

(No Model.)

J. W. SHULTS.
GALVANIC ELECTRIC PLASTER.

No. 469,796.

Patented Mar. 1, 1892.

Fig. 1.

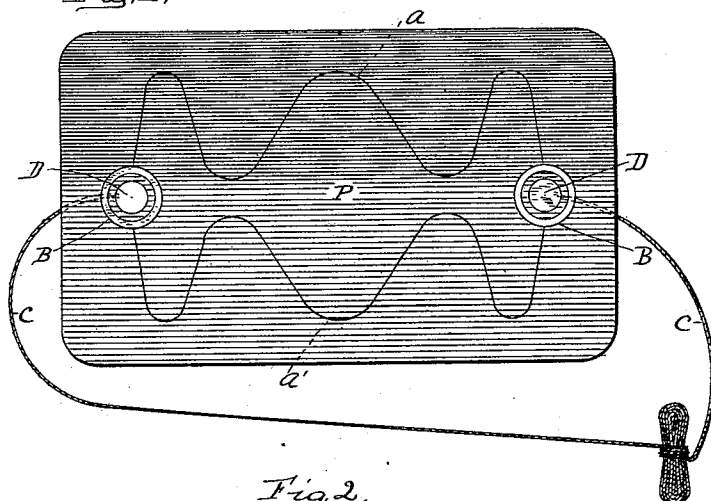


Fig. 2.

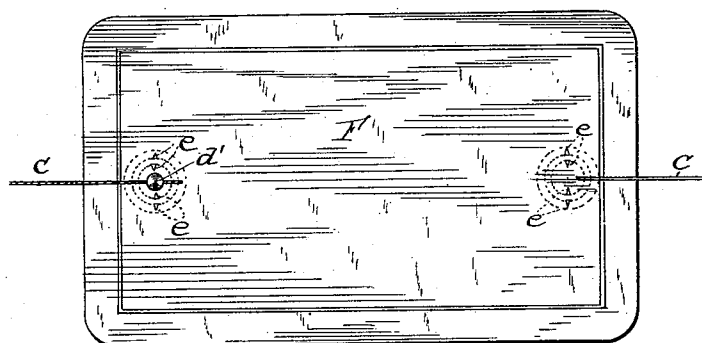


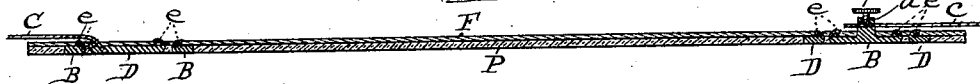
Fig. 4.



Fig. 5.



Fig. 3.



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GALVANIC ELECTRIC PLASTER.

SPECIFICATION forming part of Letters Patent No. 469,796, dated March 1, 1892.

Application filed May 16, 1891. Serial No. 392,977. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SHULTS, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Galvanic Electric Plasters, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a face plan of the plaster; Fig. 2, a back plan of the same; Fig. 3, a central longitudinal section of the same; and Figs. 4 and 5 are detailed perspectives of elements of the plaster.

This invention relates to certain improvements in galvanic electric adhesive plasters for therapeutical purposes; and it consists of cells incorporated in the plaster compound of potential arrangement, the elements of said cells being when the plaster is applied to a person in contact with the body, and of a current-conducting belt or cord arranged connecting said cells and adapted to encircle the body of a person wearing the plaster, which improvements are more fully set forth and explained in the following specification, and pointed out in the claims.

The purpose of this invention is to exert an electrical influence in a mild or faint manner upon the body of the wearer of the plaster by encircling the body with an electric current, thus bringing the body within said circuit and in close proximity therewith, the effect of which is that the electric current has an influence upon the blood, being attracted through the agency of the mineral properties of the blood, which results in an equalization of the circulation of the blood, thereby promoting health to the wearer in many instances where the health has been impaired.

Referring to the drawings, F represents a piece of linen or other suitable material cut to the desired size and form of the plaster and forms the back of the plaster.

P represents the plaster compound spread on the linen, which compound may consist of any of the known ingredients used for such purpose, and in addition to such ingredients I prefer the compound with a thorough mixture of pulverized carbon, with the particles

thereof in close proximity throughout the compound, thereby adapting the compound as an electric conductor.

Incorporated in the compound P are two cells, one at each end portion of the plaster, each consisting of copper and zinc elements, the elements being shown, respectively, at B and D, having surfaces on a plane with that of the compound, one of which cells is made with a circular body of zinc D as one element, surrounded at a little distance by a copper ring B as a second element, as shown at the left in Fig. 1, the opposite cell being made with a circular body of copper B as one element, surrounded at a little distance by a zinc ring D as a second element, which elements are respectively provided with bendable points, as shown at *e* in Figs. 4 and 5, which when they are applied to the plaster penetrate the linen and clinch upon the back thereof to secure the elements into position.

a and *a'* represent circuit-conducting wires arranged embodied in the plaster compound and connecting the opposite elements B D of the cells, as shown.

d represents a binding-post fixed to the back of the center element of one cell, as shown in Figs. 3 and 4, and is arranged extending through the linen at the back of the plaster, and *c* represents an electric-conductor cord, preferably made of a cord having embodied therein a metallic strand, which is connected to the center element of the cell opposite the binding-post by passing from the back of the plaster through the linen and is arranged to be adjustably held at its opposite end portion by the binding-post, as shown.

In use the plaster is applied to the body of a person in the usual manner, which brings the cells in direct contact with the body, where they are subjected to the exudations out of the cutis, which exudations contain chloride of sodium, which, being of alkaline reaction, when subjected to the elements of the cells generates an electric current when application of the plaster is made to the body of a person, which current is conducted through the agency of the cell-connecting wires and the carbon particles throughout the plaster and hence in communication with the body, and also the encircling cord conducts a current of electricity around the body,

thus encircling the body by an electric current and thereby completing the circuit.

It is the intention in this invention that the cells of the plaster shall be of such construction as when brought in contact with the body of a person to generate but a faint current of electricity.

In the manufacture of the plaster the pulverized carbon may, if desired, be omitted when it is desired to confine the current more strictly to the conducting-wires *a a'*, and also, as both wires and carbon are conductors, the said conducting-wires may, if desired, be omitted and the pulverized carbon used.

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

1. As a new article of manufacture, a galvanic adhesive plaster for therapeutical purposes, consisting of a plaster compound spread upon a linen or suitable backing and compounded with pulverized carbon, the opposite cells comprising the reversely-arranged elements incorporated in the plaster compound and having surfaces on a plane of the compound, the conductor-wires arranged connecting the opposite elements of the cells and embodied in the plaster compound, and the body-encircling conductor-cord arranged connecting the opposite elements of the cells, substantially as set forth.

2. The herein-described plaster, consisting of a plaster compound spread upon a linen or other suitable backing, the opposite cells comprising the reversely-arranged elements

incorporated in the plaster compound and having surfaces on a plane of the compound, the conductor-wires arranged connecting the opposite elements of the cells and embodied in the plaster compound, and the body-encircling conductor-cord arranged connecting the opposite elements of the cells, substantially as and for the purpose set forth.

3. A galvanic electric adhesive plaster consisting of a plaster compound spread upon a linen or other suitable backing, the opposite cells comprising the reversely-arranged elements incorporated in the plaster compound and having surfaces on a plane with said compound, the pulverized carbon compounded with the plaster compound, and the body-encircling conductor-cord arranged connecting the opposite elements of the cells, substantially as and for the purpose set forth.

4. An electric plaster for therapeutical purposes, consisting of a backing of linen or other suitable material, compound spread upon the linen, elements of an electric battery incorporated in the plaster construction and arranged to be brought in contact with the body of the wearer, where they are subjected to the exudations out of the cutis, and an electric-circuit conductor arranged connecting the battery or batteries of the plaster, substantially as set forth.

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