

No. 794,161.

PATENTED JULY 11, 1905.

K. L. VAN G. CURRY.
MEDICAL BATTERY ELECTRODE.
APPLICATION FILED APR. 26, 1905.

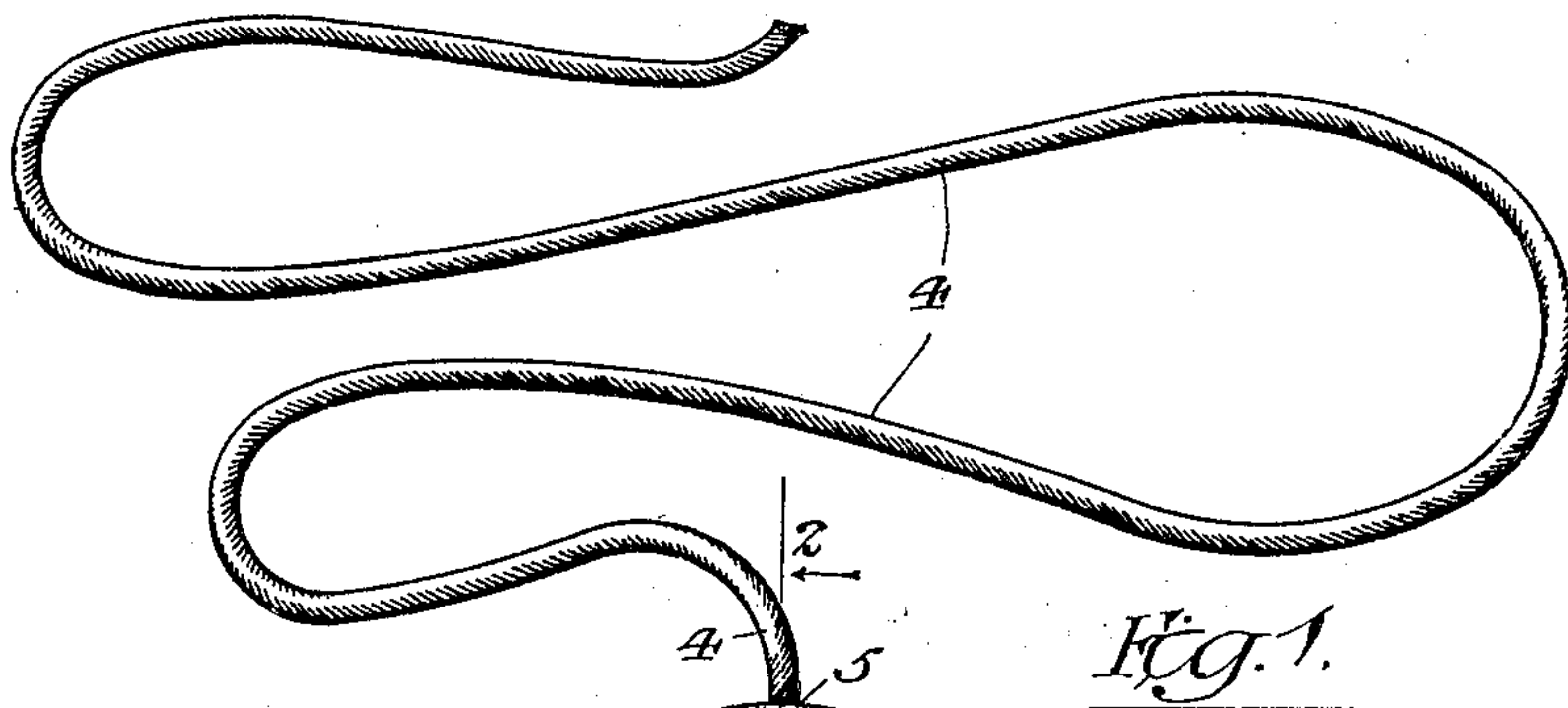


Fig. 1.

Fig. 2.

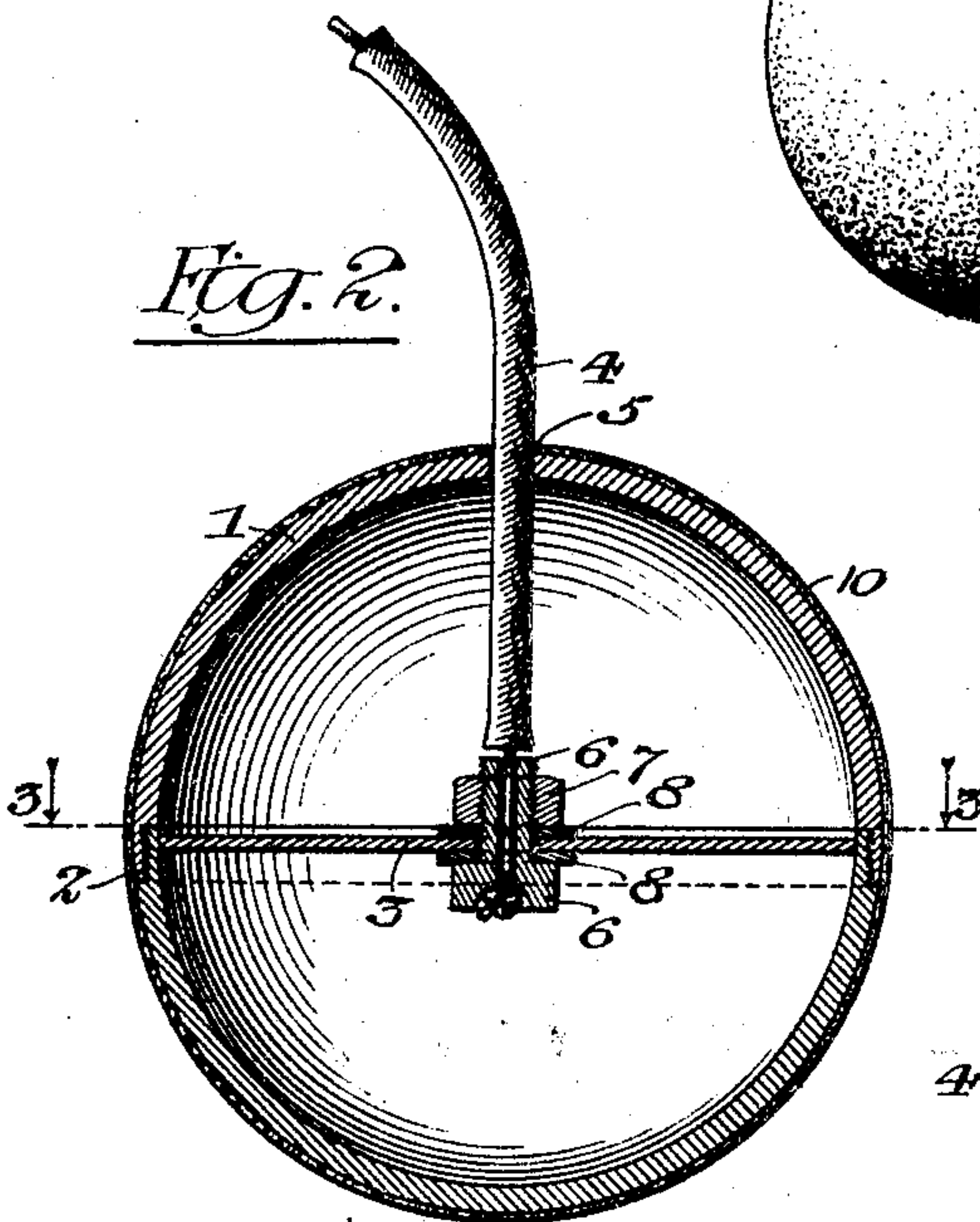


Fig. 3.

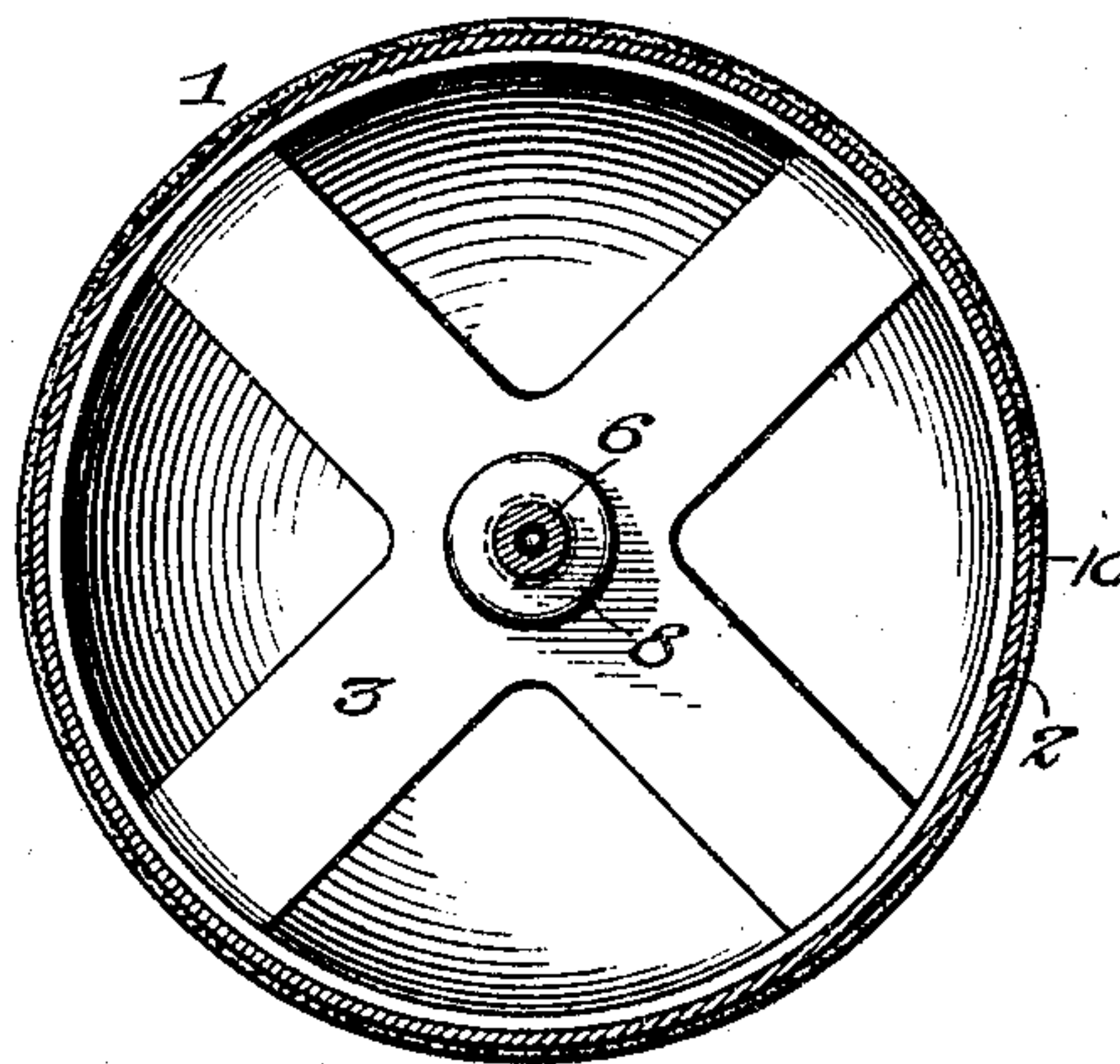
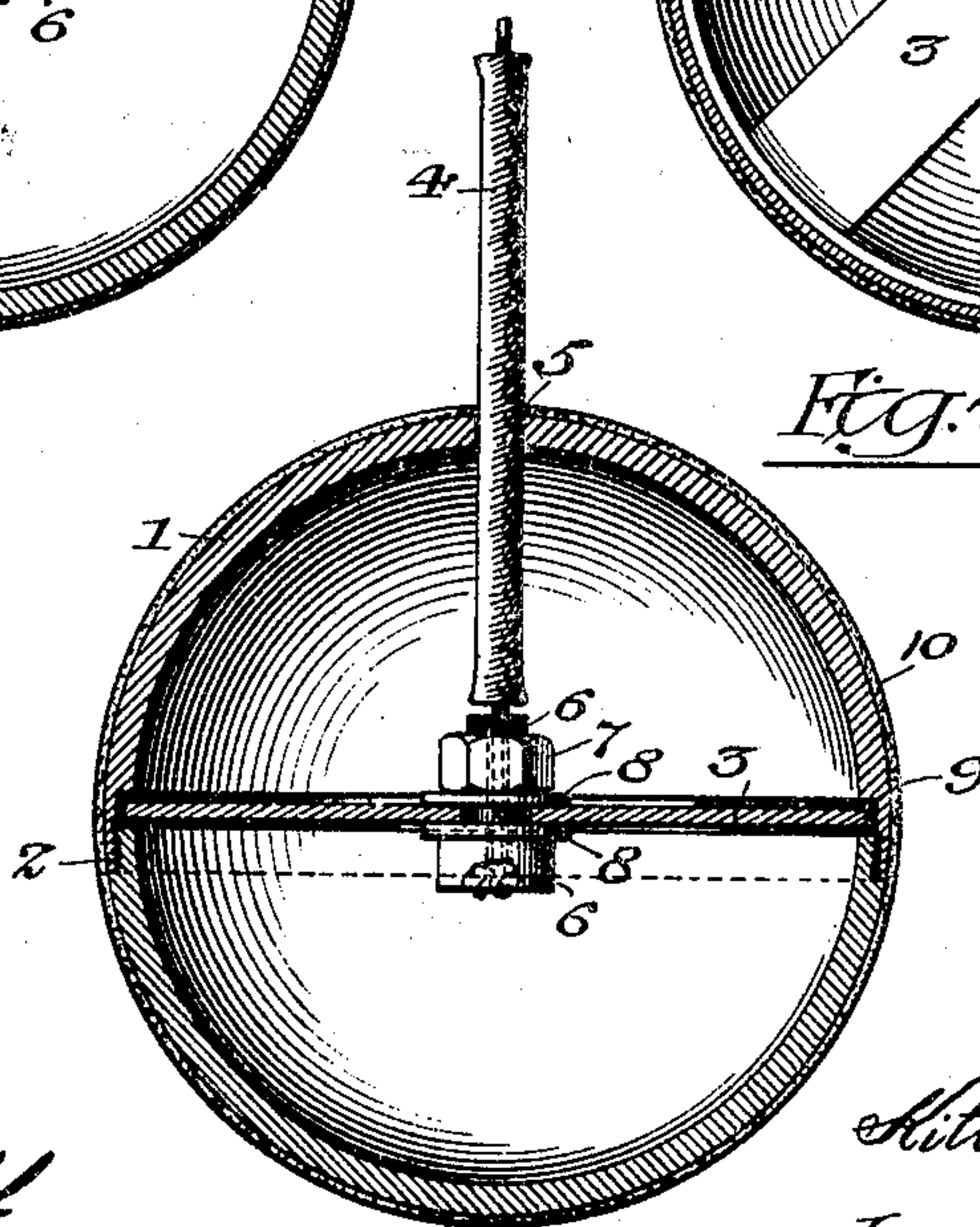


Fig. 4.



Witnesses:-

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UNITED STATES PATENT OFFICE.

KITTIE L. VAN GUYLDER CURRY, OF CHICAGO, ILLINOIS.

MEDICAL-BATTERY ELECTRODE.

SPECIFICATION forming part of Letters Patent No. 794,161, dated July 11, 1905.

Application filed April 26, 1905. Serial No. 257,432.

To all whom it may concern:

Be it known that I, KITTIE L. VAN GUYLDER CURRY, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Medical-Battery Electrodes, of which the following is a description.

My invention relates to that general class of devices known as "electrodes" and which are employed for conveniently making electrical contact with and thus introducing into an electric current various parts of a living body.

The object of my invention is to produce a simple, convenient, and altogether desirable device of the kind described and one that by its shape adapts itself to general use upon almost any portion of the body.

To this end my invention consists in the novel construction, arrangement, and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, wherein like or similar reference characters indicate like or corresponding parts, Figure 1 is an elevation of one form of my device. Fig. 2 is an enlarged section taken substantially on line 2 2 of Fig. 1. Fig. 3 is a section taken substantially on line 3 3 of Fig. 2. Fig. 4 is a section similar to that shown in Fig. 2, but showing a slightly-modified form of my device.

My device consists, essentially, of a substantially closed hollow shell of any desired form having a small opening in one part for the entrance of a conductor and a frame or plate arranged within the shell opposite the opening, to which the conductor is attached.

In the form of my device shown in the drawings, 1 is a two-part shell composed of any suitable material, preferably metal.

The two portions of the shell 1 are preferably so formed that when united in operative position the exterior of the shell is perfectly smooth. As shown, the shell parts are united by means of screw-threads 2 formed upon cooperating portions, the threads in one half being formed upon the interior of the shell and on the other half upon the circumfer-

ence of a cylindrical projection of suitable diameter so connected with its half-shell that when screwed together in place the outer portion of the two parts of the shell meet, forming a substantially smooth exterior surface over the entire shell.

The plate 3 may be formed of any suitable material and shape and is arranged within the shell to provide a convenient place for attaching the conductor 4, which preferably enters the shell through the opening 5 at right angles, in the form shown, to the enter of the plate 3.

In the form shown in Fig. 4 to prevent twisting of the conductor 4 a double swivel is provided between the conductor and the shell. First, the conductor is secured to a small bolt 6, positioned in a suitable opening in the plate 3 and having a nut 7 or equivalent means so arranged that it cannot be made to clamp the plate between the nut and bolt-head, thus leaving the bolt free to rotate in the opening. Preferably washers 8 are also arranged on each side of the plate and between the head and nut of the bolt 6 to still further reduce the friction at this point. Second, a groove 9 is arranged in the shell where its parts are united, and the plate 3 is formed to loosely and rotatably fit within the groove, so that in use the shell may be manipulated as desired without danger of twisting or kinking the conductor.

In the form shown in Figs. 2 and 3 the swivel at the center of the plate 3 is provided as above described; but the plate itself is fixed within the shell by being soldered, riveted, or pressed into place, and in practice this form gives excellent satisfaction.

If preferred, a covering 10, of chamois leather, kid, or other porous substance, may be arranged upon the shell and gives a slightly better contact if slightly dampened than the bare shell and is much pleasanter where the electrode is applied directly to the body.

Obviously my electrode may be employed in combination with any form of conductor or with any other form of electrode, if desired, or with any device for producing a suitable electric current.

In the drawings a spherical shell is shown; but I do not wish to be understood as limiting myself to any particular form.

Having thus described my improvement, it is obvious that various immaterial modifications may be made without departing from the spirit of my invention. Hence I do not wish to be understood as limiting myself to the exact form and construction shown.

What I claim as new, and desire to secure by Letters Patent, is—

1. An electrode, comprising a closed metallic shell provided with an opening for the admission of an electrical conductor, in combination with a plate arranged within the shell, opposite said opening and at substantially right angles thereto, and means for connecting a conductor to said plate.

2. An electrode, comprising a plurality of detachable parts provided with screw-threads for connecting the same to form a closed shell with a smooth regular surface provided with an opening for the admission of an electrical conductor, in combination with a plate within the shell opposite said opening and substantially at right angles thereto, and means for rotatably connecting a conductor to said plate.

3. An electrode, comprising a closed metallic shell provided with an opening for the admission of an electrical conductor, in combination with a plate arranged within the shell, opposite said opening and at substantially right angles thereto, a rotatable member mounted upon said plate opposite said opening, and means for connecting a conductor to said rotatable member.

4. An electrode, comprising a closed metallic shell provided with an opening for the admission of an electrical conductor, in combination with a rotatable plate arranged within said shell, opposite said opening and at substantially a right angle thereto, and means for connecting a conductor to said plate.

5. An electrode, comprising a closed metallic shell provided with an opening for the admission of an electrical conductor, in combination with means for rotatably connecting a conductor to the interior of said shell.

6. An electrode, comprising a plurality of detachable parts adapted when connected to form a closed shell having a smooth regular surface provided with an opening for the admission of an electrical conductor, and a covering of porous material upon the exterior of said shell, in combination with means for rotatably connecting a conductor to the interior of said shell.

7. An electrode, comprising a plurality of detachable parts adapted when connected to form a closed shell having a smooth regular surface, provided with an opening for the admission of an electrical conductor, in combination with means for rotatably connecting a conductor to the interior of said shell.

8. An electrode, comprising a plurality of detachable parts adapted when connected to form a closed shell having a smooth regular surface provided with an opening for the admission of an electrical conductor, and a covering of porous material upon the exterior of said shell, in combination with a plate arranged within said shell, opposite said opening and at substantially right angles thereto, an opening in said plate, a member extending through said opening arranged to loosely and rotatably engage said plate, and means for connecting a conductor to said member.

9. An electrode, comprising a plurality of detachable parts adapted when connected to form a closed shell having a smooth regular surface provided with an opening for the admission of an electrical conductor, and a covering of porous material upon the exterior of said shell, in combination with a plate rotatably arranged within said shell, opposite said opening and at substantially right angles thereto, an opening in said plate, a member extending through said opening arranged to loosely and rotatably engage said plate, and means for connecting a conductor to said member.

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

KITTIE L. VAN GUYLDER CURRY.

Witnesses:

BURTON U. HILLS,
CHARLES I. COBB.