Aug. 11, 1931. L. J. WAHL 1,818,287

VIBRATOR ATTACHMENT

Filed Dec. 11, 1930

Fig. 1.

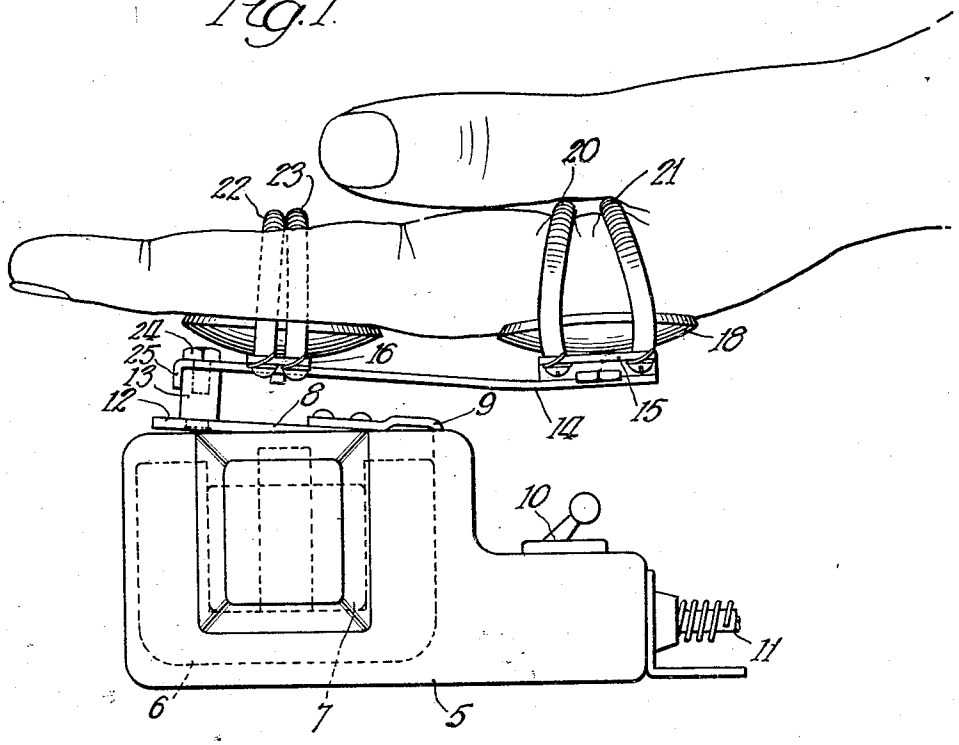
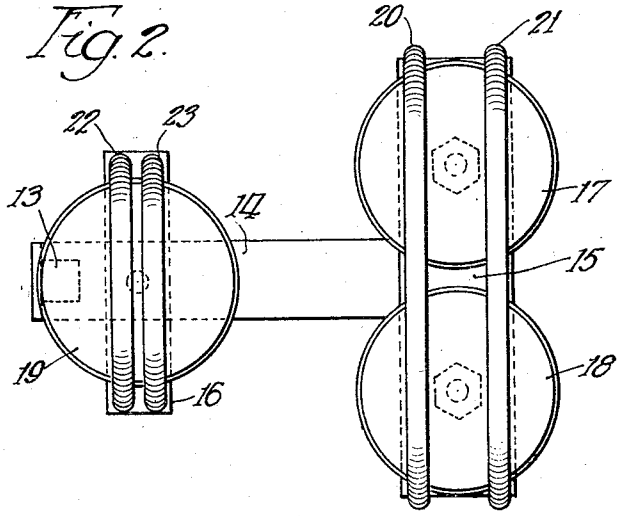


Fig. 2.



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Patented Aug. 11, 1931 1,818,287

UNITED STATES PATENT OFFICE

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VIBRATOR ATTACHMENT

Application filed December 11, 1930. Serial No. 501,549.

My invention relates to electric magnetic vibrators such for instance as is shown in my prior application Serial No. 268,609, filed April 9, 1928 for vibrator.

It is the principal purpose of this invention to provide an attachment for vibrators of this character for use in vibrating the hand or, more strictly speaking, the tips of the fingers in order that the fingers may be used for massaging in conjunction with the vibrator.

For certain types of work it is found to be advantageous to use the fingers rather than a massaging implement or tool. With the attachment which is the subject matter of this application, all the advantages of the rapid vibration of the electro-magnetic vibration may be obtained in combination with the advantages obtained by using the hand as the applicator.

More specifically it is a purpose of this invention to provide in combination with the electro-magnetic vibrator a device which may be readily attached to the armature thereof and which serves as a backing for the hand to communicate the vibrations of the armature to the finger tips of the hand.

In providing an attachment of this character, I have found that it is best to attach the attachment in a certain definite position relative to the armature and to so construct the same as to prevent detuning the armature to such an extent as to destroy the effectiveness of the vibrator.

I will describe the preferred form of my invention more specifically by reference to the accompanying drawings wherein—

Fig. 1 is a side view showing the vibrator and attachment in conjunction with the hand of the operator;

Fig. 2 is a bottom plan view of the attachment.

Referring now in detail to the drawings, I show at 5 an electro-magnetic vibrator casing having therein the usual core 6 and coil 7, such as for example as is shown more specifically in my prior application, and an armature 8 which as shown is secured at the rear end of the core by means of a spring 9. A suitable switch indicated generally at 10 is used to control the operation of the vibrator which receives the operating current through the usual electric cord 11. The armature 8 is provided at its free end 12 with a mounting means consisting of a stud 13 rigidly connected to the armature which stud is interiorly screw-threaded to receive the usual massage tools. I prefer to make this stud rectangular in cross section for a purpose which will presently appear.

The attachment consists of an elongated spring plate 14 carrying a pair of cross bars 15 and 16 which cross bars are rigidly secured thereto in any suitable manner. These cross bars in turn support yielding backing members for the hand. As shown, these consist of a pair of disks 17 and 18 on the rear bar 15 which are constructed of rubber in the preferred form so as to give a yielding surface against which the back of the hand may be placed. The front bar 16 carries a single backing member 19 of a similar character. A plurality of coiled springs 20 and 21 are secured at their opposite ends to the ends of the bar 15 to form flexible receiving loops for the hand. Another pair of similar springs 22 and 23 are connected to the opposite ends of the bar 16 to receive two of the fingers of the hand and complete the attachment of the vibrating device to the hand. It is obvious that the hand securing loops may be of any suitable material other than the coiled springs described.

The plate 14 is preferably of spring material and is slightly curved as shown in Fig. 1 to conform to the natural contour of the back of the hand. Bars 15 and 16 also preferably are slightly curved intermediate their ends so as to fit more comfortably to the back of the hand.

In order to insure rigidity between the mounting stud 13 and the plate 14, I secure the plate by means of a screw bolt 24 and also turn the end 25 thereof down over the flat front face of the stud. This forms an effective bracing construction for the plate 14 and serves to align it with the armature so that it extends back toward the rear end of the vibrator on a line substantially parallel to the armature. The length of the plate 14 is pref-

erably made such that the rear end thereof terminates substantially at the rear end of the vibrator.

These vibrators are provided in the first instance with an armature that is suitably tuned to the electro-magnet employed so as to give the best operation with the ordinary massaging tool. Now in applying the attachment, it is obvious that the same is somewhat heavier and more unwieldy than the massage tool. This has a tendency to detune the armature and thus make the vibrator less efficient.

I find, however, that by utilizing spring material in the construction of the plate 14 and extending the same rearwardly in the manner shown and attaching it at one extreme end to the armature, I avoid a great deal of the detuning effect of the attachment. This construction also communicates the vibration principally to the tips of the fingers and very little to that portion of the hand which is secured to the bar 15. The vibration takes place in the form of a more or less angular motion about the back end of the plate 14 thus giving the maximum range of movement to the tips of the fingers with very little movement to the main portion of the hand. This is no doubt owing to a combination of the mounting of the armature at one end and the extending of the plate from its point of securement at the free end of the armature toward the fixed end of the armature. The armature is thus relieved from the effort of vibrating the back end of the spring 14. In fact, the spring 9 which is the proper stiffness to tune the armature when using the regular standard applicators in the stud 26 has the spring effect of spring 14 added to it when the new attachment and the hand are connected to it and thus the additional spring effect of 14 takes care of tuning the additional weight of the hand.

From the above description, it is believed that the construction and operation of this device will be clear to those skilled in this art and the advantages thereof readily apparent. It is obvious that various minor modifications can be made from the exact details shown and described without departing from the scope of the invention.

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

1. A hand vibrating attachment for electro-magnetic vibrators having a vibrating armature and an electro-magnet, and having mounting means on the armature, comprising a supporting plate having means adjacent one end thereof for securing the same to said mounting means in spaced relation to said armature, said plate having yielding padding means thereon to engage the back of the operator's hand and having flexible securing means for passing over a portion of the hand to hold it against said padding means.

2. In an electric vibrator having a vibrating armature provided with a mounting stud, a hand holding device comprising a relatively stiff support having yieldable padding means on one side thereof and having flexible securing elements extending over said padding means whereby to receive a portion of the hand and hold it against the padding means, and means for fixing said support to said stud.

3. In an electric vibrator having a vibrating armature provided with a mounting stud, a hand holding device comprising a relatively stiff support having yieldable padding means on one side thereof and having flexible securing elements extending over said padding means whereby to receive a portion of the hand and hold it against the padding means, and means at one end of said support securing the same to said stud.

4. In an electric vibrator having a vibrating armature provided with a mounting stud, a hand holding device comprising a flat spring support having yieldable padding means on one side thereof and having flexible securing elements extending over said padding means whereby to receive a portion of the hand and hold it against the padding means, and means for fixing said support to said stud.

5. A hand vibrating device comprising an electro-magnetic vibrator having one end of its armature secured to the body of the vibrator and having a tool mounting device on the other end of said armature, a hand holder comprising a back plate, and means thereon for securing it to the operator's hand, one end of said holder being secured to said mounting device.

6. A hand vibrating device comprising an electro-magnetic vibrator having one end of its armature secured to the body of the vibrator and having a tool mounting device on the other end of said armature, a hand holder comprising a back plate, and means thereon for securing it to the operator's hand, said back plate having one end secured to said mounting device and extending toward the fixed end of said armature.

7. A hand vibrating device comprising an electro-magnetic vibrator having one end of its armature secured to the body of the vibrator and having a tool mounting device on the other end of said armature, a hand holder comprising a back plate, and means thereon for securing it to the operator's hand, one end of said holder being secured to said mounting device, said back plate being resilient.

8. A hand vibrating device comprising an electro-magnetic vibrator having one end of its armature secured to the body of the vibrator and having a tool mounting device on the

other end of said armature, a hand holder comprising a back plate, and means thereon for securing it to the operator's hand, said back plate having one end secured to said mounting device and extending toward the fixed end of said armature, said back plate being resilient.

In witness whereof, I hereunto subscribe my name this 12th day of November, A. D. 1930.

LEO J. WAHL.