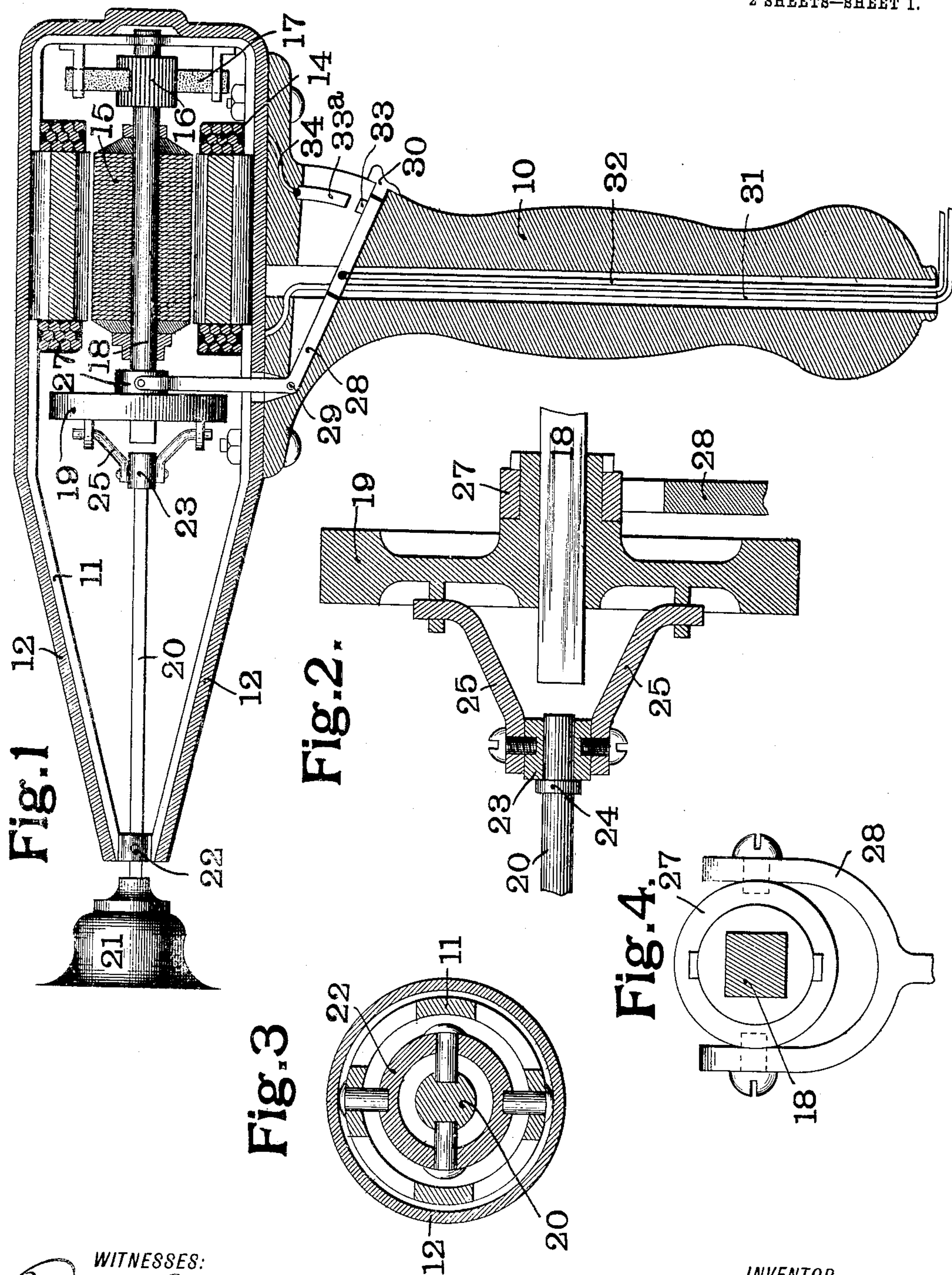


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 MASSAGE INSTRUMENT.
 APPLICATION FILED APR. 3, 1905.

2 SHEETS—SHEET 1.

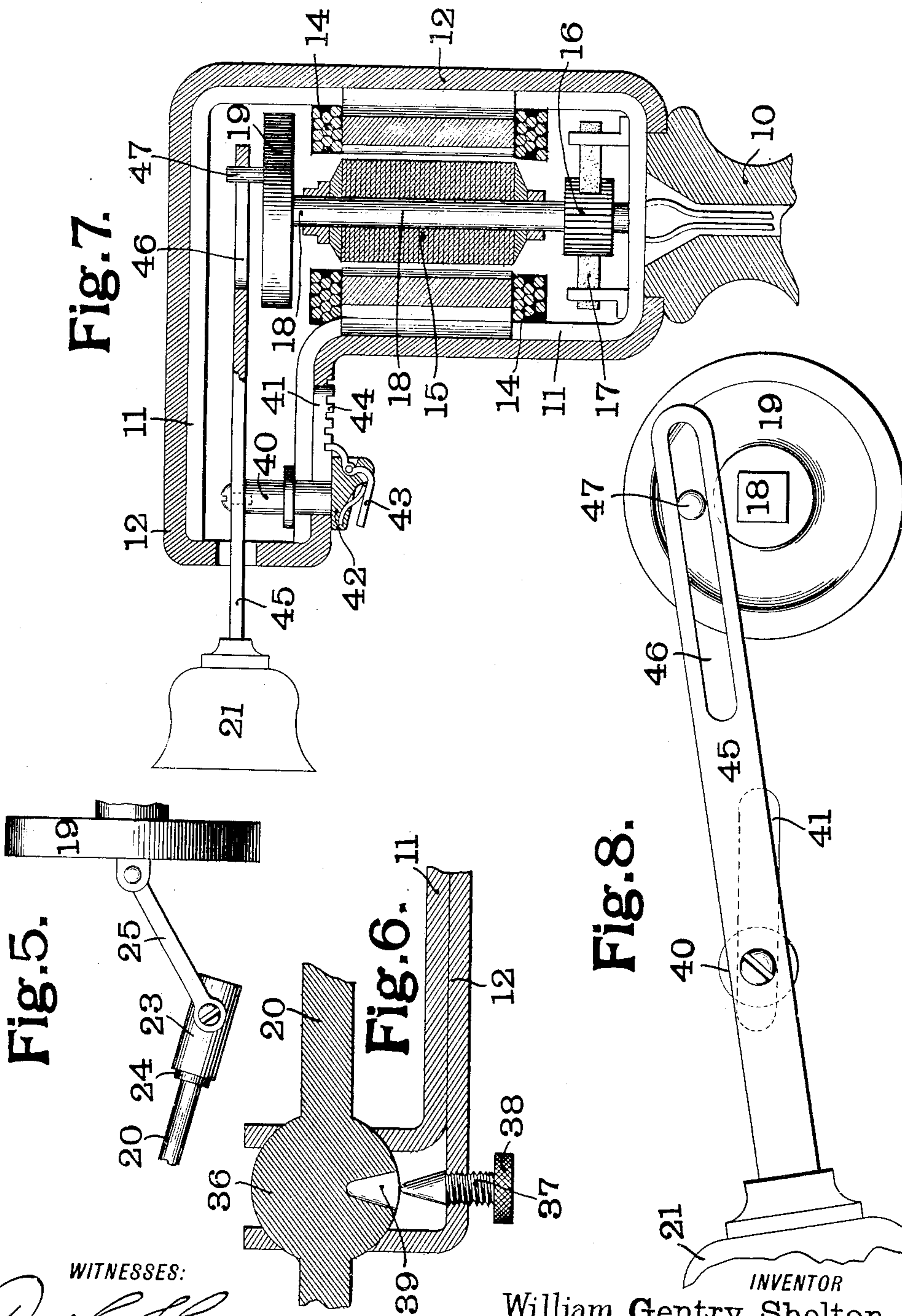


WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM GENTRY SHELTON, OF CHICAGO, ILLINOIS.

MASSAGE INSTRUMENT.

No. 816,506.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed April 3, 1905. Serial No. 253,551.

To all whom it may concern:

Be it known that I, WILLIAM GENTRY SHELTON, a citizen of the United States, formerly residing at the city of St. Louis, in the State of Missouri, and now residing at the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Massage Instrument, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of my invention is to provide a massage instrument in which the contact device is vibrated independently of the main housing or casing and in which the amount of vibration imparted to the contact device may be accurately regulated by the operator.

In the accompanying drawings, which illustrate two forms of massage instrument made in accordance with my invention, Figure 1 is a vertical central section of my preferred form of instrument. Fig. 2 is an enlarged sectional view showing the connection between the rotary member and the arm carrying the contact device. Fig. 3 is an enlarged sectional view of the gimbal-joint between the casing and the arm. Fig. 4 is an enlarged view showing the connection between the controlling-lever and the rotary member. Fig. 5 is a view of the parts shown in Fig. 2, but shown at right angles thereto. Fig. 6 is a view showing a modified form of connection between the casing and the arm. Fig. 7 is a vertical central section showing a modified form of instrument, and Fig. 8 is an enlarged top plan view of some of the parts shown in Fig. 7.

Like marks of reference refer to similar parts in the several views of the drawings.

10 is the handle by means of which the instrument is manipulated. Carried by this handle 10 is the casing or housing, which is preferably formed of an inner part or frame 11 and an outer part or sheath 12. Carried by the casing is an electric motor consisting of a field 14 and an armature 15. The armature 15 is provided with the usual commutator 16, having brushes 17. The armature 15, as well as the commutator 16, is mounted upon a shaft 18. Carried by this shaft 18 is a rotary member 19, preferably in the form of a fly-wheel. In the form of device shown in Fig. 1 this fly-wheel 19 is arranged to move

longitudinally on the squared end of the shaft 18, but to be incapable of rotation independently thereof.

20 is an arm carrying a contact device 21, preferably in the form of a soft-rubber cup. The arm 20 is connected to the frame by means of a gimbal or universal joint 22, (shown in detail in Fig. 3,) so that the said arm 20 is capable of universal movement with respect to the casing, but cannot rotate with respect thereto. It will be seen that the gimbal or universal joint 22 is connected to the arm 20 at a point fixed relatively to the contact member 21. The arm 20 is provided at its inner end with a sleeve 23, bearing against a collar 24 on the said arm. Pivoted to the sleeve 23 are a pair of links 25, forming a toggle connection between the arm 20 and the fly-wheel 19.

In order to move the fly-wheel 19 longitudinally of the shaft 18, I provide the hub of said wheel with a collar 27, to which is pivoted the bifurcated end of a lever 28, which lever is pivoted at 29 in the handle 10. The lever is extended outside of the handle 10 and is provided with a finger-piece 30, by means of which it may be actuated to move the fly-wheel 19 longitudinally of the shaft 18. By thus moving the fly-wheel longitudinally of the shaft 18 the toggle connection is varied, so as to regulate the amount of vibration imparted to the contact device 21. The lever 28 is also arranged to control the flow of current to the motor.

31 is a line-wire leading directly to the motor, and 32 is a line-wire leading to the lever 28. The lever 28 is provided with a contact device 33, which coöperates with a second contact device 33^a, provided with a wire 34, leading to the motor, so that when the lever 30 is moved to force the fly-wheel 19 longitudinally of the shaft 18 the contact devices 33 and 33^a will be brought together, so as to complete the circuit and start the motor in operation.

In place of the gimbal-joint, as shown in Figs. 1 and 3, I may use a ball-joint, as shown in Fig. 6, the arm 20 being provided with a ball 36, arranged between concave bearings in the frame 11 and the sheath 12. When the instrument is thus constructed, the contact device 21 will not only have vibratory movement, as in the construction heretofore described, but is also capable of rotary movement, which will be imparted to it by reason of the friction between the v-

rious parts in the operation of the device. If, however, it is desired to prevent this rotary movement, a set-screw 37, provided with a milled head 38, is rotated so as to bring its point into engagement with a recess 39 in the ball 36.

In Figs. 7 and 8 I have shown a modification of the device in which the handle in place of being arranged at right angles to the casing is placed parallel therewith. In this construction the fly-wheel 19 is not made movable longitudinally of the shaft 18. The casing is provided with a stud 40, which is movable in a slot 41 by means of a finger-piece 42. This finger-piece 42 is provided with a detent 43, working in notches 44 in the sheathing 12. Pivoted to the stud 40 is an arm 45, which replaces the arm 20 in the construction heretofore described. This arm 45 in place of extending substantially in the direction of the motor-shaft 18 extends at right angles thereto. The contact device 21 is carried by the outer end of this arm 45. The inner end of the arm 45 is provided with a slot 46, in which is a wrist-pin 47, carried by the fly-wheel 19. It will be evident that when the motor is operated so as to rotate the fly-wheel 19 a vibratory movement will be imparted to the arm 45, and consequently to the contact device 21, and by moving the stud 40, forming the pivot of the arm 45, near to or farther away from the fly-wheel 19 the amount of vibration imparted to the contact device 21 can be varied.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a normally stationary pivotal joint on said frame, said joint being connected with said contact member at a point fixed relatively to said contact member.

2. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a universal joint on said frame and connected with said contact member at a point fixed relatively to said contact member.

3. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising an arm carrying said contact member and a normally stationary universal joint on said frame, said joint being connected with said arm at a point fixed relatively to said contact member.

4. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections be-

tween said members, said operating connections comprising a universal joint normally stationary on said frame, said joint being connected with said contact member at a point fixed relatively to said contact member.

5. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a toggle and a pivotal joint on said frame, said joint being connected with said contact member at a point fixed relatively to said contact member.

6. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a normally stationary pivotal joint on said frame, said joint being connected with said contact member at a point fixed relatively to said contact member, and one of said members being movable toward and away from the other to adjust said operating connections.

7. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a universal joint on said frame and connected with said contact member at a point fixed relatively to said contact member, and one of said members being movable toward and away from the other to adjust said operating connections.

8. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a universal joint normally stationary on said frame, said joint being connected with said contact member at a point fixed relatively to said contact member, and means for moving one of said members toward and away from the other to adjust said operating connections.

9. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a universal joint normally stationary on said frame, said joint being connected with said contact member at a point fixed relatively to said contact member, and one of said members being movable toward and away from the other to adjust said operating connections laterally of the axis of rotation of said rotary member.

10. The combination with a frame, of a rotary member carried thereby, a contact member, and adjustable operating connections between said members, said operating connections comprising a universal joint on said frame and connected with said contact member at a point fixed relatively to said contact member, said rotary member being movable

toward and away from said contact member to adjust said operating connections.

5 11. In a massage instrument, the combination with an electric motor, of a contact device, connections between said motor and contact device for operating the latter, and means for varying said connections to change the amount of movement imparted to said contact device, said means also controlling
10 the flow of current to said motor.

12. In a massage instrument, the combination with a motor provided with a rotary member, of a pivoted arm, a toggle rotatable independently of said arm and connected
15 with said rotary member, and a contact device carried by said arm.

13. In a massage instrument, the combination with a motor provided with a rotary member, of a pivoted arm, a toggle rotatable
20 independently of said arm and connected with said rotary member, means for moving said rotary member to vary the toggle connections, and a contact device carried by said arm.

25 14. In a massage instrument, the combination with a motor, of a rotary member driven by said motor, a pivoted arm mounted to vi-

brate and to rotate about its axis, connections between said arm and rotary member, means for preventing the rotation of said
30 arm, and a contact device carried by said arm.

15. In a massage instrument, the combination with an electric motor, of a rotary member driven by said motor, a pivoted arm, a toggle connection between said arm and ro-
35 tary member, connections for moving said rotary member longitudinally of its axis to vary said toggle connections, said connections for moving said rotary member also controlling the flow of current to said motor, 40 and a contact device carried by said arm.

16. In a massage-machine, the combination with a motor having a rotary member, of a pivoted arm, a toggle sleeved upon said arm and connected with said rotary member, 45 and contact device carried by said arm.

In testimony whereof I have hereunto set my hand and affixed my seal in the presence of the two subscribing witnesses.

WILLIAM GENTRY SHELTON. [L. s.]

Witnesses:

CHARLES M. HAFT,
O. SEAR HEBEL.