

E. M. KOJIMA.

COMBINATION FARADIC AND VIBRATORY MASSAGE IMPLEMENT.

APPLICATION FILED JUNE 4, 1917. RENEWED FEB. 24, 1920.

1,338,020.

Patented Apr. 27, 1920.

2 SHEETS—SHEET 1.

FIG. 1.

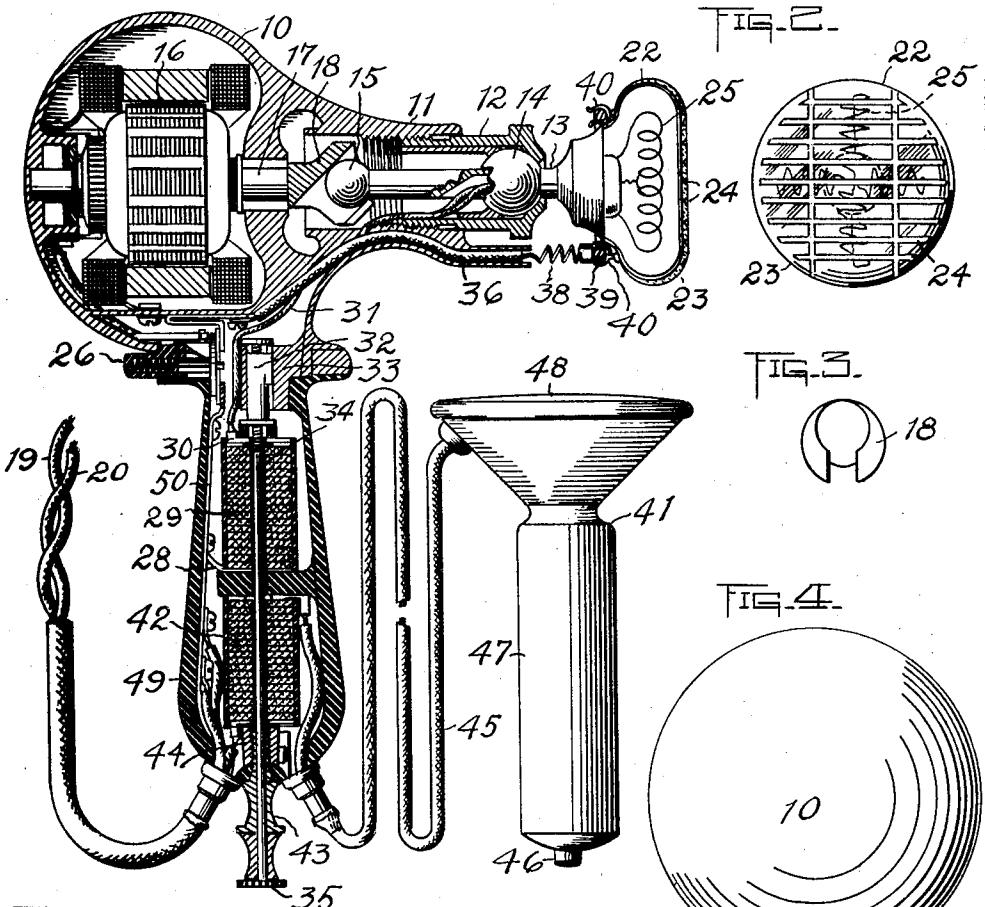


FIG. 2.

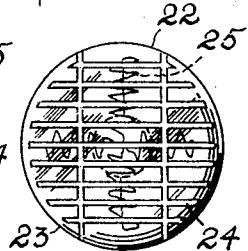


FIG. 3.



FIG. 4.

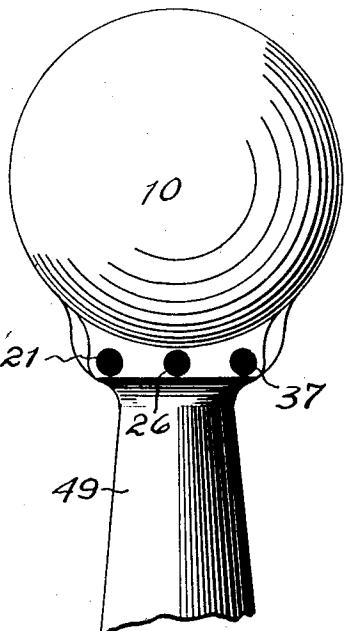
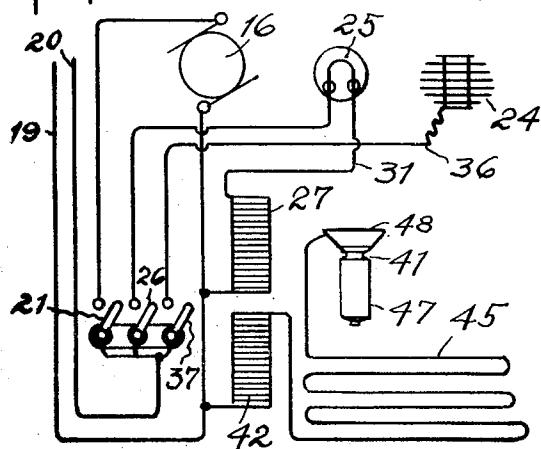
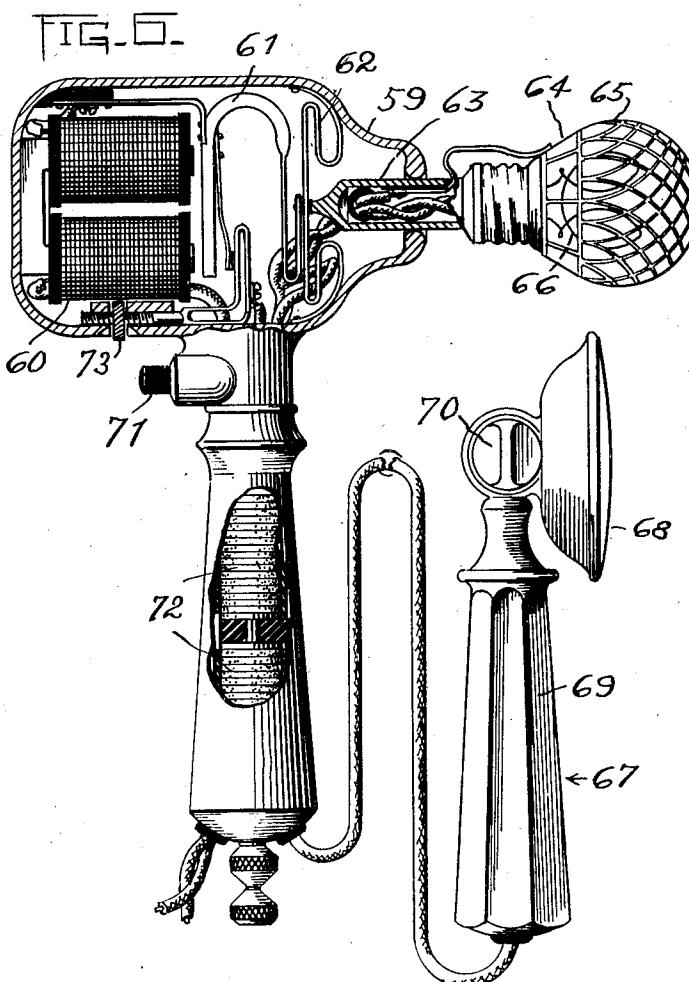


FIG. 5.



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INVENTOR  
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# UNITED STATES PATENT OFFICE.

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## COMBINATION FARADIC AND VIBRATORY MASSAGE IMPLEMENT.

1,338,020.

Specification of Letters Patent. Patented Apr. 27, 1920.

Application filed June 4, 1917, Serial No. 172,702. Renewed February 24, 1920. Serial No. 360,760.

*To all whom it may concern:*

Be it known that I, EDWARD MASAYOSHI KOJIMA, a subject of the Emperor of Japan, residing at Los Angeles, in the county of 5 Los Angeles and State of California, have invented certain new and useful Improvements in Combination Faradic and Vibratory Massage Implements, of which the following is a specification.

10 This invention relates to massage implements, and has for its principal objects, the combination with vibratory means for producing therapeutic effects, of heating means for simultaneously stimulating circulation, 15 opening the pores, of electroactinic means whereby the effects of light in close proximity to the body are attained, and means for simultaneously applying an electric current to the person treated, and to provide a 20 curative and healing means for all ailments which are alleviated, relieved, cured, or healed by application of vibrations, heat, electric current, electro-actinic rays, or any counterirritant or cautery.

25 Other objects and advantages may appear in the subjoined detail description.

In the drawings: Figure 1 is a longitudinal section of a massage implement embodying my invention; Fig. 2 is an end view of 30 the applicator showing the electrode filaments; Fig. 3 is an end view of the motor shaft showing inclined socket; Fig. 4 is a fragmental elevation of the implement showing the arrangement and position of the 35 push-button control switch; Fig. 5 is a wiring diagram showing connection of the electrical elements; and Fig. 6 is a longitudinal section of a modified form of massage implement having electromagnetic vibratory 40 means.

Referring to the drawing: The present invention may be embodied to comprise a casting 10, having a threaded end 11, adapted to receive an adjusting sleeve 12, within 45 which is mounted the oscillatory member 13 which has the spherical bearing 14, and the ball element 15, on its inner end. The motor 16, having the shaft 17 provided with an inclined socket 18, in engagement with 50 ball element 15, actuates the oscillator 13. The motor may be operatively connected to an electric circuit formed by conductors 19, 20, and the push-button make and break switch 21. The desired degree of vibration

is attained by turning the adjusting sleeve 55 12, and moving the ball 15 radially inward or outward relative to the axis of the motor shaft 17.

Upon the outer end of member 13 is screwed the applicator bulb 22, which in 60 this case is provided with a glass body 23, having embedded therein the electrode filaments 24, having an exposed surface flush with the glass body. Within the bulb, the filaments 25 are mounted adjacent to the 65 active surface of the bulb, and comprise both heating and lighting coils effective for varying the temperature of the bulb above the normal. The electric heating circuit is controlled by switch 26, and includes therein a 70 rheostat 27. The rheostat consists of a contact plate 28, connected to wire conductor 19, a series of high resistance disks 29, preferably of carbon, and a contact plate 30, connected through conductor 31, with the heating coils. The resistance is increased and diminished by varying the pressure upon the 75 disks. The nut 32, movable longitudinally in its support 33, is adjusted toward and from the disks by the screw 34, having the 80 knurled head 35.

The electrode filaments 24 are connected with the conductor 36, and through said conductor with the push-button switch 37. To provide for detachment of the conductor 36, 85 I construct the same in a spring coil 38 which is attached to an annular ring 39. Spring clamps 40 fixed to the filaments 24, are adapted to grip the annular ring 39. By thus making the electrode conductor and the 90 applicator detachable, various forms of applicator may be substituted for various purposes.

I further provide the electrode 41 which may be employed in coöperative relation 95 with the first-named electrode, to apply a faradic or galvanic current in connection with the simultaneous application of heat, light, and mechanical vibration.

In order that the current may be appropriately reduced for application through the electrodes, I provide the rheostat 42 with a construction similar to rheostat 27, the pressure thereon being attained by manipulation of the sleeve 43 which actuates the 100 nut 44. A conductor 45 connects the rheostat 42 with the electrode 41, which is provided with a push-button switch 46, where-

by the cylindrical surface 47 and the convex applicator surface 48 may be alternately energized. The resistance elements 27, 42, are contained within the limits of handle 49, 5 and switches 21, 26, 37, are arranged to be conveniently manipulated by the operator's hand that grasps the handle. Conductor 20 is attached to switch contact plate 50.

From the foregoing it may be seen that I 10 have provided simple and efficient means for simultaneously applying vibration, heat, light rays, and an electric current to the human body in the treatment of disease or relief of various ailments, together with a 15 means for independent control of each form of application.

Various modifications may be made without departing from the nature of the invention, which consists essentially of associating with two faradic or galvanic electrodes, 20 a means for heating one or each of them, a means for vibrating one or each of them, and a means for applying electro-actinic rays through one or each of them.

25 The modified form of the device shown in Fig. 6 consists of a casing 59, having therein the electro-magnets 60, which actuate the armature 61, which is connected to the resilient spring bridging member 62. A receptacle 63 is fixed to the bridge 62 and is vibrated thereby. The applicator 64 is provided with an electrode surface 65, and heating coil 66. The electrode 67 is provided with an applicator 68 which is secured to 30 the handle 69, by a screw clamp member 70, whereby the applicator may be set at 35 various angles with the handle.

The switches 71, and rheostats 72 are similar to those shown in Fig. 1. An adjusting screw 73, is provided for the magnet contacts. The bell applicator shown in 40 Fig. 9 is further provided with a reflector

75 adjacent to the electric bulb, whereby the light rays may be concentrated and intensified. The reflector may be also applied to the other forms of applicator having means for the production of actinic rays. 45

What is claimed is:

1. In a massage implement, the combination with a casing, of a spring support within the casing, a receptacle attached to the spring support and projecting from the casing, an armature in coöperative relation with the spring support, electro-magnets 50 arranged to actuate the armature, an applicator having screw connection with the receptacle and moving synchronously with the armature when the magnets are energized, an electrode terminal embedded in the applicator and flush with the face thereof, and a spring contact member projecting from the receptacle and engaging with the electrode terminal. 55

2. In a massage implement, an applicator 60 comprising a glass bulb, electric lighting elements within the bulb, and an electrode terminal consisting of metal filaments embedded in the glass and flush with the surface thereof. 70

3. In a massage device, an applicator comprising a glass bulb, electric-lighting elements within the bulb, electrode terminal filaments embedded in the glass and flush with the surface of the bulb, means for vibrating the bulb, and a coöperative electrode in connection with the bulb electrode. 75

In testimony whereof I hereunto affix my signature this 26th day of May, in the year 1917.

EDWARD MASAYOSHI KOJIMA.

Witnesses:

J. W. MASTER,  
F. M. KEENEY.