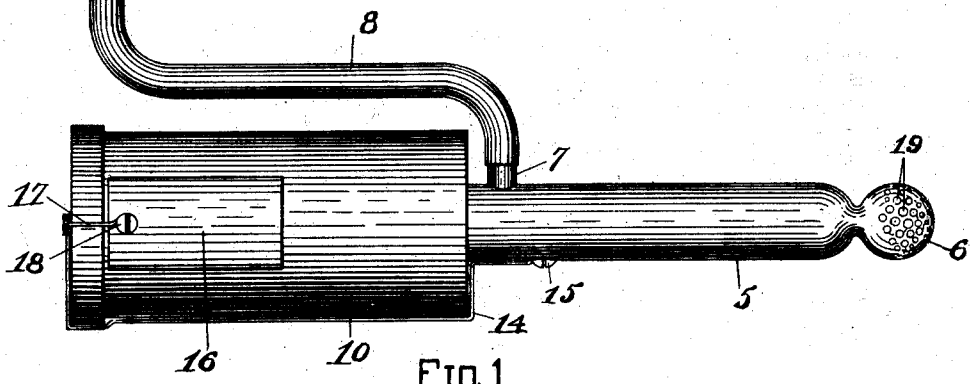


Fig. 1

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THERAPEUTIC ELECTRICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 706,602, dated August 12, 1902.

Application filed November 27, 1901. Serial No. 83,944. (No model.)

To all whom it may concern:

Be it known that I, IRA E. SHAFFER, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented a new and useful Therapeutic Electrical Apparatus, of which the following is a specification.

My invention relates to electrical apparatus; and the object thereof is to provide apparatus for therapeutic purposes which will distribute the electric current over either a larger surface or the entire surface of irregular parts of the human anatomy or of animals in the application of said current.

I shall describe my invention more particularly as applied to the treatment of the uterus; but it will be understood that by varying the form, size, and shape of the instrument it can be applied in like manner to the different internal and external organs which it would be advantageous to treat with the electric current by direct application.

In the application of electricity to the animal organs it is usual to attach a sponge to one of the poles or terminals and place it against the organ to be treated, while the other terminal is grasped in the hand or applied to another part of the body. When the sponge is applied to an organ, it usually touches only one part of it and when the current is turned on there is a contraction of that part. In order to apply the current to all parts, the sponge must be removed from one part to another and each part in turn is contracted. It is my purpose to reach all parts of the organs at the same time, so that all parts shall contract at the same time and expand together, thus getting the full benefit of the application of the current to the organ.

One of the most difficult organs to treat electrically is the uterus, for the reasons stated above, and it is the special object of my invention to provide an electrical apparatus for this purpose which will successfully distribute the current over all exposed parts, which is simple and easily manufactured, and which can be conveniently used without the aid of an assistant.

I attain the objects of my invention by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a syringe constructed according to my invention, a part of the reservoir and tube leading therefrom being shown. Fig. 2 is a longitudinal section of the nozzle and battery-holder, showing a battery mounted therein; and Fig. 3 is an end view of the nozzle and battery-holder.

In the accompanying drawings like parts are indicated by the same numerals of reference in each of the views, and in the practice of my invention I provide a nozzle 5 and a globular tip 6, which is detachably connected with the end of said nozzle, preferably by being screwed into the same, as clearly shown in Fig. 2. The other end of the nozzle is closed, the passage-way extending back adjacent thereto and communicating with a hollow stud 7, inserted in the side of the nozzle. In operation a flexible tube 8 is mounted on the stud 7 and is connected with a reservoir 9, whereby water may be made to flow through the nozzle, as will be readily understood.

For convenience I secure a battery-holder 10 to the rear end of the nozzle 5 and in it I mount a dry battery 11 of any desired construction and which may be held in said holder by a rim-cap 12 or in any convenient manner.

In the passage-way of the nozzle I mount a metal tube 13, so constructed and disposed that all the water passing through the nozzle will pass through said tube. One of the poles of the battery is connected with said tube 13 by a conducting-wire 14 and binding-screw 15. The other pole is connected with a plate 16 by a wire 17 and binding-screw 18. The tip 6 is provided with a plurality of orifices 19 of considerable size, so that the water will be discharged in continuous streams from the different orifices.

In operation the nozzle 5 is inserted in the vagina. The battery-holder 10 is grasped in the hand, so that the plate 16 will contact with said hand. The water is then turned on, and as it passes through the tube 13 it will act as a conductor to the parts of the uterus with which it comes in contact, and as the stream is divided by the plurality of orifices the current will be distributed over the entire exposed surface of the uterus, and the contraction of all the parts of the same will be uniform and without the necessity of moving the electrode from one point to an-

other, as is the case with a sponge or with a sound.

It will thus be seen that I accomplish the object of my invention in a very simple and efficient manner, and I do not limit myself to the exact construction herein disclosed, for it is evident that many changes may be made without departing from the spirit of my invention, such as entirely separating the battery from the nozzle, or in using an ordinary medical battery with a primary and secondary current, or in substituting a plate for the tube 13 or an ordinary hand-electrode for the plate 16, or of so locating the plate 16 that it will contact with a portion of the body instead of the hand, or in the shape and construction of the nozzle and tip according to the part of the body with which it is to be used.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A therapeutic electrical apparatus comprising an instrument adapted to convey a liquid to the part of the body to be treated, means to electrically charge the flowing liquid, and a spherical terminal provided with perforations so disposed as to disperse the liquid over a large area, for the purpose set forth.

2. A therapeutic electrical apparatus comprising an instrument adapted to convey a liquid to the part of the body to be treated, means to connect one pole of a battery with the flowing liquid, and means to connect the other pole with a portion of the body, and a spherical terminal provided with perforations so disposed as to disperse the liquid over a large area, as and for the purpose set forth.

3. A therapeutic electrical apparatus comprising a syringe, a battery-holder connected with one end of the nozzle thereof, a battery mounted in said holder, a terminal mounted in the passage-way of said nozzle, and a second terminal mounted on the exterior of the battery-holder, as and for the purpose set forth.

4. A therapeutic electrical apparatus, comprising a syringe, a battery-holder connected with one end of the nozzle thereof, a battery mounted in said holder, a tube mounted in the passage-way of said nozzle, a conductor connecting one pole of said battery with said tube, a plate mounted on the exterior surface of said battery-holder, and a conductor connecting the other pole of said battery with said plate, as and for the purpose set forth.

5. A therapeutic electrical apparatus comprising a syringe, a battery, a terminal mounted in the nozzle of said syringe, a second terminal exterior to said nozzle, the discharge end of the nozzle being composed of non-conducting material semispherical in form, and provided with a plurality of perforations, as and for the purpose set forth.

6. A therapeutic electrical apparatus comprising a syringe, a battery-holder, a battery mounted therein, a tube mounted in the nozzle of said syringe, a conductor connecting said tube with one pole of said battery, a plate mounted on said battery-holder, a conductor connecting said plate with the other pole of said battery, and a globular tip forming the discharge end of said nozzle, said tip being provided with a plurality of large orifices, as and for the purpose set forth.

In testimony whereof I have signed my name to this application in the presence of two subscribing witnesses.

IRA E. SHAFFER.

Witnesses:
GRAHAM MCADAM,
FREDERICK WILLIAM MEYER.