Oct. 15, 1957 W. VOLKER 2,809,630

ROTATABLE HEATED MASSAGE DEVICE

Filed Aug. 9, 1954

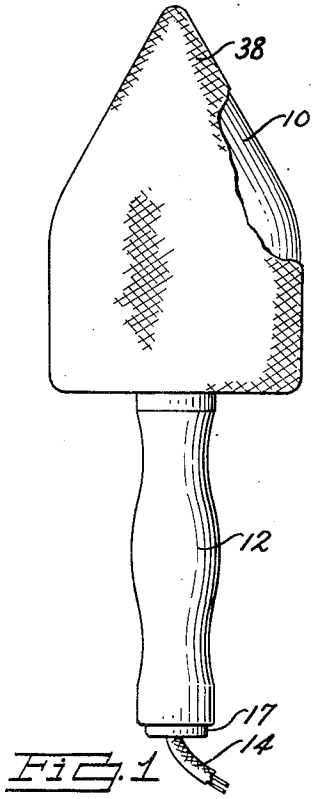


Fig. 1

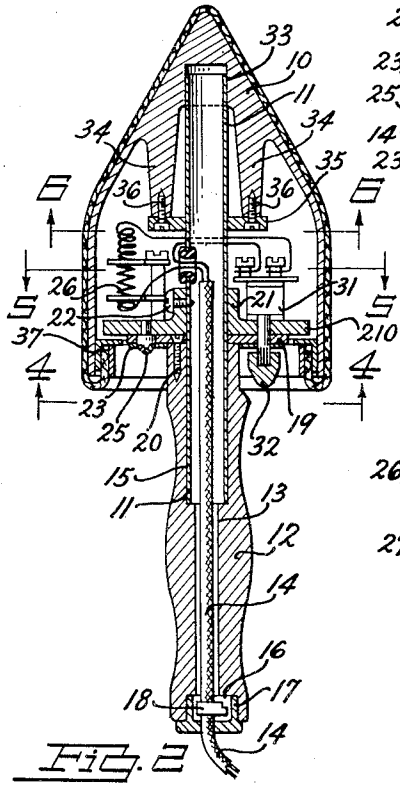


Fig. 2

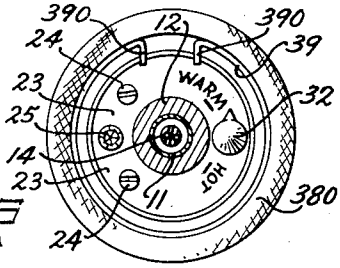


Fig. 4

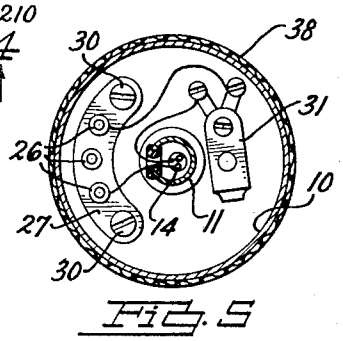


Fig. 5

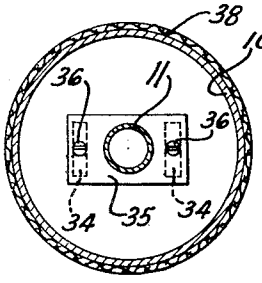


Fig. 6

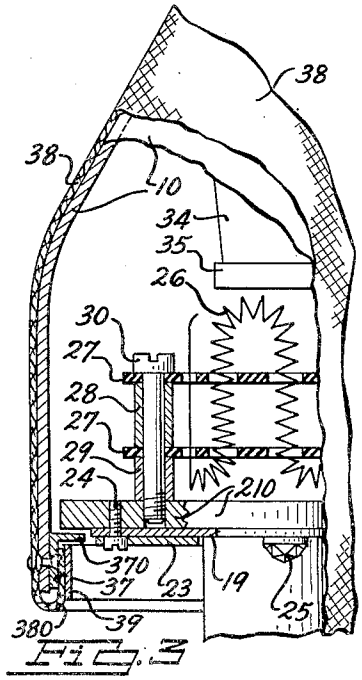


Fig. 3

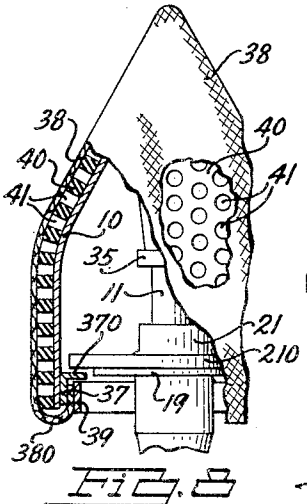


Fig. 8

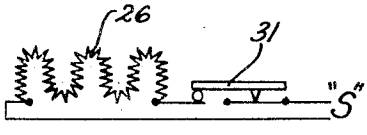


Fig. 7

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ROTATABLE HEATED MASSAGE DEVICE

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5 Claims. (Cl. 128—24.3)

This invention relates to massage devices and in particular to improved applicator massage devices.

The primary object of the invention is to provide a universal massage device for both cold and heated roller applications and for still heat application constructed and formed for use on both extremely sensitive and non-sensitive body areas or at local difficult-to-contact spots wherever mechanical or heat therapy is called for, and which is employable to carry and apply medicament to any portion of the body during massage, or to massage portions of the body with or without medicament having been applied thereto.

A further object of the invention is to provide a roller type massage device adapted for use dry or to apply medicaments or for use with applied medicaments comprising a hand grip and a cylindrical conically pointed massage head rotatably mounted thereon, the said massage head being adapted to receive and removably retain thereon an applicator covering which serves to spread and massage in medicaments already applied, to receive, hold and apply medicaments, and to cushion the massage head when rolled over or applied to injured or tender portions of the body; the said massage device including a non-rotatable heating element which provides uniform heat during roller massaging or spot heat of various intensities at one side of the roller when the massage head is held against a portion of the body without rolling—the intensity and location of the spot heat depending upon the orientation of the hand grip after the applicator head is placed against the body.

Other objects of the invention will become apparent by reference to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is an elevational view of a massage device embodying the invention.

Fig. 2 is a vertical sectional view through the massage device.

Fig. 3 is an enlarged fragmentary sectional view showing one type of heating element that may be employed.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a more or less diagrammatic sectional view taken on the line 5—5 of Fig. 2 showing the thermostatic switch and heating element and electrical connections thereto.

Fig. 6 is a cross sectional view taken on the line 6—6 of Fig. 2.

Fig. 7 is a wiring diagram.

Fig. 8 is a fragmentary view showing the use of a reticulated cushion element for soft massage and to retain excess medicament.

Referring now to the drawing wherein like numerals

refer to like and corresponding parts throughout the several views, the particular embodiment of the invention disclosed for illustrative purposes comprises a cylindrical conically pointed roller element **10** rotatably mounted on a tubular spindle **11** fixed in a hand grip **12**. The hand grip **12** is bored at **13** to accommodate an electric cord **14** and counterbored at **15** to receive the spindle **11**. The lower end of the hand grip **12** is also counterbored at **16** to receive a ferrule **17** through which the electric cord **14** extends. The ferrule **17** accommodates a strain relief clamp **18** which is clamped to the electric cord **14** to prevent it from being pulled out of or pushed too far into the hand grip **12**.

An annular washer **19** is telescoped over the tubular spindle **11** and is secured to the inner annular end of the hand grip **12** by such suitable means as the countersink head screw **20**. A collar **21** is also telescoped over the spindle **11** with the bottom of the radially outstanding flange **210** thereof positioned in abutment with the top of the annular washer **19**, and the said collar **21** is fixed to the spindle **11** by such means as a set screw **22**. A name plate **23** is secured onto the bottom of the washer **19** by suitable studs **24** extending therethrough into the outstanding flange of the collar **21**.

The annular washer **19** and name plate **23** are apertured to accommodate a reflector jewel **25**, and the flange **210** of the collar **21** is apertured opposite the jewel **25** to permit light from the heating element **26** to reflect through the jewel **25** for the purposes hereinafter described. The heating element **26** is preferably composed of a suitable number of turns of resistance wire formed into a coil disposed in continuous reverse bends through arcuate mica or other insulating supporting bars **27** held in spaced relationship to each other and the outstanding flange **210** of the collar **21** by sleeves **28** and **29**. The arcuate mica bars **27** maintain the heating element **26** in uniform spaced relationship to roller element **10**. Screws **30** extending through the mica bars **27** and sleeves **28** and **29** are threaded into the outstanding flange of the collar **21** to fix the mica heating element insulating and supporting bars **27** and resistance coils **26** carried thereby into spaced relationship to the other adjacent and surrounding elements of the massage device.

As best shown in Figs. 2, 5 and 7, electric current from a suitable source S flows through the resistance coil or heating element **26** and an adjustable thermostatic circuit breaker **31** which breaks the flow of current to the heating element **26** when a selected Warm or Hot temperature is attained thereby, the adjustment of the thermostat by the control knob **32** determining the temperature at which the heating element **26** is cut out by the thermostatic circuit breaker **31**. Thus, the temperature to which the heating element **26** may heat the roller element **10** is constantly governed by the setting of the thermostatic circuit breaker **31**.

The roller element **10** is preferably cast or otherwise formed to the cylindrical conically pointed shape shown in Fig. 2, is centrally bored at **33** to rotatably fit on the outer end of the spindle **11**, and is provided with a pair of inwardly extending diametrically spaced arms **34** onto the inner ends of which an apertured bridge **35** is secured by means of studs **36**. The apertured bridge **35** neatly fits the spindle **11** for the purpose of permitting the roller element **10** to rotate on the spindle **11** substantially without wobble. To prevent the roller element **10** from sliding axially from the spindle **11**, a circularly formed re-

tainer angle 37 is riveted or otherwise secured to the inner periphery cylindrical portion thereof as best shown in Figs. 2, 3 and 8. The annular inwardly disposed leg or retainer ring 370 of the circular retainer angle 37 overlays the radial flange 210 of the collar 21 fixed to the spindle 11 to prevent the roller element 10 from axially sliding off the spindle 11; however, adequate working clearance is provided between the retainer ring 370 of the retainer angle 37 and the flange 210 of the collar 21 to permit the roller element 11 to rotate freely at all times.

Over the roller element 11 is disposed a close fitting fabric cover 38 which has its lower end or skirt 380 folded upwardly adjacent the retainer angle 37 and is held in such position by means of a split spring retainer ring 39 having finger grips 390 formed at the split therein to permit the said retainer ring 39 to be readily positioned to hold the fabric cover 38 in place. This fabric cover 38 is preferably formed of a relatively soft absorbent material to carry medicament if desired or to aid in the spreading of medicament previously applied to the portion of the body being massaged.

Fig. 8 discloses the use of an apertured or reticulated cushioning element 40 of soft rubber, sponge rubber or other material which fits snugly over the cylindrical conically pointed roller element 10. The thickness of the cushioning element 40 and the size and spacing of the apertures 41 therein may be varied to suit the purpose for which the massage device is employed. The massage device may be used with or without a cushioning element, but, when a cushioning element having rather small apertures 41 is employed, the apertures 41 will serve as retainers for medicament applied to the cover 38 thereover. When the cushioning element 41 is used alone, it fits sufficiently snugly onto the roller element 10 so that it retains itself thereon.

It is obvious that the improved massage device embodying the invention has many uses, and its cylindrical pointed roller element 10 is considered to be substantially universal in its application to the various parts of the anatomy. It should be noted that the massage device may be used with or without the fabric cover 38, with or without a cushioning element 41, and with or without the application of heat. Of considerable importance is the thermostatic heat regulation and the spot heat available to the user. For example, if the thermostatic element of the circuit breaker 31 is of the range of from 110 to 120 degrees, the heating element 26 and thermostatic element will operate to maintain the massage roller element 11 within that temperature range as determined by the setting of the thermostat control knob 32. However, if the user would like to have a hot spot heat for application to a particular muscle, joint or the like, the massage device is held on the selected body area or point without rotation of the roller element 10 with the jeweled indicator disposed nearest the selected area or point of heat application. Conversely, a relatively cooler spot heat is obtainable by holding the massage device against a selected body area or point with the portion of the roller element 11 opposite the jeweled indicator disposed nearest the selected area or point of heat application. The thickness of the fabric cover 38 and/or the thickness and type of cushioning element 40 give added versatility in the use of the massage device embodying the invention.

Although but a single embodiment of the invention has been disclosed and described herein, it is obvious that many changes may be made in the size, shape, arrangement and detail of the several elements of the invention, all without departing from the spirit and scope thereof as defined by the appended claims.

I claim:

1. A massage device comprising a hand grip, a spindle extending from said hand grip, a hollow cylindrical conically pointed roller element rotatably mounted at its pointed end on said spindle leaving the remainder thereof

disposed in spaced relationship to said spindle, a collar fixed on said spindle adjacent said hand grip having a flange extending radially toward said roller element terminating in spaced relationship thereto, a retainer ring fixed on said roller element axially spaced below but overlapping said collar flange axially retaining said roller on said spindle, an arcuate heating element supported by said collar flange disposed in spaced relationship to said spindle and said roller element, and means within said roller disposed in spaced relationship to said heating element maintaining said roller at selected temperatures.

2. A massage device comprising a hand grip, a spindle extending from said hand grip, a hollow cylindrical conically pointed roller element rotatably mounted at its pointed end on said spindle leaving the remainder thereof disposed in spaced relationship to said spindle, a collar fixed on said spindle adjacent said hand grip having a flange extending radially toward said roller element terminating in spaced relationship thereto, a retainer ring fixed on said roller element axially spaced below but overlapping said collar flange axially retaining said roller on said spindle, and an arcuate heating element supported by said collar flange disposed in spaced relationship to said spindle and said roller element, and means fixed with respect to said hand grip adjacent thereto indicating the location of the heating element in respect to the hand grip whereby to permit the heating element to be oriented toward the side of the roller element applied to the anatomy when the roller element is non-rotatably applied thereto.

3. A massage device comprising a hand grip, a spindle extending from said hand grip, a hollow cylindrical conically pointed roller element rotatably mounted at its pointed end on said spindle leaving the remainder thereof disposed in spaced relationship to said spindle, a collar fixed on said spindle adjacent said hand grip having a flange extending radially toward said roller element terminating in spaced relationship thereto, a retainer ring fixed on said roller element axially spaced below but overlapping said collar flange axially retaining said roller on said spindle, a medicament absorbent cover on said roller, spring means removably fixing said cover on said roller, and an arcuate heating element supported by said collar flange disposed in spaced relationship to said spindle and said roller element.

4. A massage device comprising a hand grip, a spindle extending from said hand grip, a hollow cylindrical conically pointed roller element rotatably mounted at its pointed end on said spindle leaving the remainder thereof disposed in spaced relationship to said spindle, a collar fixed on said spindle adjacent said hand grip having a flange extending radially toward said roller element terminating in spaced relationship thereto, a retainer ring fixed on said roller element axially spaced below but overlapping said collar flange axially retaining said roller on said spindle, a medicament absorbent cover on said roller, means removably fixing said cover on said roller, and an arcuate heating element supported by said collar flange disposed in spaced relationship to said spindle and said roller element, means maintaining the temperature of said roller within selected limits, and means fixed with respect to said hand grip adjacent thereto indicating the location of the heating element in respect to the hand grip whereby to permit the heating element to be oriented toward the side of the roller element applied to the anatomy when the roller element is non-rotatably applied thereto.

5. A massage device comprising a hand grip, a spindle extending from said hand grip, a hollow cylindical conically pointed roller element rotatably mounted at its pointed end on said spindle leaving the remainder thereof disposed in spaced relationship to said spindle, a collar fixed on said spindle adjacent said hand grip having a flange extending radially toward said roller element terminating in spaced relationship thereto, a retainer ring fixed on said

roller element axially spaced below but overlapping said collar flange axially retaining said roller on said spindle, an apertured resilient element telescoped onto said roller, an arcuate heating element supported by said collar flange disposed in spaced relationship to said spindle and said roller element, means fixed with respect to said hand grip adjacent thereto indicating the location of the heating element to be oriented toward the side of the roller element applied to the anatomy when the roller element is non-rotatably applied thereto, means maintaining the temperature of said roller within selected limits, a medicament absorbent cover on said roller disposed over said apertured resilient element thereon, and spring means removably retaining said cover on said roller.

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