H. HIROTA.

MASSAGE DEVICE.

APPLICATION FILED JAN. 30, 1917.

1,262,669.

Patented Apr. 16, 1918.

2 SHEETS—SHEET 1.

FIG. 1.

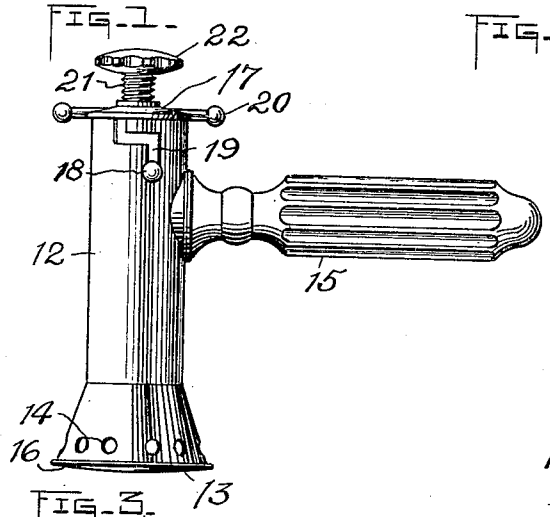


FIG. 2.

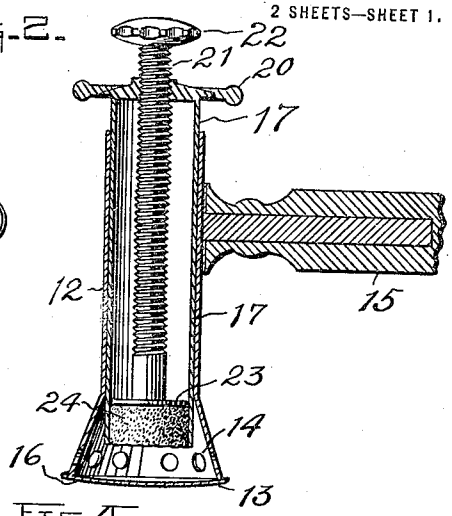


FIG. 3.

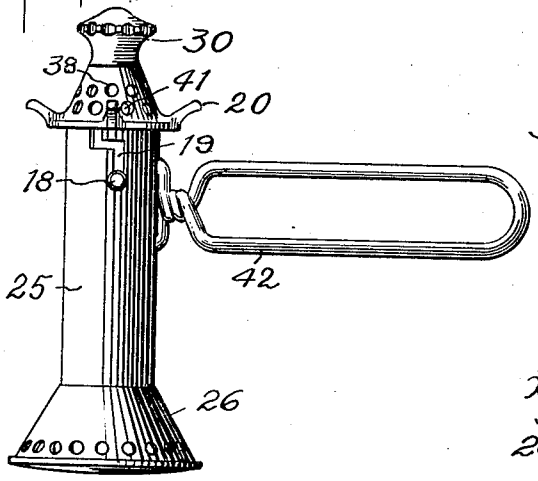


FIG. 4.

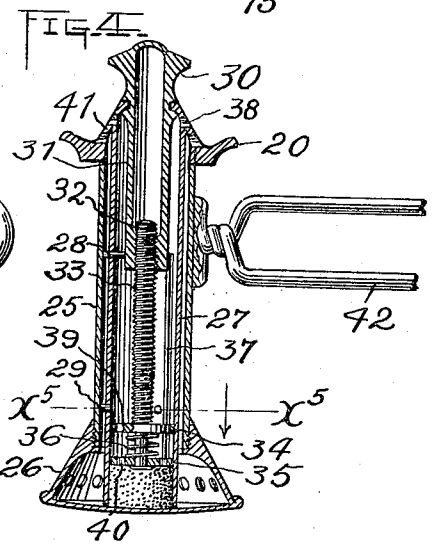


FIG. 5.

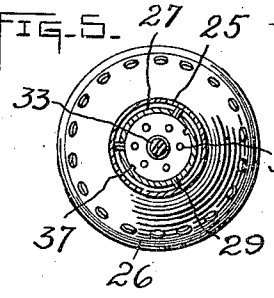
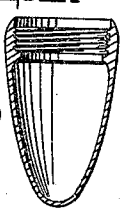


FIG. 6.



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2 SHEETS—SHEET 2.

FIG. 7.

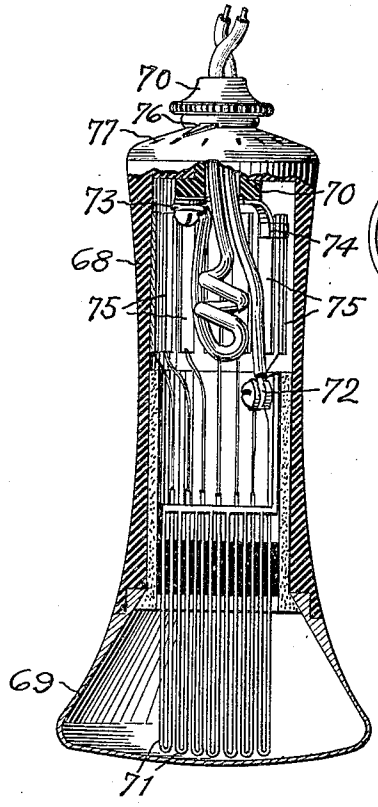
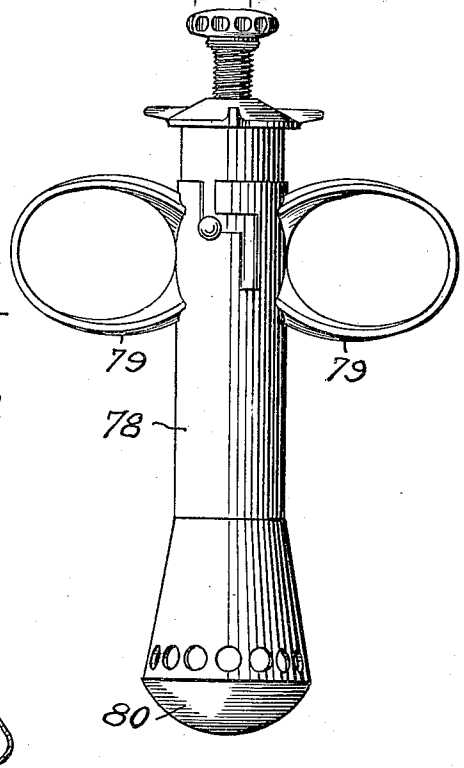


FIG. 8.



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HYAKUTARO HIROTA, OF LOS ANGELES, CALIFORNIA.

MASSAGE DEVICE.

1,262,669. Specification of Letters Patent. Patented Apr. 16, 1918.

Application filed January 30, 1917. Serial No. 145,412.

To all whom it may concern:

Be it known that I, HYAKUTARO HIROTA, a subject of the Emperor of Japan, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Massage Devices, of which the following is a specification.

This invention relates to massage devices, and more particularly to a device of this character in which thermo-electric and other heat producing means are substituted for vibrating means to produce the desired therapeutic effects.

The objects of this invention are, to provide means efficient as a curative and healing device in all ailments of a person's body, which are ordinarily alleviated by the process of kneading, rubbing, pressing, or slapping the afflicted parts, and also such ailments as may be relieved, cured, or healed by the employment of a counter irritant or cautery.

It is an object of the invention to provide simple and efficient means for restoring vitality to sluggish organs of the body, and to stimulate and hasten the development thereof, also to provide efficient means for the relief of fatigue, pains, and nervous affections.

To this end, the invention consists in the peculiar construction and combination of parts, as hereinafter described and claimed.

While simple and efficient means are herein described for accomplishing the objects of the invention, it is to be understood that the invention is not limited to the precise construction shown, but may include within its purview such minor changes and modifications as may fall within the scope of the appended claims; the essence of my invention comprising a receptacle adapted for manual use to create friction of the skin and otherwise to knead and massage the same, heat or cold producing elements contained within the receptacle, a handle for the receptacle, and means for varying the degree of heat or cold in accordance with the use to which the device is to be applied.

In the drawings: Figure 1 is an elevation of a massage device constructed in accordance with the principles of my invention. Fig. 2 is a vertical mid-section of the same. Fig. 3 is a side elevation of a modified form of the invention. Fig. 4 is a vertical mid-section of the form shown in Fig. 3; this form being constructed with a detachable end, whereby various forms may be substituted one for another, adapting the device for various uses. Fig. 5 is a transverse section on line X^5—X^5, of Fig. 4, looking in direction indicated by the arrow. Fig. 6 is a sectional detail of a detachable end to be attached to the device shown in Fig. 4. Fig. 7 is a vertical mid-section of a modified form employing thermo-electric units to vary the temperature thereof. Fig. 8 is a side elevation of a modified form of the invention having double handles adapted to temperature modifications.

Referring to the drawings, a form of my invention, as shown in Figs. 1, 2, consists of the casing 12, having a flared bottom 13, provided with apertures 14, and a heat insulated handle 15. The massage face 16 is slightly rounded. A tubular receptacle 17 is adapted to telescope within the casing 12; being provided with a pin 18, working in the slot 19, in casing 12. The receptacle 17 is provided at its upper end with wings 20 by which it may be more readily manipulated, its movement being limited by the length of the slot 19.

A screw shaft 21, mounted axially within the receptacle, has mounted on the outer end, the operating handle 22, and on the inner end, the disk or follower 23, which forces the filler 24, preferably moxa, a substance which burns at a uniform rate of combustion, and often used by burning it on the skin as a counter irritant or cautery, downward as the handle 22 is turned.

In use, the skin, or part of the person to be treated, is rubbed or kneaded by applying the massage face 16, thereto; the receptacle 17 having been first withdrawn to the position shown in Fig. 2, and the filler lighted. The burning of the heat producing element is controlled by the handle or feed-nut 22, and the combustion is facilitated by admission of air through the apertures 14. The receptacle may be withdrawn for renewal of the filler.

In the modified form shown in Figs. 3, 4, the casing or body 25, is provided with a detachable massage element 26, screwed to the bottom end thereof. The inner receptacle 27 is smaller than and spaced apart from the casing 25, being, in this case, held in concentric relation with said casing, by radial projecting pins 28 and 29. These pins are fixed to the receptacle and are in contact with the outer casing.

The feed-nut 30 is mounted to rotate freely relative to the receptacle, but without longitudinal movement, and has a tubular extension 31, threaded at the lower end 32, to engage with the correspondingly threaded shaft 33, having a fixed circular head 34, and a longitudinally movable follower 35, with a spring 36, interposed between the head and follower to hold the follower in yielding engagement with the moxa filler 24. The head 34 is grooved and held against rotation by engagement with the longitudinal ribs 37 on the inner wall of the receptacle, and working in said grooves. Thus the rotation of the feed-nut 30 will cause the longitudinal movement of the follower to force the filler downward as it is needed for combustion.

Various forms of detachable massage elements may be provided for this form of the device; the form shown in Fig. 6 being adapted for rectal use, as for example, in the treatment of piles. To maintain combustion of the heat producing elements when the non-perforated massage elements are attached, the receptacle is pierced at its upper end with draft holes 38, admitting air to the interior. The current of air will pass downward through apertures 39, in the head, and apertures 40, in the follower, thence through the filler which is sufficiently porous for this purpose. The products of combustion pass outward through the annular space between the casing and receptacle, and thence through the draft holes 41.

This device is used in the same manner as that shown in Figs. 1, 2. To stop combustion, the receptacle is forced downward until the filler is in contact with the bottom of the massage element, as shown in Figs. 3, 4. It may be noted that the pins 28 also project inward, and hold the end of the feed-nut in concentric relation with the receptacle. A handle 42 is provided to facilitate manipulation of the device.

In the modified form shown in Fig. 7, thermo-electric means are employed for varying the temperature thereof. The outer casing 68, is provided at the bottom with a massage bulb 69, and at the top with a rotating member 70. A series of metallic resistance plates 71, adapted upon passing an electric current therethrough to become heated, are connected with one terminal 72, of an electric conduit. The opposite terminal 73, is connected to a contact member 74, upon the bottom of the rotary sleeve 70, and adapted to engage consecutively, the contact members 75, connected respectively, to plates 71, upon actuating the member 70.

One or more of the resistance plates 71 may be placed in circuit by rotating the sleeve 70, an indicating means therefor consisting of a pointer 76 affixed to the sleeve, and graduating marks 77 upon the outer casing.

In the modified form shown in Fig. 8, the casing 78, is provided with oppositely disposed handles 79, whereby the device may be more conveniently grasped by the operator, said handles being adapted for insertion of the fingers. The detachable massage cap is constructed with a substantially hemispherical head 80. The receptacle and heat producing elements as shown in either Figs. 1, 2, or 3, 4, may be employed with the casing as shown in this modified form.

From the foregoing it may be seen that the invention may be carried out in various ways and with various modifications, there being in each form shown, a means of varying the temperature of the device above or below normal, while in use, to secure advantages in massage treatment, which could not be obtained in using the ordinary type of massage device.

The heat producing elements are simple, inexpensive, and easily renewed. The angularly disposed handle shown in several of the forms is of advantage where the operator wishes to employ the device in treatment of his own shoulders or his back.

Attention may be called to the fact that a thermo-electric receptacle may be constructed for the forms shown in Figs. 1, 2, 3, 4, and 8, and other forms of containers may be substituted and the detachable massage bulbs may be varied within the scope of the appended claims.

What is claimed is:

1. A massage device, comprising a casing, a massage head formed on the bottom of the casing, a receptacle within the casing, heat producing elements within the receptacle, and means for adjusting the receptacle to and from the massage head.

2. A massage device, comprising a casing, a massage head formed thereon, a receptacle within the casing, heat producing elements within the receptacle, and a screw means for feeding the heat producing elements to support combustion.

3. A massage device, comprising a casing, a massage head formed thereon, a receptacle within the casing, means for adjusting the receptacle to and from the massage head, heat producing elements within the receptacle, and a screw means for feeding the heat producing elements to support combustion adjacent to the massage head.

4. A massage device, comprising a casing, having the bottom thereof adapted to massage, a receptacle within the casing, means for shifting the receptacle to and from the bottom of the casing, a heat producing element within the receptacle, adapted upon combustion, to change the temperature of said bottom of casing, means for adjusting the heat element to support combustion, and

a series of apertures in said casing adjacent to the bottom to maintain combustion.

5. A massage device, comprising a casing, a receptacle sliding longitudinally within the casing, means for adjusting the receptacle to and from the bottom of the casing, a combustible element within the receptacle, and means for maintaining the combustion thereof.

6. A massage device, comprising a casing having a detachable bottom of substantially hemispherical shape, a pair of oppositely disposed handles on the upper end, a receptacle within the casing, and heat producing elements within the receptacle, adapted through combustion to vary the temperature of the bottom from normal.

7. A massage device, comprising a casing having an angularly disposed handle, a detachable massage head secured to the bottom of the casing, a receptacle within the casing, having draft holes in the upper end, means for spacing the receptacle apart from the casing to form a draft chamber, a circular head working within the receptacle, a spring actuated follower working in unison with the head, a feed-nut secured against longitudinal movement and engaging with the head and follower, and a combustion element carired within the receptacle and controlled by the feed-nut, the combustion of said element being maintained by the air current passing through the draft holes and chamber.

8. A massage device, comprising a casing having an angularly disposed handle and a detachable massage head, a receptacle within the casing and spaced apart therefrom, said receptacle having draft means in the upper end, and heat elements in the lower end of the receptacle, adapted through combustion, to heat the massage head.

In testimony whereof, I hereunto affix my signature this 24th day of January, 1917.

HYAKUTARO HIROTA.

Witnesses:

MASAYOSHI KOJIMA,

T. V. K. KOGA.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."