

[54] FOOT CARE APPARATUS

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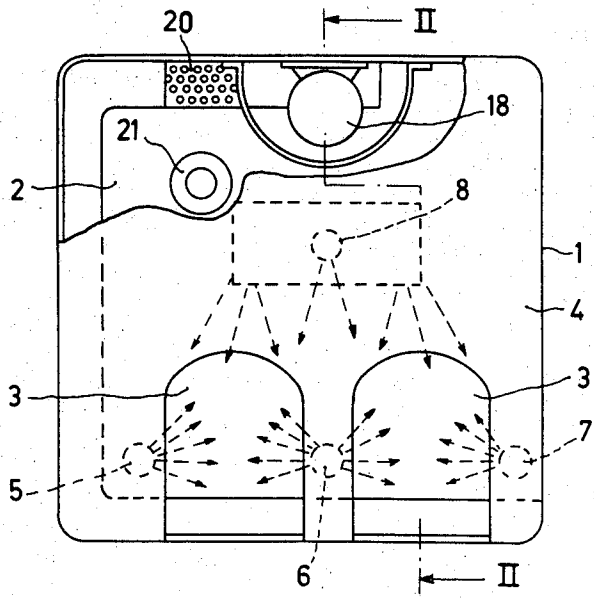
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[57] ABSTRACT

Foot care apparatus having a foot treatment chamber in which liquid spray nozzles are arranged. Pressurized liquid is supplied to the nozzles by a liquid pump. The liquid is directed by the nozzles against the feet in the foot treatment chamber, resulting in a foot massage effect. The liquid is collected in a collecting chamber and re-supplied to the pump for recirculation.

5 Claims, 5 Drawing Figures



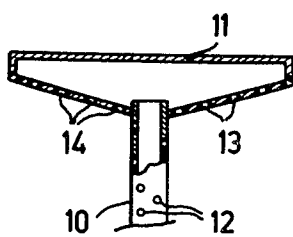
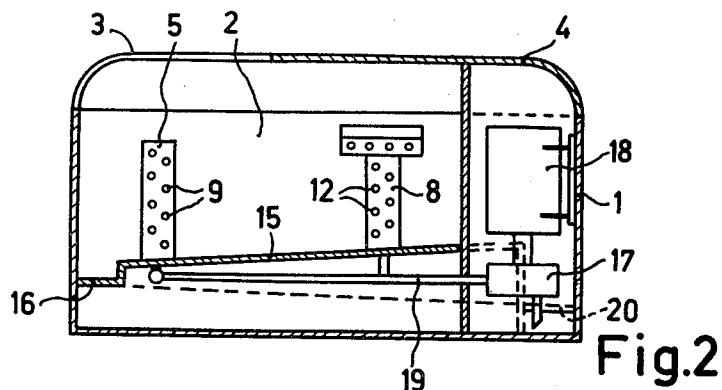
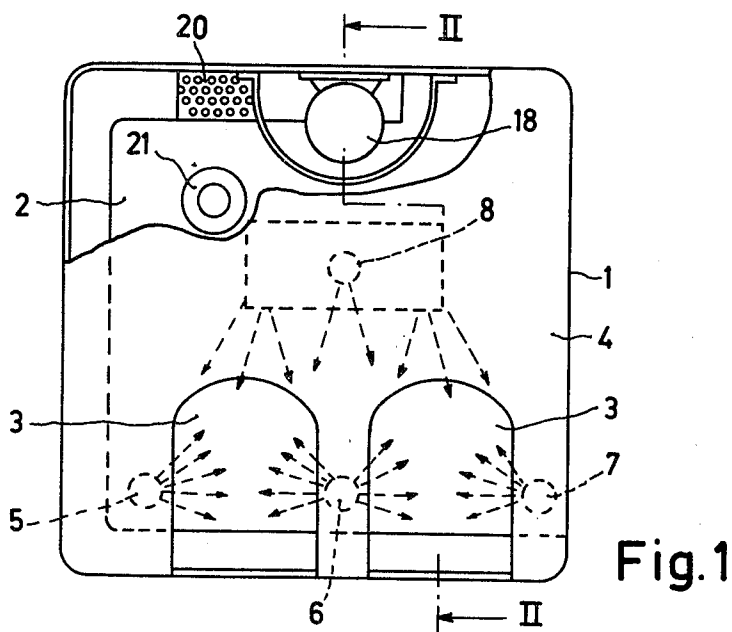


Fig. 3

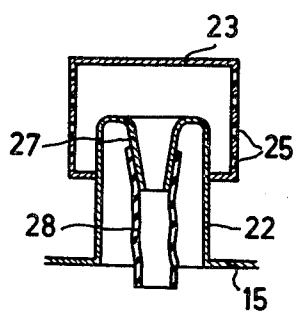


Fig. 4

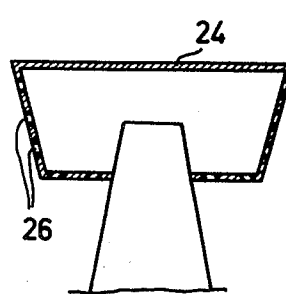


Fig. 5

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FOOT CARE APPARATUS

The invention relates to a foot care apparatus and specifically to an embodiment of such an apparatus which may be cheaply manufactured and simply operated, rendering it particularly suitable for private use.

It is an object of the invention to provide an apparatus by means of which the feet may be massaged and simultaneously cleaned and, if required, treated with a disinfecting or medicinal substance. The apparatus according to the invention is characterized in that it comprises a casing which encloses a foot treatment chamber which is accessible through an opening in the upper wall of the casing, whilst in the casing there are arranged liquid spray nozzles having spraying perforations which are directed into the treatment chamber at different levels and a liquid pump for conveying the liquid from a collecting chamber communicating with the foot treatment chamber to the spray nozzles.

Liquid jets are directed against different parts of the feet by the spray nozzles. The liquid, for example water, then drains to the collecting chamber and is again supplied to the spray nozzles by the pump.

A preferred embodiment is characterized in that the spray nozzles at least partly comprise tubular elements which are arranged in the foot treatment chamber and are provided with spraying perforations which open into the chamber substantially radially.

At least one spray nozzle may be located at the top of the foot care chamber and be provided with downwardly directed spraying perforations so that the upper surfaces of the feet also are treated. The spray nozzle may be a branch of a tubular element arranged centrally of the foot care chamber.

Another preferred embodiment is characterized in that tubular elements on which removable spraying nozzles are clamped are arranged in the foot care chamber.

By providing the bottom of the foot care chamber with a grid beneath which spray nozzles having upwardly directed spraying perforations are arranged the foot soles also may be treated.

The apparatus may, if required, be equipped with an electric heating device located in the collecting chamber and provided with a thermostat.

A particular embodiment is characterized in that the foot treatment chamber is provided with an operating device for a switch for the circulating pump, which operating device is disposed at a location accessible to the foot.

In another advantageous embodiment the apparatus is provided with a device for operating a switch for the circulating pump, which device is located near the upper edge of the casing and is operated by the cover.

The apparatus is preferably provided with a semi-transparent cover.

Embodiments of the invention will now be described, by way of example, with reference to the accompanying diagrammatic drawings, in which

FIG. 1 is a top plan view of a foot care apparatus,

FIG. 2 is a sectional view taken on the line II-II of FIG. 1,

FIG. 3 shows a separate spray nozzle, and

FIGS. 4 and 5 show modified spray nozzles.

The foot care apparatus shown in FIGS. 1 and 2 mainly comprises a casing 1 enclosing a foot care

chamber 2. The foot care chamber 2 is accessible through openings 3 in a cover 4.

Spray nozzles 5, 6, 7 and 8 are arranged in the foot care chamber. The spray nozzles 5, 6 and 7 are in the form of vertical tubular elements having radially opening spraying perforations 9. FIG. 3 is a part sectional view, part elevation of the spray nozzle 8 which comprises a vertical tube 10 on which a cross-piece 11 is mounted. The pipe 10 also is provided with radially opening spraying perforations 12, whilst the cross-piece 11 is provided with downwardly directed perforations 13 and 14.

The sprayed liquid flows along the bottom 15 of the foot care chamber 2 to a collecting chamber 16 where it is supplied to a circulating pump 17.

The collecting chamber 16 takes the form of a gutter-shaped channel which extends along the foot care chamber 2 from the front of the apparatus to its rear where the circulating pump 17 and a driving motor 18 are disposed. The depth of the channel increases from the front to the rear, so that the water in the channel flows to the circulating pump 17 by gravity. In the bottom of the channel 16 there is mounted a filter 16 through which the water must pass to reach the inlet of the circulating pump 17.

Alternative embodiments of the collecting chamber are possible. The bottom of the foot care chamber may be provided with a grid. Beneath this grid also there may be arranged spray nozzles having upwardly directed spray perforations, enabling the foot soles also to be treated.

An electric heating device provided with a thermostat may be disposed in the collecting chamber.

Thus the temperature of the water may be brought to an agreeable value.

The circulation pump may be a centrifugal pump of known construction driven by an electric motor. The liquid is conveyed to the nozzles through a pipe 19.

To use the apparatus the cover must be removed and the collecting chamber be filled with a controlled amount of a liquid, for example water. The feet are placed in the foot care chamber 2 and the cover is replaced. The openings 3 may be provided with inwardly directed skirts to obviate splashing, or the openings may be provided with rubber sleeves enclosing the legs.

The circulating pump may be switched on by means of a manual switch in the casing wall or a pedal switch 21 in the bottom 5 of the foot care chamber 2, as is shown in FIG. 2.

The switch may alternatively be so mounted near the upper rim of the casing that the motor of the pump is started when the cover is closed and is stopped when the cover is opened.

The cover may be hingedly connected to the apparatus. It has been found that the users dislike a completely opaque cover. Frequently a completely transparent cover is objected to for aesthetic reasons, so that a semitransparent cover is used which may be made, for example, of an orange-coloured translucent synthetic material.

The spray nozzles direct powerful jets of water against different parts of the feet, resulting in a massage effect. The spray nozzles 5, 6 and 7 will treat especially the sides of the feet, whilst the spray nozzles 13 and 14 are directed against the upper surfaces of the feet. The feet may simultaneously be subjected to special treat-

ments by adding disinfecting or medicinal substances to the water.

FIGS. 4 and 5 show modified embodiments of the spray nozzles shown in FIGS. 1 to 3.

In both embodiments the spray member comprises a tubular element 22 on which a nozzle 23 and 24 respectively is clamped. The nozzles are provided with spraying perforations 25 and 26 respectively. Thus the nozzles may simply be cleaned.

The tubular element 22 is integral with the bottom 15 of the foot treatment chamber and is provided with a re-entrant rim 27 on which a hose 28 for supplying liquid may be secured.

Thus a readily portable and simply connectable and operable apparatus is obtained which consumes little energy and is particularly suited for domestic use, but which may also be used for professional purposes in, for example, rehabilitation centres, pedicure institutions, sports clubs, and so on.

What is claimed is:

1. A foot care apparatus comprising a casing enclosing a foot treatment chamber therein, at least one opening in the upper surface of said casing so as to provide access to said chamber, a plurality of liquid spray nozzles comprising partly tubular elements arranged in said chamber and provided with spraying perforations radially opening into said chamber, said spraying noz-

zles located at different levels within said chamber with one of said nozzles located at the top of said foot care chamber and provided with downwardly directed spraying perforations, said nozzle located at the top of said chamber forming a branch of a tubular element centrally arranged within said chamber, a grid arranged in the bottom of said chamber, spray nozzles located beneath said grid having upwardly directed spraying perforations, a collecting chamber communicating with said foot treatment chamber for receiving sprayed liquid, and a liquid pump for conveying the liquid from the collecting chamber to the spray nozzles.

2. The foot care apparatus according to claim 1 further comprising an electric heating device provided with a thermostat arranged within said collecting chamber.

3. The foot care apparatus according to claim 1 further comprising switch means for operating said circulating pump located within said chamber accessible to the feet.

4. The apparatus according to claim 1 further comprising a semi-transparent cover.

5. The foot care apparatus according to claim 4 further comprising switch means for operating said pump located near the upper rim of the casing and operated by said cover.

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