

No. 672,047.

Patented Apr. 16, 1901.

H. E. WAITE.  
ELECTRODE.

(Application filed Feb. 16, 1901.)

(No Model.)

Fig. 1.

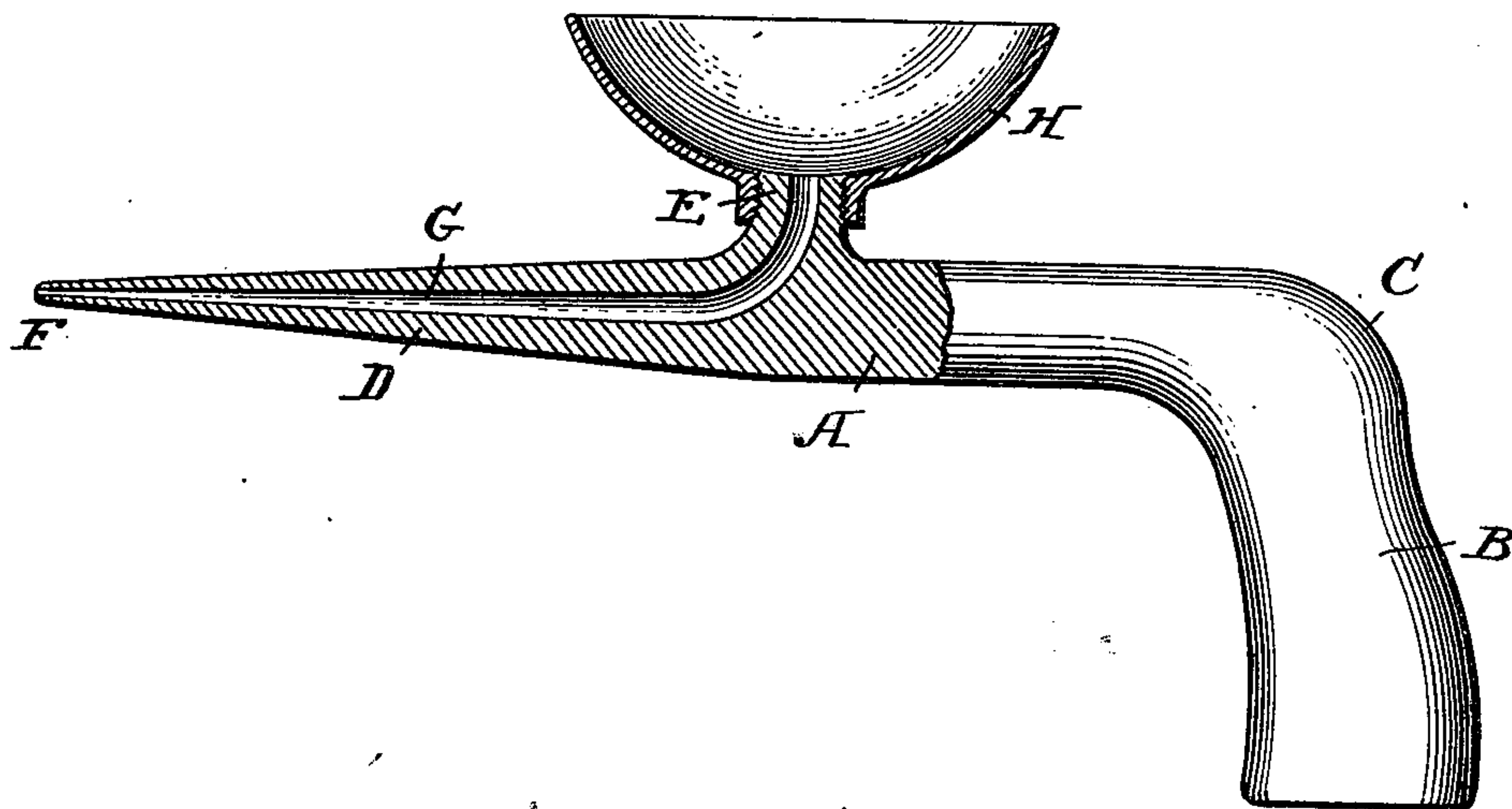
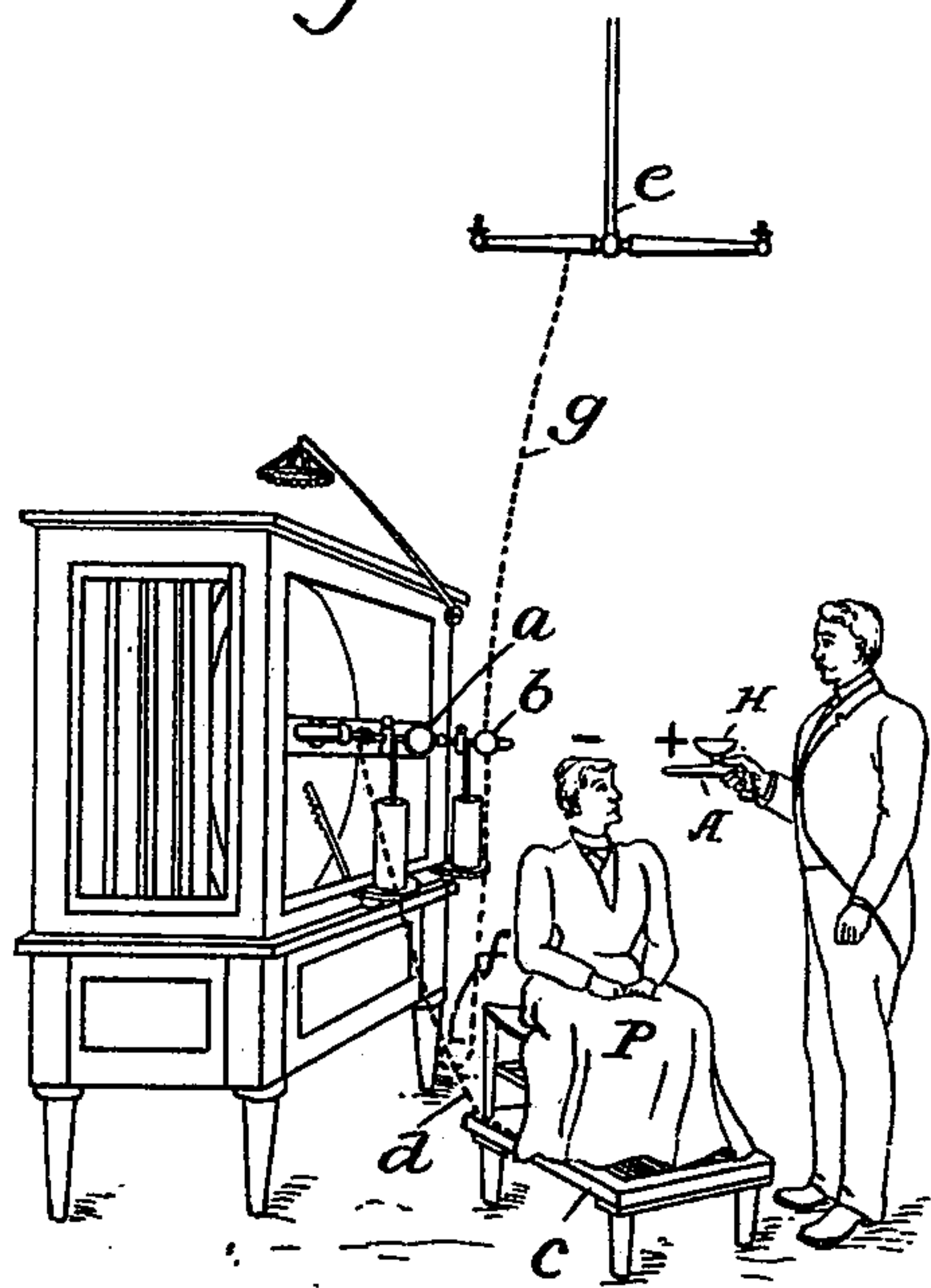


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY E. WAITE, OF NEW YORK, N. Y.

## ELECTRODE.

SPECIFICATION forming part of Letters Patent No. 672,047, dated April 16, 1901.

Application filed February 16, 1901. Serial No. 47,602. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY E. WAITE, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Electrodes, of which the following is a specification.

My invention relates to improvements in therapeutic electrodes for use more particularly in the application of static electricity to the human body; and its object is to provide an electrode by means of which static electricity may alone be administered or the static charge may be accompanied by a vapor having medicinal properties, which vapor is produced by cataphoric action on any desired drug introduced into the electrode by particular means.

Electrodes are in use for introducing medicinal substances directly into the tissues of the human body through the agency of a constant current of galvanic electricity, the action being known as "cataphoric medication," "electro-osmosis," or "anodal diffusion;" but it is necessary in this case that the electrodes shall be in actual contact with the body. While there are also various ways of treating diseases by means of the faradic or induced current and the static electricity from an influence-machine, my especially-devised electrode is particularly applicable for use under conditions where neither galvanic nor faradic electricity would produce any results.

My electrode is designed for use with static electricity in connection with that form of treatment known as "static insulation," whereby the patient, placed upon an insulated stand, is charged for a given length of time with either a positive or negative charge, according as the patient is connected with the positive or negative pole of an influence-machine. The poles of the machine should be separated to the desired distance, and if under these conditions the electrode connected with the second pole of the machine is held in proximity to the patient on the insulated stand his body will receive a charge which has known therapeutical effects. By means of cataphoric action, while this condition of static insulation is being produced, I am able to diffuse about the patient a vapor having medicinal qualities which penetrates the

clothing and produces the effects desired, but in a mild and agreeable manner, without shock or any of the accompaniments of the more severe forms of treatment.

In the accompanying drawings, Figure 1 is a side view, partly in section, of an electrode made according to my invention. Fig. 2 illustrates its use in connection with a static machine.

Referring to Fig. 1, A represents the body of an electrode made of any suitable electro-conductive substance, but preferably of metal. The body may be of any desirable shape, but I have shown it curved at B to form a convenient handle C and as having an extended tubular portion D. At a point between the handle C and end F of the electrode is a means for attaching a receptacle shown as a screw-threaded lug E, and extending from the top of the lug through the electrode to the end F is a channel having a capillary dimension and shown as tapering from E to F. A vessel H, which may be of glass or rubber, is adapted to be secured to the lug E and hold the material from which to produce the vapor while the electrode is in use. Upon filling the vessel H with the desired material it will pass into the channel G, but cannot under ordinary circumstances pass out through the capillary portion. Should the electrode A, however, be connected with one pole of an influence-machine under the conditions hereinbefore specified, the material then becomes charged with electricity and is caused by cataphoric action to flow from the end F in the form of an exceedingly light and penetrating vapor.

In Fig. 2 is shown the method of using my electrode, in which *a* and *b* represent the poles of an influence-machine, and *c* an insulated stand connected, as by a chain *d*, with the negative pole *a*. The other electrode is grounded by attaching it, as by a chain *g*, to the gas-pipe *e* or by simply allowing the end *f* of the chain to fall to the floor. The poles *a* and *b* are placed at a proper distance apart, and the patient P is placed upon the stool *c*. The operator O, with the electrode A containing the desired medicating material in his hand, takes his stand in proximity to the patient, as shown in the figure. Then if the machine to which the poles *a* and *b* are con-



connected is set in operation the static electricity passes through the chain *g* to the floor or ground, thence to and through the operator to the electrode A, and from its point to the patient, causing the hereinbefore-mentioned vapor to issue. Thus the use of my electrode makes it possible to administer mild applications of static electricity to sensitive patients in conjunction with a medication.

Without limiting myself to the precise construction and arrangement of parts shown, I claim as my invention—

1. A therapeutic electrode for the application of static electricity consisting of an electroconductive body with a tubular portion having a capillary channel, substantially as described.

2. A therapeutic electrode for the application of static electricity consisting of an electroconductive body with a tubular portion having a capillary opening at its point, substantially as described.

3. A therapeutic electrode for the application of static electricity consisting of a body having a hollow lug for the attachment of a vessel, and a tubular portion, substantially as described.

4. A therapeutic electrode for the applica-

tion of static electricity consisting of a body having a hollow lug for the attachment of a vessel, and a tubular portion having a capillary channel, substantially as described.

5. A therapeutic electrode for the application of static electricity consisting of a body with a tubular portion, a hollow lug on the body and a vessel attached to the lug, substantially as described.

6. A therapeutic electrode for the application of static electricity consisting of a body with a tubular portion having a capillary channel, a hollow lug on the body and a vessel attached to the lug, substantially as described.

7. A therapeutic electrode for the application of static electricity consisting of a body with a tubular portion having a capillary opening at its point a hollow lug on the body and a vessel attached to the lug, substantially as described.

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

HENRY E. WAITE.

Witnesses:

E. S. WILKINSON,  
E. H. OPITZ.