C. C. RUPRECHT.

ELECTRIC MASSAGE VIBRATOR.

APPLICATION FILED FEB. 1, 1908.

1,005,319. Patented Oct. 10, 1911.

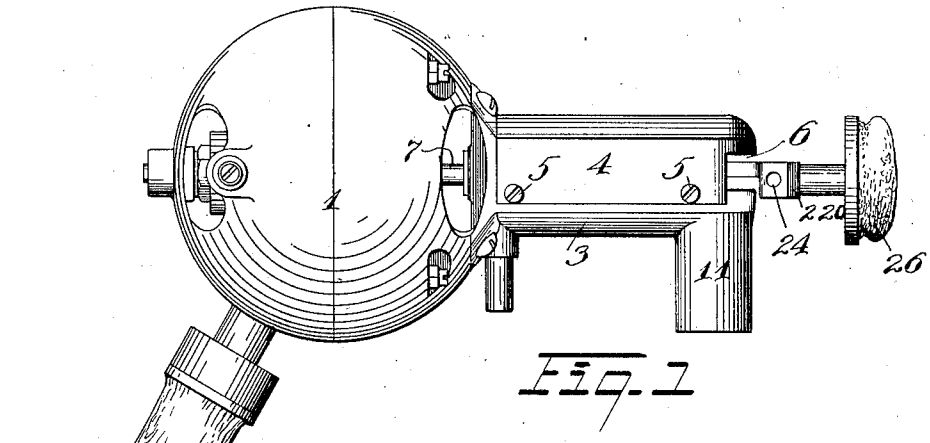

Fig. 1

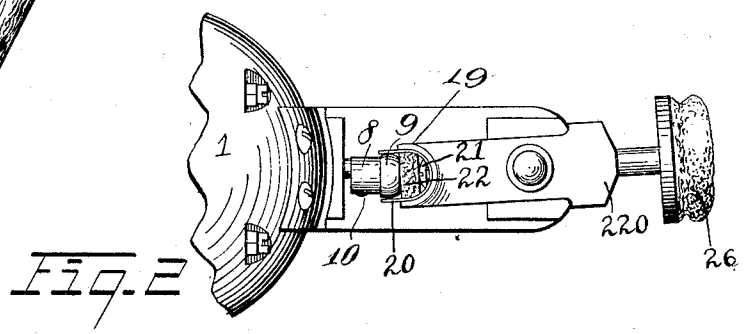

Fig. 2

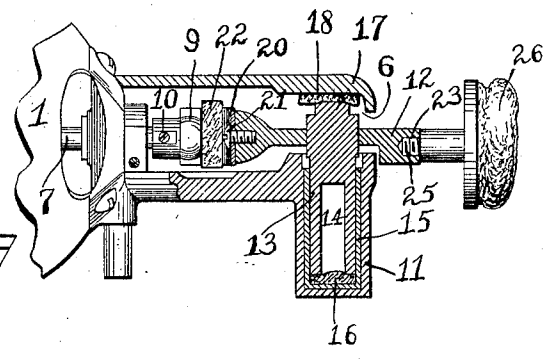

Fig. 3

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ELECTRIC MASSAGE-VIBRATOR.

1,005,319. Specification of Letters Patent. **Patented Oct. 10, 1911.**

Application filed February 1, 1908. Serial No. 413,724.

To all whom it may concern:

Be it known that I, CHARLES C. RUPRECHT, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Electric Massage-Vibrators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to vibrators such as are employed for massaging purposes, and has for its object to provide a vibrator of this character which is simple and economical of construction, efficient in operation, which may be readily assembled and disassembled, and which shall be provided with means for softening or cushioning the action of the applicator carried thereby.

Generally speaking, the invention may be defined as consisting of the combinations of elements embodied in the claims hereto annexed and illustrated in the drawings forming a part hereof, wherein—

Figure 1 represents a side elevation of a vibrator constructed in accordance with my invention; Fig. 2 represents a top plan view of the outer or operating end of the same, the cover for the oscillatory member or arm being removed and Fig. 3 represents a central vertical section through such outer or operating end, some of the parts being illustrated in elevation.

Describing the parts by reference characters, 1 denotes a motor casing from which projects the handle 2 and an elongated base 3. 4 denotes an arch-shaped cover secured to said base, as by screws 5 and forming with said base a closure for the vibratory parts. At its front end it is provided with an aperture 6 for the passage of the applicator arm.

7 denotes the motor shaft, which projects through the motor casing into the cover 4, and is provided at its outer end with an operating member 8. This member is in the form of a sleeve having an eccentric bore for the reception of the outer end of the motor shaft, said sleeve being provided at its outer end with a head or disk 9 having rounded edges by means of which the rotary motion of the shaft is transmitted to the oscillatory applicator arm. The operating member 8 may be detachably and adjustably secured to the outer end of shaft 7 by means of a set screw 10.

The base 3 is provided at the outer extremity thereof with a downwardly projecting sleeve 11, said sleeve being generally cylindrical in shape and having a closed bottom.

12 denotes the applicator arm or lever. This lever is provided, intermediate of the ends thereof, with a downwardly projecting stud 13 having an aperture 14 extending from the lower end thereof upwardly into the body a suitable distance to form a receptacle for a lubricant.

15 denotes a bushing fitted within sleeve 11 and having at the bottom thereof a pad 16 of absorbent material which is adapted, as the lubricant within the orifice is softened or melted, to receive the lubricant and to distribute the same to the lower end of stud 13 and the space between said bushing and said stud. The stud 13 is preferably of tool steel having a driving fit with an aperture in arm 12 and projecting upwardly above said arm and there provided with a rounded head 17 adapted to engage a pad 18 fitted between said head and the portion of the cover located thereabove. Pad 18 will be supplied with lubricant and will thus facilitate the vibration or oscillation of arm 12 on its pivot. Arm 12 projects forwardly and rearwardly from its pivot and is provided at its rear end with a U-shaped fork 19. Within this fork there is fitted a flat spring 20, which is bent in a U-shape and is secured to arm 12 by means of a screw 21. The ends of spring 20 project beyond the ends of fork 19 and are engaged beyond such fork ends by the operating head 9 fitted on the end of shaft 7. Between the outer end of head 9 and screw 21 there is interposed a pad 22 of absorbent material. In practice, this pad is saturated with lubricating oil for the purpose of lubricating the points of contact between head 9 and spring 20. The front or forward end of lever 12 is provided with a head 220, said head being provided with threaded apertures 23 and 24 located respectively at the front and at the side thereof for the reception of the threaded end 25 of an applicator, 26. This applicator may be of any desired shape or construction, the one shown

herein being used merely for illustrative purposes.

In operation, the current supplied to the motor within casing 1 rotates shaft 7. Owing to the eccentricity of head 9, the rotation of shaft 7 causes a lateral vibratory movement of the inner end of lever 12, with a corresponding vibratory movement of the outer end thereof. The interposition of spring 20 between head 9 and lever 12 serves to cushion the action of the applicator 26 upon the object on which it is used. The slight heat developed by the oscillation of stud 13 within its journal serves to melt the lubricant in aperture 14 and distribute the same to pad 16; also to cause the lubricant on pads 18 and 22 to be distributed to their respective heads and the adjacent parts. Should it be desired to disassemble the device, the construction employed permits such operation with a minimum of difficulty, it being only necessary to remove the screws 5 which secure the cover 4 to base 3, whereupon lever 12 may be lifted from the base. In assembling, stud 13 is inserted into bushing 15, with the jaws of spring 20 embracing head 9, and casing 4 is then screwed in place.

The vibrator described is extremely simple of construction, but of marked efficiency in operation. It does not become overheated, and insures a soft or cushioned action of the applicator upon the object to which it may be applied.

Having described my invention, I claim:

1. In a vibrator, the combination of an applicator lever pivoted intermediate of its ends, provided with an applicator at one end and a pair of spring arms carried by said lever, and a rotary shaft having an eccentric interposed between the said spring-arms, substantially as specified.

2. In a vibrator, the combination of a rotary shaft, an applicator arm, said arm having a forked portion, and a spring applied to said forked portion and having ends projecting beyond the ends of the fork and operatively engaged by said shaft, substantially as specified.

3. In a vibrator, the combination of a rotary shaft, an applicator arm having a forked end, a U-shaped spring fitted to said forked end of the arm and having its ends projecting beyond the forked end of said arm, and means carried by said shaft and engaging the forks of said spring beyond the forks on said arm and adapted thereby to oscillate said arm, substantially as specified.

4. In a vibrator, the combination of a rotary shaft, a circular head mounted eccentrically on the end of said shaft, a lever pivoted intermediate of its ends and having a forked end presented toward said head, and a flat spring secured to the forked end of the lever with its ends projecting beyond the forks thereof and engaging said head, substantially as specified.

5. In a vibrator, the combination of a base, a shaft projecting above said base, a downwardly projecting journal sleeve carried by said base, and an applicator lever having a depending stud journaled in said sleeve and having a portion adapted to be engaged by said shaft, substantially as specified.

6. In a vibrator, the combination of a base having a depending journal sleeve, an applicator lever having a depending stud journaled in said sleeve, said stud being provided with a recess for a lubricant at the lower end thereof, a pad of absorbent material supporting the lower end of said stud, and an operating shaft projecting above said base and adapted to oscillate said lever on said stud, substantially as specified.

7. In a vibrator, the combination of a casing, a base projecting therefrom and having a depending bearing, a bushing in said bearing, a lever having a depending stud fitted within said bushing, and a shaft projecting above said base and adapted to engage said lever to operate the same, substantially as specified.

8. In a vibrator, the combination of a base having a depending tubular bearing, a lever having a downwardly projecting stud and an upwardly projecting head opposite said stud, said stud being mounted in said journal, a cover plate forming a casing with said base, and a pad of absorbent material interposed between said head and the adjacent portion of said casing, substantially as specified.

9. In a vibrator, the combination of a motor casing, a base member projecting therefrom and having a depending tubular bearing, a lever having a downwardly projecting stud and an upwardly projecting head opposite said stud, said stud being mounted in said journal, a cover plate forming a casing with said base, a pad of absorbent material interposed between said head and the adjacent portion of said casing, and a pad below said stud, substantially as specified.

10. In a vibrator, the combination of a motor casing, a base member projecting therefrom and provided with a downwardly projecting journal sleeve, a rotary shaft projecting through said motor casing above said base and having an operating head mounted eccentrically thereon, a lever having intermediate of the ends thereof a downwardly projecting stud adapted to be inserted into said journal and having a forked end, and a cover plate detachably secured to said base, substantially as specified.

11. In a vibrator, the combination of a motor casing, a base projecting therefrom and having a downwardly extending jour-

nal sleeve, a shaft projecting through said casing above the inner end of said base and having on the outer end thereof a head, an applicator lever having a downwardly projecting stud fitted within said journal and an upwardly projecting head opposite said stud, said lever having a forked end adapted to be operatively engaged by said head, a cover plate for said base, and a pad interposed between said head and said cover plate, substantially as specified.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

CHARLES C. RUPRECHT.

Witnesses:
H. MILLER,
J. B. HULL.