

[54] **MESSAGE TYPE OF PORTABLE VIBRATOR**

[76] Inventor: **Frederick J. Knop**, 802 Kentucky St., Racine, Wis. 53405

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[58] Field of Search 128/32-36, 128/24.2

[56] **References Cited**

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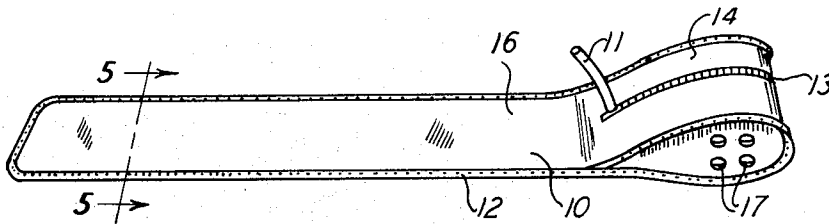
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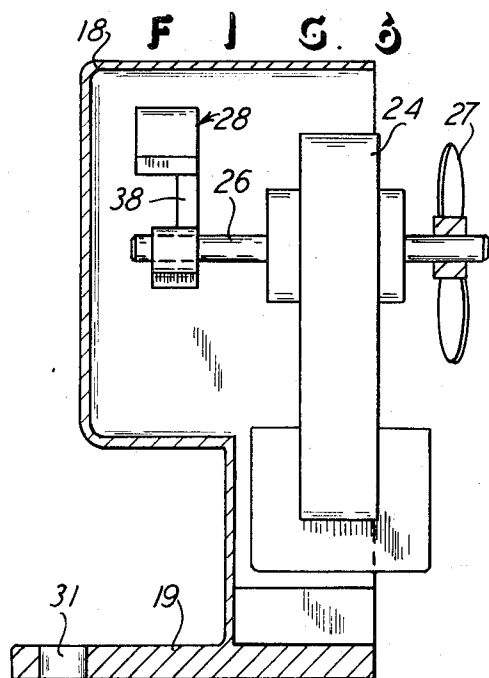
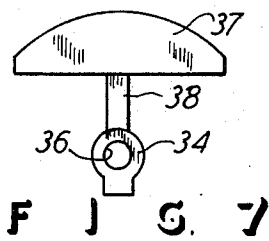
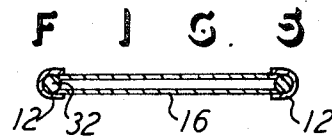
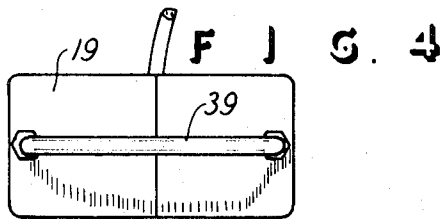
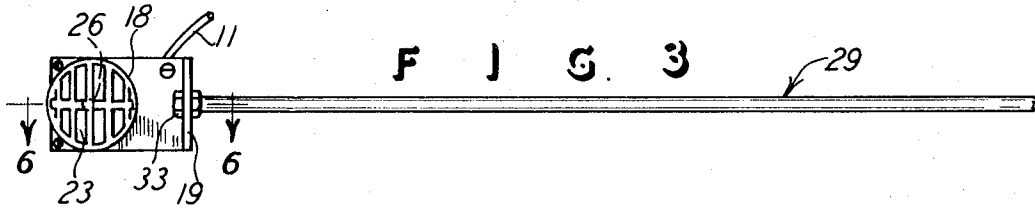
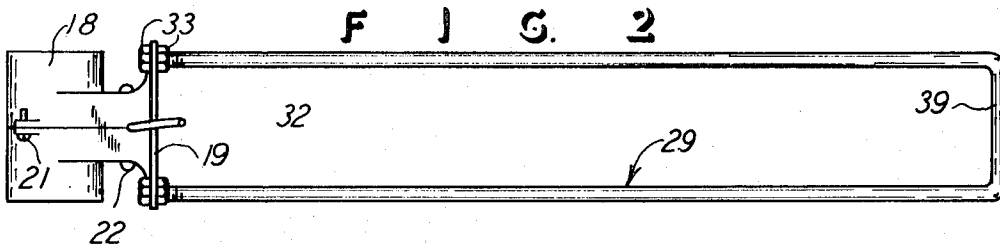
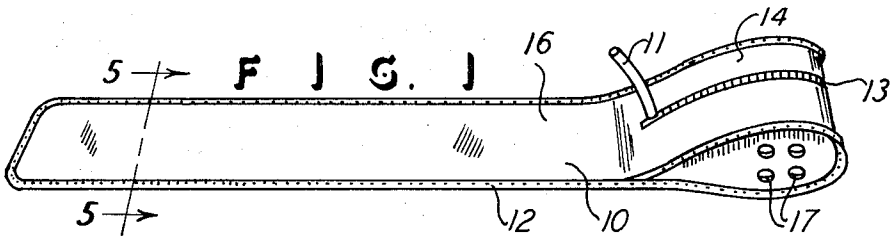
Primary Examiner—Lawrence W. Trapp
Attorney, Agent, or Firm—Arthur J. Hansmann

[57] **ABSTRACT**

A massage type of portable vibrator including a motor having an eccentric and being enclosed with a housing terminating in a flange on one side thereof. An elongated member, in the form of a U-shaped rod, is attached to the flange by passing through holes therein and therefore rigidly connected to the motor housing to vibrate in response to operation of the motor. The U-shaped rod is disposed in one plane which is co-incident with the plane along the axis of the motor shaft, and the eccentric weight is in a plane transverse to the plane of the U-shaped rod. A removable cover snugly extends over the parts mentioned, and a hem is provided around the edge of the cover at the periphery of the rod. The rod portion of the vibrator can be inserted under a seat cushion or a bed mattress to vibrate the object.

7 Claims, 7 Drawing Figures





MASSAGE TYPE OF PORTABLE VIBRATOR

This invention relates to a massage type of portable vibrator, and, more particularly, it relates to a portable vibrator of a type which can be slid under a seat cushion or a mattress for vibrating the object and thereby transmitting vibrations to the person supported on the cushion or mattress.

BACKGROUND OF THE INVENTION

The prior art is already aware of vibrators which are used in conjunction with upholstered furniture, cushions, beds with mattresses, and like places. These prior art vibrators commonly include the vibrating mechanism and the cushion or pad or mattress itself, such as that shown in U.S. Pat. Nos. 2,539,712 and 2,833,276 and 3,580,245.

However, the prior art vibratory massaging devices are not sufficiently constructed nor versatile to be used in any location with a chair cushion or a bed mattress or like cushioned object. That is, the prior devices commonly include their own pads or cushions, and they are therefore constructed and arranged to be completely self-contained vibrators with their own cushions.

Of course where units are provided in a form to be self-contained vibrators and cushions, as indicated above, those units are bulky and expensive and have limited use in that the user must always use them in connection with the cover, pad, or cushion included in the massaging unit itself.

Accordingly, it is an object of this invention to provide a truly portable type of vibratory massager which can be readily and easily utilized either with a chair cushion, bed mattress, or other type of cushioned item. Still further, it is an object of this invention to provide the vibratory massager which is readily and easily positioned with the cushioned item without any skill, attachment, or even any precautions required in order to instantaneously provide a vibratory massaging device with a standard cushioned item.

Still further, it is an object of this invention to accomplish the aforementioned with a relatively lightweight, inexpensive, and simplified unit, and one which can be easily installed and operated by a person who gives it only a minimum of attention.

Another object of this invention is to provide a portable type of vibrator massaging device which can be utilized with standard cushions but which does not damage the cushions and which does not require any special placement of the device or the cushion but simply sliding the device underneath the cushion is the only installation preparation required.

Still another object of this invention is to provide a vibratory massaging device which is highly efficient in its action and which therefore is very quiet in its operation of an electric motor utilized for creating the vibration. Also, the present invention provides for a neatly and completely covered unit which is easy and safe to handle and which will not damage the cushion or the furniture around which it is being used.

Other objects and advantages will become apparent upon reading the following description in light of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a preferred embodiment of this invention.

FIG. 2 is a plan view of the embodiment included in FIG. 1 but with the cover removed and with the view being slightly enlarged.

FIG. 3 is a side elevational view of FIG. 2.

FIG. 4 is an enlarged end elevational view of FIG. 3.

FIG. 5 is an enlarged sectional view taken along line 5-5 of FIG. 1.

FIG. 6 is an enlarged sectional view taken along the line 6-6 of FIG. 3.

FIG. 7 is an end elevational view of the eccentric shown in FIG. 6.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The drawings show the vibrating unit of this invention which has a cover 10 enclosing the entire unit, except for the electric cord 11 which is fragmentarily shown extended from the unit. The cover 10 is preferably of a pliable character, being a plastic, fabric, or like material, and it has a stitched hem 12 extending around the periphery of the unit, and it also has a zipper 13 which permits insertion and removal of the hardware portions of the unit. Also, FIG. 1 shows that the cover has a motor portion 14 and an elongated portion 16, and the motor portion 14 has ventilation openings 17 which are adjacent the motor within the portion 14 and thus permit ventilation to the motor while otherwise completely enclosing the hardware portion of the unit.

Thus, FIG. 2 shows the motor housing 18 being basically cylindrically shaped and having a flange 19 connected with and spaced from the cylindrically shaped portion 18. The housing is in two halves, as seen in FIGS. 2 and 4, and it is held together by screws 21, 22, and the like. The ends of the housing cylindrical portion 18 have ventilation openings 23, and thus air can flow through the cover opening 17 and the housing openings 23 and into the motor designated 24 in FIG. 6 and which of course is disposed within the cylindrical portion 18. The motor 24 has a shaft 26 with a cooling fan 27, on one end of the shaft, and with an eccentric member 28, on the other end of the shaft 26. The motor 24 is suitably secured in a fixed position with the housing 18, such as being snugly received therein against the side walls of the housing 18, and thus rotation of the motor shaft 26 will induce rotation of the eccentric member 28 and thus create the desired vibration of the entire housing 18 and the housing flange 19.

An elongated member, shown in the form of a U-shaped rod 29, is connected to the flange 19 by extending through two spaced-apart openings in the flange 19, such as the opening 31 shown in FIG. 6. That is, the member 29 has two spaced-apart legs 32 which respectively extend through an opening 31 in the flange 19, and the ends of the legs 32 are secured to the flange 19 by nuts 33 which are threaded on the ends of the legs 32 and which flank the flange 19. Thus, the elongated member 29 is fixedly secured to the flange 19 to vibrate with the flange 19. It will be further noted that the legs 32 are spaced apart only a distance no greater than the length of the cylindrical motor housing 18. Also, FIGS. 1 and 5 show that the cover portion 16 is snugly disposed over the elongated member 29, and the cover binding 12 encloses the outer surfaces of the legs 32,

and thus the binding 12 provides special protection over the legs 32. That is, it will now be understood that the portion 16 of the unit can be readily slid underneath a cushion, such as a chair cushion or a bed mattress, and the vibration of the elongated member 29 is transmitted to the cushion. Also, the binding 12 of the cover, and the entire cover itself, is snugly disposed on the legs 32 and protects the cushion from the possibility of damage from the vibrating action of the legs 32. Still further, the cover portion 16 permits ready sliding of the entire member underneath the cushion, and even underneath a bed mattress, without any lifting of the mattress or without any special installation of the vibratory unit. However, the vibratory unit has been found to be sufficiently efficient to vibrate an entire bed mattress even though the unit is only approximately 6 inches between the legs 32 and only approximately 30 inches in the length of the legs 32.

FIGS. 6 and 7 show that the eccentric member 28 includes a hub 34 which has an opening 36, and the member 28 need only be pressed onto the shaft 26. Also, the member 28 includes a weight portion 37 and a stem 38 which connects the weight 37 with the hub 34 so that the entire eccentric is in one piece with the bulk of the weight at a maximum position from the shaft 26. The eccentric 28 is made of a dense material of metal or the like, and it is rotated in a plane transverse to the plane in which the elongated member 29 is disposed. Thus the member 29 is vibrated in the plane transverse to its own plane, and therefore maximum efficiency is developed with this unit.

Therefore, the elongated member, with the legs 32 and the cross piece 39, disposed in a plane extending along the plane of the shaft 26, and the member 29 is readily and easily attached to the motor housing through the nuts 33 adjacent the housing flange 19. Also, the arrangement of the motor housing 18 with its two halves as shown and secured together by the screws 21 and 22, and the inherent flexibility of the legs 32 for alignment and subsequent insertion in the flange openings 31, all provide a simplified but yet sturdy and efficient unit. Still further, the snugly fitting cover portion 16 over the elongated member 29 provides a knife-like arrangement for sliding the unit under a cushion up to the extent of the electric cord 11 and the cover portion 14 which is therefore left in a position exposed relative to the cushion being vibrated. In this manner, the user cannot inadvertently slide the cover portion 14 and the enclosed motor underneath the cushion, and the flange 19 provides a form of an abutment for preventing complete positioning of the cover portion 14 underneath the cushion being vibrated. Thus, the elongated member 29 is of a rigid material only, and it has been found that rod material of a circular cross section is suitable for maximum efficiency in the unit, and a material of a rectangular cross section is not of best efficiency. That is, where a portable type unit having no cushion

of its own but instead only having a rigid member 29 and a pliable cover 10 extending thereover, the U-shaped member 29 of a round cross sectional stock is suitable for greatest efficiency in the vibrator. Also, the round stock, along with the binding 12 extending thereover, provide the best arrangement for inserting the member underneath a mattress or the like, and it also provides the best protection for the cushion of a chair or mattress type, and that is compared to any member of a different shape or of a cross sectional shape other than the circular shape shown and described.

What is claimed is:

1. A massage type of portable vibrator comprising a vibrator motor having a shaft extending thereon, an eccentric weight on said shaft for inducing vibrations in the plane of rotation of said weight, a motor housing surrounding said motor and having a flange extending in the plane transverse to the plane of rotation of said eccentric, an elongated member of rigid material only connected to said flange and extending therefrom and being flat in a plane along the axis of said shaft, and a cover snugly disposed over said vibrator and presenting a flat portion encasing said elongated member, for sliding underneath a cushion to vibrate the latter.

2. The massage type of portable vibrator as claimed in claim 1, wherein said flange has spaced-apart openings therein, and said elongated member extends into said openings for connecting to said flange.

3. The massage type of portable vibrator as claimed in claim 2, wherein said elongated member is a single piece of rod in a U-shape and with the ends of said rod being disposed in said flange openings.

4. The massage type of portable vibrator as claimed in claim 3, wherein said rod is of round stock in cross-sectional shape.

5. The massage type of portable vibrator as claimed in claim 1, wherein said elongated member is a U-shaped metal rod with legs spaced apart within the width of said motor housing, and with said flange extending laterally of the plane of said U-shaped rod for presenting an abutment in the sliding of said U-shaped rod with its said cover underneath said cushion.

6. The massage type of portable vibrator as claimed in claim 1, wherein said eccentric includes a hub having an opening for snugly pressing said hub onto said shaft, and said eccentric includes a weight offset from said hub and includes a stem extending between said hub and said weight.

7. The massage type of portable vibrator as claimed in claim 1, wherein said cover is snugly disposed in direct contact with said elongated member for fully encasing the latter, and said cover is of a pliable material and sewn with a binding extending along said cover at the periphery of said elongated material to protect said cushion from damage when using said vibrator underneath said cushion.

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