

UNITED STATES PATENT OFFICE.

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ELECTRO-MEDICAL AIR-INJECTOR.

SPECIFICATION forming part of Letters Patent No. 505,393, dated September 19, 1893.

Application filed August 7, 1893. Serial No. 482,606. (No model.)

To all whom it may concern:

Be it known that we, JAMES DAWDY and FRANK M. CATTERN, citizens of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Electro-Medical Air-Injectors; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to an improved medical instrument specially designed for treating diseases of women pertaining to the womb.

The device consists of a tube having a nozzle at each extremity and an electric source capable of generating a weak current which is carried directly to the parts treated, by insulated wires passing from the respective poles of the battery through the tube. The extremities of the wires or conductors farthest from the source of the current, project into an opening in the extremity of the nozzle which enters the body of the patient. These extremities of the conductors are exposed and uninsulated, but not directly connected, except when the instrument is in use, when the part to which the nozzle extremity is applied bridges the space between the separated conductor-extremities and completes the circuit through the medium of said part, and starts the current to flow. The opposite extremity or nozzle of the tube may be inserted in the mouth and a current of air passed from the lungs to the affected part, whereby inflammation may be allayed and the parts reduced to the normal temperature. The combined effect of the weak current of electricity and the air introduced from the lungs has been found very efficient in the treatment of womb diseases characterized by inflammation. The invention may therefore be called an electro-medical air injector and

will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is an elevation of the instrument. Fig. 2 is an enlarged sectional view of the same, partly broken away in the center. Fig. 3 is a cross section taken on the line $x-x$, Fig. 2.

Similar reference characters indicating corresponding parts or elements of the mechanism in the several views, let the numeral 5 designate a flexible tube preferably composed of soft rubber and provided with the rigid nozzles 6 and 7 at its extremities. Attached to a rigid insulating sleeve 8 surrounding the tube in proximity to the nozzle 6 are the disks 10 and 10^a of unlike metal capable of generating a current of electricity when connected by a porous pad 9 saturated with a suitable solution. These disks may consist of copper and zinc and they are insulated from each other by the sleeve 8. From the disks 10 and 10^a lead the insulated wires 12 and 12^a which traverse the tube 7 to the opening 7^a where the wire extremities are uninsulated and exposed, but so fashioned that they will not injure the delicate parts which the instrument is intended to treat. These exposed extremities of the conductors do not engage each other or meet, but are separated by a suitable space, whereby the circuit is normally broken. When, however, these separated extremities engage the body, the circuit is completed and the current passes from one extremity to the other through the part engaged which is thereby subjected directly to the action of the current generated in the voltaic battery. The nozzle 6 being inserted in the mouth, a current of air is forced from the lungs of the patient herself to engage the part under treatment, simultaneously with the application of the weak electric current. Of course it will be understood that the strength of the voltaic battery may be increased to any desired extent by increasing the number of zinc and copper plates arranged and connected in the usual manner.

Having thus described our invention, what we claim is—

5 An electrical apparatus consisting of a tube having a nozzle at each extremity, and a voltaic battery attached to the tube and conductors passing therefrom through the tube and exposed at the opening in one of the nozzles, whereby the circuit is normally open but closed by contact with the parts to which

the instrument is applied, substantially as is described.

In testimony whereof we affix our signatures in the presence of two witnesses.

JAMES DAWDY.

FRANK M. CATTERN.

Witnesses:

G. J. ROLLANDET,

CHAS. E. DAWSON.