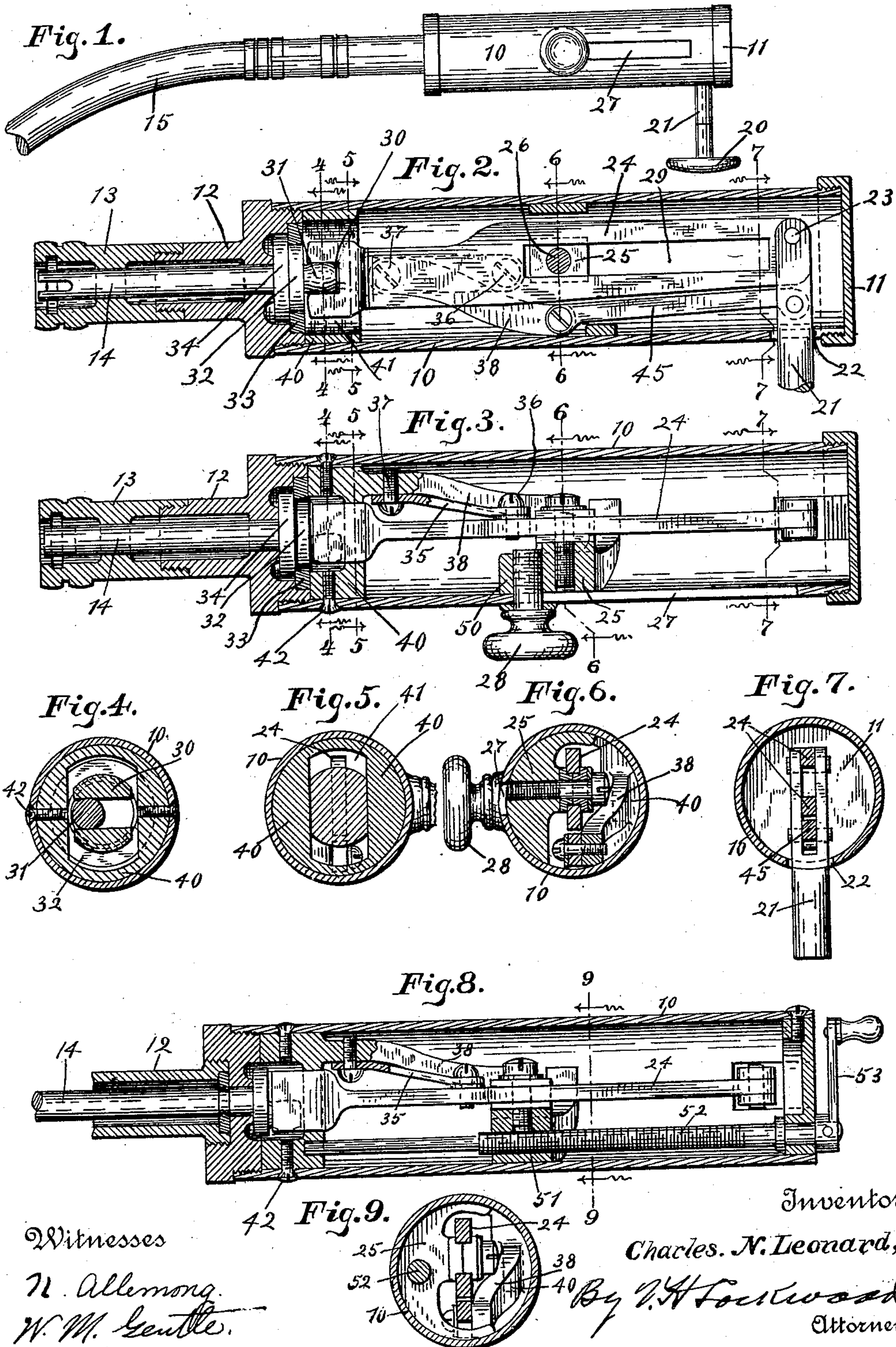


No. 841,024.

PATENTED JAN. 8, 1907.

C. N. LEONARD.
MASSAGE VIBRATOR.
APPLICATION FILED FEB. 8, 1906.



UNITED STATES PATENT OFFICE.

CHARLES N. LEONARD, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO
WILLIAM D. ALLISON, OF INDIANAPOLIS, INDIANA.

MESSAGE-VIBRATOR.

No. 841,024.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed February 8, 1906. Serial No. 300,121.

To all whom it may concern:

Be it known that I, CHARLES N. LEONARD, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Massage-Vibrator; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

The object of this invention is to provide an improved construction of vibrators for massage purposes. This vibrator is so constructed that it has a slight lateral in addition to its longitudinal movement.

The general nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is a side elevation of the complete device on a smaller scale than the other figures. Fig. 2 is a central vertical longitudinal section of the device with the vibratory head removed. Fig. 3 is a horizontal longitudinal section thereof. Figs. 4, 5, 6, and 7 are transverse sections on the corresponding section-lines shown in Figs. 2 and 3. Fig. 8 is a horizontal longitudinal section of a modified form. Fig. 9 is a section on the line 9 9 of Fig. 8.

Referring to the details shown in the drawings, I provide a cylindrical casing 10, closed at one end with a screw-cap 11 and at the other end with the head 12, that screws internally into the casing 10. An extension 13 screws externally upon the outer end of the reduced portion of the head 12, and said parts 12 and 13 together hold and furnish bearings for the shaft 14. This shaft 14 is actuated by a flexible shaft 15.

The vibratory head 20 has a stem 21, that extends through a hole 22 in the casing and at 23 is pivoted to a slotted lever 24, which extends longitudinally in the casing. This lever has a shifting fulcrum 26, which is a screw carrying two similar blocks 25, slidable in the slot 29 in said lever. The screw is carried in a block 50, slidable in the casing and from which the set-screw 28 extends through the slot 27 in the casing, whereby the fulcrum may be shifted by moving said set-screw longitudinally of the casing and clamping it in the desired position. The effect of this shifting of the fulcrum of the lever 24 is to vary the extent of the longitudinal vibrations of the vibratory head. At

the left-hand end of the lever 24, as shown, it is horizontally slotted at 30 to receive the pin 31 of the eccentric 32 on the shaft 14. Said eccentric operates in a ring-bearing 33, and a disk 34 on the shaft 14 prevents any outward thrust of said shaft.

The lever 24 can have no end thrust toward the shaft 14 because of the pin 31, and the thrust of the lever 24 in the other direction is prevented by a connecting-bar 35, that is fulcrumed at one end to the screw 36, entering said lever, and at the other end to the screw 37, entering the arm 38.

In the left-hand end of the cylinder there is a block 40, with a vertical opening 41 centrally in it, into which the end of the lever 24 extends and which serves to guide the latter in its vertical movement and to prevent lateral movement of said lever. From this block 40 the arm 38 extends, the two being integral and the block 40 secured stationary by the screws 42.

The purpose of the arm 38 is to provide means substantially below the fulcrum 26 for pivoting the connecting-bar 45, which is fulcrumed at one end to said arm 38 and at the other end to the stem 21 of the vibratory head. The function of this connecting-bar 41 is to reduce the lateral vibratory movement of the vibratory head and tend to maintain the stem 21 vertical during the movements of the lever 24. As constructed, it does not completely maintain said stem vertical, so that there is some lateral vibratory movement, and this lateral movement of the vibratory head increases as the fulcrum 26 is moved toward the right-hand end of the lever 24, and such movement of the fulcrum 26 correspondingly reduces the extent of the longitudinal vibrations of the vibratory head 20.

The modified form in Figs. 8 and 9 does not differ substantially from the form shown in the first seven figures, excepting in the means for shifting the fulcrum 26. In the modified form the screw 26 is in a block 51, that travels on a threaded shaft 52, mounted within the casing and longitudinally thereof and actuated by a crank 53 on the outside. This last construction has the advantage of avoiding the slot 27, the casing thereby being closed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a massage-vibrator, a casing, an ac-

tuating-lever in said casing, a vibratory head with its stem extending into the casing and pivoted to one end of said lever, a shifting fulcrum for said lever, a block slidable in said casing in which said fulcrum is mounted, a threaded rod extending through said block, and means outside the casing for rotating said threaded rod for shifting said fulcrum.

2. In a massage-vibrator, a casing, a lever within said casing, a vibratory head with its stem extending into said casing and pivoted to said lever, a rotary shaft at the other end of said casing and in line with said lever, an eccentric carried by said shaft with a pin in engagement with said lever for operating the latter, and means within the casing for guiding the actuated end of said lever in its vertical movements.

3. In a massage-vibrator, a casing, a lever within said casing, a vibratory head with its stem extending into said casing and pivoted to said lever, a rotary shaft at the other end of said casing, an eccentric carried by said

shaft with a pin in engagement with said lever for operating the latter, and means pivotally connecting said lever with a stationary part for holding it in engagement with said eccentric-pin.

4. In a massage-vibrator, a casing, a lever fulcrumed between its ends in said casing, means for actuating one end of said lever, a vibratory head with the stem extending into the casing and pivoted to the other end of said lever, and a connecting-rod pivoted to said stem below its pivotal point with said lever and at its other end pivoted to a stationary part substantially below the fulcrum of said lever.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

CHARLES N. LEONARD.

Witnesses:

HELEN B. McCORD,
N. ALLEMONG.