Feb. 9, 1937. A. B. STOUT 2,070,378

MEDICATED STEAM BATH

Filed May 22, 1936 2 Sheets-Sheet 1

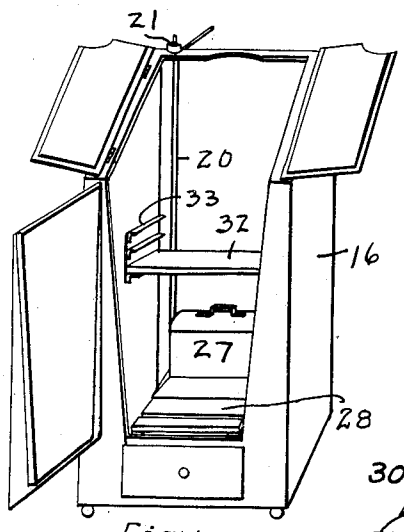


Fig. 1

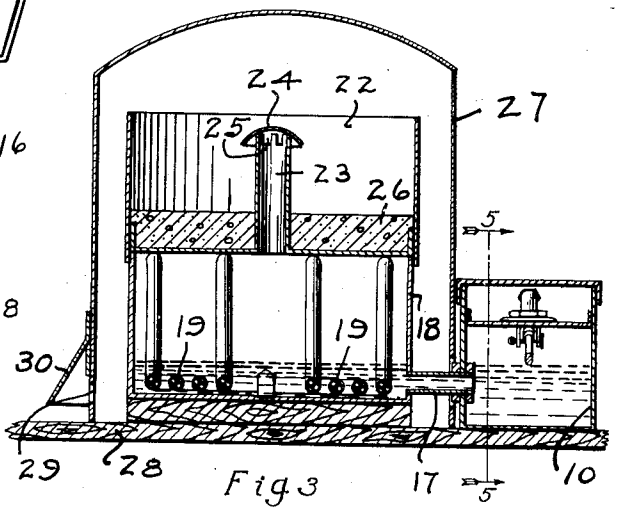


Fig. 3

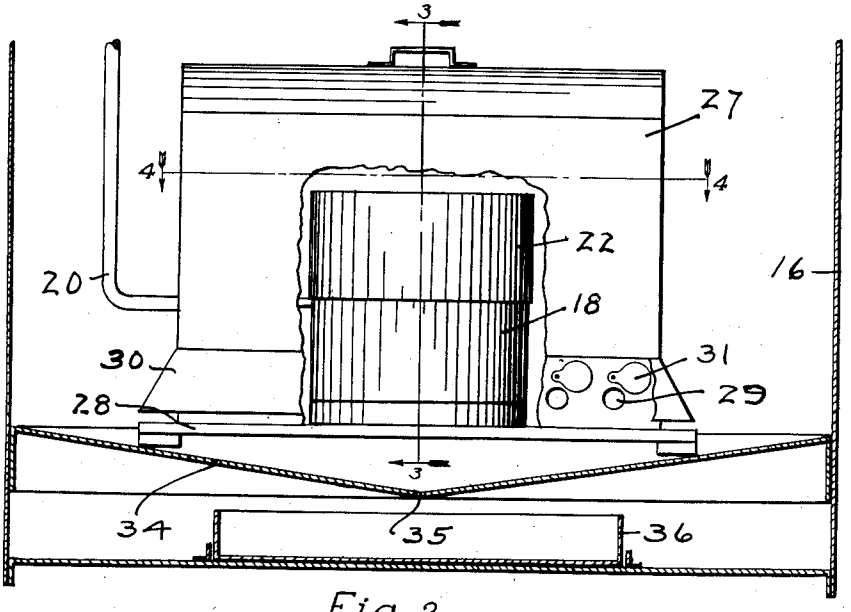


Fig. 2

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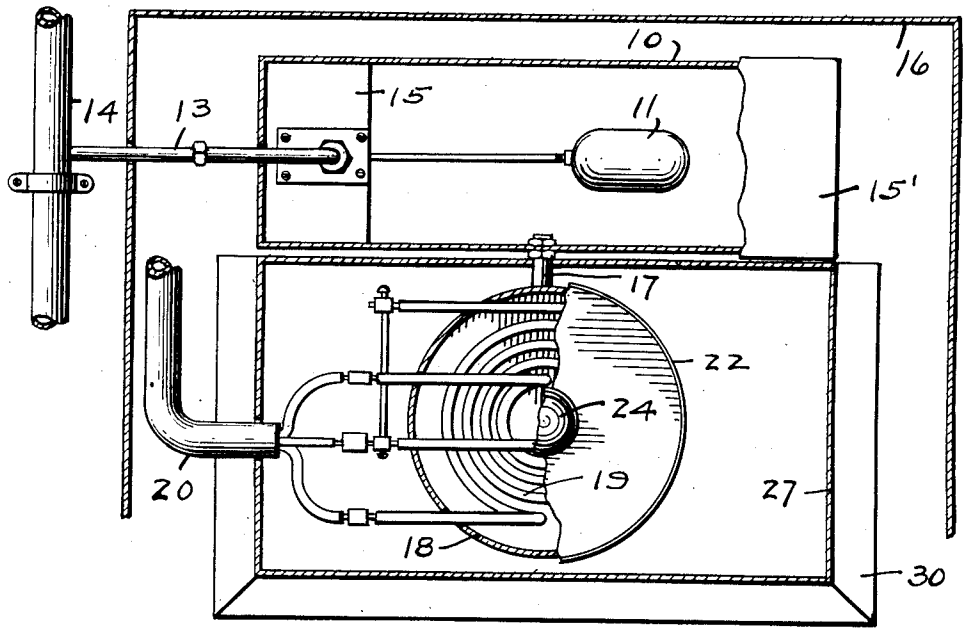


Fig. 4

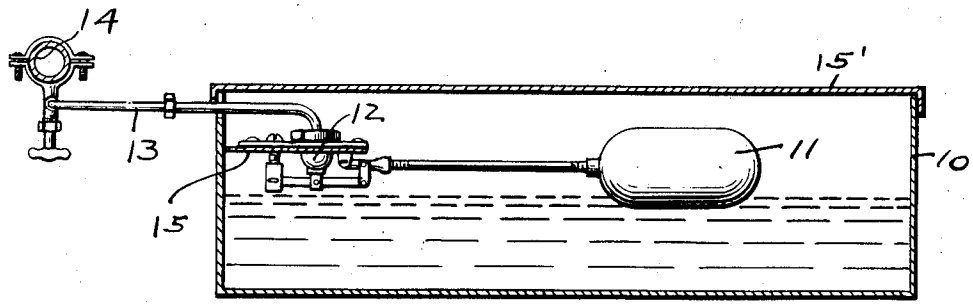


Fig. 5

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MEDICATED STEAM BATH

Abraham B. Stout, Plymouth, Ind.

Application May 22, 1936, Serial No. 81,168

6 Claims. (Cl. 4—164)

This invention relates to means for producing a medicated steam bath and has for a primary object the provision of means for generating steam at a minimum cost and in such manner as to effectively distribute the steam within a cabinet as may be desired. A still further primary object of the invention is to provide a simple mechanism for the generation of steam which will require all of the steam without loss to pass into and over a mass of the medicinal compound to be employed.

Other important objects and advantages of the invention such as reside in the particular assembly of the elements as will hereinafter be indicated will become apparent to those versed in the art in the following description of one particular form of my invention as illustrated more or less diagrammatically in the accompanying drawings, in which

Fig. 1 is a front view in perspective of a cabinet to which my invention is shown as applied;

Fig. 2 a front elevation of the generating unit;

Fig. 3 a vertical transverse section on the line 3—3 in Fig. 2;

Fig. 4 a horizontal transverse section on the line 4—4 in Fig. 2, and

Fig. 5 a vertical transverse section on the line 5—5 in Fig. 2.

Like characters of reference indicate like parts in the several views in the drawings.

I form a water tank 10 arranged to have a float 11 carried therewithin to operate a valve structure 12 in order to provide and maintain an approximately constant water level within the tank. A pipe line 13, Fig. 5, leads from any suitable water supply pipe 14 to the valve structure. The valve structure 12 is carried by a plate 15 at one end of the tank as indicated in Fig. 4. Preferably a cover 15' is provided to fit over the tank 10 so as to prevent any external matter from dropping into the tank. The tank 10 is placed within the cabinet 16 adjacent its rear wall as indicated in Fig. 4 and a flow pipe connection 17 leads across from the tank 10 to a boiler 18, the floor of which is preferably at an elevation above the floor of the tank 10 and the pipe connection 17 is so positioned as to elevation in reference to the normal water level in the tank 10 as to be kept filled without causing the water level within the boiler 18 to be at any appreciable distance thereabove. As a matter of fact the depth of water within the boiler 18 is preferred not to exceed two or two and one-half inches, a minimum amount of water being carried within the boiler so as to permit quick generation of steam initially and also to maintain a considerable volume of steam without having to heat a large volume of water.

The boiler 18 consists essentially of a cylindrical vessel in which is placed an electrical heating element 19 here shown as in the form of a plurality of turns of tubing in which is carried in insulated manner a resistance wire so that the wire is effectively insulated from the water surrounding the tube. In the form herein shown, there are two separate coils or windings having their terminals so arranged that three combinations of "heats" may be secured. A cable 20 carries conductors from the windings up to a suitable switch 21 here shown as being mounted on the upper side of the cabinet 16, Fig. 1.

A chemical carrying vessel 22 is formed to have its under side telescope over the upper open end of the boiler 18, the floor of the vessel 22 forming a cover for the boiler 18 and the telescoping arrangement preventing the escape of steam from between the boiler and the vessel 22. The steam may escape from the boiler 18 through a central stand pipe 23 carried by the vessel 22. This stand pipe 23 is mounted in a vertical position and has a deflector head 24 fixed to its upper end in spaced relation to provide a plurality of orifices 25 between the upper end of the pipe 23 and the under side of the head 24 so that as the steam leaves the upper end of the pipe 23, its direction is changed by striking the head 24 so that the steam is directed downwardly toward the floor of the vessel 22 where it may strike the medical preparation 26 carried by the vessel. The vessel 22 is entirely open at its top side so that the steam after being deflected downwardly within the vessel may escape upwardly therefrom.

The boiler 18 with the vessel 22 mounted thereon is positioned immediately in front of the tank 15 within the cabinet 16. Now in order to prevent the travel of the steam immediately into the cabinet 16 from the vessel 22, I provide a diffusing housing 27 in the nature of a hood to fit down over the vessel 22 and the boiler 18 thereunder in spaced relation. This housing 27 in the form herein shown is rectilinear in horizontal cross section and has an upper arched roof which will tend to deflect the steam downwardly within the housing as it leaves the vessel 22 and moreover will cause any condensation to run down on the inner side walls rather than drip back into the vessel 22. This housing 27 rests upon a floor 28 carried in the cabinet 16. Spaced above the lower edges of the walls of the housing 27 is a plurality of openings 29 arranged

therearound on substantially the same horizontal alignment. A skirt 30 is fixed around the outer side of the housing 27 to extend downwardly and outwardly from the walls of the housing to terminate by its lower end at a distance above the lower ends of the housing walls as indicated in Figs. 2 and 3.

Steam coming down toward the floor 28 within the housing 27 may escape through these holes 29 to be intercepted by the skirt 30 and thereby directed downwardly along the floor 28 from which the steam may rise and diffuse slowly through the cabinet compartment. In order to control the escape of steam from the housing 27 as may be desired, each hole 29 is provided with a door 31 pivotally mounted on the wall in proximity thereto in such manner that the door 31 may be revolved to drop across the particular hole as may be desired. For example, it may be desired to have the steam escape from the holes in the end walls of the housing 27 without any escape from the holes in the forward wall or vice versa. The housing 27 rests on the floor 28 immediately in front of the tank 10 and in this position is directly under a seat 32 mounted within the cabinet 16. The seat 32 may be adjusted as to elevation by being placed between any one of a series of side wall brackets 33 as indicated in Fig. 1.

The floor 28 is carried in a demountable manner on a drain floor 34 which is an integral part of the cabinet 16 as indicated in Fig. 2, the floor 34 being formed to slope downwardly from the side walls of the cabinet to the center from which condensation and moisture collecting in the cabinet may drain through a hole 35 into a tray or drawer 36 carried by the cabinet thereunder. Such moisture collecting in the drawer 36 may be thrown away.

The person to be treated uses the cabinet 16 in the ordinary manner by sitting on the seat 32 and closing the cabinet doors in the customary manner. The switch 21 may be operated first to give the maximum amount of heat to generate the steam quickly and warm up the cabinet and then the rate of generation may be retarded by manipulating the switch as may be desired to reduce the amount of current passing through the heating coils within the boiler 18. By carrying such a small amount of water in the boiler 18, steam may be generated very quickly initially and then steam may be continued to be generated with a less amount of current in a very efficient manner. Moreover the flow of steam is effectively controlled so as to discharge entirely through the stand pipe 23 as above indicated all without any danger of live steam escaping directly from the boiler in a manner that might cause injury to the patient.

While I have herein shown and described my invention in the one best form as now known to me it is obvious that structural variations may be employed without departing from the spirit of the invention and I, therefore, do not desire to be limited to that precise form beyond the limitations as may be imposed by the following claims.

I claim:

1. In combination, a bath cabinet, a drain floor in the cabinet, a steam generator on the cabinet carried above the floor, means for deflecting steam from the generator toward the floor, said floor sloping from the walls of the cabinet to a low area having a drain hole therein, and a removable drain pan under said area receiving condensation from the walls and floor of the cabinet, said generator comprising a water supply and level control, a boiler receiving water from said supply, an electric heating element immersed in the water in said boiler, said element being formed to extend horizontally over the floor of the boiler and be submerged by a minimum amount of water, a medication vessel fitted over the boiler, a steam conductor from the boiler into said vessel, means for deflecting the steam toward the floor of the vessel, said vessel having an opening at its top, and a housing surrounding said boiler and said vessel in spaced relation to form a hood thereover, said housing having steam escape openings through the lower part of its walls.

2. In combination, a bath cabinet, a drain floor in the cabinet, a steam generator on the cabinet carried above the floor, means for deflecting steam from the generator toward the floor, said floor sloping from the walls of the cabinet to a low area having a drain hole therein, and a removable drain pan under said area receiving condensation from the walls and floor of the cabinet, said generator comprising a water supply and level control, a boiler receiving water from said supply, an electric heating element immersed in the water in said boiler, said element being formed to extend horizontally over the floor of the boiler and be submerged by a minimum amount of water, a medication vessel fitted over the boiler, a steam conductor from the boiler into said vessel, means for deflecting the steam toward the floor of the vessel, said vessel having an opening at its top, and a housing surrounding said boiler and said vessel in spaced relation to form a hood thereover, said housing having steam escape openings through the lower part of its walls, a skirt carried by the housing over said holes to deflect steam downwardly from the holes, and means for controlling the escape of steam through said holes.

3. In combination, a bath cabinet, a drain floor in the cabinet, a steam generator carried above the floor, means for deflecting steam from the generator toward the floor, said floor sloping from the walls of the cabinet to a low area having a drain hole therein, and a removable drain pan under said area receiving condensation from the walls and floor of the cabinet.

4. In combination, a bath cabinet, a drain floor in the cabinet, a steam generator carried above the floor, means for deflecting steam from the generator toward the floor, said floor sloping from the walls of the cabinet to a low area having a drain hole therein, and a removable drain pan under said area receiving condensation from the walls and floor of the cabinet, a false floor carried by the drain floor, and said generator being mounted on the false floor whereby said steam may diffuse thereunder and back up within the cabinet.

5. In combination, a bath cabinet, a drain floor in the cabinet, a steam generator carried above the floor, means for deflecting steam from the generator toward the floor, said floor sloping from the walls of the cabinet to a low area having a drain hole therein, and a removable drain pan under said area receiving condensation from the walls and floor of the cabinet, said generator comprising an open top vessel, an immersion type electrical heating element in the vessel, a second vessel telescoping over the top of the first vessel, a stand pipe in the second vessel through which all the steam from the lower vessel dis-

charges, and a deflector about the top end of the stand pipe directing escaping steam downwardly within the second vessel.

6. In combination, a bath cabinet, a drain floor in the cabinet, a steam generator on the cabinet carried above the floor, means for deflecting steam from the generator toward the floor, said floor sloping from the walls of the cabinet to a low area having a drain hole therein, and a removable drain pan under said area receiving condensation from the walls and floor of the cabinet, said generator comprising a water supply and level control, a boiler receiving water from said supply, an electric heating element immersed in the water in said boiler, said element being formed to extend horizontally over the floor of the boiler and be submerged by a minimum amount of water, a medication vessel fitted over the boiler, a steam conductor from the boiler into said vessel, means for deflecting the steam toward the floor of the vessel, said vessel having an opening at its top, and a housing surrounding said boiler and said vessel in spaced relation to form a hood thereover, said housing having steam escape openings through the lower part of its walls, said housing having its upper portion arranged to direct condensation on its under side downwardly away from said vessel.

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