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PORTABLE HYDROTHERAPY MACHINE

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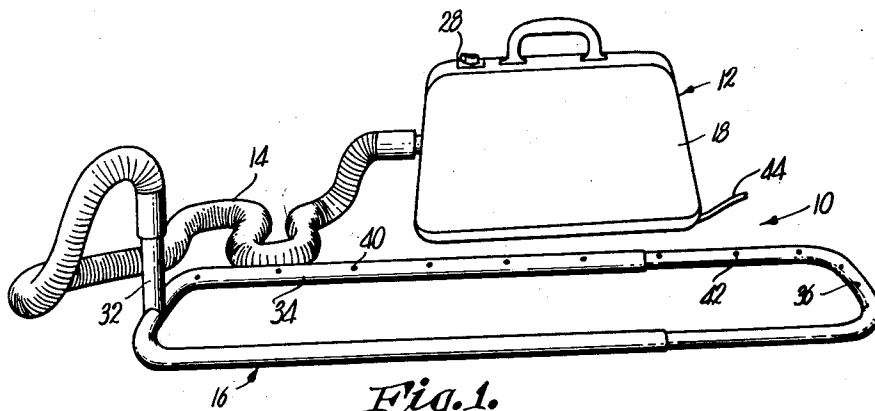


Fig. 1.

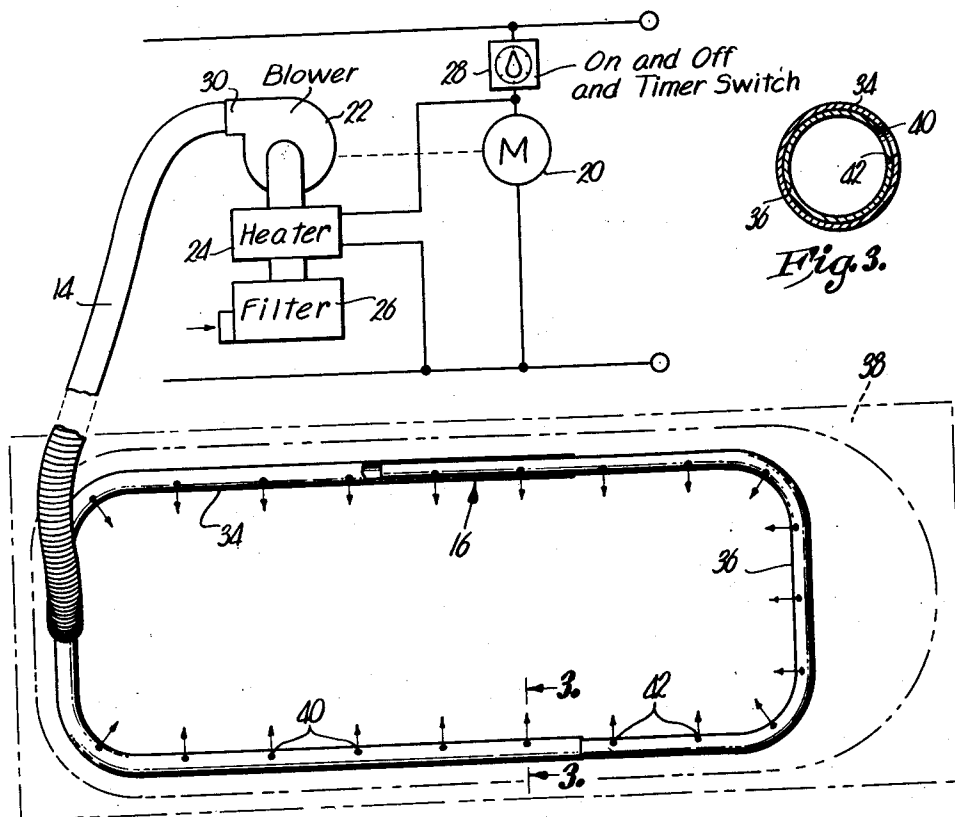


Fig. 3.

Fig. 2.

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PORTABLE HYDROTHERAPY MACHINE
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This invention relates to body massaging apparatus, and more particularly, to a portable hydrotherapy machine adapted to be used in conjunction with a tub of water, especially a bathtub, the machine having a component disposed exteriorly of said tub and a frame adapted to be positioned within the tub whereby to aerate the water therein and thereby massage the body of the person seated within the tub.

It is the most important object of this invention to provide a hydrotherapy machine which is portable and which may be utilized in lieu of a stationary machine as a result of its portability, the same enabling it to be used in conjunction with a conventional home bathtub or similar water-receiving tub.

A yet further important object of this invention is to provide a portable hydrotherapy machine which has a suitable motor and blower for delivering air through a flexible hose, the motor and blower being disposed exteriorly of a tub of water and the hose being connected to a tubular frame, the frame being disposed within the tub of water whereby to lie upon the bottom thereof.

A yet further aim of this invention is to provide a portable hydrotherapy machine having a frame adapted to be disposed within a tub of water, the frame being substantially rectangular in plan configuration and consisting of a pair of telescopically interconnected, U-shaped sections, each of said sections being provided with a plurality of air outlet holes therein, whereby air entering the interior of the frame through a flexible hose may be fully circulated within the tub of water receiving the frame whereby to massage the body of an individual seated within the tub.

Other objects include details of construction of the air delivery means and the frame assembly which will become apparent from the following specification and accompanying drawing, wherein:

FIGURE 1 is a perspective view of the portable hydrotherapy machine;

FIG. 2 is a plan view thereof showing the frame disposed within a tub, portions being broken away to reveal details of construction and the air delivery means being shown schematically; and

FIG. 3 is a sectional view taken on line 3—3 of FIG. 2.

The portable hydrotherapy machine is broadly designated by the numeral 10 and includes as its primary components, air delivery means broadly designated as 12, a flexible hose 14, and a substantially rectangular frame 16.

The air delivery means 12 is encased within a receptacle 18 and includes a motor 20 coupled to a suitable source of electrical energy as illustrated in FIG. 2, a blower 22, a heater 24, and a filter 26. A suitable on and off and timer switch such as 28 is interposed in the electrical supply line whereby to control the operation of the heater and the motor which drives the blower, according to a preselected time period. If desired, the motor may be of the two-speed type and an appropriate switch provided to control the speed thereof.

The blower 22 is provided with a suitable outlet as at 30, the same being coupled with the length of flexible hose 14, which hose 14 has one end thereof directly connected to the blower outlet 30, and the other end thereof connected to a boss 32 formed as a part of frame 16.

Specifically, frame 16 is comprised of a pair of U-shaped, tubular sections designated as 34 and 36, the boss

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32 being disposed substantially centrally of the bight of section 34. Sections 34 and 36 are telescopically interconnected as illustrated in the drawing, whereby the size of frame 16 may be suitably adjusted to accommodate the same to the bottom of a bathtub such as 38, it being appreciated that frame 16 may be adjusted over a rather wide range whereby it may be accommodated within tubs of various sizes and configurations.

The subject device is, however, primarily adapted for use with bathtubs such as 38 conventionally found in homes, and it is contemplated that the subject invention will be utilized in this area due to its portability.

Each of the sections 34 and 36 is provided with a plurality of air outlet holes therein, the holes in section 34 being designated as 40, and the holes in section 36 being designated as 42. To obtain the maximum flow of air through frame 16 and thus into the water normally disposed within tub 38, holes 40 and 42 are positioned throughout substantially the entire circumference of frame 16, the same being disposed on the inner wall thereof whereby air delivered to frame 16 by means 12, may be directed inwardly with respect to the walls of the tub 38, although it will be appreciated that holes 40 and 42 might be positioned at any location on frame 16, depending on the direction of airflow desired. Furthermore, it is desirable for maximum and efficient flow of air through the frame 16 and into the water contained within tub 38, that the holes 42 within section 36 be of a larger diameter than the holes 40 in section 34 whereby to obtain maximum circulation of the air within the frame 16 and to compensate for the fact that the air is initially delivered to the frame by means of a boss 32 disposed centrally of the bight of section 34.

It is further contemplated that when the sections 34 and 36 are telescopically interconnected as shown in the drawings, certain of the holes 42 of section 36, and more particularly, those disposed along the legs of said section, will align with corresponding holes such as 40 in the legs of section 34. This alignment provides air outlet holes throughout substantially the entire circumference of frame 16 in any position of adjustment thereof wherein the holes are aligned as above described. Furthermore, the fact that the diameter of holes 42 is greater than the diameter of holes 40, allows a full flow of air from the frame 16 when the holes 40 and 42 are aligned as above described.

In operation, the portable hydrotherapy machine is carried to a point of use adjacent a bathtub or similar water-receiving tub, and the air delivery means 12 disposed exteriorly of the tub such as 38, the same then being connected to a suitable source of electric energy as by a cord 44. The frame 16 is then adjusted to an appropriate size through actuation of the sections 34 and 36 of the frame 16 whereby said frame may be disposed flatly in the bottom of a tub. Outlet 30 of blower 22 is then coupled with the boss 32 by means of hose 14 and the motor 20 energized as by switch 28. Air is then taken into means 12 through filter 26, the same then passing through heater 24 and thence to blower 22 which delivers heated air from the outlet end 30 thereof through hose 14 and into the interior of frame 16. It will be appreciated that the air entering frame 16 as above described, subsequently passes outwardly therefrom through air outlet holes such as 40 and 42, the heated air serving to agitate the water within tub 38 and within which frame 16 is disposed, the water also being aerated whereby to cause the bubbling thereof which is known to have a massaging effect upon the body of a person seated within the tub 38.

Thus, there is provided a portable hydrotherapy machine which is economical in construction and which may be safely operated in the bathroom of any home without the necessity for complex equipment, and which machine

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performs an effective and efficient job of massaging the entire body of an individual disposed within a bathtub in connection with which the machine 10 is utilized.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A portable hydrotherapy machine comprising a pair of U-shaped tubular sections having the legs thereof telescopically interconnected whereby to form a substantially rectangular frame adapted to be disposed within a tub of water, each of said sections being provided with a plurality of air outlet holes therein, certain of said holes being in register when the sections are interconnected; a boss on one of said sections and communicating with the interior thereof; a flexible hose having one end thereof connected to said boss; and means for delivering air into said frame connected to the other end of said hose, said means being disposed exteriorly of said tub of water.

2. A portable hydrotherapy machine as set forth in claim 1, wherein said means for delivering air to the frame includes a filter for air taken into said means, a heater for said air, and a blower for forcing said air through said hose.

3. A portable hydrotherapy machine as set forth in claim 1, wherein said air outlet holes are disposed at spaced intervals throughout substantially the entire cir-

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cumference of said frame whereby upon delivery of air into the frame and passage thereof through said air outlet holes, all of the water in the tub is agitated.

4. A portable hydrotherapy machine comprising a pair of U-shaped tubular sections having the legs thereof telescopically interconnected whereby to form a substantially rectangular frame adapted to be disposed within a tub of water, each of said sections being provided with a plurality of air outlet holes therein, certain of said holes being in register when the sections are interconnected; a boss on one of said sections and communicating with the interior thereof; a flexible hose having one end thereof connected to said boss; and means for delivering heated air into said frame, said means being connected to the other end of said hose and disposed exteriorly of said tub of water, the air outlet holes in one of said sections being of a diameter greater than the holes in the other of said sections.

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