

"Improvements in electrodes particularly for use in the therapeutic application of electricity under the water."

Contributors

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PROVISIONAL SPECIFICATION.

"Improvements in Electrodes particularly for use in the Therapeutic Application of Electricity under Water."

I, WILHELM RUBINER, of Nurenberger Strasse, 35, Berlin, S.W., Germany, Editor, do hereby declare the nature of this invention to be as follows:—

This invention relates to the therapeutic use of electricity especially under water, for instance, in baths and the like.

- 5 The object of this invention is to enable the electric current to be localised upon the body of the patient so that the sensation or discomfort common to the application of electricity by methods usually adopted is completely eliminated and a very strong current can be applied to the most sensitive parts of the body without danger or the least discomfort and on the contrary
10 in a most pleasant and beneficial manner.

The invention consists in using two or more electrodes both under water and both insulated except at determined portions as hereinafter particularly described.

- 15 In carrying out the invention according to one mode each electrode is covered with rubber, or similar insulating covering, adapted to insulate the whole of the back and preferably overlapping the front edges. The electrode is provided with a suitable terminal.

- The electrodes are preferably made of silver plated sheet copper, a convenient size being about 3" x 4". Any suitable insulating material may be employed
20 instead of rubber for instance celluloid. The connecting wires are also encased in rubber or otherwise insulated.

- One electrode is suspended and submerged in the bath and faces the bather, who moves the other electrode over his body under water only. As he grasps only the insulated portion of the electrode he feels no shock or sensation of
25 current through his hand, but only feels the electrical sensation on the part of the body actually in contact with or adjacent to the exposed face of the electrode. By this method a current which would be unbearable if applied in the usual manner, not only becomes bearable but is very pleasant and refreshing.

- 30 The invention is applicable for the treatment of nervous debility and many other affections, the most important feature being the absolute localisation of the current, no sensation being felt anywhere in the body except at the point desired. It can be made as light or strong as desired by moving the exposed face of the electrode towards or away from the body. All the usual discomfort
35 of electric shock is avoided.

It is to be understood that the shape or configuration of the electrode may be varied to suit the particular portion of the body or limbs to which the invention is to be applied, and that the electrode may be provided with any convenient form of handle.

- 40 In one form the handle may be centrally disposed at the back of the electrode, the connection for the terminal being made through the handle, but obviously in an insulated manner as regards the handle.

[Price 8d.]

Rubiner's Improvements in Electrodes.

In another form a curved electrode also provided with a handle, may have the terminal at the rear of the electrode itself instead of in the handle.

Dated this 21st day of December, 1908.

MARKS & CLERK,
18, Southampton Buildings, London, W.C., 5
13, Temple Street, Birmingham, and
30, Cross Street, Manchester,
Agents.

COMPLETE SPECIFICATION.

"Improvements in Electrodes particularly for use in the Therapeutic Application of Electricity under Water." 10

I, WILHELM RUBINER, of Nurenberger Strasse, 35, Berlin, S.W., Germany, Editor, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:— 15

This invention relates to the therapeutic use of electricity especially under water, for instance, in baths and the like, in which two electrodes are used, one electrode being movable relatively to the other.

The invention consists in the employment of electrodes consisting of either flat or curved silvered brass plates arranged in corresponding celluloid or the like containers. 20

Referring now to the accompanying drawings,

Figures 1 to 4 show forms of electrodes adapted to be used when carrying the invention into effect,

Figures 1 and 2 are an elevation and vertical section of a flat form of electrode, 25

Figure 3 is a view of a curved electrode,

Figure 4 is a sectional view of a modified electrode.

In carrying the invention into effect according to one mode and referring to Figures 1 and 2, each electrode *a*, is preferably made of brass thickly silvered for hygienic reasons, for greater durability and for restricting polarisation. Each electrode is covered with rubber, or similar insulating covering *b*, adapted to insulate the whole of the back and preferably overlapping the front edges as indicated at *c*. The electrode is provided with a suitable terminal *d*. 30

The electrodes are made of silver plated sheet copper, a convenient size being about 3" x 4". Any suitable insulating material may be employed instead of rubber for instance celluloid. The connecting wires are also encased in rubber or otherwise insulated. 35

One electrode is suspended and submerged in the bath and faces the bather, who moves the other electrode over his body under water only. As he grasps only the insulated portion of the electrode he feels no shock or sensation of current through his hand, but only feels the electrical sensation on the part of the body actually in contact with or adjacent to the exposed face of the electrode. 40

It is to be understood that the shape or configuration of the electrode may be varied to suit the particular portion of the body or limbs to which the invention is to be applied, and that the electrode may be provided with any convenient form of handle. 45

Figure 3 illustrates a curved electrode also provided with a handle *e*, but having the terminal *d* at the rear of the electrode itself instead of in the handle. 50

Rubiner's Improvements in Electrodes.

Figure 4 illustrates a similar electrode to that shown in Figures 1 and 2 but provided with a handle *e*, the connection for the terminal *d* being also made through the handle, but obviously in an insulated manner as regards the handle.

5 It will be understood that the hereinbefore described electrodes may be used in connection with any suitable source of electrical energy, the power of which is controlled and regulated by any desired apparatus.

With the present apparatus it is possible to obtain an electric bath in the most simple manner, by introducing one electrode at one end of the bath and
10 the other electrode at the other end. There will then flow through the bath and the body of the patient, a weak electric current favourably acting on the nervous system.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that
15 what I claim is:—

1. In the therapeutic application of electricity under water, the employment of electrodes consisting of either flat or curved silvered brass plates arranged in corresponding celluloid or the like containers.

2. The improved electrodes for the therapeutic application of electricity
20 as and for the purpose hereinbefore described and as illustrated in the accompanying drawings.

Dated this 21st day of July, 1909.

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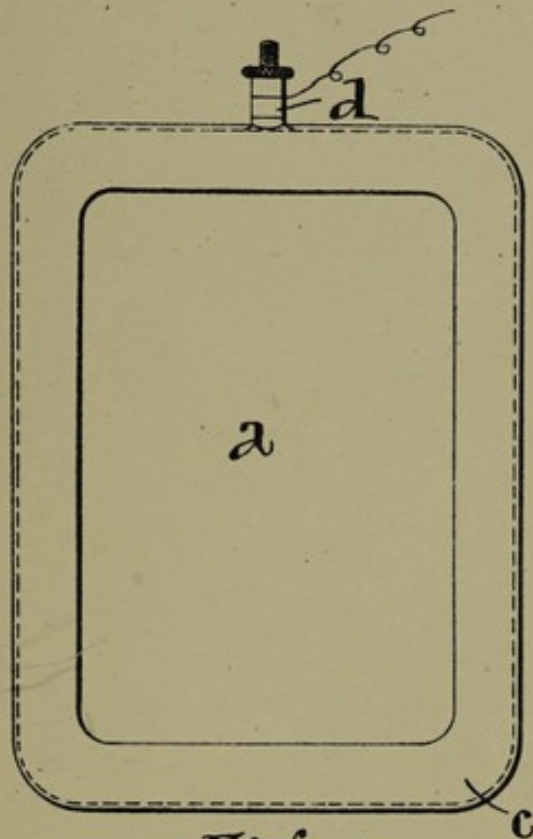


Fig. 1.

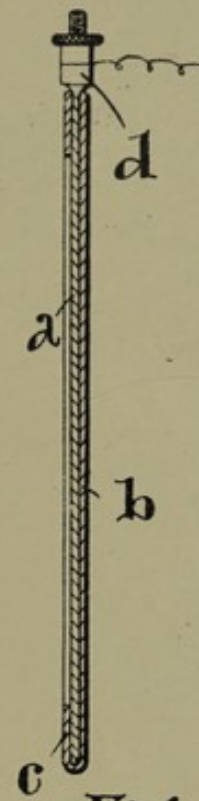


Fig. 2.

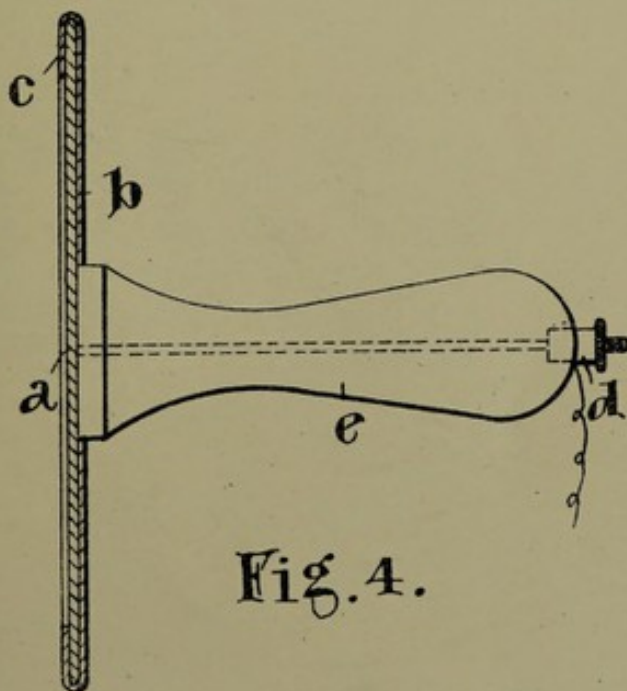


Fig. 4.

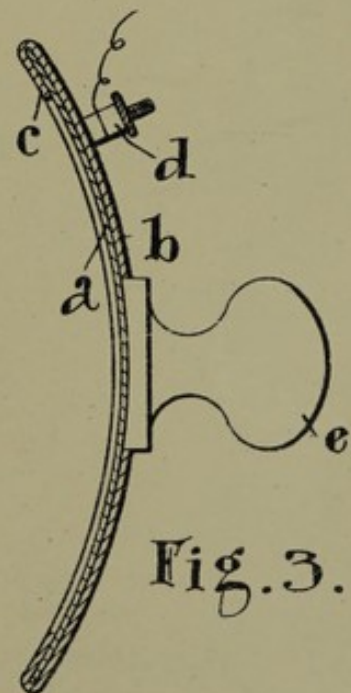


Fig. 3.

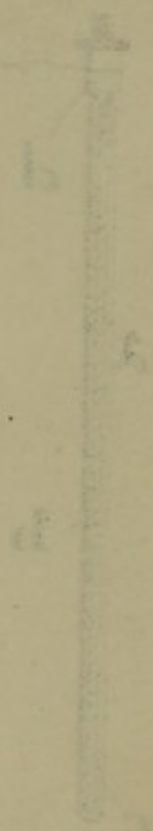


Fig. 2.

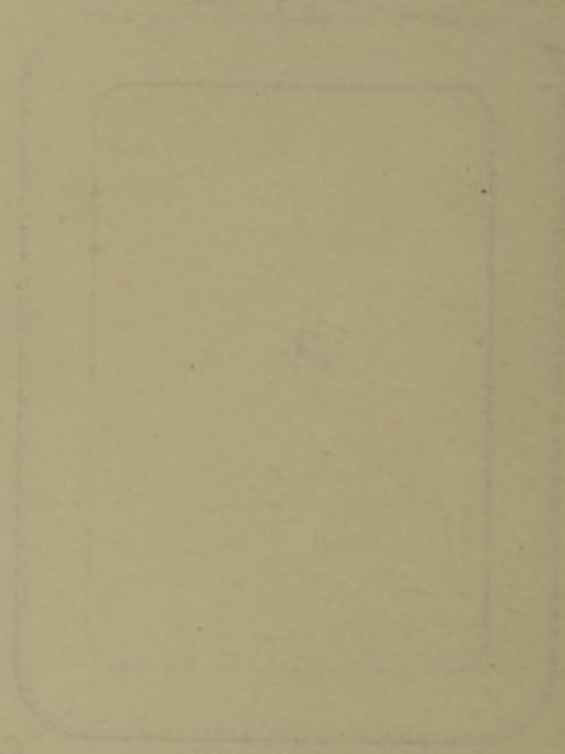


Fig. 1.



Fig. 3.

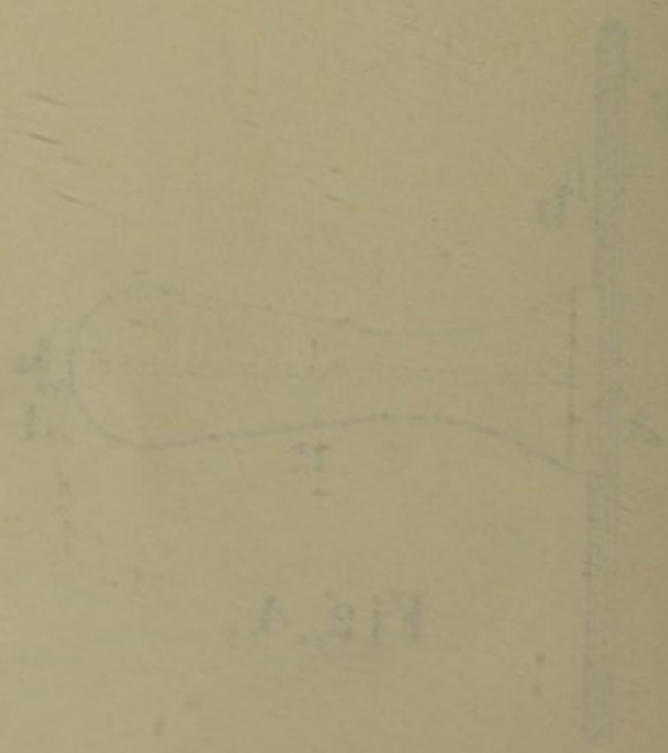


Fig. 4.