

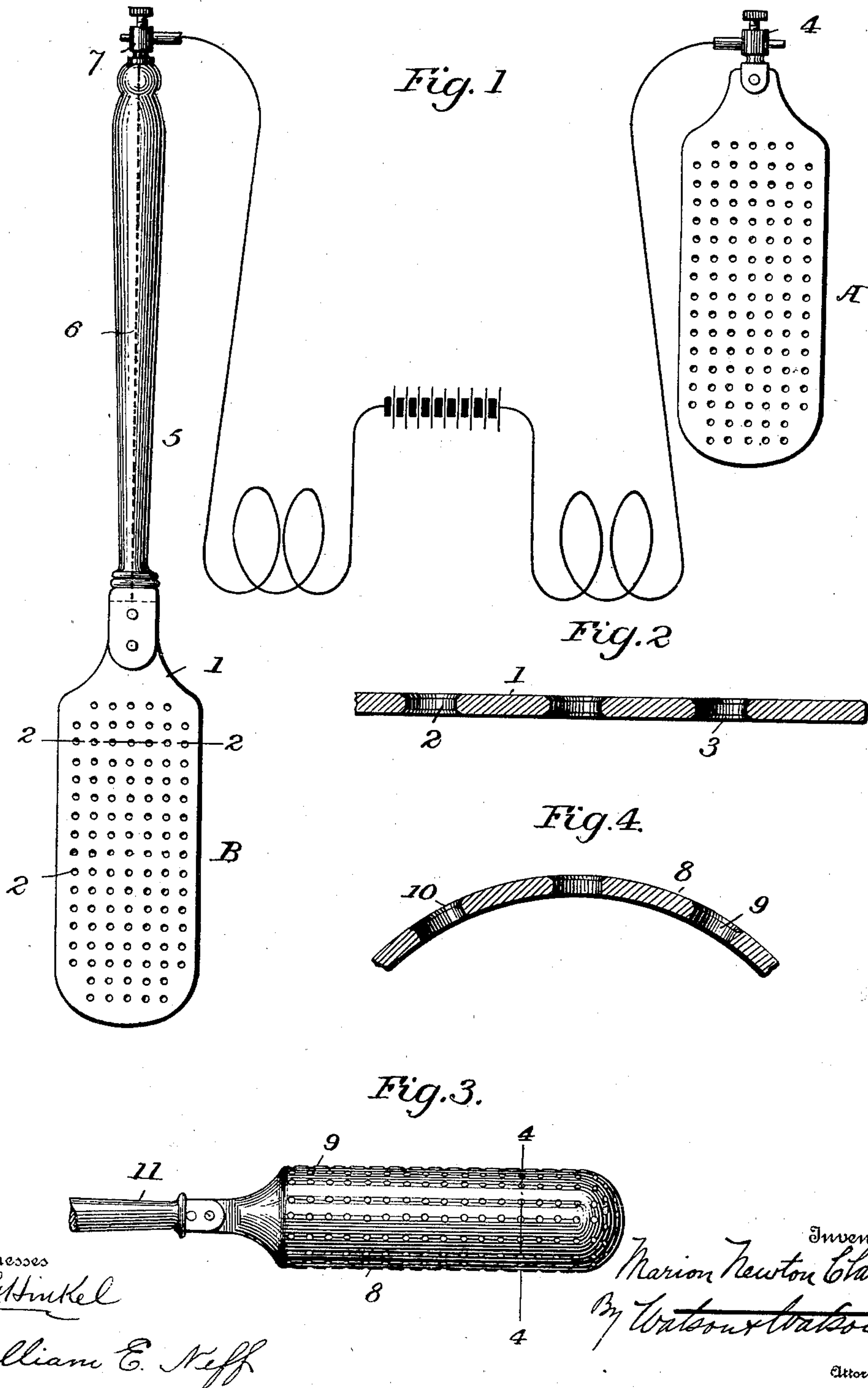
No. 609,875.

Patented Aug. 30, 1898.

M. N. CLARKE.
ELECTRODE FOR MEDICAL PURPOSES.

(Application filed Jan. 8, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

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ELECTRODE FOR MEDICAL PURPOSES.

SPECIFICATION forming part of Letters Patent No. 609,875, dated August 30, 1898.

Application filed January 8, 1898. Serial No. 666,001. (No model.)

To all whom it may concern:

Be it known that I, MARIAN NEWTON CLARKE, a citizen of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Electrical Apparatus for Medical Purposes, of which the following is a specification.

My improved electrical apparatus comprises an electrode consisting in a plate of conducting metal perforated throughout its area, the perforations being preferably countersunk at one or both sides of the plate. I have found in practice that charges of electricity may be administered by means of my improved electrode without shock or inconvenience to the patient. By placing one electrode in contact with the body and passing the other over the afflicted portion the current is subdivided and discharged from the peripheries of all the perforations instead of discharging from a single point, in consequence of which what might otherwise prove a shock becomes a pleasant sensation. The electrode can be passed over the skin of the most delicate patient without producing any irritation on account of the rounded or countersunk perforations.

For a detailed description of the invention reference is had to the accompanying drawings, in which—

Figure 1 is a view of a pair of electrodes and a battery. Fig. 2 is a partial section on the line 2 2 on an enlarged scale. Fig. 3 is a side view of a cylindrical electrode for internal treatment, and Fig. 4 is a partial section on the line 4 4 of Fig. 3.

The electrodes of my improved apparatus consist of metal plates shaped to conform to the part of the body to be treated and provided with perforations, which are preferably countersunk on one or both sides of the plate. Thus in Figs. 1 and 2, 1 indicates a plate having perforations 2 closely arranged all over its surface, the said perforations having their corners rounded or countersunk, as at 3. Such a plate is used for the positive electrode

A and a similar one for the negative electrode B. The positive electrode is provided with a binding-post 4, while the negative electrode is provided with a handle 5, through which extends a wire 6 to a binding-post 7. The negative electrode may be said to constitute an electric brush, which can be conveniently passed over any portion of the body.

My apparatus is far superior in its operation to the ordinary forms of electrodes mounted with sponges or pads, which require moistening. Such electrodes require that the clothing be removed for treatment, and they are awkward to handle and likely to spoil clothing. My improved electrode can be largely used without removing the clothing, as it can be slipped underneath. In using the apparatus shown in Fig. 1 the positive electrode A is placed against the body and the negative electrode B is placed against the portion to be treated or passed over said portion either directly in contact or at a slight distance therefrom.

Electrodes may be made according to my invention for any portion of the body. Thus for internal treatment I prefer to use a cylindrical electrode such as that shown in Figs. 3 and 4. In these figures, 8 indicates a hollow cylinder consisting of suitable metal. The cylinder is filled with small perforations 9, the outer ends of which are preferably countersunk, as at 10. These electrodes may be provided with suitable handles 11, through which wires are carried to the binding-posts, as shown in Fig. 1.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an electrical apparatus for medical purposes, a suitable source of electricity and a pair of electrodes consisting of suitably-shaped metal plates filled with small perforations, substantially as described.

2. In an electrical apparatus for medical purposes, an electrode comprising a suitably-shaped metal plate, said plate having its surface filled with perforations which are coun-

tersunk on the operative face of the electrode, substantially as described.

3. In an electrical apparatus for medical purposes, an electrode or brush consisting of
5 a suitably-shaped plate filled with perforations which are countersunk on its operative face, a handle of non-conducting material, and a conductor connecting the plate with a

suitable source of electricity, substantially as described. 10

In testimony whereof I affix my signature in presence of two witnesses.

MARIAN NEWTON CLARKE.

Witnesses:

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W. C. OLDS.