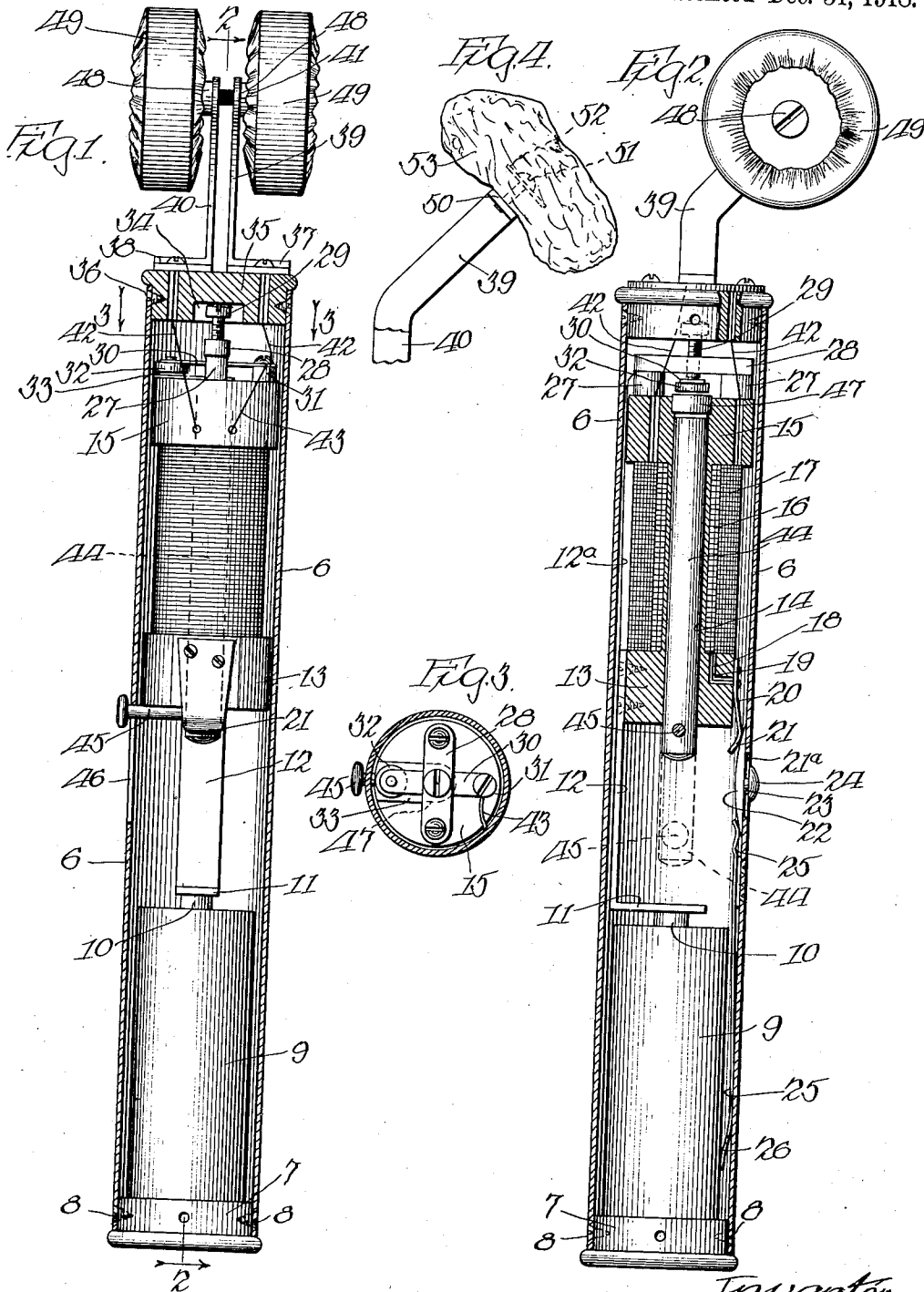


A. MODERN.
ELECTRICAL MASSAGE APPARATUS.

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1,289,864.

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UNITED STATES PATENT OFFICE.

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ELECTRICAL MASSAGE APPARATUS.

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To all whom it may concern:

Be it known that I, ALFRED MODERN, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in an Electrical Massage Apparatus, of which the following is a specification.

This invention relates to certain new and useful improvements in an electrical massage apparatus, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is, to provide an electrotherapeutic device or apparatus, to be used for massaging and treating the human body with electricity, which shall be simple and inexpensive in construction, portable, strong, durable and compact in form, as well as, efficient in operation, with its parts so made, arranged and operating as to enable the person undergoing treatment to self administer the same.

Another object is to provide means for controlling the electric current as it is applied to the body.

Other objects and advantages of the invention, will be disclosed in the subjoined description and explanation.

In the accompanying drawing which serve to illustrate an embodiment of the invention,

Figure 1, is a longitudinal sectional view through the casing of the apparatus showing parts contained therein in elevation and in section.

Fig. 2, is a similar view of like parts taken on line 2—2 of Fig. 1, looking in the direction indicated by the arrows.

Fig. 3, is a cross-sectional view taken on line 3—3 of Fig. 1, looking in the direction indicated by the arrows, and

Fig. 4, is a fragmental view of one of the electrode carrying conductors showing a modification in the electrode and the manner of securing the same to said conductor.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 6 designates the casing or body of the apparatus, which is by preference, tubular or cylindrical in form, and made of hard rubber, or of any

other suitable material. In one end of the casing 6 a plug 7 is secured by means of screws 8 or otherwise. This plug 7 serves as a seat or rest for a dry-battery 9 of the ordinary construction which as shown in Figs. 1 and 2 of the drawing is spaced from the casing 6 and has its carbon element 10 in contact with the lower horizontal portion 11 of a longitudinally extended bar 12 which is secured at its upper end to the outer surface of a block or piece 13 forming a portion of the induction coil. This block or piece 13 has a sleeve 14 extended therefrom and united at its other end to a block or piece 15 which is located in the end of the casing 6 opposite that end in which the battery 9 is situated. The sleeve 14 is provided with a primary winding or coil 16 and with a secondary winding or coil 17 in the ordinary manner. The primary winding or coil 14 has extended therefrom through a suitable opening 18 in the block 13 a conductor 19 which is connected to a spring contact 20 secured at one of its ends to the block or piece 13 and extended longitudinally in the casing 6 to near one end of a longitudinal slot 21^a, located in said casing between the adjacent portions of the block or member 13 and the battery 9. The free portion of the spring contact 20 is inwardly curved as at 21 to engage and disengage with a slidable member or switch 22 which has on its outer surface a projection 23 provided with a button head 24 used for moving said slidable member longitudinally within the slot 21^a of the casing 6 or body of the device. Secured near one of its ends to the inner surface of the casing 6 near one of the ends of the slot 21^a therein is a metallic strip or spring 25 which is extended between the battery 9 and that end of the casing 6 in which the plug 7 is located. The member 25, as shown, projects at one of its ends beyond the adjacent end of the battery 9 and is deflected at its other end as at 26, so as to contact with the zinc element of the battery. The block or member 15 has mounted diametrically on its outer portion a pair of posts 27 which support a cross-bar 28 in which is seated a stop-screw 29 the lower end of which is adapted to impinge with a spring 30 which is secured at one of its ends to a binding post 31 and carries at its other end a piece of metal 32

which is drawn toward and against a plate 33, when the latter is magnetized, by the action of the induction coil. The bar 28, is connected to the bar 12 by a conductor 12^a, see Fig. 2 of the drawing. As shown in Fig. 1, the head of the screw 29 is located in a recess 34 formed centrally in the inner portion of a plug 35 which is located in the end of the casing 6 opposite that in which the plug 7 is located. The plug 35 is by preference made of hard rubber and may be secured in position within the casing 6 by means of screws 36 or otherwise. This plug has secured on its outer surface oppositely extended projections 37 and 38 of conducting arms 39 and 40, respectively, which arms are spaced apart and may be held in spaced relation by means of a piece 41 of insulating material interposed between said arms near their outer ends. The extensions 37 and 38 of said arms are connected to the secondary windings of the induction coil by conductors 32, and it will be noted in Figs. 1 and 3 of the drawing that the binding post 31 is connected to the primary windings of the induction coil by a conductor 43. Slidably located within the sleeve 14 of the induction coil is a core 44 which projects at one of its ends through the block or member 13 and has extended laterally therefrom a pin 45 which projects through a slot 46 located longitudinally in the casing 6 about midway of said casing. The other end of the core 44 is extended to near a part 47, located centrally in the outer portion of the block 15 and forming a portion of the plate 33 of the vibrator.

By this arrangement it will be understood that by moving the core 44 by means of the handle or pin 45 in the proper direction the current of electricity will be increased or diminished as desired, and that if it is desired to break the current the slidable switch 22 may be slid by means of its button 24 in the proper direction so as to disconnect the switch 22 from one or the other of the contact springs 21 or 25 as will be readily understood by reference to Fig. 2 of the drawing.

Referring now to Fig. 1 of the drawing, each of the arms 39 and 40 has extended laterally therefrom a projection 48 on each of which is rotatably mounted an electrode 49 each of which is in the form of a wheel or roller which has on its periphery absorbent material of any suitable kind which should be moistened before or when the apparatus is to be used.

In Fig. 4 of the drawing is shown a modification in the construction of the arms 39 and 40 and in the form of the electrodes employed thereon which consists in providing the free end of the arm with a laterally extended projection 50 to which is secured by means of a screw 51 and a washer 52 a piece

of sponge 53 or other absorbent material which may be applied to the body in the same manner as the electrodes shown in the other construction.

From the foregoing and by reference to the drawing, it will be readily understood and clearly seen that by dampening the material on the electrodes 49 or on the ends of the arms 39 and 40, when the construction shown in Fig. 4 and above described is employed, the said electrodes may be applied to that portion of the body which it is desired to treat, when by moving the apparatus back and forth with the electrodes in contact with the body it will be subjected to a current of electricity, the strength of which current may be regulated by moving the core 44 of the induction coil in the proper direction by means of the handle 45 connected to the said core, it being understood that in the foregoing operation the switch 22 occupies such a position as to close the circuit between the contact springs 21 and 25 leading from the induction coil and battery respectively.

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

1. In an electrical massage apparatus, the combination with a hollow casing having a detachable closure at each of its ends, of a battery and an induction coil located in said casing and spaced apart at their inner ends and having means to electrically connect them together, a core slidably mounted within the induction coil and having near its inner end a lateral projection extended through the casing for moving said core, a slidable switch located within the casing in the circuit uniting the battery and induction coil and provided with a projection extended through an opening in the casing, a pair of electrode arms mounted at one end of the casing on one of said closures and having electrical connection with the induction coil and extended in parallelism with one another from said closure, a shaft extended laterally from the outer portion of each of said arms, and absorbent material carried by the outer portion of each of said arms.

2. In an electrical massage apparatus, the combination with a hollow casing having a detachable closure at each of its ends, of a battery and an induction coil located in said casing and spaced apart at their inner ends and having means to electrically connect them together, a core slidably mounted within the induction coil and having near its inner end a lateral projection extended through the casing for moving said core, a slidable switch located within the casing in the circuit uniting the battery and induction coil and provided with a projection extended through an opening in the casing, a pair of electrode arms mounted at one end of the casing on one of said closures and hav-

ing electrical connection with the induction
coil and extended closely in parallelism with
one another from said closure, a shaft ex-
tended laterally and outwardly from the
5 outer portion of each of said arms, insulat-
ing material interposed between said arms
near their outer ends, a current-applying

roller rotatably mounted on each of said
shafts, and absorbent material surrounding
each of said rollers.

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