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Wack

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[54] **THERAPY BATH CABINET**

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[52] **U.S. Cl.** **128/66,** 4/178, 128/371

[51] **Int. Cl.** **A61h 9/00**

[58] **Field of Search** 128/66, 24.1, 371, 128/374; 4/175, 178

[56] **References Cited**

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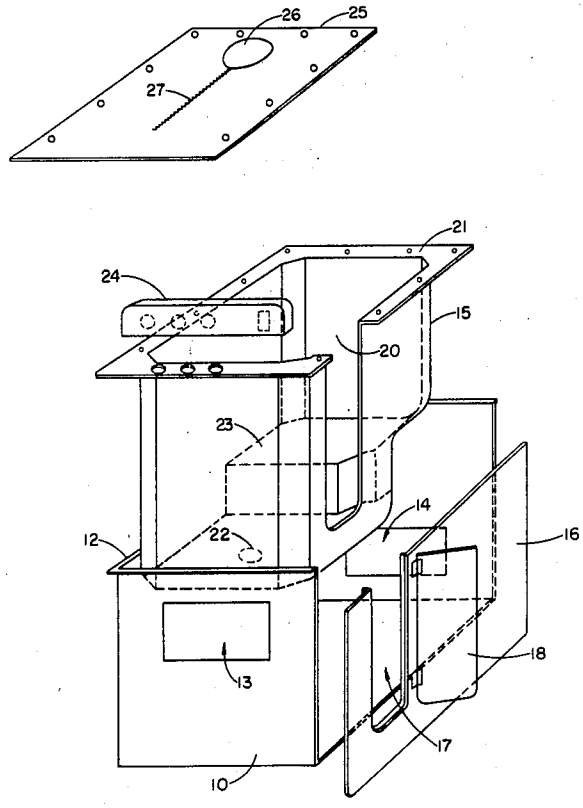
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Attorney—John L. Hutchinson

[57] **ABSTRACT**

A cabinet comprising an inner and outer preformed shell assembled into a unitary structure with a water tight side door. The inner shell includes an integrally formed seat for use by an occupant. The outer shell is spaced from the inner shell forming a chamber containing water conduits, pump and associated equipment. Control means permit an attendant or occupant to provide either a shower or bath and also a whirlpool effect.

6 Claims, 4 Drawing Figures



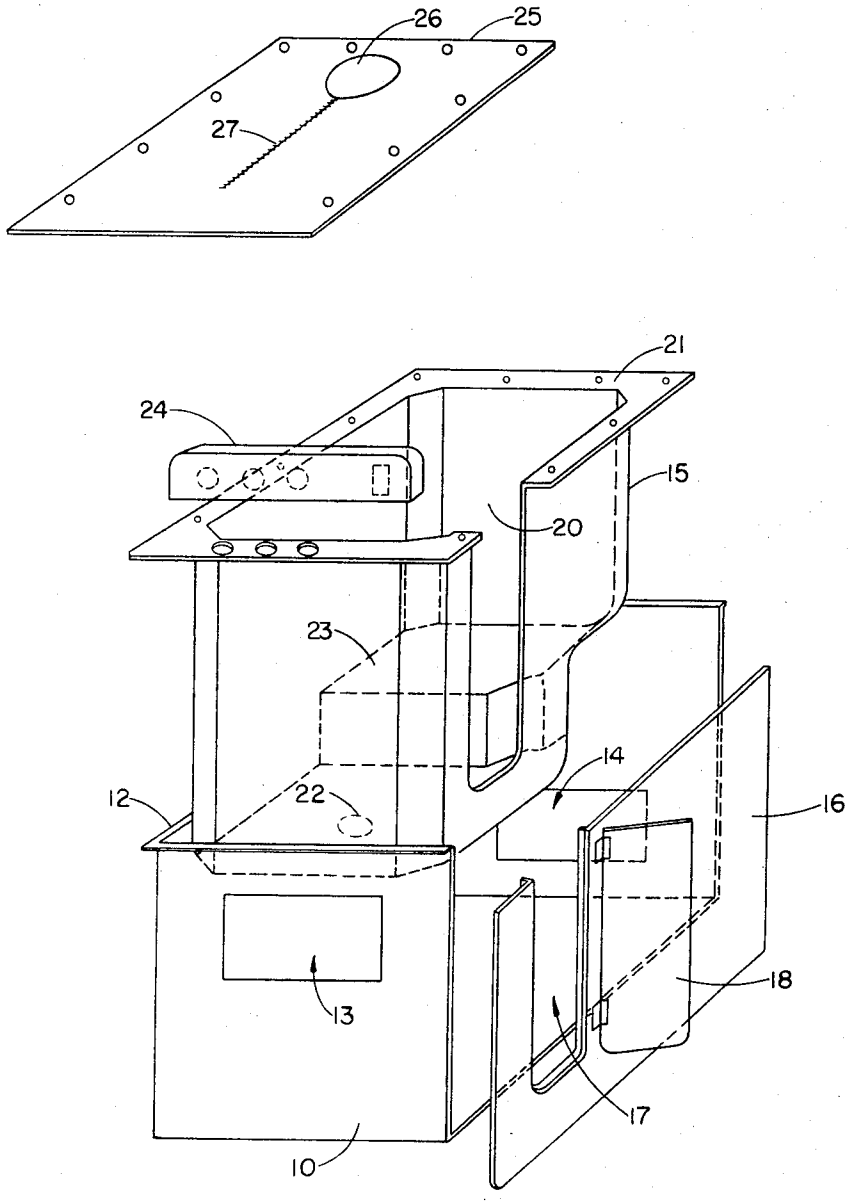


FIG. 1

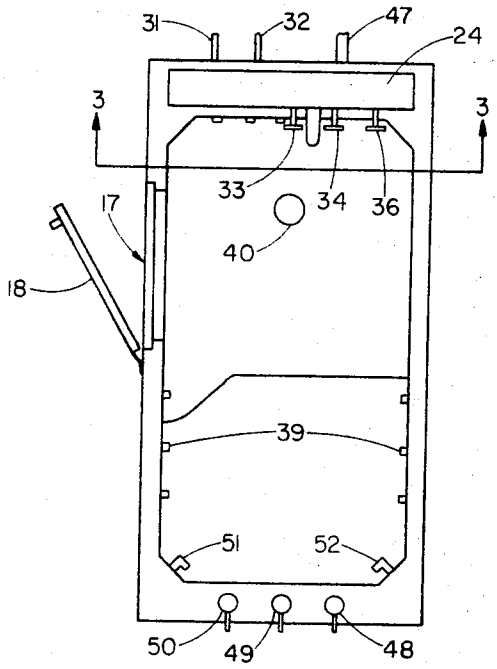


FIG. 2

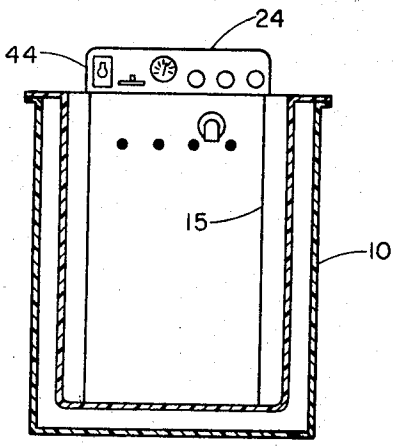


FIG. 3

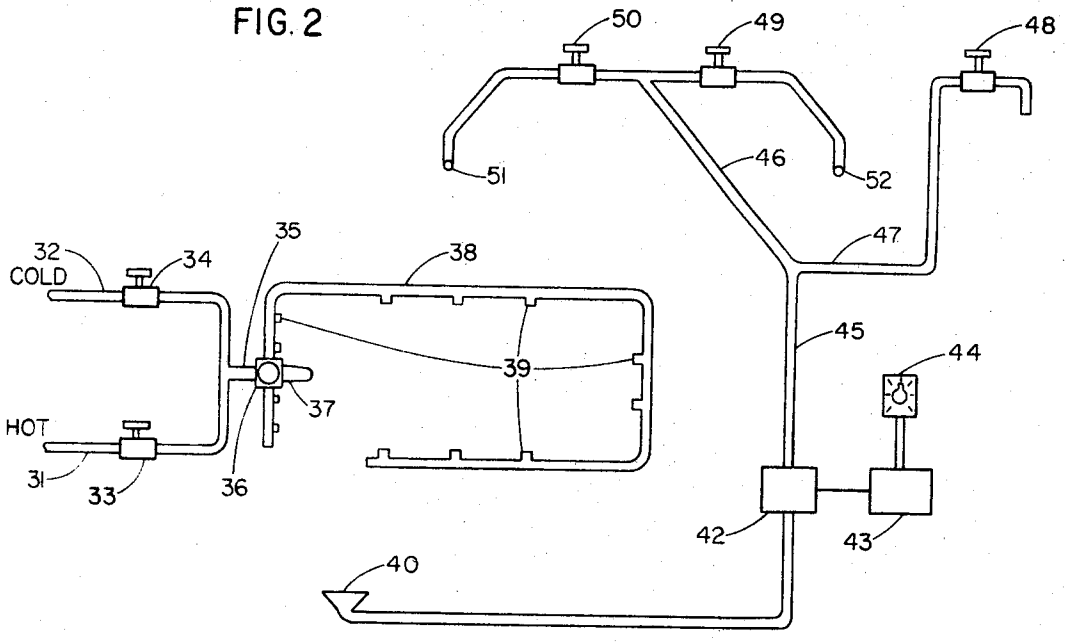


FIG. 4

THERAPY BATH CABINET

DISCLOSURE OF INVENTION

The present invention is directed to a new and improved bath or shower cabinet which is particularly suitable for partially infirm patients or patients who may not be able to use the normally available shower or tub facilities. A seat is provided in the cabinet and valves are arranged in such a manner as to afford easy access and control by an occupant or, alternately, by an attendant. Also included are means for imparting a whirlpool effect about an occupant when the cabinet is partially filled with water.

The cabinet housing comprises inner and outer molded shells wherein the inner shell includes an integral molded in-place seat. An entry door on one side is provided which is water tight when closed. Water conduts, motor and pump are concealed within the housing. Access to this equipment is available through removable panels in the front and rear of the housing. In a preferred modification, wheels may be attached to the bottom to render the cabinet mobile. The cabinet housing is designed to permit its components to be readily manufactured and assembled in volume.

In the following more detailed description of the cabinet, reference will be made to the drawings.

FIG. 1 is an exploded view of the cabinet housing illustrating the basic components of the housing.

FIG. 2 is a plan view of the assembled cabinet.

FIG. 3 is a partial cross section taken along line 3—3 of FIG. 2.

FIG. 4 is a diagramatic arrangement of the conduit system.

Turning now to the drawings and, initially, to FIG. 1 the numeral 10 designates the outer shell which, as shown, is open at the top and on one side. Preferably, the shell 10 will be provided with a small laterally extending flange 12 around its upper periphery. The back and front of the shell 10 is also provided with openings 13 and 14, respectively, to permit access to the chamber formed between the shell 10 and inner shell 15 described below. When finally assembled the outer shell will include cover panels, not shown, over the openings 13 and 14.

A side panel 16 is adapted to be secured to the open side of and form a complete outer shell. The side panel includes a door opening 17 and is provided with a hinged door 18 as shown. The door 18 or the associated door jam should be provided with rubber gaskets or similar sealing means to prevent egress of water from the cabinet when the door is closed.

Inner shell 15 is also open at the top but otherwise has an integral bottom and four sides. The side of the inner shell 15 opposite the separate side panel 16 of the housing in final assembly is provided with a door opening 20 adapted to be aligned with opening 17 of the side panel 16. A laterally extending flange 21 extends around the periphery of the upper rim of shell 15. An opening 22 is formed in the bottom of shell 15 to receive a drain conduit. Also provided is an integral seat 23 disposed at the rear of the interior of the shell. The seat is formed by a horizontal section extending inwardly from the back of the inner shell and a vertical section extending upwardly from the floor of the inner shell. The seat forms a rearwardly opening recess beneath the rear of the inner shell opposite the opening 14 in the outer shell. As shown, the corners of the inner

shell 15 are preferably formed rounded or otherwise angled rather than square to assist in establishing a swirling action, as hereinafter described.

Adapted to be secured to the top of rim 21 at the front of the cabinet is a vale housing 24. As shown, suitable openings may be formed in the rim 21 beneath the housing 24 to permit installation of conduits to valves, etc.

Also provided is a removable flexible cover 25 which may be secured along its edges to the top of the rim 21 by snap buttons or other means. The cover 25 includes an opening 26 to encircle the neck of an occupant with the head extending above the cover. A zipper 27 extends part way down the middle of the cover from the opening 26 to permit the cover to be placed over the head of an occupant.

Preferably, the inner and outer shells, as well as the side panel 16, door 18 and valve housing 24, are formed by molding an appropriate composition. As an example, a glass filled polyester resin composition has been found particularly suitable. such a composition can be shaped using lay-up preforms, in accordance with well known practices. This type of composition may also be provided with smooth colored exterior finishes which are especially desirable from an appearance and cleaning viewpoint. The shells may be permanently assembled together by bolts extending through the respective aligned rims 12 and 21.

The water conduit system and controls are illustrated diagramatically in FIG. 4. As indicated, a hot water supply line 31 and cold water supply line 32 are provided having control valves 33 and 34, respectively. Both lines merge by means of a T into a common conduit 35. Water from conduit 35 is controlled by a valve 36 to enable water to be discharged from faucet 37 into the cabinet or into conduit 38 and outwardly in a spray from nozzles 39. Valve 36 may be a three way valve and, accordingly, also used as an "on" "off" control.

Disposed in opening 22 in the floor of the cabinet is a drain 40 leading to a pump 42 operated by a motor 43, which, in turn, is controlled by switch 44. Connected to the discharge outlet of the pump is a conduit 45 which leads to a T connection and branch conduits 46 and 47. Conduit 47 provides a drain with the outlet controlled by valve 48. Conduit 46 is connected by means of valves 49 and 50 to horizontally opening jet nozzles 52 and 51, respectively.

All of the conduits, except where external connections are required, are disposed in the chamber formed between the outer shell 10 and inner shell 15. The pump 42 and motor 43 are positioned in the recess beneath the seat 23. Spray nozzles 39 are preferably located on all four internal sides to insure complete shower spray around an occupant.

In operation, an occupant or attendant can initially elect to provide a shower and may select the proper temperature by valves 33 and 34. Valve 36, when turned to the proper position, will divert the water into conduit 38 and then outwardly onto an occupant from the various spray nozzles 39. With the valve 48 open, valves 49 and 50 closed and the pump in operation shower water accumulating in the bottom of the cabinet will be removed through drain 40 and discharged. Prior to taking a shower, the top cover 25 preferably should be placed in position about the neck of the occupant and fastened to the upper rim of the cabinet to prevent spray from escaping from the cabinet.

In the event an occupant desires a bath, the pump is turned off and by control of valve **36** water of the desired temperature is discharged from faucet **37** into the cabinet. At such time as the water has reached a desired level in the cabinet, valve **36** or valves **33** and **34**, as the case may be, may be closed.

If a whirlpool bath effect is desired while the cabinet is filled with water, the pump **42** may be started and either valve **49** or **50** opened. With the valves in this position, water in the cabinet is withdrawn through the drain **40** and reintroduced through either jet nozzle **51** or **52** depending on the valve openings. The jets cause the water in the cabinet to swirl behind and around the occupant. Closing valve **49** or **50**, depending upon which was opened, and opening the other valve will cause a swirling action in the reverse direction.

When wheels are provided on the bottom, the cabinet may be freely moved to a position affording a partially infirmed patient to more readily use its facilities.

From the foregoing description, it can be seen that a new and improved therapy cabinet is made available which simplifies manufacture and assembly. Further, the cabinet affords a variety of water treatments for an occupant not available in similar cabinets hereto proposed.

Having described the invention the same is only intended to be limited by the scope of the following claims.

I claim

1. An open top therapy cabinet comprising in combination

a. an outer shell open at the top and on one side thereof

b. an open top inner shell disposed within and attached to the outer shell in substantially spaced relationship to form a chamber between said shells, said inner shell having

i. a flange extending laterally around the top to permit the inner shell to be supported on the rim of the outer shell and provide a closure for the chamber established between the shells

ii. a seat in the rear of said shell formed by a horizontal section extending inwardly from the rear wall and a vertical section extending upward from the floor of said shell and providing a rearwardly opening recess beneath said seat, and

iii. a door opening in the side of said shell corresponding to the open side of the outer shell

c. a panel secured to the open side of the outer shell having a door opening corresponding to and aligned with the door opening in the inner shell

d. a door disposed in the side door opening formed by the inner shell and side panel adapted to provide a water tight seal when closed, and

e. control means for introducing water into and removing water from the cabinet at a predetermined rate and temperature.

2. A therapy cabinet as described in claim **1** including means for permitting the cabinet to be filled with water to a predetermined height.

3. A therapy cabinet as described in claim **2** including means for establishing a swirling action in the water contained in the cabinet.

4. A therapy cabinet as described in claim **3** wherein the swirling action is created by withdrawing water from the bottom of the cabinet and reintroducing it into the cabinet by means of a nozzle disposed at the rear of the cabinet.

5. A therapy cabinet as described in claim **1** including means for introducing the water into the cabinet in the form of a spray from a plurality of sides.

6. A therapy cabinet as described in claim **1** wherein substantially all permanently associated conduits and accesory equipment employed to convey water to and withdraw water from the cabinet are disposed in a chamber formed between the inner and outer shells.

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