May 9, 1939. C. BRANDENBURG 2,157,279

ELECTROMAGNETIC VIBRATOR

Filed Nov. 29, 1937

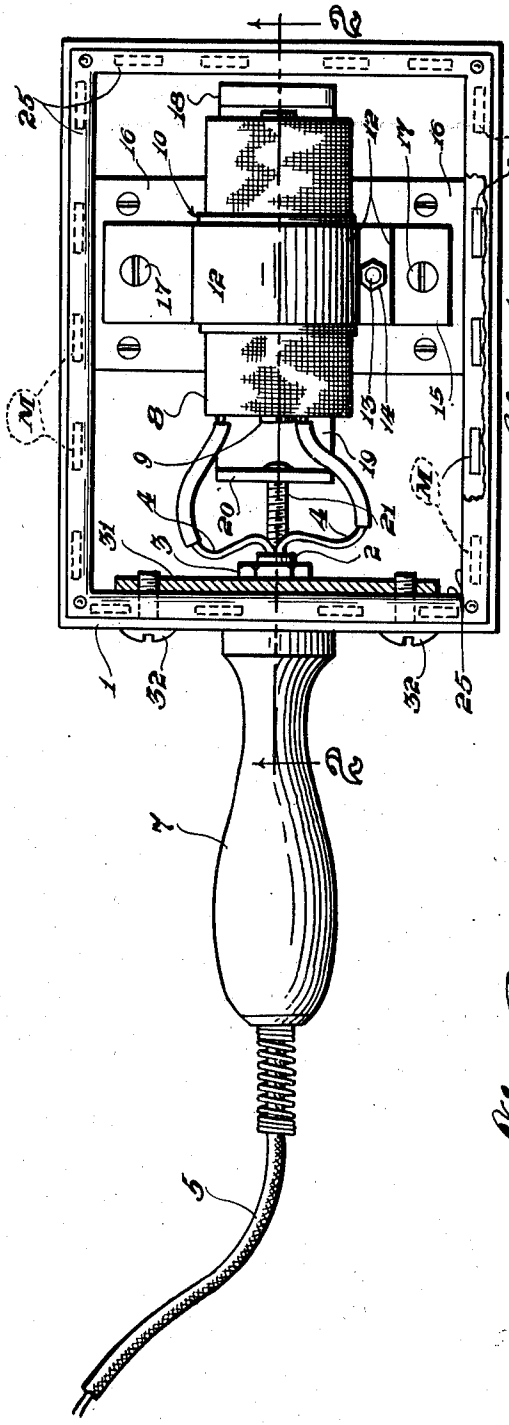


Fig. 1.

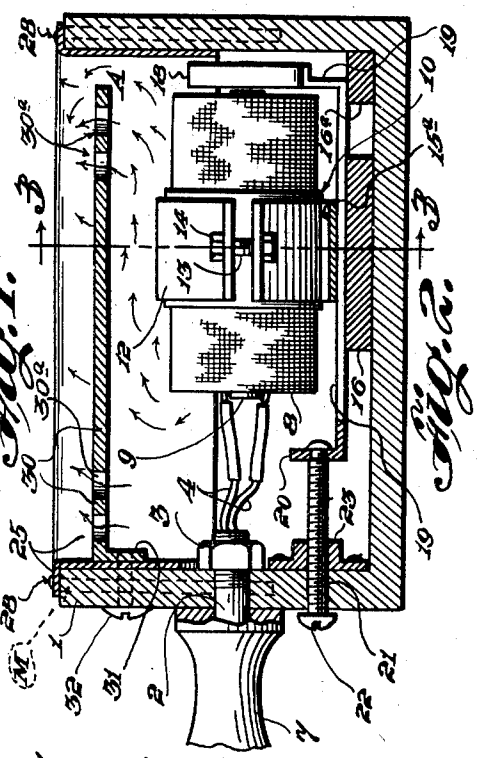


Fig. 2.

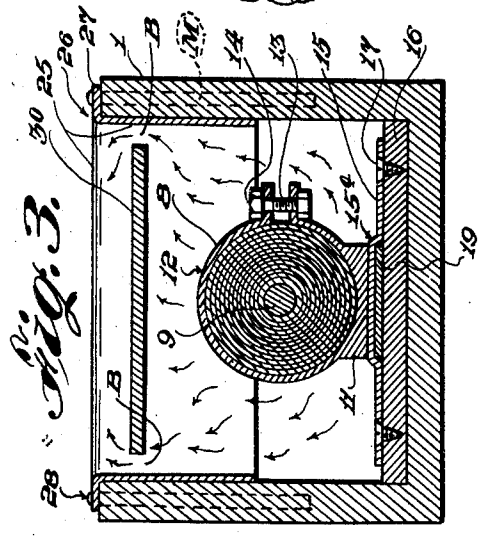


Fig. 3.

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Patented May 9, 1939 2,157,279

UNITED STATES PATENT OFFICE

2,157,279

ELECTROMAGNETIC VIBRATOR

Charlotte Brandenburg, San Antonio, Tex.

Application November 29, 1937, Serial No. 177,020

2 Claims. (Cl. 128—41)

This invention relates to electro-magnetic vibrators designed for use in treating the human body and tending to act upon the tissues and revitalize the system.

The present invention is an improvement over United States Letters Patent No. 1,167,256, granted to Charlotte Bergman on January 4, 1916, the object being to improve the vibrator and simplify its construction by the arrangement and addition of certain parts hereinafter set out.

The invention will be clearly understood from a perusal of the following detailed description, taken in connection with the accompanying drawing, and in the drawing:

Figure 1 is a plan view of the vibrator, partly in section.

Figure 2 is a vertical sectional view of Figure 1, the view being taken along the line 2—2 of said figure, and

Figure 3 represents a cross-sectional view of Figure 2, the view being taken along the line 3—3 of Figure 2.

Referring to the drawing in detail, a casing of rectangular form is indicated at 1, and this casing is made of suitable fire-proof material or covered with asbestos or other characteristic material to resist burning and for insulating purposes. One end wall of the casing or housing has an aperture in which a tubular member 2 is secured by a nut 3, whereby wires 4, inserted through the tubular member 2, conduct electric current from a source of electrical supply through the cord 5, to a coil 8. A handle 7 of insulating material is axially bored to receive the tubular member 2, and the handle may have a conventional switch (not shown) of the opposed push-button type.

The purpose of the instrument is to provide a means for producing a combined vibratory action, heat and magnetism in treating the tissues and nerve system of those to whom the instrument is applied. There is therefore provided the coil 8, consisting of resistance wire as shown, wound on a core 9. The coil 8 has an insulating collar 10 and secured around this collar is a clamping means with a base portion 11, formed integrally with the circular portion 12, the ends of the portion 12 projecting outwardly as shown and connected by a bolt and nut 13 and 14 respectively. A strip of metal 15, fastened to an insulating plate 16 by the screws 17 is provided for supporting the coil 8, the strip 15 having an integrally-formed upwardly projecting surface as indicated at 15a upon which the base portion 11 of the clamping means rests.

An armature 18 is positioned at one end of the core 9 and the coil 8, the armature being connected to or integrally formed with a metallic strip 19. The strip 19 is bent angularly as shown and one end at 20 is apertured for the insertion of one end of a bolt 21, riveted or otherwise secured thereto. This bolt is adapted to be moved backwardly or forwardly by a screw driver placed on the head 22 and slides the strip 19 on the plate 16 and a support 16a in adjusting the armature 18 to the core 9 of the coil 8, to regulate the vibrations set up. If preferred the head end of the bolt may take the form of a knurled end for adjusting the bolt by the fingers. The strip 19 which is connected to the armature 18 is adapted to be slid as stated and is guided in the slot formed by the projection 15a and the top of the plate 16. The plate 16 is fastened to the bottom of the housing or casing 1 by the screws 17.

Spaced apart in the walls of the housing 1 are a plurality of magnets M, the north and south poles of which are oppositely and alternately disposed. The purpose of these magnets is to produce a magnetic field which is effective several inches beyond the margins of the walls of the housing 1.

The instrument, as pointed out, is designed to serve, in addition to the vibratory effect thereof, as a generator of heat and magnetism, and for this purpose and in addition to the magnets M and in order to maintain some of the heat and magnetism, there is provided an interior lining or plate of suitable material as indicated at 25. In the present invention this lining is made in one piece and is angularly formed as at 26 to provide a flange 27, the flange adapted to be seated over and upon the upper edges of the walls of the housing or casing 1. This lining extends downwardly against the inside surfaces of the walls of the housing for approximately a distance half way between the top and bottom of the housing walls and is secured in position by the pins (or screws) 28. The housing is open at the top, but has a plate 30, with openings 30a and an angularly formed end 31, whereby it is fastened to a position slightly below the top edges of the walls by the screws 32. This plate serves to prevent a too rapid escape of the heat generated by the coil, the heat passing upwardly as indicated by the arrows, Figures 2 and 3, but allowing the heat to escape to an extent sufficient for the purpose, as evidenced by the spacing of the sides and one end thereof from the walls of the housing as at A and B—in addition to the holes 30a.

In the operation of the instrument, its open side is placed towards the parts to be treated, and the beneficial effect attained is brought about by the combined vibratory action, heat and magnetism of the instrument.

Obviously the structure of the instrument may be modified and varied in some respects without departing from the intent of the invention, such as might be said to fall fairly within the scope and meaning of the claims appended hereto.

What is claimed as new is:

1. An electro-magnetic vibrator comprising a housing with an open face, an armature secured inside the housing, a coil co-operating with the armature for effecting vibration of said armature, a plate lining inside the housing for heat holding and retaining purposes, an adjusting means secured to said armature and extending outside one wall of the housing so that the armature can be moved to and from the coil to control the vibrations of the armature, a perforated plate spaced above the said coil as a protection and to prevent too rapid escape of heat from said coil, and a handle carrying wires for connecting the coil to an external electrical source.

2. An electro-magnetic vibrator comprising a housing with an open face, an armature secured inside the housing, a coil co-operating with the armature for effecting vibration of said armature, a plate lining inside the housing and extending from the top of the housing to approximately midway toward the bottom thereof for heat holding and retaining purposes, an adjusting means secured to said armature and extending outside one wall of the housing so that the armature can be moved to and from the coil to control the vibrations of the armature, a perforated plate spaced above the said coil as a protection and to prevent too rapid escape of heat from said coil.

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