Dec. 8, 1953 C. SCHWARTZ 2,661,736

ELECTRIC VIBRATOR FOR MASSAGE PURPOSES

Filed Aug. 20, 1952

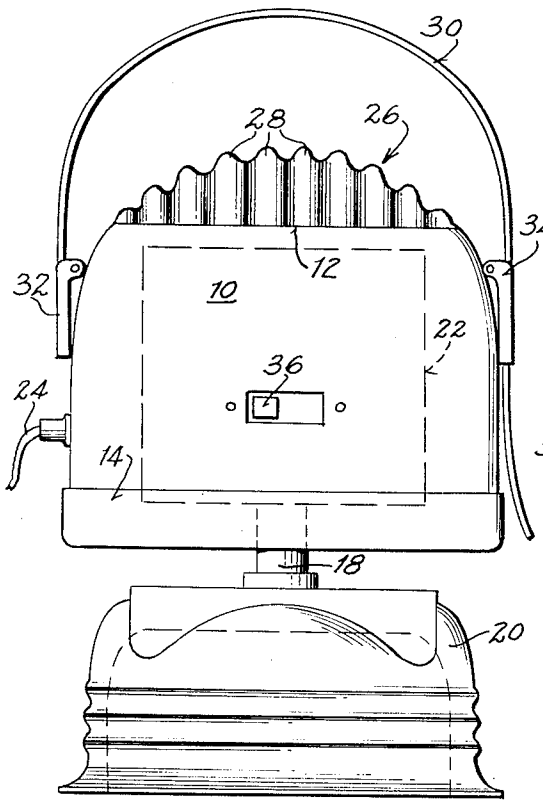


Fig. 1

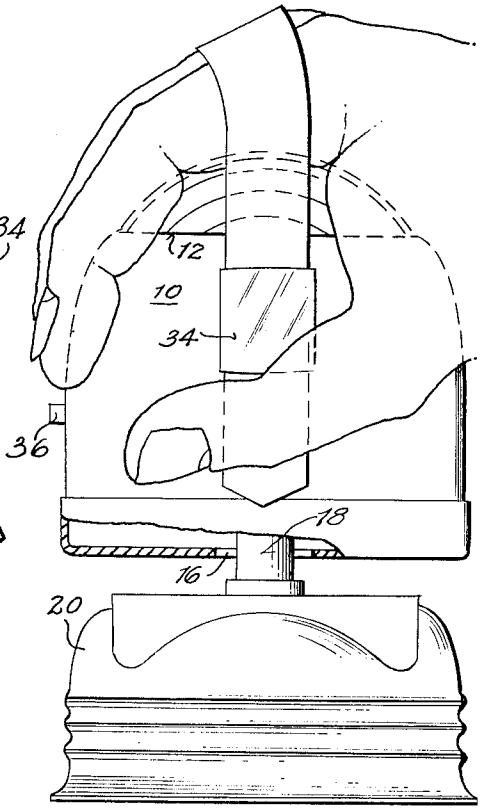


Fig. 2

Charles Schwartz,
INVENTOR

BY Ross Thurrey
ATTORNEY

Patented Dec. 8, 1953

2,661,736

UNITED STATES PATENT OFFICE

2,661,736

ELECTRIC VIBRATOR FOR MASSAGE PURPOSES

Charles Schwartz, Norwalk, Conn., assignor to Republic Electric & Manufacturing Corporation, New York, N. Y.

Application August 20, 1952, Serial No. 305,443

3 Claims. (Cl. 128—41)

1

This invention pertains to electric vibrators of the type used for medical and therapeutic massage, and more particularly to improvements in such a device which make it practical and convenient for use.

Electric vibrators of the type mentioned are generally designed to be held in the hand, either of the person upon whose body they are to be used, or by another person. Inasmuch as these devices, by their nature, depend upon relative movement between the body of the device itself and a resilient or other applicator (which transmits vibration to the part being treated), it follows that considerable vibration occurs between the body of such device and the hand in which it is held. One undesirable result of this construction is that the user's grip upon the device is quite insecure, and becomes less secure as the device continues to vibrate during an application period. Consequently, it is necessary for the user continually to readjust his grip upon the device, and where the handle is cylindrical, use of the device may become quite uncomfortable, the hand loses its grip, and the device may be allowed to fall, with injury to itself or undesired effects upon the patient, or both.

Inasmuch as the relatively stationary mass (with respect to which the vibrations are generated) is constituted by the mass of the body portion of the device plus the effective mass of the user's hand, it is desirable that the center of gravity of the device be disposed as closely as possible at the center of the user's fist, when the latter is in the relatively unclenched (or partially clenched) position in which it holds the device. This close mechanical coupling between the device and the hand also lessens the paralyzing effect of the vibrator upon the wrist muscles, and of course the close contact between palm, fingers and the device also minimizes the chance that the device will slip out of the user's grip.

It is accordingly a principal object of the invention to provide an electric vibrator whose design permits extremely close coupling between the device and the user's hand; that is, one in which the effective mass is concentrated in the center of the user's fist.

A further object of the invention is to provide a device of the above character which has a palm-engaging portion comprising a section of an ovoid shape, having transverse ribs of generally semi-cylindrical configuration, so as to provide maximum contact with the fingers and palm of the user's hand.

An additional object of the invention is to

2

provide such a device with a securing strap adapted to be adjusted for tight encirclement of the back of the user's hand, whereby to ensure intimate contact between the hand and the vibrator device.

Inasmuch as the use of a securing strap of the above type renders it difficult to disengage the hand for operation of a control or on-off switch, still another object of the invention is to provide a disposition of the control switch such that it can readily be operated "on" and "off" positions by the fingertips of the same hand which holds the vibrator; i. e., without removal of the securing strap or change of position of the hand.

The above and other objects and advantages of the invention will best be understood by study of the following detailed specification of a preferred and exemplary embodiment of the invention, taken in connection with the appended drawings, in which:

Figure 1 is a vertical elevation front view of the device; and

Figure 2 is a similar view showing the side elevation of the device, as it appears in use held in the user's hand.

The electric vibrator of the invention, as shown in the drawings, comprises a main casing 10 which is of generally oval shape in horizontal section, and has a flat, truncated top surface indicated by the numeral 12. The casing 10 is closed at its lower end by a cover plate 14, through an aperture 16 of which passes the oscillating vibrator shaft 18, and to which is secured the resilient massage cup 20 shown by way of example as a hollow cup of rubber or the like. It is this cup 20 which is applied to the body of the patient under treatment.

While the details of the electrical arrangement for producing vibration of the cup 20 with respect to the main casing 10 are of no significance with respect to the present invention, a conventional electric vibrator motor is designated by numeral 22 and shown in dotted lines in Figure 1, it being understood that this motor is fixed with respect to the casing 10. The motor may, for example, comprise a stack of E-shaped laminations upon which is wound an electric coil, together with a suitable armature mounted for movement under the influence of the electromagnetic field of the laminations, and said armature being connected to the connecting rod or shaft 18. In such a machine, connection of the coil to the usual source of alternating current will produce the vibrations, and

a power cord is indicated at 24 for this connection.

The flat upper surface 12 of casing 10 has secured thereto in any convenient manner a rounded grip or hand-piece 26, corresponding in its oval horizontal profile to the upper portion of casing 10, and provided with a plurality of generally semi-cylindrical ribs 28 extending in one direction along its upper surface. These ribs provide a very intimate contact with the palm and fingers of the hand which holds the device in use, as shown in Figure 2, and prevent any slipping or loosening of the grip on the device.

A strap 30, of leather or other flexible material, is secured to a suitable clip 32 at one side of casing 10, and extends over the grip portion 26 and is adjustably received in a locking clip 34 at the opposite side of the device. Thus, when the hand is in position to grip the device, the strap may be pulled down tight upon the back of that hand and secured in this adjustment by means of locking clip 34. When so disposed, the fingers of the hand are in position to operate the electric on-off switch which is mounted in casing 10 with its sliding operating button 36 located to permit such operation. Thus, it is unnecessary for the user to employ his other hand for the purpose of temporarily de-energizing the device during one session of use, which is a decided convenience in practical use.

The use of the strap 30 in combination with the rounded, ribbed grip 26 makes it unnecessary for the user to continuously apply sufficient finger pressure to ensure his grip on the device, as is the case where a handle or the like is merely held in the fist, and this has been found to reduce in great measure the muscular fatigue which is generally produced when extensive periods of use of the device are necessary. Sufficient pressure to ensure transmission of the vibrations to the patient can be obtained merely by pressing down upon the unit, with the fingers relatively relaxed, and yet good position control of the device is maintained.

While the invention has been described in detail in connection with a single preferred embodiment, it will be obvious that many changes and modifications therein can be made without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:

1. An electric vibrator for massage purposes and the like, comprising a casing of generally rounded horizontal profile and having flat upper and lower surfaces, a vibrator motor in said casing, a massage applicator beneath said casing, a vibratable shaft connecting said applicator with said motor, a grip element of generally convex profile secured to the upper surface of said casing and substantially covering the flat upper surface thereof, and a hand-engaging strap extending across the top of said grip element and secured at opposite ends to opposite side walls of said casing.

2. The combination of claim 1, in which said grip element is provided with a plurality of parallel, hemi-cylindrical ribs extending across the upper convex surface thereof and extending in a direction perpendicular to the direction of said strap.

3. The combination of claim 1, and a switch for said motor mounted on said casing with its operating element extending adjacent the position of the fingers of a hand engaging said casing and grip element.

CHARLES SCHWARTZ.

No references cited.