Dec. 13, 1966 R. T. ANDERSON ET AL 3,290,697

CABINET BATHS

Filed June 2, 1964 2 Sheets-Sheet 1

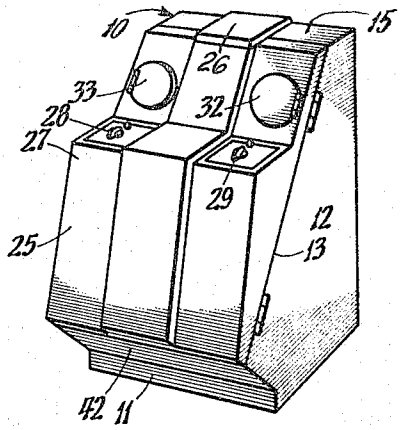


Fig. 1

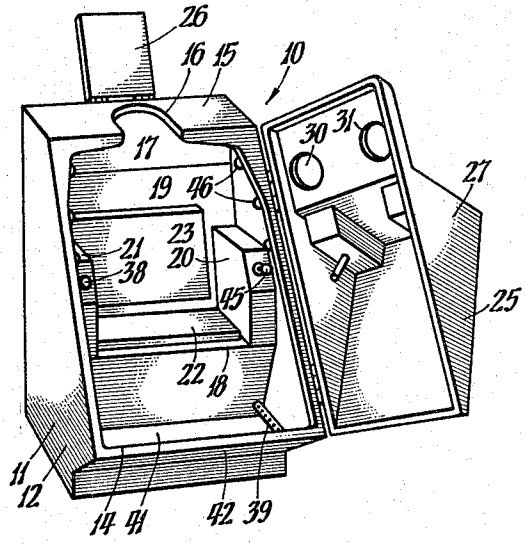


Fig. 2

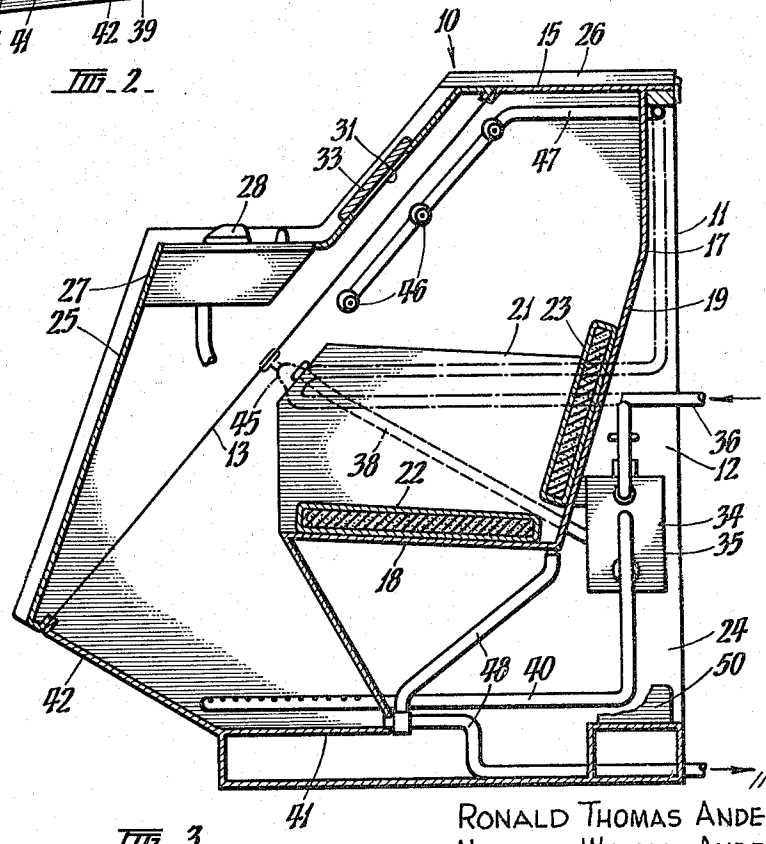


Fig. 3

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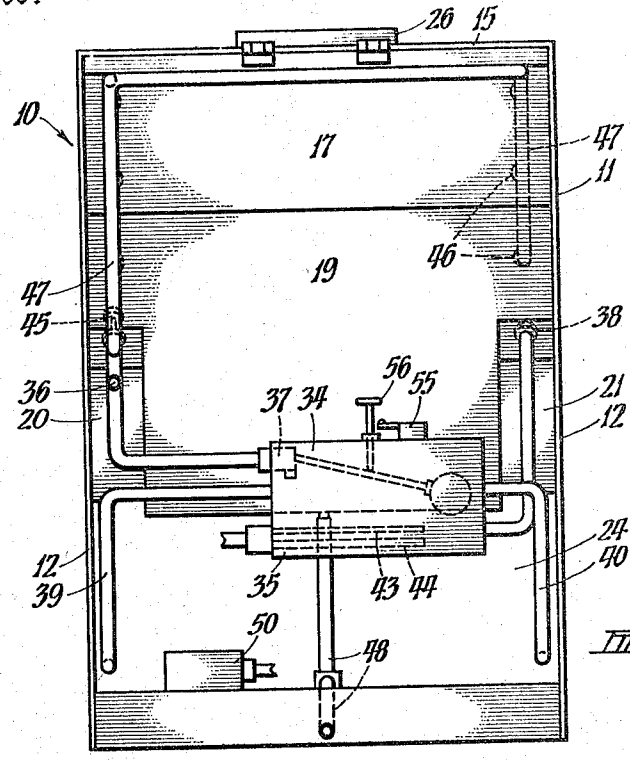


Fig. 4.

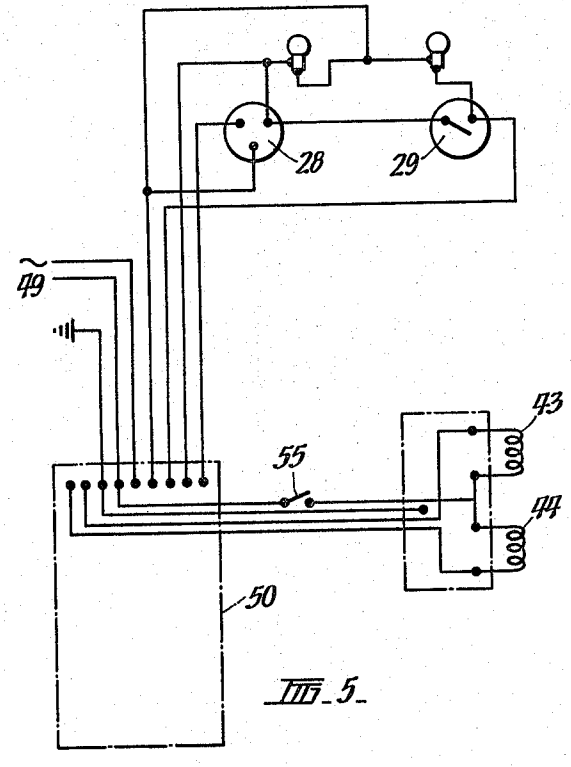


Fig. 5.

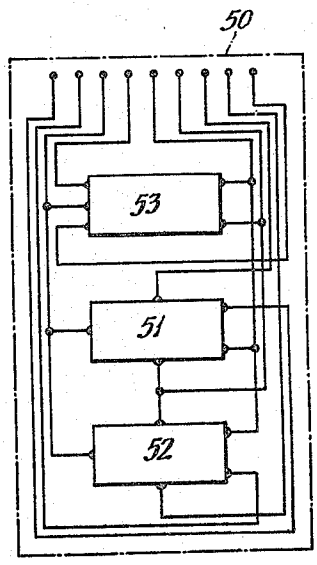


Fig. 6.

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CABINET BATHS

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14 Claims. (Cl. 4—161)

This invention relates to an improved cabinet bath and is directed to a cabinet bath which can provide a steam, water or hot air bath either individually or alternatively.

The principal object of the present invention is to provide a cabinet bath which is conveniently adaptable as a steam or water bath or hot air bath and in which the user of the bath can control the conditions in the cabinet of the type of bath selected.

According to the present invention a steam, water or hot air cabinet bath is characterised by the provision of a casing body within which a user is adapted to be seated with the neck of the user received in a top opening in the casing, an inclined open front closable by a hinged door to permit access by a user to the interior of the casing, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, and with arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet.

The back wall of the casing forming the cabinet may be arranged to form or support a seat and also to form with the side walls a rear compartment adapted to contain a steam generating unit and/or a hot air generator arranged to direct steam or hot air into the cabinet.

The arm openings are normally closed by hinged doors or flexible sleeves and a hinged lid may be provided to cover the neck opening during storage of the cabinet. The neck opening lid may be arranged to form a head rest for the user when seated in the cabinet. The steam generator or hot air generator are under the control of adjustable thermostat and time regulators. Valve means within the cabinet may also be provided to regulate water supply to spray nozzles, suitable outlet draingage outlet being provided for the discharge of water collected in the bottom of the cabinet.

In order that the invention may be more readily understood reference will now be made to the accompanying drawings illustrating a steam or water cabinet bath constructed in accordance with the present invention. In these drawings:

FIGURE 1 is a perspective view of the cabinet constructed according to the present invention;

FIGURE 2 is a perspective view of the cabinet with the stepped access door and neck opening door in open positions;

FIGURE 3 is a view in side sectional elevation of the cabinet;

FIGURE 4 is rear elevation of the cabinet showing the steam generating unit and associated piping;

FIGURE 5 is a diagram of the electrical circuit for the control of the steam generating unit heating elements, and

FIGURE 6 is a schematic circuit diagram of a low voltage operated contactor for the steam generator heating elements.

As illustrated in the drawings a steam or water bath cabinet **10** comprises a casing **11** having side walls **12**, an inclined front **13** having an opening **14** therein, a relatively narrow top **15** having a neck opening **16** centrally located therein, and a back wall **17** formed of several

integral sections adapted to form a seat **18**, back rest **19** and arm rests **20** and **21** for a person to be seated within the cabinet. The seat **18** and back rest **19** are also preferably padded as at **22** and **23** respectively, the said back wall **17** also forming a partition to provide a compartment **24** at the rear of the cabinet between the side walls **12** thereof.

The inclined open front **13** is closed by a door **25** hinged at one side of said opening **14** and in the open position permits a person to be seated in the cabinet with their neck received in the neck opening **16**, which latter is preferably provided with a hinged lid **26** adapted to uncover said opening **16** and provide a rest for the head of the person in the cabinet.

The door is provided with a stepped portion **27** the upper surface of which is visible to a person seated in the cabinet and on which portion **27** are located adjustable thermostatic and time controls **29** and **28** for equipment to be hereinafter described. Two spaced arm holes **30** and **31** are also provided in the door above the stepped portion **27** to permit access by the person within the cabinet to the controls on the door. The arm holes **30** and **31** are closed by hinged flaps **32** and **33** or flexible sleeve closures (not shown) through which the hands may be inserted.

The steam generator **34** for the cabinet comprises a low pressure boiler comprising a tank **35** located in the rear compartment **24**, said tank **35** receiving a supply of water therein from an external supply pipe **36** through a float controlled valve **37** within the tank. If required a water supply pipe **38** is provided in one arm rest **21** to provide a manual supply of water to the boiler tank **35**.

Steam outlet pipes **39** and **40** are connected to the boiler tank above the water level therein, said pipes extending into the cabinet on each side thereof at or adjacent to the level of the floor **41** and are perforated to deliver steam into the cabinet. The floor **41** is provided with an inclined section **42** which forms a foot rest for the user of the cabinet.

The water in the tank is boiled by two electric immersion heating elements **43** and **44** one of higher wattage than the other e.g. 800 and 1600 watts respectively, the higher rated element or both in parallel being connected to a power supply for quick boiling and the lower rated element for maintaining a steam supply from the tank. A water supply valve **45** connected to supply pipe **36** is also provided in the arm rest **20** to control a supply of cold water to a plurality of spray nozzles **46** on pipes **47** located in the cabinet to provide a covering shower for a person seated in the cabinet. Steam condensate or shower water is collected above the floor **41** or at back of seat **18** and is drained off through drain pipes **48** for discharge to a waste pipe.

The power supply **49** is connected to the water heating elements **43** and **44** in the boiler tank **35** through a control box **50** which includes two contactors in the form of relay switches **51** and **52** and a transformer **43** arranged to provide a low voltage, e.g. 12 volts, energising circuits for the relays under the control of the time and thermostat controls **28** and **29** mounted on the door **25**.

The low voltage circuits for the timer and thermostatic controls are provided as a safety measure so that electrical circuits adjacent to or operated by the user are of such a voltage that any current leakage will not constitute an electrical danger.

As illustrated in FIGURES 5 and 6 the diagrams of the timer and thermostat, heater elements and control box circuits are shown. In these diagrams the timer **28** is a timer switch of known kind and is adjustable to enable a steam bath treatment to be maintained for a predetermined period. The timer is included in the energising circuit for the relays **51** and **52** which are

respectively connected to the heating elements 43 and 44 for the supply of energising current thereto. The adjustable thermostat control switch 29 is also connected in the circuit of relay 51 to control the current supplied to the higher wattage heating element 44 as determined by the temperature setting effected thereto and which will operate according to the steam temperature in the cabinet.

A cut out switch 55 is also associated with the float valve 37 in the boiler tank and is arranged to open the power supply circuit when the water in the boiler tank 35 reaches a dangerously low level above the heating elements 43 and 44. The cut out switch 55 is actuated by a member 56 which rides on the float valve arm and when a low water level is reached it opens the switch 55 which normally remains closed.

The above described cabinet provides a steam or water spray bath. However, in addition or as an alternative the cabinet may be provided with a hot air generator (not shown) which may consist of a fan adapted to pass air over an electric heating element and the heated air then being ducted into the cabinet. The same or similar timing and thermostat controls may be provided for the hot air generator portion of the air heating element which is cut out or cut in by the thermostat to maintain a temperature within the cabinet as determined by the setting given the thermostat.

The cabinet may be made of any suitable material such as sheet metal. However, a more suitable material is reinforced synthetic resin which provides lightness as well as heat insulating properties which would prevent excessive heat losses through the walls of the cabinet.

It will be apparent that a steam, water or hot air cabinet bath, as above described, will provide a unit which may safely be operated by the user and provides a convenient and relatively simple unit which can be economically produced, and safely operated by the user without the necessity of an attendant to control the conditions in the cabinet.

What we claim is:

1. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, and with arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet.

2. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet, and with the back wall of the casing body shaped as a seat within the cabinet.

3. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet, a rear compartment in the cabinet formed by the rear and side walls of the casing, and with a steam generator in said rear compartment arranged to direct steam into the cabinet.

4. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet, a rear compartment in the cabinet formed by the rear and side walls of the casing, and with a hot air generator in said rear compartment arranged to direct hot air into the cabinet.

5. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet, and with closure means adapted to normally close the said arm openings.

6. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet, and with a hinged lid adapted to close the said neck opening, said lid being adapted when open to form a head rest for the user of the cabinet.

7. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the said controls by the user from within the cabinet, a rear compartment in the cabinet formed by the rear and side walls of the casing, a steam generator in said rear compartment and comprising a closed water tank, an electric heating element therein to effect generation of steam within the tank, pipe means to discharge steam from the tank into the cabinet, and water supply means to replenish water in said tank.

8. A cabinet bath as claimed in claim 7 and wherein a timing switch and a thermostatically operated switch responsive to temperature conditions within the cabinet are adapted to control the supply of electric current to the heating element in the steam generator, said switches constituting the controls on the step formation of the cabinet door.

9. A cabinet bath as claimed in claim 7 and wherein the steam generator includes a float actuated switch arranged to break the power circuit to the electric heating element when water in the generator reaches a predetermined low level.

10. A cabinet bath as claimed in claim 7 and wherein the steam generator includes two electric elements one of lower wattage rating than the other and arranged to be connected in circuit in parallel for maximum steam generation and the lower rating element alone in circuit to maintain steam generation at a lower rate.

11. A cabinet bath as claimed in claim 8 and wherein the timing and thermostatically operated switches operate low voltage circuits to energise relays for opening or

closing the energising circuit of the generator heating element.

12. A cabinet bath including a casing body within which a user is adapted to be seated, a top opening in the casing adapted to receive the neck of the user, an inclined open front to permit access by the user to the interior of the casing, a door hinged to the open front to close said open front, a step formation on said door having manually operable controls thereon for regulating bath conditions in the cabinet, arm openings in the door above the step formation to permit access to the controls by the user from within the cabinet, and a valve positioned within the cabinet and connected to a cold water supply source, a plurality of jets connected to said valve and adapted to direct water onto the user as required.

13. A cabinet bath as claimed in claim **12** and wherein drain pipes are connected to the floor of the cabinet to enable water collected in the cabinet to be discharged as waste.

14. A cabinet bath as claimed in claim **4** and wherein the hot air generator includes a fan arranged to pass air over an electric heating element, ducts to pass the heated air into the cabinet, and with the heating element controlled and regulated by the manually operable controls on the door of the cabinet.

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