

J. B. WANTZ.  
 MASSAGING INSTRUMENT.  
 APPLICATION FILED OCT. 23, 1907.

899,234.

Patented Sept. 22, 1908.

2 SHEETS-SHEET 1.

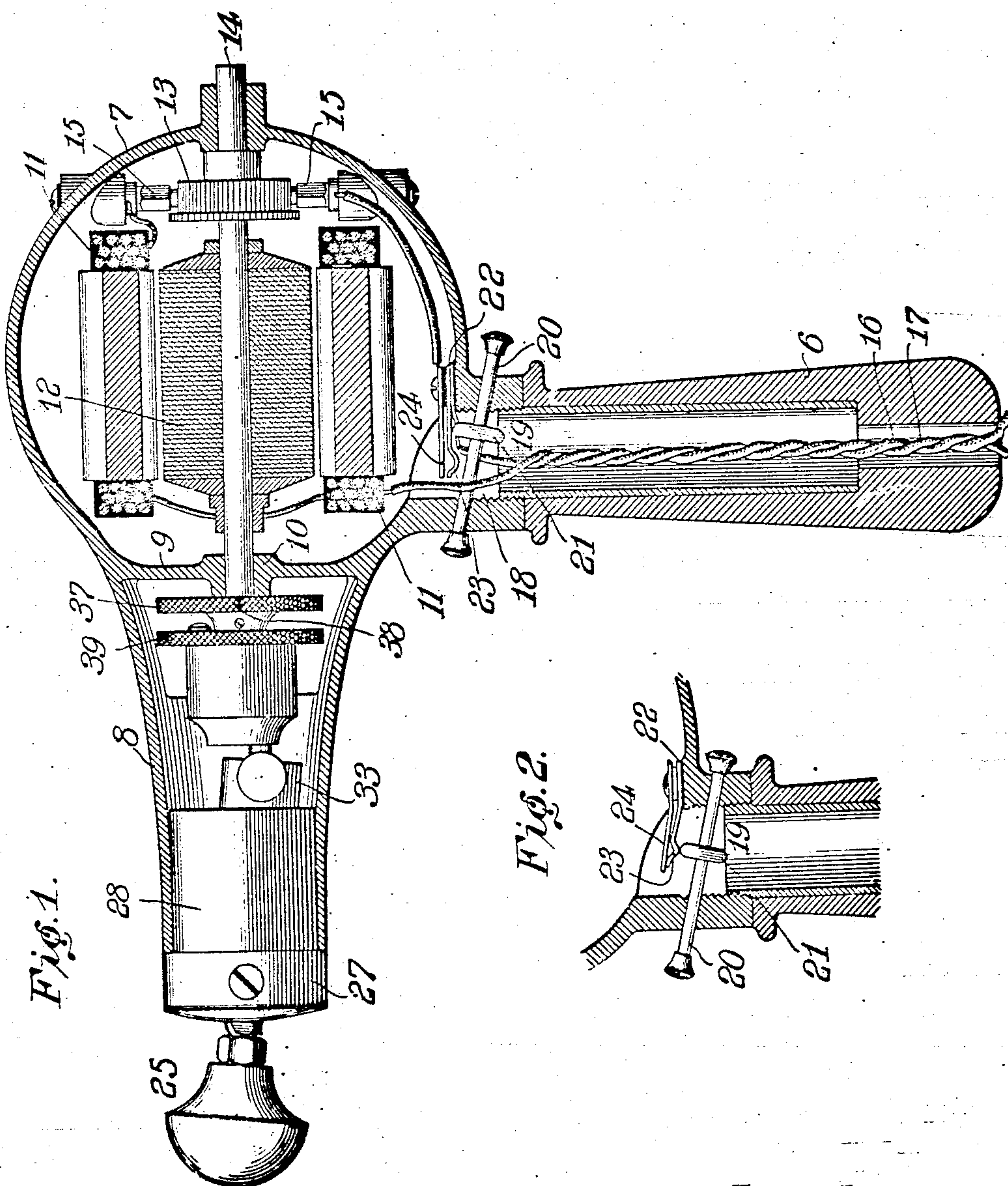


Fig. 1.

Fig. 2.

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SHEET 2.

Fig. 3.

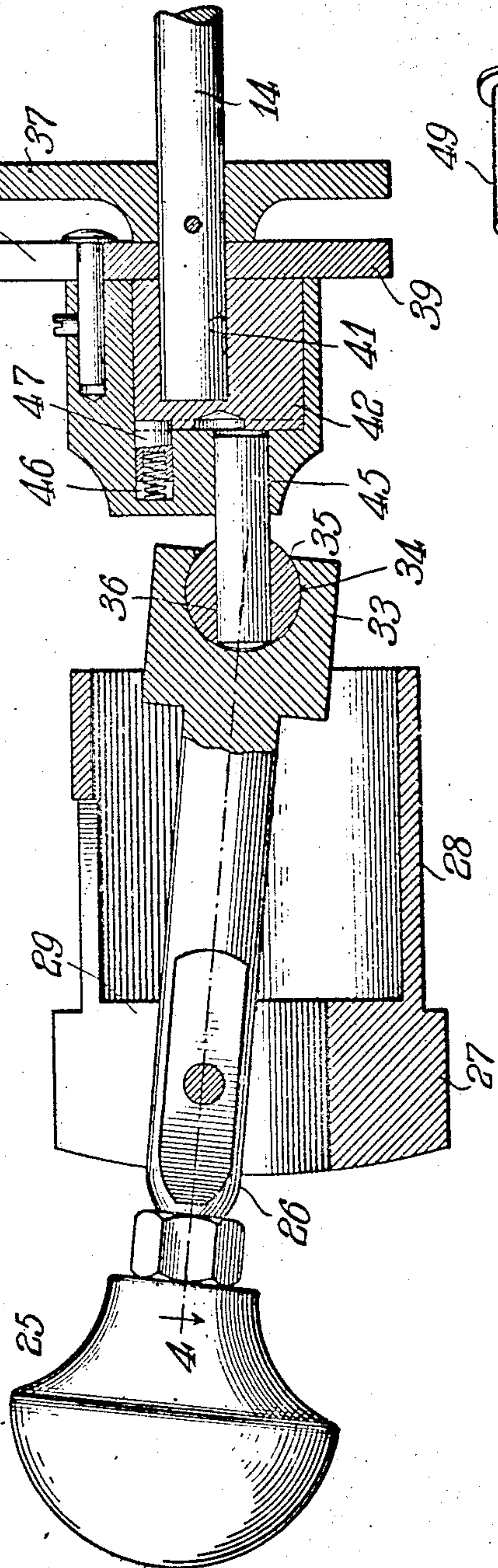


Fig. 5.

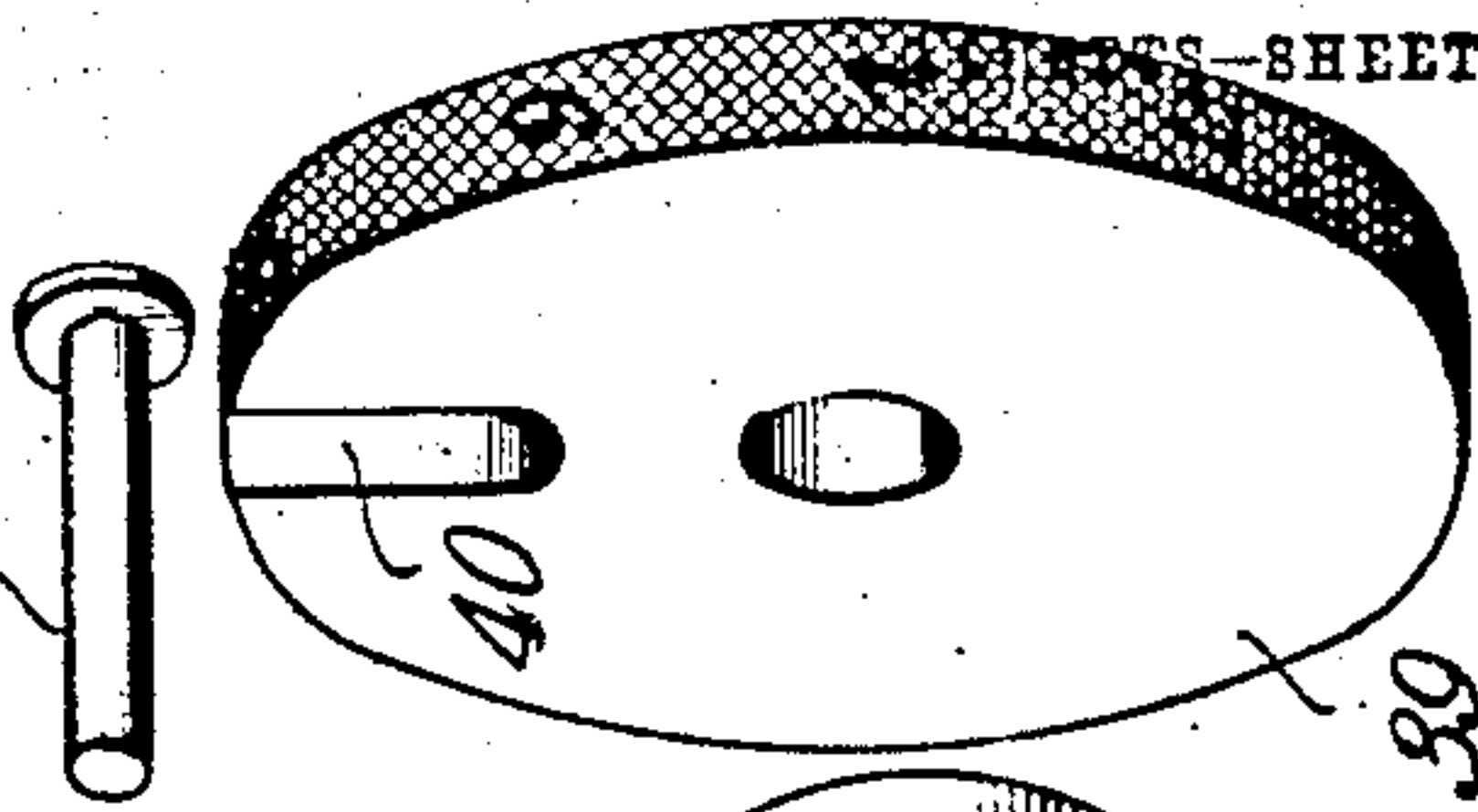
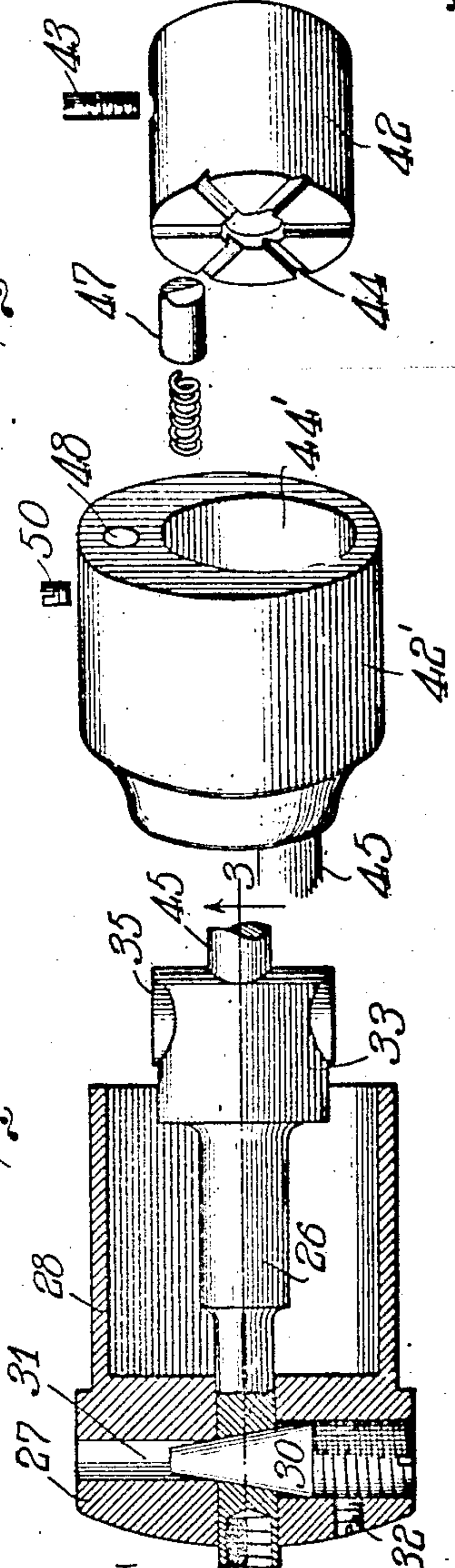


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## MASSAGING INSTRUMENT.

No. 899,234.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed October 23, 1907. Serial No. 328,811.

*To all whom it may concern:*

Be it known that I, JULIUS B. WANTZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Massaging Instruments, of which the following is a specification.

My invention relates to an improvement in the class of massaging instruments wherein a rapidly-oscillating vibrator is actuated by a rotary shaft through the medium of mechanism for converting the rotary motion of the shaft into oscillatory massaging motion at the vibrator.

In the accompanying drawings, Figure 1 is a vertical central section of my improved massaging instrument; Fig. 2, a broken sectional view showing the electric switch in its closed condition; Fig. 3, a section taken at the line 3 on Fig. 4 and viewed in the direction of the arrow, showing the mechanism for converting the rotary motion of the motor-shaft into the oscillatory motion of the vibrator; Fig. 4, a broken section taken at the line 4 on Fig. 3 and viewed in the direction of the arrow, and Fig. 5, a perspective view showing in their unassembled relation the parts of the mechanism connecting the motor-shaft with the vibrator.

On a hollow handle 6 at which to hold the instrument for manipulating it, is carried a casing 7, shown in its preferred general globular shape and provided with a tubular extension 8 at the junction of which with the casing is formed a wall 9 containing a central shaft-bearing 10. In the casing is suitably supported an electric motor, of which 11 is the field, 12 the armature, 13 the commutator on the armature-shaft 14 journaled at its rear end in the casing and at its forward end in the bearing 10, and 15 are the commutator-brushes. The motor presents no features of novelty, and it is adapted to receive the supply of current, as is usual in instruments of the present class, through a flexible cord of which the current-supply wires 16 and 17 pass through the handle 6.

At a neck 18 which extends from the bottom of the metal casing 7 and to which the handle 6, preferably of wood, is connected, is provided a snap-switch device 19 of the following-described construction: A rod 20, provided on its ends with knobs, as shown, extends across the neck 18 preferably in in-

clined position, being supported, between the knobs, in the wall of the neck to adapt it to be moved longitudinally, and carrying within the neck an abutment 21 shown as a round-edged disk. On the wall of the neck are secured at one end a spring contact-finger 22 provided on its free end with a cam-section 23 projecting into the path of the abutment 21 and a straight spring contact-finger 24, insulated from and extending parallel with the finger 22.

The two contact-fingers are normally separated, as represented in Fig. 1, to break the motor-circuit, and to close it the operator, with the instrument held in his hand at the handle 6, presses his thumb against the knob on the rear end of the rod 20 to force the abutment 21 against the cam 23 and wedge it against the latter, thus into the position represented in Fig. 2, thereby to contact the finger 22 with the finger 24, in which condition the fingers are held by the wedging action of the abutment to close the circuit. To open the circuit the operator employs his forefinger to press against the knob on the forward end of the rod, thereby snapping the abutment off the cam 23 to permit the finger 22 to separate from the companion finger. This construction of switch is very simple and peculiarly desirable in the particular situation since it permits of easy operation by the same hand that manipulates the instrument.

The vibrator 25 consists of a massaging-knob on the end of a stem 26 fulcrumed near its forward end in the head 27 of a tubular sleeve 28 provided with a longitudinal slot 29 extending transversely of the head past the center thereof and nearly to the rear end of the sleeve. For fulcruming the stem, a tapering pin 30 is employed to work in a tapering opening 31 formed transversely through the stem, the pin screwing into a threaded opening in the sleeve-head 27 which extends therein at a right-angle to the slot 29. As wear on the fulcrum in the oscillatory working, hereinafter described, of the vibrator produces lost motion, the latter is taken up by screwing the tapering pin into the stem-opening 31, a set-screw 32 serving to releasably fasten the pin in its adjusted position. On the rear end of the stem, which extends longitudinally through the sleeve, is provided a head 33 containing in its rear face a transverse cylindrical recess 34 for re-



ciprocably confining a pin 35 provided between its ends with a transverse opening 36. The sleeve 28 fits and is fastened in the forward end of the casing-extension 8. On the armature-shaft, immediately in advance of the bearing 10, is secured to rotate with the shaft a thumb-wheel 37 shown to be provided on its periphery with an index-point 38. Adjacent to this wheel is rotatably supported on the shaft a thumb-wheel 39 containing a radial slot 40 and provided at suitable intervals about its periphery with index-characters, which may be the numerals 1 to 9, or a higher number to register with the point 38 for the purpose hereinafter explained. The forward end of the shaft 14 enters an eccentric longitudinal socket 41 in a barrel 42 fixed on the shaft by a set-screw 43 and provided in its forward end with a series of radial recesses 44, of which six are shown though they may be in any desired number and at any suitable intervals apart according to the number and degrees of adjustments desired of the extent of oscillatory movement of the vibrator. The barrel 42 fits within a longitudinal eccentric socket 44' in a barrel 42', closed at its tapered forward end, eccentrically from which projects a stud 45 which enters the opening 36 in the pin 35. The outer barrel contains in an opening 46 in the base of the socket 44' a spring-pressed bolt 47 to engage the recessed face of the barrel 42; and it contains in its rear end a hole 48 to receive a pin 49 movably confined near its headed end in the slot 40 of the setting-wheel 39, a set-screw 50 serving to secure this pin in the hole 48.

Rotation of the shaft 14, with the barrels 42 and 42' thus eccentrically mounted upon it, causes the stud 45 by its rotation to oscillate the head 33, while reciprocating the pin 35 in the head-opening 34, and this oscillation of the head oscillates the vibrator on the fulcrum-pin 30 of the stem 26. The extent of oscillation of the vibrator may be adjusted to any desired degree by varying the eccentricities of the barrels 42 and 42' relative to the motor-shaft and to each other. This adjustment the operator may readily effect by holding the wheel 37 against rotation of the shaft while the adjustment is being made and turning the wheel 39 to bring a certain character upon its periphery into registration with the point 38, according to the degree of adjustment desired. By thus turning the wheel 39, its connection through the medium of the pin 49 with the barrel 42' turns the latter against the resilient resistance of the bolt 47, which slips over the recessed face of the barrel 42 to engage one of the recesses when the desired point of adjustment is attained, in effecting which the position of the pin 49 in the wheel-slot 40 will, of course, change. As will be understood, the engagement of the spring-bolt

with the recessed face of the inner barrel connects the outer barrel with the armature-shaft to be rotated by it.

It will be observed that the vibrator oscillates in the direction parallel with the handle, or up and down in contradistinction to the direction crosswise of the handle. This is advantageous inasmuch as by thus oscillating the massaging member the force of the vibrations does not tend to displace the instrument in the grip of the operator, as it would if the oscillations were crosswise of the handle by turning the latter in the operator's hand.

What I claim as new and desire to secure by Letters Patent is—

1. In a massaging instrument, the combination with a casing provided with a handle, of an electric motor in said casing, a massaging member operatively connected with the motor, and a switch comprising contact-fingers and a rod supported to extend across said handle and longitudinally movable in its bearings with its opposite ends accessible, respectively, to the thumb and a finger of the operator's hand grasping the handle, and carrying an abutment to engage one of said fingers, for the purpose set forth.

2. In a massaging instrument, the combination with a casing provided with a handle, of an electric motor in said casing, a massaging member operatively connected with the motor, and a switch comprising contact-fingers, one of which is provided with a cam-section, and a rod supported to extend across said handle and longitudinally movable in its bearings with its opposite ends accessible, respectively, to the thumb and a finger of the operator's hand grasping the handle, and carrying an abutment to engage said cam-section, for the purpose set forth.

3. In a massaging instrument, the combination with a casing provided with a handle, of an electric motor in said casing, a massaging member operatively connected with the motor, and a switch comprising contact-fingers, one of which is provided with a cam-section, and a knob-ended rod supported to extend inclinedly across said handle and longitudinally movable in its bearings with its opposite ends accessible, respectively, to the thumb and a finger of the operator's hand grasping the handle, and carrying an abutment to engage said cam-section, for the purpose set forth.

4. In a massaging instrument, the combination with a casing for the vibrator-actuating mechanism, said casing having a tubular extension provided with a slot in its outer end, of a fulcrum-pin extending in said end transversely thereof and provided with a tapering inner end extending across said slot, and a vibrator on a stem working in said slot and



provided with an opening at which it is fulcrumed on the tapered end of said pin, for the purpose set forth.

5 In a massaging instrument, the combination with a casing, of an electric motor therein, a vibrator having a stem oscillatorily supported on the casing, an inner eccentric secured on the motor-shaft and provided with a recessed face, an outer barrel adjustably  
10 surrounding said inner eccentric, a spring-pressed bolt yieldingly interlocking said barrel with said recessed face, and an eccentric stud projecting from said outer barrel into engagement with the vibrator-stem, for the  
15 purpose set forth.

6. In a massaging instrument, the combination with a casing, of an electric motor therein, a vibrator having a stem oscillatorily supported on the casing and provided on its  
20 inner end with a recessed head containing in its recess a movable pin provided with an opening, a wheel fixed on the motor-shaft, a second wheel loosely surrounding said shaft, a barrel eccentrically fixed on said shaft and  
25 a second barrel containing a socket at which it loosely surrounds said fixed barrel, yielding locking means between the two barrels, a stud extending eccentrically from the forward end of said second barrel into the open-

ing in said pin, and a pin connecting said 30 second wheel with said loose barrel, for the purpose set forth.

7. In a massaging instrument, the combination with a casing having an extension, of an electric motor in the casing, a vibrator 35 having a stem fulcrumed on said extension and provided on its inner end with a transversely-recessed head containing in its recess a movable pin provided with an opening, a wheel fixed on the motor-shaft, a second 40 wheel loosely surrounding said shaft and provided with a slot, a barrel having recesses in its forward end and containing an eccentric socket at which it surrounds the shaft to which said barrel is fixed, a second barrel 45 containing a socket at which it loosely surrounds said fixed barrel, a spring-pressed bolt in said second barrel engaging the recessed end of said fixed barrel, a stud extending eccentrically from the forward end of the outer 50 barrel into the opening in said pin, and a pin in the slot of said loose wheel connecting it with said outer barrel, for the purpose set forth.

JULIUS B. WANTZ.

In presence of—

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R. A. SCHAEFER.