Nov. 19, 1940. N. A. NELSON 2,222,422

VIBRATOR

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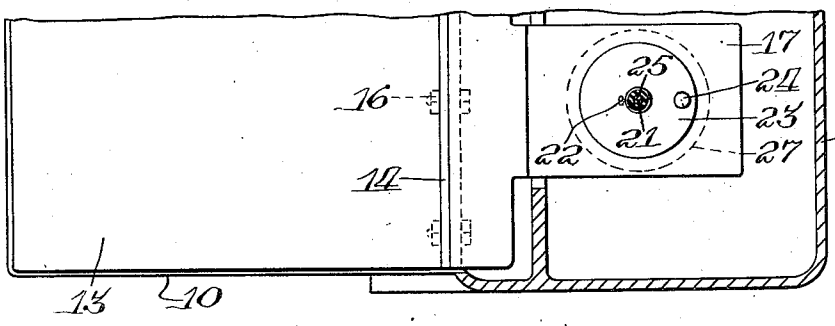


Fig. 1.

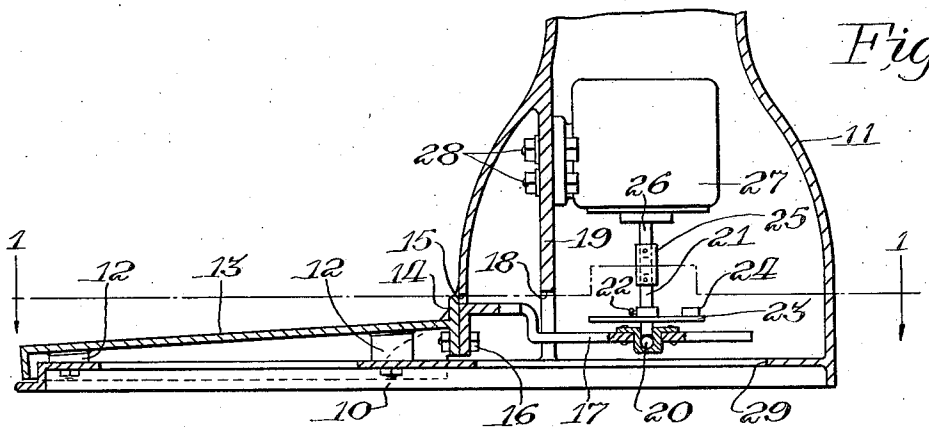


Fig. 2.

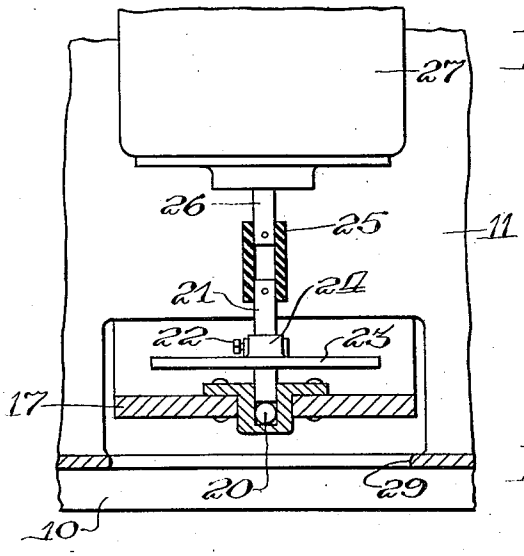


Fig. 3.

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VIBRATOR

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5 Claims. (Cl. 128—36)

The invention relates to a vibrator of the type having a platform upon which a person stands to receive a vibratory treatment. More particularly the invention relates to new and improved means for causing the platform to be vibrated so that a rapid shaking motion is properly transmitted to the person standing thereon.

The improved vibrator includes a housing for the operating mechanism which in practice is preferably coin released, the vibrating platform having an exposed position outside the housing and conveniently placed to enable a person to step thereonto for treatment.

The main object of the invention is to provide an improved vibrator for the purposes stated.

Another object is to provide such a vibrator of unusually compact construction whereby a minimum of space will be occupied thereby.

Still another object is to provide a novel, compact and foolproof power drive mechanism for rapidly vibrating the platform in the most effective manner.

Other important objects will no doubt become apparent to those versed in this art as the disclosure is more fully made.

Briefly, the new vibrator embodies a base carrying a yieldably supported horizontal platform upon which a person is to stand. Said platform is associated with a suitable upright housing, the platform having rigidly connected to it, a bracket which extends into the housing, where it carries a bearing to journal a vertical shaft. Fast on this shaft is a disk or wheel carrying an eccentric or off-center weight. The shaft mentioned is flexibly connected to the shaft of an electric motor rigidly supported on the inside of the housing. When the motor operates the shaft and weighted wheel rotate very rapidly so that through the bracket a vigorous vibratory movement is imparted to the platform and the person standing thereon.

In the drawing, showing a practicable embodiment of the invention:

Figure 1 is a horizontal sectional view through the vibrator, taken along the line 1—1 of Figure 2, looking in the direction of the arrows;

Figure 2 is a vertical sectional view through the vibrator structure; and

Figure 3 is an enlarged elevational view, partly in section.

The improved vibrator embodies a suitable base 10, including an appropriate, upright housing 11 at one end, which housing may be enlarged in the shape of a bell at its lower end. The portion of the base exterior of the housing 11 carries suitable rubber blocks 12 to support yieldably, a suitable substantially horizontal platform 13, one end of which is formed with a vertical flange 14.

Adjacent said flange 14, the wall of the housing 11 is provided with an opening 15 and bolted securely and rigidly to said flange by bolts 16, is a bracket 17. This bracket is passed into the housing 11 through the opening 15. The bracket also passes through an opening 18 formed in the lower end of a vertical wall or standard portion formed in the housing 11, as shown.

Inside the housing 11 the bracket 17 is horizontally disposed as shown, and carries a removably positioned ball bearing 20 of any suitable kind to support and journal a vertical shaft 21. This shaft has secured to it, by a set screw 22 a horizontal wheel or disk 23 provided with an eccentric or off-center weight 24. This disk is positioned immediately above the bracket 17. The shaft 21 extends above the disk 23 and is flexibly and drivingly connected by a rubber sleeve coupling 25 to the vertical shaft 26 of an electric motor 27 rigidly secured within the housing 11 by bolts 28 to the wall or support 19, as shown. The motor is supported independently of the bracket 17. The base 10 is open as at 29 to give easy access to the interior parts described within the housing 11.

In use it will be understood that the motor 27 is connected to a usual source of commercial electric current and that the starting switch therefor may be operated by a conventional coin released means. Once started the motor can, in practice, be timed to run for any desired period of time.

In operation, a person desiring vibratory treatment stands on the platform 13. When the motor 27 is started the shaft 21 is rapidly driven at motor speed through the flexible coupling 25 from the motor shaft 26. As a result the disk 23 is rapidly rotated at the same high speed. The off-center weight 24 sets up a rapid vibratory motion which through the shaft part 21 is directly communicated to the bracket 17 and platform 13 in an obvious manner. The rubber block supports 12, of course, permit said platform 13 so to vibrate. Because of the vertical axis of the shaft 21 it is found that a lateral vibration predominates in the platform 13 which is desirable as it is not so easily transmitted upwardly through the spine of the person treated. The treatment is especially useful in relieving tired, aching feet.

It is the intention to cover all changes and

modifications of the example shown for purposes of the disclosure which do not in material respects constitute departures from the spirit and scope of the invention.

What is claimed is:

1. In a vibrator, a horizontal base, an upright housing at one end thereof, a yieldably supported platform carried at the other end of the base outside the housing, a bracket rigidly secured to the platform and extending into the housing through an opening formed therein, an upright shaft journaled on the bracket within the housing, an electric motor having a shaft, means rigidly supporting the motor above the bracket within the housing and independently of the bracket, means flexibly connecting the two shafts, and a disk secured to the first shaft and provided with an off-center weight portion whereby rotation of the shafts by the motor imparts vibratory motion through the bracket to the platform.

2. In a vibrator, a horizontal base, an upright housing at one end thereof, a yieldably supported platform carried at the other end of the base outside the housing, a bracket rigidly secured to the platform and extending into the housing through an opening formed therein, an upright shaft journaled on the bracket within the housing, an electric motor having a shaft, means rigidly supporting the motor above the bracket within the housing and independently of the bracket, a flexible coupling drivingly connecting the two shafts, an off-center weighted member secured to the first shaft whereby rotation of the shafts by the motor imparts vibratory movement to the platform through the bracket, said base formed with an opening to make the drive parts within the housing accessible.

3. In a vibrator, a horizontal base, an upright housing positioned at one end thereof, a yieldably supported platform carried at the other end of the base outside the housing, said platform having a rigid extension bracket portion protruding through an opening in the housing and into the housing, an electric motor positioned rigidly in the housing on a vertical axis and independent of the bracket portion, said motor having a vertical shaft, a vertical shaft journaled on the bracket portion, means flexibly and drivingly coupling said shafts, and an off-center weight means rotatable with the shaft carried by the bracket portion whereby when the motor is operated a preponderantly lateral vibratory motion will be transmitted to the platform.

4. In a vibrator, a horizontal base, an upright housing positioned at one end thereof, a yieldably supported platform carried at the other end of the base outside the housing, said platform having a rigid extension bracket portion protruding through an opening in the housing and into the housing, an electric motor positioned rigidly in the housing on a vertical axis and independent of the bracket portion, said motor having a vertical shaft, and eccentric means supported by said bracket portion and drivingly and flexibly connected to the motor shaft to transmit a preponderantly lateral vibratory motion to the platform when the motor operates.

5. In a vibrator, a horizontal base, a substantially horizontal platform yieldably mounted thereon, an electric motor, a support on the base including means for rigidly mounting the motor in a raised position above the base with its motor shaft extending vertically downwardly, said platform having an extension bracket portion extending substantially horizontally below the motor shaft, a shaft journaled in the bracket portion in substantial coaxial alinement with the motor shaft, a drive coupling flexibly connecting the two shafts, and an eccentric weight member made fast on the second shaft.

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