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MULTIPLE ELECTRODE HOLDER

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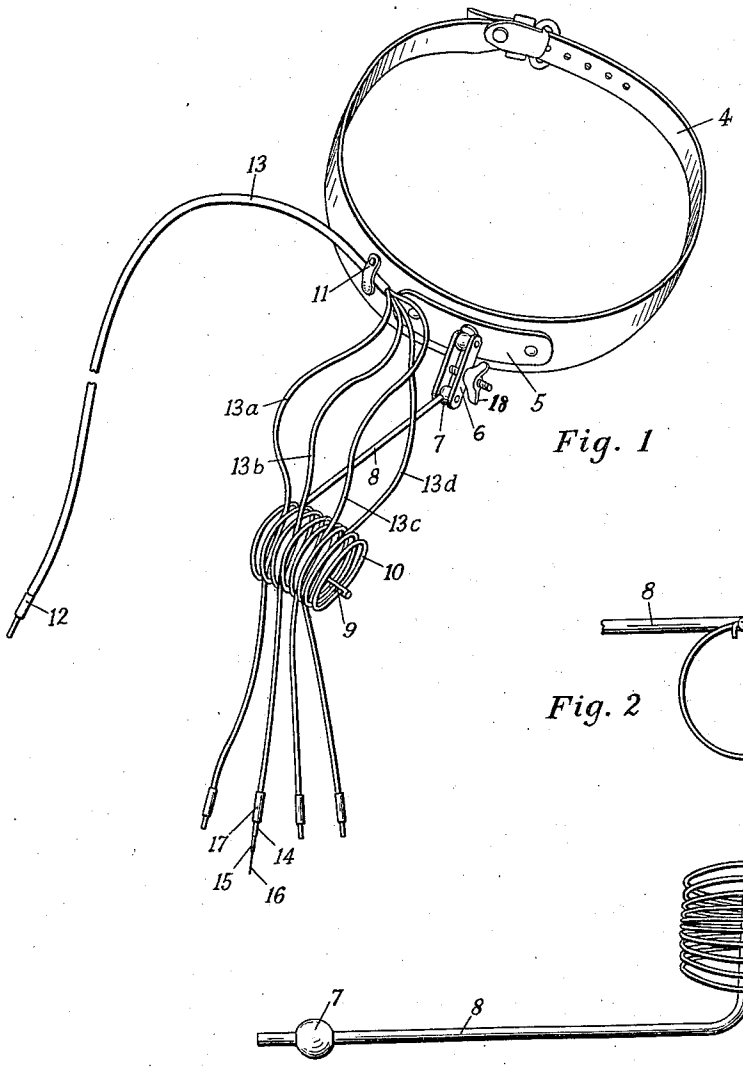


Fig. 1

Fig. 2

Fig. 3

Moses Marton

INVENTOR.

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MULTIPLE-ELECTRODE HOLDER

Moses Marton, New York, N. Y.

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4 Claims. (Cl. 128—303.19)

My invention relates to multiple electrode holders such as used in the work of removing hair by electrolysis.

The object of my invention is to provide a holder for the accommodation of one or more electrodes, of simple and inexpensive design and construction, attachable to the body, preferably to the head of the patient, in the manner of a physician's head-mirror; a holder that is easily adjustable to any desired position and permits free and unhampered manipulation of the electrodes.

Holders heretofore in use are impractical. They are difficult to handle and their use in hair removal does not promote good results. Most of these holders are attached to the cabinet or to some other fixed object, so that if the patient winces or moves, the electrodes become dislodged. Reinsertion of the needles is injurious to the skin, and it is also time-consuming. The holders designed to be attached to the body are unwieldy, movement in their several joints is jerky and uneven. This, and the fact that the electrode-bearing tip is clasped directly by the arm of the holder rather interferes with, instead of facilitating, the fine maneuvering of the electrode, so essential for its proper insertion into the skin.

In view of the inadequacy of the holders presently in use I have improved the design and construction of multiple electrode holders as disclosed in the following specification and illustrated by the accompanying drawing, in which, Fig. 1 is a perspective view of the assembled holder and conducting cords placed between the coils of the holding device proper. Fig. 2 is a side view of the holding device, showing the spring coil as it passes through the slot of the extension rod. Fig. 3 is a representation of the extension rod and holding device proper.

Referring to the drawing, Fig. 1 shows a headband 4, a ball bearing plate 5 attached to it, and a socketed coupling 6. The latter forms universal joints with the ball on plate 5 and with the bulbous enlargement 7 of the extension rod 8. By turning the winged nut 18 of the coupling 6 one way or another we loosen or tighten the universal joints, thus we are able to adjust the holder and secure it in any desirable position. The rod 8 is preferably curved, to an angle of about 90 degrees, at some distance from the bulbous enlargement 7, in the end portion of this part is a slot 9 and a spring coil 10 is passed through it. The wire coils 10 are held closely together within the slot 9, which causes them to spread out and to separate on the opposite side, forming segment shaped spaces between the coils into which the electrode-bearing conducting cords 13a, 13b, etc. are placed. These cords are preferably made of rubber-covered, very flexible tinseled wire, convenient to handle and easily, yet securely held between the wire coils. The main line 13 makes contact with the electrical source by a metal plug 12; the opposite end of this cord leads through a loop 11 on the head-band 4 and branches out into any desirable number of extension cords 13a, 13b, etc. When the electrode-bearing cords are placed between the coils a certain amount of slack is allowed between the loop 11 and the spring coil 10 so that adjustments can be made in the position on the holder, in relation to the part operated on, without interference from the cords. A suitable length of extension cord is allowed beyond the spring coil 10 to enable the operator to manipulate the electrodes skilfully while inserting them into the hair-follicle, and to permit the patient to move without dislodging the inserted electrodes.

In certain cases, for instance when treating two sides of the face or other fairly separated parts, it is found advantageous to operate two sets of electrodes concurrently. For such purpose I mount two sets of holder assemblies on one head-band, by adding another plate 5, coupling 6 slotted extension rod 8, and spring coil 10.

While I have illustrated a preferred embodiment of my invention it will be readily understood that modifications and changes may be made without departing from the spirit of my invention or the scope of the appended claim.

I claim:

1. In a multiple electrode holder, means to support the holder from the body of the patient, means projecting from the support for supporting the electrode-bearing conducting cords, said means being composed of a ball which projects from a plate attached to the support and an extension rod with a bulbuous enlargement towards one end, the ball and extension rod being held together by a socketed coupling with which they form universal joints, means for locking said universal joints thus securing the parts in their adjusted position, and means at the end of the extension rod for holding a plurality of conducting cords.

2. In a multiple electrode holder, means to support the holder from the body of the patient, means projecting from the support for supporting the electrode bearing cords, said means

comprising a ball which projects from a plate attached to the support and an extension rod which has a bulbuous enlargement towards one end, the ball and extension rod being held together by a socketed coupling with which they form universal joints, means for locking said universal joints and securing the parts in their adjusted position, a spring coil passed through a slot at the outer end of the extension rod, the coils being held closely together within the slot and separated outside of it forming segment shaped spaces into which the conducting cords are placed.

3. In a multiple electrode holder, means to support a holder from the body of a patient, means extending from the aforesaid means for supporting a plurality of electrode-bearing cords, said means having holding portions to hold said cords, and universally adjustable means connecting said second-recited means and holding portions with the aforesaid means.

4. In a multiple electrode holder, means to support a holder from the body of a patient, a holder for a plurality of electrode-bearing cords comprising yieldable means for releasably gripping each cord, an elongated rod upon which said holder is mounted, and universally adjustable means coupling an end of said rod with said supporting means.

MOSES MARTON.