March 27, 1956 O. K. PREIS 2,739,586

SUCTION AND HOT AIR PRESSURE MASSAGE APPLICATOR

Filed April 14, 1954

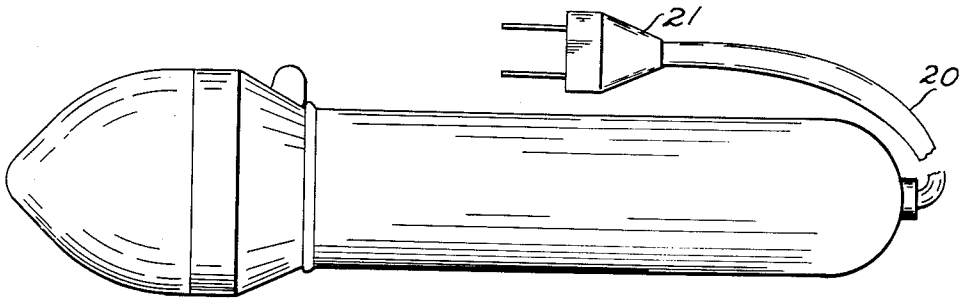


Fig. 1.

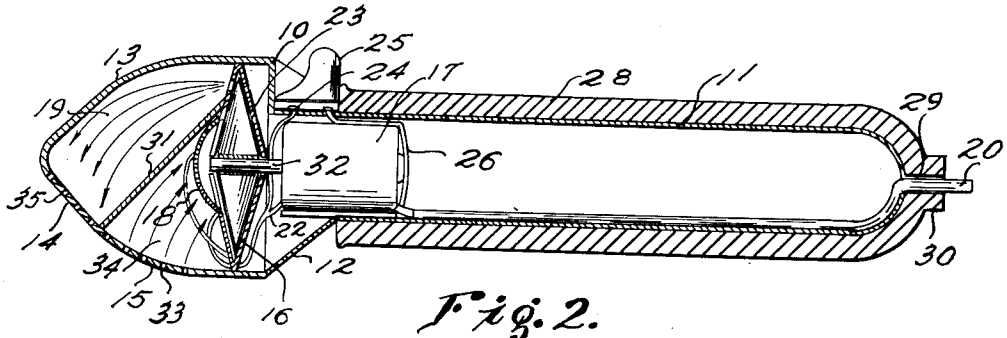


Fig. 2.

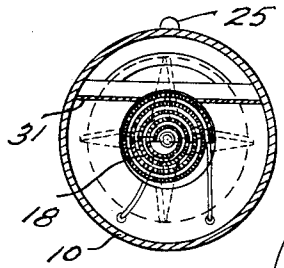
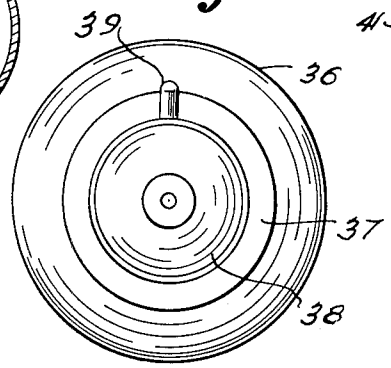


Fig. 3.

Fig. 4.



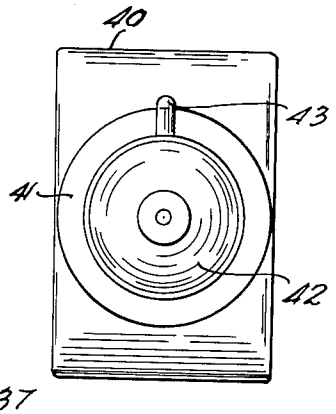


Fig. 5.

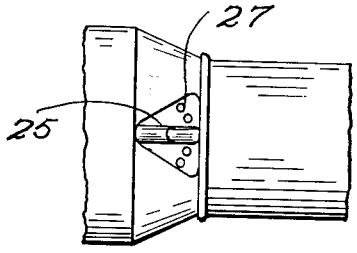


Fig. 6.

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SUCTION AND HOT AIR PRESSURE MASSAGE APPLICATOR

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1 Claim. (Cl. 128—24.1)

This invention relates to devices for massaging the skin of a patient, and in particular a device for drawing air from the surface of the skin, heating the air and returning or discharging the heated air upon the surface of the skin.

The purpose of the invention is to provide a massage device wherein both suction and pressure are applied to the skin of a patient simultaneously.

Various types of massaging devices have been provided and heating elements have been used in some devices of this type; however, for certain applications it has been found desirable to apply suction, heat and pressure to the surface of the skin of a patient in a single application. With this thought in mind, this invention contemplates a massaging applicator having a shield with a fan in combination with an electric heating element therein whereby air drawn through perforations in one part of the shield is heated and discharged through perforations in another part of the shield.

The object of this invention is, therefore, to provide means for incorporating a blower in combination with an electric heating element in a massage device whereby air drawn through perforations in one part of the device may be heated and discharged through corresponding perforations in another part of the device.

Another object of the invention is to provide a massaging applicator that provides suction, pressure and heat, in which the device is adapted to be held in one hand and is self-contained.

A further object of the invention is to provide an applicator for applying suction, heat and pressure to the skin of a patient in which the device is of a simple and economical construction.

With these and other objects and advantages in view, the invention embodies a tubular handle having a motor driven fan in a shield or head at one end with a heating element in combination with the fan and with suction and discharge passages positioned whereby air drawn from the surface of the skin may be heated and discharged or returned to the surface of the skin.

Other features and advantages of the invention will appear from the following description taken in connection with the drawing, wherein:

Figure 1 is a side elevational view showing the improved massaging applicator.

Figure 2 is a view similar to that shown in Figure 1 showing a longitudinal section through the device.

Figure 3 is a cross-section through the head of the device taken on line 3—3 of Figure 2.

Figure 4 is an end elevational view looking toward the extended end of the handle showing the massaging applicator in which the head is circular or spherical and in which the parts are shown on an enlarged scale.

Figure 5 is a view similar to that shown in Figure 4 showing a modification wherein a rectangular-shaped head is used.

Figure 6 is a plan view of a portion of the device

showing a button for starting and stopping and also for controlling the speed of the fan of the applicator, the ends of the handle and head being broken away.

As illustrated in the drawing, the device may be provided with an elliptical shaped head as shown in Figures 1 and 2, a circular head as shown in Figure 4, or with a rectangular shaped head as shown in Figure 5. The handle, motor, fan, heater and perforated areas are the same throughout the different designs.

In the design illustrated in Figures 1 and 2 a cylindrical portion **10** of the head is connected to an inner tubular section **11** of a handle with a frustro-conical shape section **12** and an outer shield **13** having a perforated pressure area **14** on the lower surface and a perforated suction area **15** between the surface **14** and the cylindrical portion **10**. The head is provided with a fan **16**, carried and actuated by a motor **17** and positioned to draw air through perforations in the area **15** over a spiral electric heating element **18**, whereby with the motor operating air is drawn by the fan **16** through perforations in the portion **15** over the electric heating element and is discharged by the fan, as indicated by the arrows **19**, through perforations in the area **14** of the face of the shield or head.

Current is supplied to the motor and electric heating element through an electric cord **20** having a plug **21** on the extended end and, as shown in Figure 2, one wire **22** of the cord is connected to one terminal of the electric heating element **18** with the opposite terminal of the element connected by a wire **23** to a terminal **24** of a switch having a button **25**; and the opposite wire **26** is connected, through suitable means, to terminals **27** positioned to be contacted by the button **25** for completing circuits to the motor and electric heating element whereby the speed of the motor is controlled.

The tube **11** of the handle of the massage device is covered with a sleeve **28** and the electric cord or conduit **20** extends through an opening **29** in a nipple **30** on the extended end of the sleeve.

The shield **13** is provided with a partition **31** that separates the perforated areas **14** and **15** and this partition is used in the designs shown in Figures 2, 4 and 5.

The shield is adapted to be made of an elliptical shape, as shown in Figures 1 and 2, of a circular or spherical shape, as shown in Figure 4, or of a rectangular shape, as shown in Figure 5.

The fan **16** is mounted directly on the motor shaft **32** and the wires **22** and **23** are extended beyond the ends of the fan blades.

With the parts assembled as shown and described, the device is held in one hand whereby the button **25** is adapted to be actuated by the thumb of the hand gripping the handle and by this means circuits may be completed to the motor and also to the electrical heating element whereby the electric heating element provides the heat as air is circulated by the fan. Air drawn inwardly through the perforations **33** in the area **15**, as indicated by the arrows **34**, is drawn over the heating element **18** and discharged around the upper edge of the partition **31** whereby the air follows the arrows **19** and is discharged through perforations **35** in the extended portion **14** of the shield.

In the device shown in Figure 4 a circular shield **36** is carried by a head **37** at the end of a handle **38** and the device is provided with a button **39**, and in the device shown in Figure 5 a rectangular shaped shield **40** is carried by a head **41** on the end of a handle **42** and this device is provided with a button **43**. The head may also be provided in other shapes or designs.

It will be understood that other modifications, within the scope of the appended claim, may be made in the

design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

In a massage device, the combination which comprises a tubular handle having a head extended from one end, a shield having perforated skin contacting surfaces carried by the head, a transversely disposed partition in the shield dividing the perforated contacting surfaces, a motor mounted in the handle and having a shaft extended into the head, a fan mounted on the motor shaft and positioned to draw air into the head through perforations of a section of the shield on one side of the partition and adapted to discharge the air through perforations in the section of the shield on the opposite side of the partition, an electric heating element mounted in the shield and positioned in the section thereof through which air is drawn into the shield, and a button actuated switch connected in a circuit to the motor and electric heating element.

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