Aug. 7, 1934. C. W. SENN 1,969,042

MASSAGING DEVICE

Filed March 24, 1930

Fig. 1.

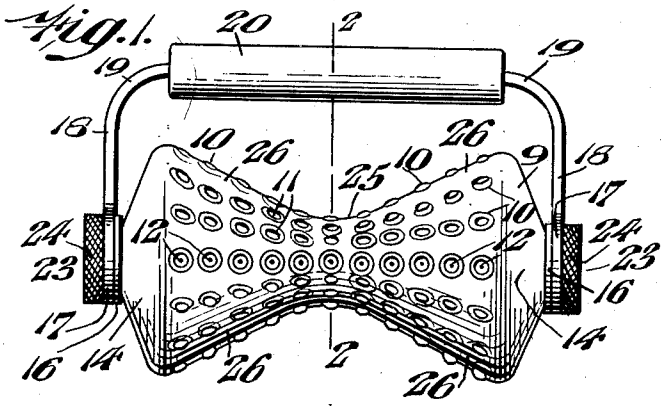


Fig. 2.

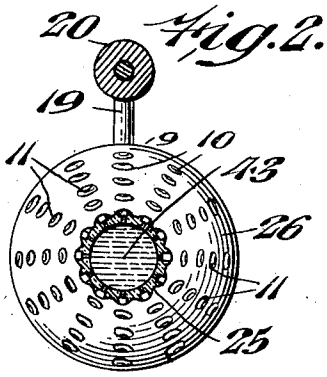


Fig. 3.

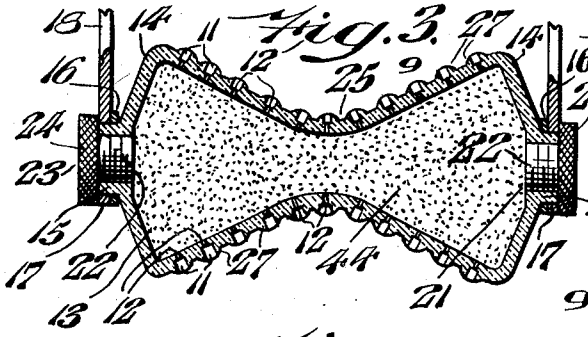


Fig. 4.



Fig. 5.

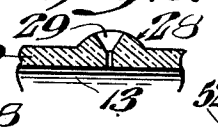


Fig. 6.

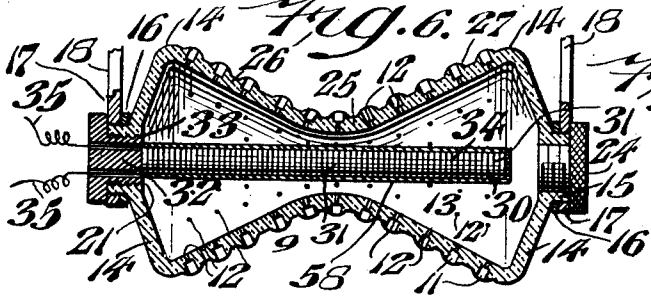


Fig. 8.

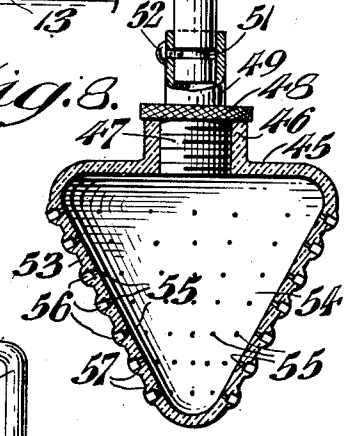
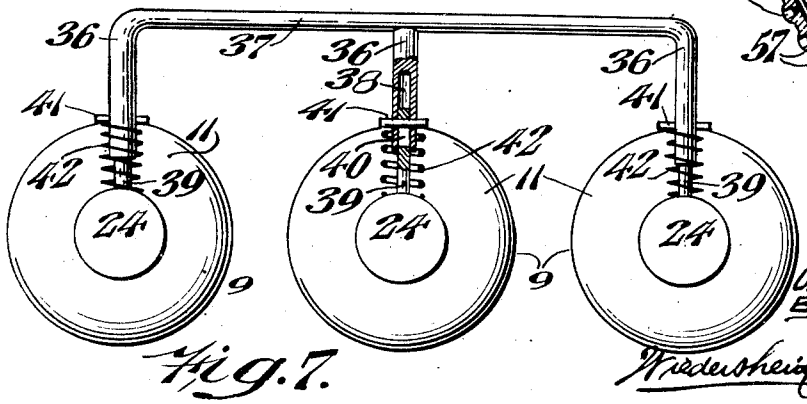


Fig. 7.



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MASSAGING DEVICE

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Application March 24, 1930, Serial No. 438,352

3 Claims. (Cl. 128—57)

This invention in general relates to a massaging device having for its object the provision of the device of the kind described, with certain desired improvements therein with a view of a more efficient apparatus adapted for the needs of modern massage treatments.

Another object is to provide a highly efficient massage roller particularly adapted for the special use and therapeutical ingredients employed in the massage treatment used in connection with certain embodiments of my invention.

A further object is to provide a massage apparatus of a configuration and type adapted to knead the flesh of the patient while applying certain healing and soothing liquids from vacuum cups of a special type utilized in the present invention.

Other and further objects and advantages of the method and means employed in the invention will appear more fully in the details hereinafter set forth when taken in connection with the accompanying drawing in which:—

Figure 1 is an elevational view of an embodiment of my invention employing a massage roller having knobbed vacuum cups;

Figure 2 is a transverse sectional view taken on line 2—2 Figure 1;

Figure 3 is a longitudinal sectional view partly in elevation of the device shown in Figure 1;

Figure 4 is an enlarged sectional detail view of the construction employed in connection with the vacuum cups;

Figure 5 is an enlarged sectional detail view of a modified form of vacuum cup construction;

Figure 6 is a longitudinal sectional view, partly in elevation of a massage roller in which a temperature control element is inserted;

Figure 7 is an end elevational view partly in section with parts broken away, of a modified form of the invention and

Figure 8 is a vertical, sectional view, partly in elevation, with parts broken away of any other modified form of the invention.

For the purpose of illustrating my invention I have shown in the accompanying drawing one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

With more particular reference to the drawing in which similar characters of reference indicate corresponding parts in which preferred forms of the invention 9 designates a hollow massaging roller of a double conical configuration having formed on the periphery thereof a plurality of studs 10 which as best shown in Figure 4 are formed with a pocket 11 communicating with a duct 12 leading to a chamber 13 containing the lotion or other ingredients employed in connection with the present device.

As best shown in Figure 3 the roller 9 has formed at the flared ends 14 thereof projecting hubs 15 receiving washers 16, the latter serving as anti-friction elements for the annular socket members 17 formed integrally with the arms 18 of a U-shaped member 19 on which a handle 20 is rotatably mounted. As clearly shown in Figure 3 the hubs 15 of the roller 9 have interiorly threaded bores 21 communicating with the chamber 13 the bores 21 being closed by the threaded stems 22 of the plugs 23 which are preferably formed with knurled heads 24, which latter serve to retain the socket members 17 in operative position on the hubs 15. The roller comprised in the details set forth is preferably formed of glass and is adapted for the application of lotions such as witch hazel, alcohol, sea water etc. in conjunction with the manipulation of the device over the surface being treated, it being observed that the ducts 12 are of a diameter sufficient to permit the exudation of just sufficient lotions etc. to moisten the exterior portion of the studs 10 via the ducts 12 and pockets 11. In Figure 3 the interior of the chamber 12 is shown filled with sand preferably heated, the roller being applied to the body under such temperature conditions as are best calculated to carry into practice the curative effect desired. In this embodiment it will be observed that the concaved central portion 25 of the roller 9 in conjunction with the adjacent diverging sides 26 is particularly adapted to snugly fit against the limb or body of the patient, while at the same time the liquid or lotion within the chamber 13 is carried to the surface as the vacuum cups 27 formed by the studs 10 and pocket 11 facilitate the seeping of liquid from the chamber 13 through the ducts 12. In this form of the invention it is not desired to cause any free exudation of the lotion within the chamber 15 but merely sufficient to moisten the exterior surfaces of the roller.

In Fig. 5, a modified form of vacuum cup 38 is illustrated having a conical pocket 29 communicating with the duct 12. I have found that the diverging sides of the conical pocket 29 in this

modification are adapted to facilitate the seeping of certain liquids from the chamber 13.

In the form shown in Fig. 6 I have incorporated a resistance coil 30 which comprises a cylinder 31 of refractory material suitably secured to a plug 32 having a threaded stem 33 received in one of the bores 21 of the roller 9, a suitable winding 34 of resistance wire being coiled about the cylinder 31, the leads 35 of the winding 34 being connected to a source of electric energy in the usual manner. The resistance coil 30 is preferably protected by a metal sheath or cover 58.

In the embodiment shown in Fig. 7, it will be observed that I have interconnected a plurality of rollers 9 by a corresponding plurality of tubular legs 36 joined by a bar 37. Each of the legs 36 has a bore 38 slidably receiving a plunger 39 secured to a socket member (not shown) of the type illustrated in Figs. 1, 3, and 6. The plungers 39 are provided with a slot 40 in which a pin 41, passed through the leg 36, is positioned. When the limit of the slot 40 is reached the translational movement of the plunger 39 will be checked. A spring 42 coiled about each of the legs 36 is confined between the protruding ends of the pin 41 and an adjacent part of the hub of the rollers 9. By inspection of Fig. 7 it will be seen that as the rollers 9 are pressed against the part being massaged, the spring 42 will provide yielding means for preventing a too violent contact with the patient. As shown in Fig. 2, the roller 9 is filled with any desired lotion or liquid 43, while in Fig. 3 the roller 9 is filled with sand 44 which has been previously heated with or without the addition of other ingredients. The present embodiment may be coupled to a suitable reciprocating apparatus for the purpose of massaging the body of the patient without undue fatigue to the operator.

In the embodiment shown in Figure 8, the roller 45 is substantially of a conical shape having a flanged opening 46 in which a plug 47 is threadedly engaged. Suitably secured on the knurled head 48 of the plug 47 is a tubular projection 49 in which a pipe 50 is rotatably received, the latter having an annular groove 51 in which the shank of a screw bolt 52 is operatively engaged. The tapering body portion 53 of the roller 45 is particularly adapted for facial massage with a view to conforming with the varied configuration of the human countenance. In this modification the chamber 54 of the roller 45 is assumed to be filled with a suitable lotion etc. which seeps through the ducts 55 thence into the communicating pockets 56 which are formed in the studs or protuberances 57 of the periphery of the roller 45. Here again the studs 57 exert a kneading effect on the flesh while the ducts 55 permit a gentle seeping of the liquid from the chamber 54 for the special purposes contemplated in the present invention.

The function and mode of operation of my device has been in a large measure indicated from the foregoing description, but will be made more fully apparent from the following brief description. Assuming the chamber 13 of the roller 9 to contain a quantity of the lotion or linament 43 desired the device is preferably passed over the body or part to be treated some degree of pressure being exerted by means of the handle 20. As the series of vacuum cups 27 pass over the body, a partial vacuum will be created as these cups lift from the flesh, in this manner causing a seeping of the liquid 43 from the chamber to the surface thereof. It is not in general desirable to cause any considerable exudation of fluid but merely enough to be readily absorbed by the patient while moistening the surface sufficiently to facilitate the massaging. As shown in Figure 3 wherein chamber 13 is filled with sand 44 I have found that the ducts 12 are of sufficient fineness to prevent the admission of any grains of sand 44 to the surface of the roller 9 which as a general rule is not desirable. The sand 44 however retains its heat for a long time and I have found it to be particularly adapted for use in connection with my device, using in certain cases sand saturated with various liquids having an invigorating or stimulating action when absorbed into the circulation. As shown in Figure 6, the roller 9 may be heated efficiently to any desirable degree by means of the winding 34 with or without the use of sand. In Figure 8 the chamber 54 may contain any one of a number of lotions employed at barber shops, massage establishments, these liquids being conveyed to the surface in the manner indicated above in connection with the description of the other embodiments of the invention.

I am aware of massage rollers in the interior of which liquids have been inserted but these devices in general are impractical either by reason of a too free exudation of the liquids contained therein or a failure of the liquid to flow at all, in addition to which no adequate provision was made for the extraction of the liquids within the rollers by the vacuum process herein indicated. It is an important feature of the present invention to provide improvements for the economical application of liquid to the surface of the roller in conjunction with the kneading effect of the studs 10 of the vacuum cups 27 as a substitute for the actual fingers of the operator thus providing an efficient roller type of massager which may be mechanically actuated as pointed out above.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

Having thus described my invention what I claim is new and desire to secure by Letters Patent:—

1. A device of the kind described comprising a hollow roller of concave configuration, said roller being provided with a plurality of studs integrally formed on the exterior surface thereof, each of said studs having a liquid-conducting duct therethrough communicating with a liquid-containing interior chamber of the said roller, and hubs formed on and projecting outwardly from the ends of said roller for receiving a manually operating assembly detachably mounted thereon, said hubs having interiorly threaded bores receiving threaded plugs, said plugs rotatably confining said assembly on said hubs one of said plugs having a resistance coil secured thereto, said resistance coil extending within the hollow roller.

2. A device of the kind described comprising in combination a hollow roller, a plurality of projecting studs integrally formed on the exterior periphery of said roller, an exterior pocket in each of said studs, said pocket communicating with a duct formed in the roller, said duct leading to a liquid containing chamber in the interior of said roller, an interiorly threaded plug

formed on and projecting outwardly from each end of the roller, a U-shaped member having at each end thereof an annular member, said annular members being rotatably mounted on said hubs, each of said plugs closing an opening in each of said hubs while detachably confining the annular member on each of the said hubs, one of said plugs having a resistance coil secured directly thereto, said resistance coil extending within the roller.

3. A device of the character described comprising in combination, a hollow roller, an interiorly threaded hub formed on and projecting outwardly from each end of the roller, an annular member pivotally mounted on each of said hubs, a U-shaped member connected to said annular member, a plug threadedly engaged in each of said hubs for confining said annular members thereon, heating means within the roller and secured directly to one of said plugs, and means including a plurality of studs integrally formed with and on the exterior of said roller, said studs having ducts therethrough for creating a partial vacuum within the interior of the roller while massaging, thereby drawing liquid contained in the said interior to the surface of the roller.

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