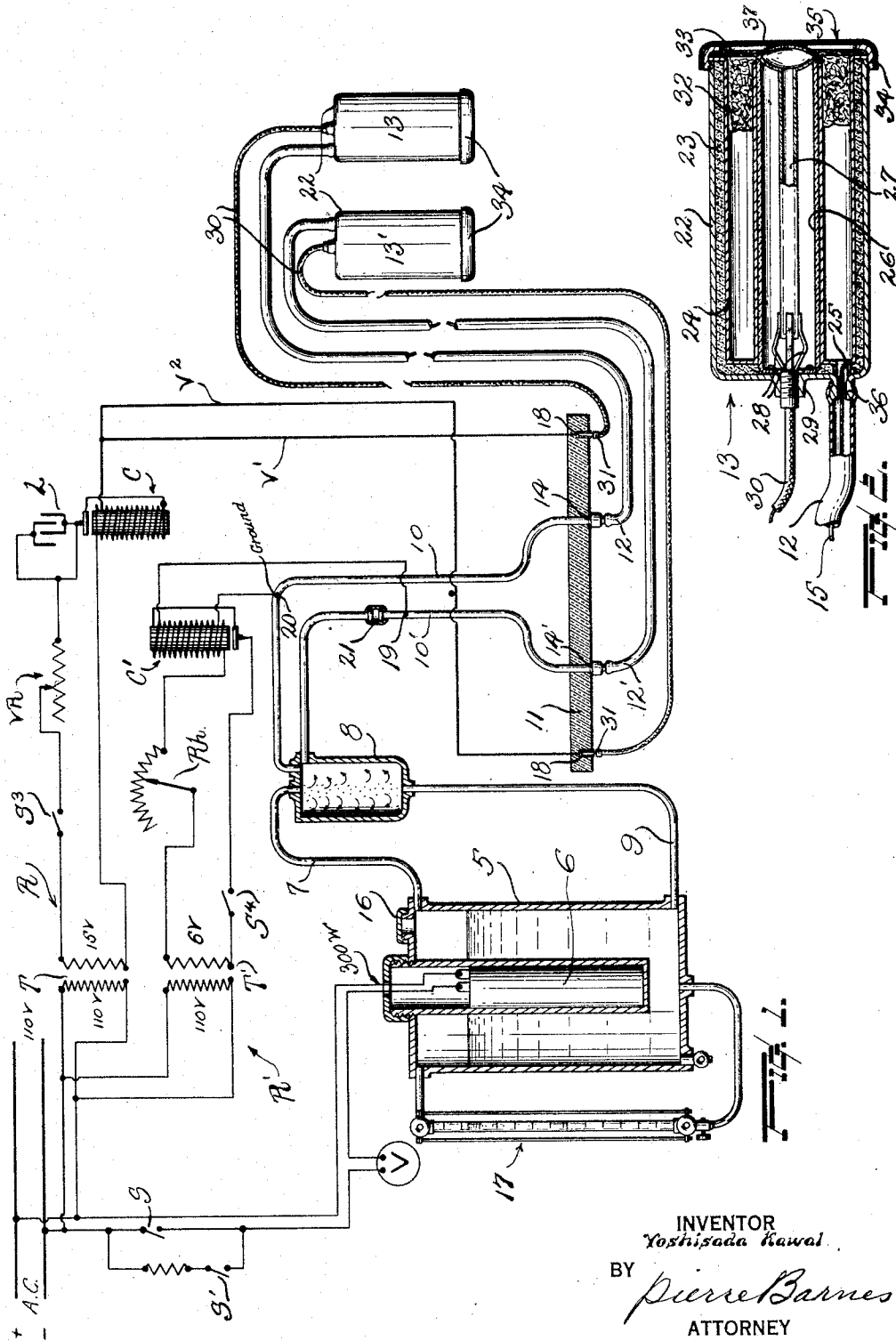


July 12, 1932.

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MEDICINAL APPARATUS

1,866,772

Filed June 24, 1929



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# UNITED STATES PATENT OFFICE

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## MEDICINAL APPARATUS

Application filed June 24, 1929. Serial No. 373,203.

This invention relates to medicinal apparatus, and, more especially, to apparatus of this kind wherein vaporized medicine is applied to affected parts of one's body in union with beneficial electrical effects.

An object of the invention is to provide means whereby a constant supply of vaporized medicine can be maintained to the body.

Another object of the invention is to provide a medium whereby stimulation of the skin is built up at the affected parts to more readily assimilate the medicine.

Still further objects and advantages will become apparent in the following specification and claims.

In the drawing, Figure 1 is a view of apparatus embodying my invention, parts being shown in section and parts being shown in symbolic representation. Fig. 2 is a vertical longitudinal section of one of the applicators represented in Fig. 1, taken to an enlarged scale.

Before proceeding with a detailed description of the apparatus shown, it might be advantageous to set forth, in a general way, the end attained by utilizing the invention. In many disorders, such as rheumatism, neuralgia, etc., affecting the nervous muscular and respiratory systems, certain curative medicinal values are present in some medicines, such being especially of benefit by vaporizing the same in assuring a more rapid assimilation to the affected portions of the body.

Healthful results are further attained by using a violet ray in conjunction with the above, the theory as to its action upon the human system being that it sets up a nerve response at the point of contact.

Electrical shocks will act in a similar manner, with respect to nerve response, and in addition set up a current of electrical atoms between two contactual points of the body, such current coursing through the body having a tendency of drawing atoms of the vapor into contact with the affected parts. In utilizing the foregoing, I provide means whereby such electrical disturbances and a requisite quantity of vaporized medicine may be most advantageously interassociated and applied, one in conjunction with the other.

Reference being had, more especially to Fig. 1, apparatus utilized in the present invention comprises a medicinal storage chamber 5, having centrally suspended therein, a heating rod 6, adapted to raise the temperature within said chamber to a point where vapor will form and be carried through the passage 7 to a condensing chamber 8, excess fluid being returned through the return pipe 9 to the storage chamber.

Pipes 10, 10<sup>1</sup> lead from said condensing chamber 8 to a panel 11, of suitable non-conductive material, and through flexible couplings 12, 12<sup>1</sup> to applicators 13, 13<sup>1</sup> which will be hereinafter described in detail. Said couplings are further provided interiorly of the length thereof, and in contactual relation with the ends 14, 14<sup>1</sup> of said pipes 10, 10<sup>1</sup> with a conducting wire 15 (Fig. 2). A filling cap 16 and gauge 17 are advantageously provided for said chamber 5.

In combination with said chamber, I provide means operable from a main alternating current source, consisting of switch posts S, S<sup>1</sup>; in a manner to provide selective resistance in controlling the heat set up by the rod 6. Connected therewith are two electrical circuits R, R<sup>1</sup>, wired to produce violet ray and electric shocks, respectively. Said violet ray circuit consists, as shown, in a transformer T, variable resistance VR and a super induction coil C, acting through effects set up through a condenser L, in a manner well known.

Connections V<sup>1</sup> and V<sup>2</sup> from said induction coil contact with sockets 18 provided in the panel 11. The shocking apparatus is shown as comprising a transformer T<sup>1</sup>, rheostat R<sup>1</sup> and induction coil C<sup>1</sup>. Said induction coil C<sup>1</sup> is connected, as at 19 to the supply pipe 10<sup>1</sup>, the other terminal being grounded, as at 20 to the pipe 10. An insulation, shown as comprising a rubber tube 21, secured to the ends of complementary pipe members, is shown. Switches S<sup>3</sup>, S<sup>4</sup>, are provided within the aforesaid circuits. The foregoing structure is not new, except as taken with the following novel manner of discharging the same from a common applicator in being applied to affected portions of a person's body.

Said applicator comprises a casing 22, preferably of bakelite or similar insulated material, and having interiorly of the wall thereof, a lining of asbestos 23. A thin metallic shell 24 encases the asbestos and contacts with the end 25 of said wire 15. Interiorly suspended centrally of said casing 22 is an insulated shell 26, within which a violet ray tube 27 is securably clamped within spring contacts 28 carried by a screw threaded stud 29, and adapted to be connected as by a cord 30 and posts 31 with sockets 18.

Cotton or other similar absorbent material 32 is inserted within the space afforded between said shells 26 and 24, and is encased by a screening 33. An interiorly screw threaded metallic head 34 is provided to secure about the face portion 35 of said casing, and is adaptably covered by absorbent strips 37, secured as by an adhesive, and arranged to extend over the aforesaid screening, in a manner to prevent excess vapor from being discharged, beyond the absorbing capacity of the affected portions of the body.

The invention is believed clear from the foregoing, vaporized medicine entering through inlet end 26 of said casing 22, being discharged through the screening 33 in cooperation with electrical impulses set up in the tube 27 and metallic head piece 34.

In using the applicators together on different portions of the body, an electric circuit is built up which will course through the body to stimulate the reception of vaporized medicine.

Although I have described my invention as utilizing specific forms of electrical activity, I do not wish to confine myself thereto, except as limited by the appended claims.

What I claim, is,—

1. In a therapeutic instrument, in combination, a tubular non-conductive body having its outer end open, a conductive centrally apertured head received about said open end, a strip of heat insulating material disposed about the inner periphery of the body walls, a tubular insulator arranged axially of said body and interiorly of said heat insulating strip to provide an annular space therebetween, an electrically conductive chambered shell received within said space and contactually engaging said head, said shell having its outer end open, a vacuum tube received within said tubular insulator, means for continuously admitting a vaporized medicinal preparation to the chamber of said shell, means to electrically energize said vacuum tube, means to electrically energize said shell for intermittent impulses, and means to restrict the egression of said vaporized preparation co-incident with electrical effects imparted by said energized tube and the conductive head.

2. In a therapeutic instrument of the character described, a tubular body, a heat insu-

lating jacket interiorly of the wall of said body, a chambered shell interiorly of said jacket, a non-conductive tubular insulator within said shell, said last named member serving to receive a vacuum tube adapted to be electrically energized, means for continuously admitting a vaporized medicinal preparation to the chamber of said shell, an apertured head for said body for emitting said medicinal preparation, and means to electrically energize said vacuum tube coincident with the emission of said medicinal preparation.

3. In a therapeutic instrument, a body member providing a pair of chambers, one electrically insulated from the other, means for continuously admitting a vaporized medicinal preparation to one of said chambers, a head for said body member providing means for emitting said vaporized medicinal preparation, an electrically energizable vacuum tube supported in the other of said chambers, and means for electrically energizing said vacuum tube.

Signed at Seattle, Washington, this 7th day of June, 1929.

YOSHISADA KAWAI.