Dec. 3, 1946. N. D. MININBERG 2,412,093

THERAPEUTIC-OSCILLATION APPLICATOR

Filed Oct. 11, 1944 2 Sheets-Sheet 1

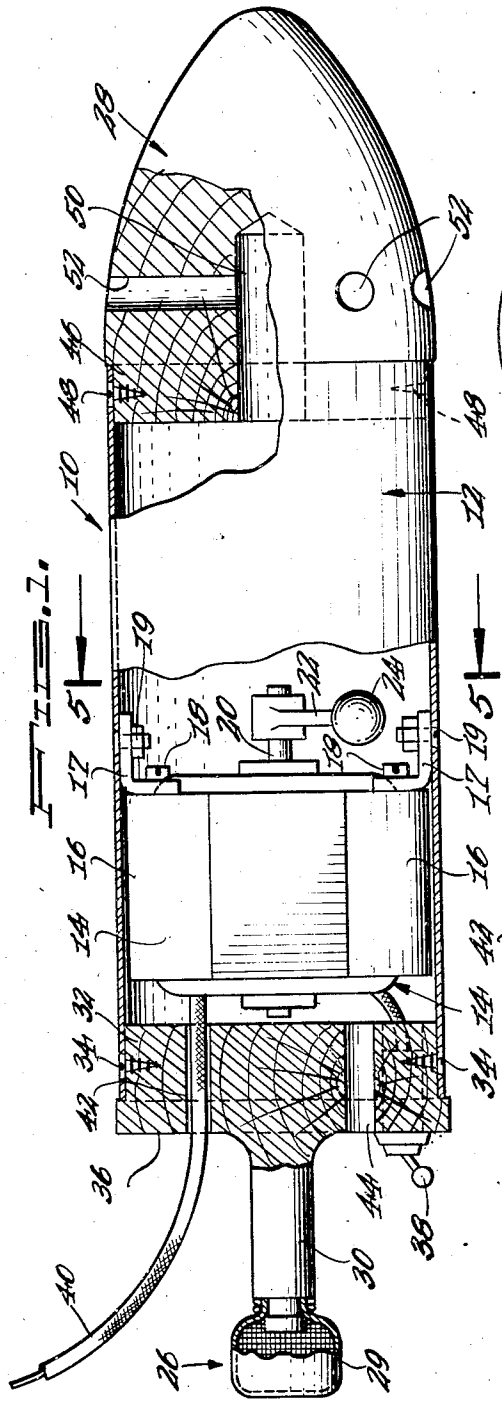


Fig. 1.

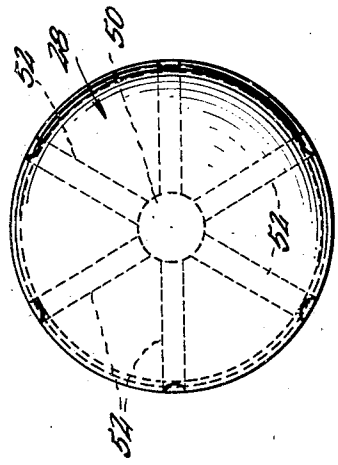


Fig. 3.

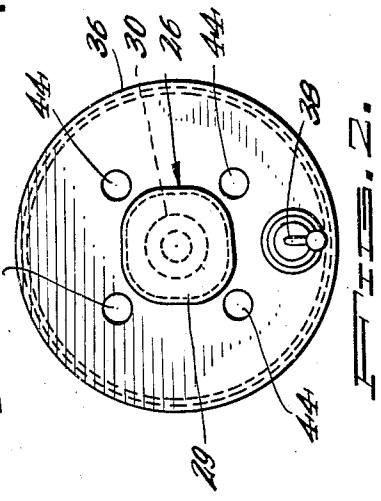


Fig. 2.

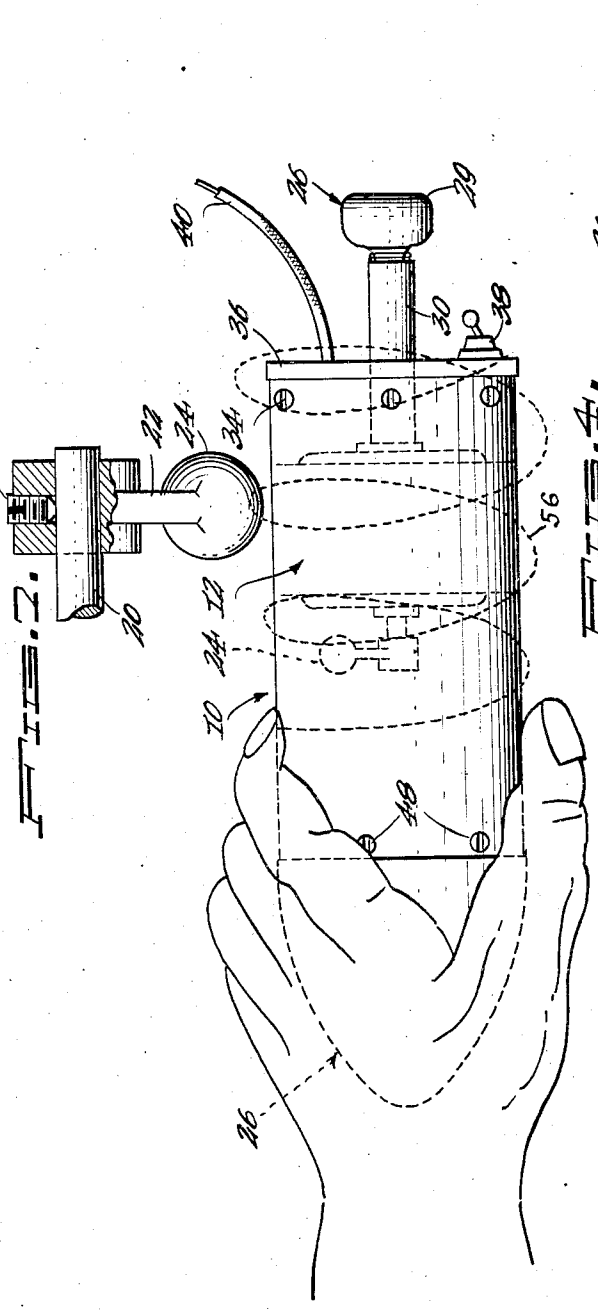
Nathan D. Mininberg
INVENTOR.

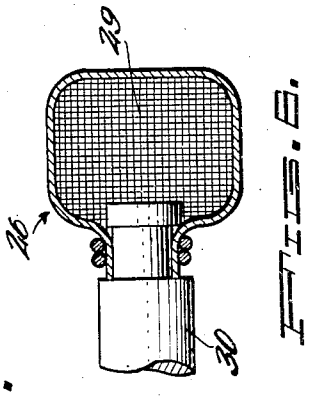
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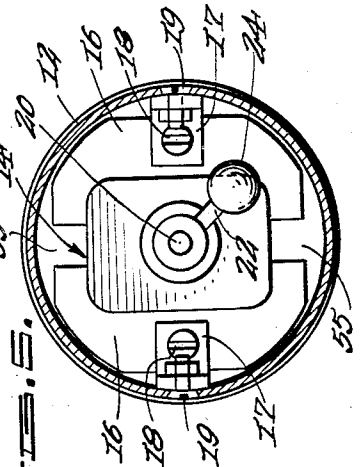
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THERAPEUTIC-OSCILLATION APPLICATOR

Filed Oct. 11, 1944 2 Sheets-Sheet 2







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THERAPEUTIC-OSCILLATION APPLICATOR

Nathan D. Mininberg, New York, N. Y.

Application October 11, 1944, Serial No. 558,152

3 Claims. (Cl. 128—49)

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This invention relates to therapeutic devices and more particularly to therapeutic oscillation devices.

The primary object of the invention is the provision of a manually-portable oscillation applicator provided with means for applying oscillations to parts of the face or head or other comparatively small areas of the body and provided also with means for applying oscillations over larger areas of the body.

The above and other objects, features and advantages of the invention will best be understood from the following description considered in connection with the accompanying illustrative drawings.

In the drawings:

Fig. 1 is a longitudinal view, partly in elevation and partly in section of an oscillation applicator embodying the present invention;

Figs. 2 and 3 are views of the opposite ends, respectively, thereof;

Fig. 4 is a longitudinal view thereof showing the applicator held at one end thereof for the application of oscillations by its opposite end;

Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 1;

Fig. 6 is a sectional view of the resilient part of the head at one end of the oscillator; and

Fig. 7 is a detail view of the attachment of the weight to the motor shaft eccentrically thereof.

Referring now to the drawings in detail, the oscillation applicator 10 embodying the present invention is manually portable and is of such size and shape as to facilitate the handling thereof by the user. More specifically, said applicator is of such size and shape that it can be conveniently held at either end thereof in the user's hand while the opposite end is brought into engagement with the desired part of the face, head or other part of the user's body for applying oscillations.

The oscillation applicator 10 comprises a longitudinally extending cylindrical or tubular frame 12 within which there is mounted an electrical motor 14 in fixed relation to said frame. More specifically, said motor 14 is carried by frame members 16 fastened to tubular frame 12 by brackets 17 secured to members 16 and 12 by screws 18 and 19, respectively, or in any other suitable way. The rotary shaft 20 of motor 14 is disposed co-axially of frame member 12 and is provided with a radially extending arm 22 having a weight 24 secured thereto. As shown in Fig. 7 arm 22 is secured to shaft 20 by a set screw 25. Thus the motor shaft 20 carries a weight

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eccentrically thereof, said weight being rotated by said shaft when the motor is operated.

Oscillation applying heads 26 and 28 are fixedly secured to the opposite ends, respectively, of tubular frame member 12. The oscillation head 26 preferably comprises a resilient pad 29 which is fixed to and thereby carried by the outer end of a rod 30 which is fixed to a disk 32 secured in and closing one end of tubular frame member 12 by screws 34 or in any other suitable way. Rod 30 and disk 32 are preferably formed in one piece of wood or other suitable material. Said disk has an outer end portion 36 on which is mounted a switch 38 for controlling the circuit of the electrical motor 14. An electric cord 40 for connecting the motor 14 to a source of electric for operating motor 14 passes through an opening 42 in disk 32. Said disk is also provided with an opening 44 for the passage of air into the tubular frame 12.

The oscillation applying head 28 comprises a reduced inner end portion 46 which projects into frame member 12 and is secured thereto by screws 48 or in any other suitable way. Head 28 is formed of wood or any other suitable material. Said head is provided with a recess 50 and with a plurality of openings 52 which extends from the outer surface of said head to said recess. The inner end of recess 50 is in communication with the interior of tubular frame member 12. Thus air can pass through openings 44 and 52 into and through tubular frame member 12 for cooling motor 14. It will be noted that spaces 55 (Fig. 5) are provided between motor-mounting members 16 to allow the passage of air through the tubular member 12.

It will be observed that the oscillation applying heads 26 and 28 which are carried by tubular frame member 12 at the opposite ends thereof, respectively, are disposed in line with the axis of rotation of shaft 20. Accordingly, when shaft 20 is rotated the eccentrically disposed weight 24 produces circular oscillations which are communicated to said heads and which cause the latter to oscillatate in directions running transversely of the axis of shaft 20. In the use of the device, the latter is held by the user at one or the other end thereof (Fig. 4) depending upon which head is to be engaged with the desired part of the user's or patient's head or body. More specifically, when the oscillation applying head 26 is utilized the applicator 10 is grasped at the opposite end, as illustrated in Fig. 4, so that the oscillation of head 28 is arrested while the head 26 is free to oscillate under the action of the weighted shaft

20. On the other hand, when the head 28 is to be used for applying oscillations, the applicator 10 is held at the end thereof opposite said head 28 so that oscillation of said held end is arrested while head 28 is free to oscillate. It will be noted that motor 14 is positioned closer to one end of frame 12 than to the opposite end thereof so that the amplitude of oscillation of the head 28 which is fixed to the end of the frame which is farther from the motor is greater than the amplitude of oscillation of the other head which is fixed to the opposite end of the frame, which is nearer to the motor, when the frame is manually gripped adjacent one of said heads for the transmission of oscillations by the other of said heads. Ordinarily, the head 26 is utilized for applying therapeutic oscillations to parts of the face or head or to comparatively small areas of the user's or patient's body while the head 28 is utilized for applying therapeutic oscillations to or over larger areas of the body. Further, it will be observed that head 26 being resilient provides for the application of oscillations to regions, for example, the eyes of the patient which require more gentle treatment, while oscillation applying head 28 being non-resilient can be utilized where less gentle treatment is desirable or applicable. The oscillation of the applicator frame is indicated diagrammatically in Fig. 4 by the dotted line 56.

While I have shown and described the preferred embodiment of my invention, it will be understood that the latter may be embodied otherwise than as herein shown or described and that various changes in the embodiment herein disclosed may be made without departing from the invention within the scope of the appended claims.

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

1. A manually portable oscillation applicator, comprising a tubular cylindrical member, motor-mounting means disposed within said tubular member between its opposite ends and fixed thereto, a motor fixedly mounted on said means and having a rotary shaft disposed co-axially of said tubular member, said motor being positively secured in said frame against movement axially of the frame, a weight carried by said shaft eccentrically thereof and rotatable thereby, an oscillation applying head fixed to one end of said tubular member and closing said end thereof, an oscillation head fixed to and closing the opposite end of said tubular member and provided with a rod disposed co-axially of tubular member externally thereof and an oscillation-applying member carried by the outer end of said rod, said motor being positioned nearer to one end of said frame than to the other end of said frame whereby the amplitude of oscillation of one of said heads is greater than the amplitude of oscillation of the other of said heads when the frame is manually gripped adjacent one of said heads for the transmission of oscillations by the other of said heads.

2. A manually portable oscillation applicator, comprising a longitudinally extending frame, a motor mounted within and fixed to said frame, said motor having a rotary shaft, a weight carried by said shaft eccentrically thereof and rotatable thereby, said motor being positively secured in said frame against movement running longitudinally of the motor shaft, said shaft and the weight carried thereby being positioned within said frame, and oscillation-applying heads fixedly secured to said frame at the opposite ends thereof, respectively, in line with the axis of rotation of said shaft of the motor, said motor being positioned nearer to one end of said frame than to the other end of said frame whereby the amplitude of oscillation of one of said heads is greater than the amplitude of oscillation of the other of said heads when the frame is manually gripped adjacent one of said heads for the transmission of oscillations by the other of said heads, said shaft and weight being clear of direct engagement with said frame and said oscillation heads.

3. A manually portable oscillation applicator, comprising a tubular member, motor-mounting means disposed within said tubular member between its opposite ends and fixed thereto, a motor fixedly mounted on said means and having a rotary shaft disposed co-axially of said tubular member, a weight carried by said shaft eccentrically thereof and rotatable thereby, said motor being positively secured in said frame against movement axially of the frame, an oscillation applying head fixed to one end of said tubular member and closing said end thereof, an oscillation head fixed to and closing the opposite end of said tubular member and provided with a rod disposed co-axially of tubular member externally thereof and an oscillation-applying member carried by the outer end of said rod, said motor being positioned nearer to one end of said frame than to the other end of said frame whereby the amplitude of oscillation of one of said heads is greater than the amplitude of oscillation of the other of said heads when the frame is manually gripped adjacent one of said heads for the transmission of oscillations by the other of said heads, said shaft and weight being clear of direct engagement with said frame and said oscillation heads.

NATHAN D. MININBERG.