

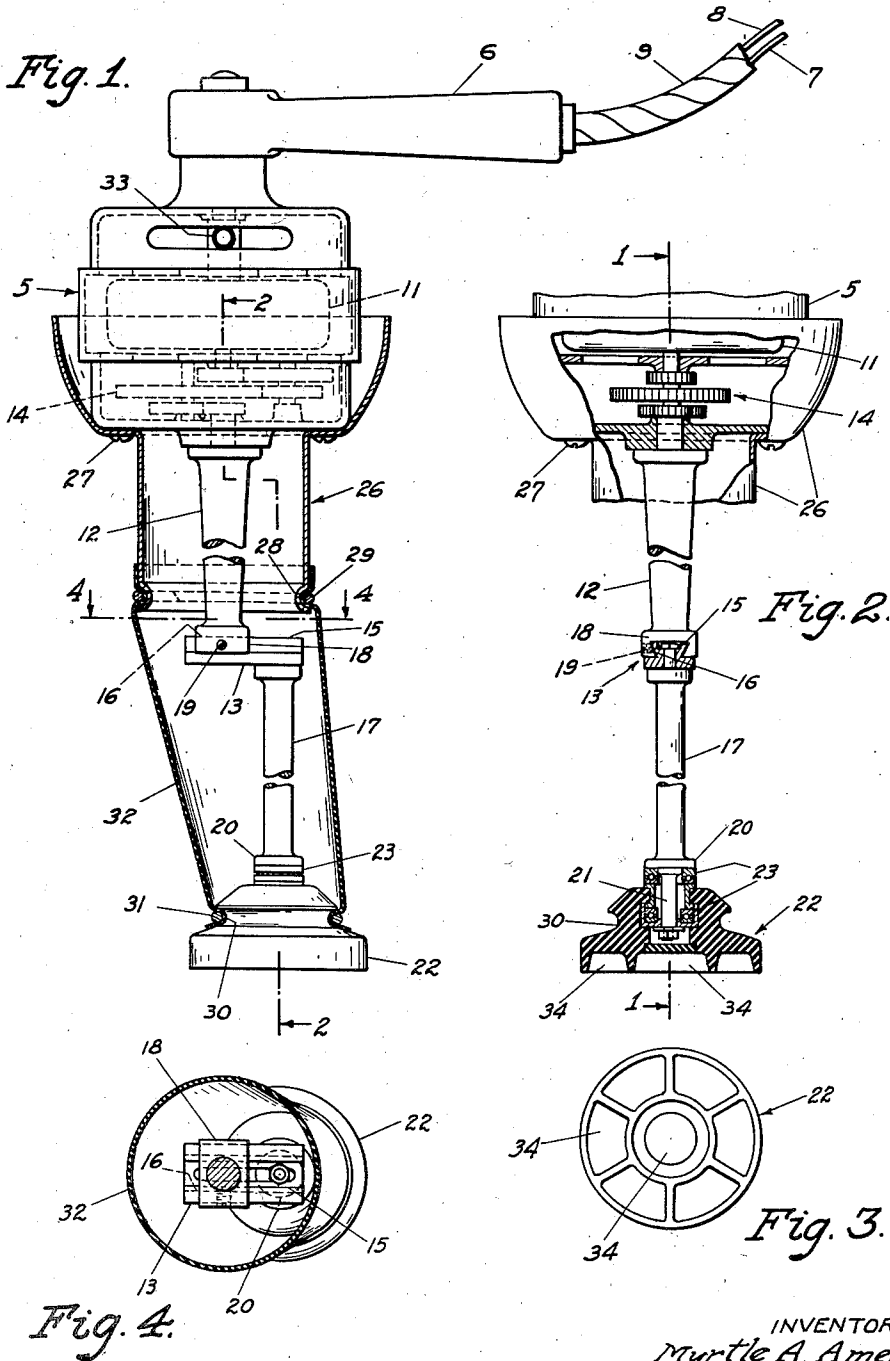
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MOTOR DRIVEN MASSAGING INSTRUMENT

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MOTOR-DRIVEN MASSAGING INSTRUMENT

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8 Claims. (Cl. 128-46)

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This invention relates to a motor driven appliance for massaging surface portions of the human body.

Speaking more specifically, the invention pertains more particularly to a novel, motor driven applicator so shaped as to utilize air suction in a manner producing a more efficient massage, and to an improved means for adjusting the extent of the massaging movement given to said applicator during its motor driven operation.

The invention also pertains to a new combined manual and mechanical method of giving a massage to the surface of the human body to stimulate circulation of the blood with a view to removing abnormal conditions resulting from a faulty circulation.

Among the objects of the invention are to provide a more efficient means for applying a deep and vigorous massage to the skin and underlying tissues of the human body; to provide an improved means for regulating the extent of the massaging movement; and to provide an applicator having an improved arrangement of multiple air rarifying, or suction, cups utilizable to apply a vigorous yet cushioned, and therefore painless massage.

A more specific object is to provide a massaging means particularly well adapted to massage the scalp in a vigorous yet painless manner thus to stimulate the circulation of the scalp, and hair, improve the condition of the hair and safeguard against baldness, and dandruff.

Other objects, advantages and features of the invention will hereinafter appear.

Referring to the accompanying drawing, which illustrates a preferred embodiment of the invention,

Fig. 1 is a side elevation of the appliance partly in section on line 1-1 of Fig. 2.

Fig. 2 is a front elevation of the applicator portion of the device, partly in section on line 2-2 of Fig. 1. The lower portion of the applicator housing being removed.

Fig. 3 is a bottom plan view of the applicator.

Fig. 4 is a cross section on line 4-4 of Fig. 1.

Referring in detail to the drawing, the device is shown combined with a motor-carrying body 5 having a handle 6 through which are led the current-supplying conductors 7 and 8 which also pass through the flexible cable 9. The motor 11 rotates in a non- gyratory manner, the shaft 12 which, in turn, adjustably carries the crank arm 13.

The preferred means for attaching said applicator to said shaft includes an arm 13 which as

it appears in cross section in Fig. 2 has a widened upper portion 15, this part of the arm being slidably fitted into a groove 16 extending diametrically across the extremity of the shaft 12, the dovetail joint thus provided insuring a secure and rigid attachment of the crank arm 13 to said shaft 12, which carries it and by which it is driven.

A speed reducing mechanism 14 is positioned between the motor 11 and its driven shaft 12 to facilitate the use of a higher speed motor for applying a relatively slow gyratory motion to the shaft 17.

In order to adjust radially the arm 14 so as to vary the extent of the gyratory movement given to the applicator shaft 17, said arm is provided with a trapezoidal lateral extension 18 and a set screw 19 is provided on the side of said extension 18, the inner end of said screw being projectable into the groove 16 likewise trapezoidal, its mouth being contracted. Said screw can be clamped against the side of the arm 13. Said shaft 17 has an enlarged end portion 20 to which the pin 21 is formed. The rubber applicator head 22 is mounted by means of said pin upon ball bearings 23 which bearings are interposed between said head and the arm's enlargement 20, thus rotatably mounting said head upon its shaft 21.

The stationary housing 26 is secured to the motor casing 5 by screws 27 and extends up around the lower portion of the casing and also down around said shaft 12. The lower extremity of the housing 26 is formed with radial seat 28 into which is fitted a spring ring 29. Said head 22 is also provided with a radial groove 30 into which is fitted a spring ring 31. An elastic rubber, or flexible fibrous tube, 32 is secured in the grooves 28 and 30 by the rings 29 and 31 respectively, to provide a complete dust and safety housing for said moving parts contained therein and also to protect the operator from said moving parts.

It is to be seen that the diameter of the lower end of the stationary tubular housing member 26 is sufficiently great to encircle the path of the outer end of the crank arm 13 even when the latter is so adjusted as to provide for the desired eccentricity of movement of the applicator head 22. Therefore the upper end portion of the flexible tube 32, which is attached exteriorly around the lower end of said housing portion, does not interfere with the rotation or gyrations of said crank arm or of the applicator shaft 17, the latter shaft always extending parallel to the produced axis of the shaft 12. An angular lengthening of the shaft 12 is thus produced.

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The appliance is provided with the usual speed and current control lever 33.

In using the device the operator, having adjusted the speed control 33 for the desired speed, will utilize the handle 6 to press the multiple vacuum cup applicator 22 against the surface of the body with the desired amount of force and will manually impart an auxiliary gyratory movement thereto to supplement the gyratory movement of the mechanically driven applicator head 22. It will be noted that the manually graspable handle 6 extends at right angle to the applicator driven shaft 12, thus enabling the operator more efficiently to combine a manual gyration of the applicator with the mechanical gyration thereof.

I claim:

1. In a motor driven massaging instrument having a mechanically rotated shaft, there being a groove with a contracted outer side extending diametrically across an extremity of said shaft, a rigid crank arm slidably dovetailed into said groove, clamping means adjustably securing said arm in said groove to hold the former in various positions of longitudinal adjustment, and an applicator means including a shaft carried by said crank arm and projecting laterally therefrom, thus producing an angular lengthening of the first recited shaft.

2. In an electrically driven, manually supportable massaging device, a casing, a motor therein, a shaft projecting from said casing and driven by said motor, a massaging applicator, means eccentrically mounting said applicator on the projecting portion of said shaft, said mounting means including a crank arm rigidly attached to said shaft, and a manually graspable handle carried by said casing and extending at a right angle to said shaft, thus enabling the operator conveniently manually to impart additional gyration to the applicator.

3. The subject matter of claim 2, and said crank arm being adjustable to vary the extent of the mechanical gyration of said applicator.

4. In a motor driven massaging instrument, a motor driven shaft having an outer end portion spaced away from the motor, a tubular housing concentrically surrounding said shaft to a point adjacent to the outer end of the latter, a crank

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arm secured to and extending transversely of said outer end portion of said shaft, an applicator shaft fixed to said crank arm and cooperating therewith to produce an angular lengthening or extension of the first recited shaft, an applicator head concentrically carried by the outer end of said applicator shaft, and a flexible tube surrounding said crank arm and applicator shaft, one end portion of said tube being in a secured surrounding relation to the outer end of said tubular housing and the opposite end thereof being in a secured surrounding relation to said applicator head.

5. The subject matter of claim 4, and said tubular housing having an external groove around its outer end portion over which the inner portion of said flexible tube is fitted, and a retaining ring surrounding said tubular housing and seated in said groove.

6. The subject matter of claim 4, and said applicator head having a groove around it over which the outer end portion of said flexible tube is fitted, and a retaining ring surrounding said tubular housing and seated in said groove.

7. In a motor driven massaging instrument, a motor, a rigid shaft structure rotated thereby, and an applicator head concentrically secured to the outer part of said shaft structure, said head having an elastic body engaging portion, said shaft structure being rigid throughout its length and having in its midlength portion a crank element which imparts a gyratory massaging movement to said head when said shaft structure rotates.

8. The subject matter of claim 7, and said crank element being adjustable to vary the extent of said gyratory movement of said head.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
855,342	Richmond	May 28, 1907
915,251	Vanderslice	Mar. 16, 1909