Jan. 30, 1951 J. SZIKLAY 2,539,710

PORTABLE AND FOLDABLE STEAM CABINET

Filed April 4, 1946 2 Sheets-Sheet 1

Fig. 1.

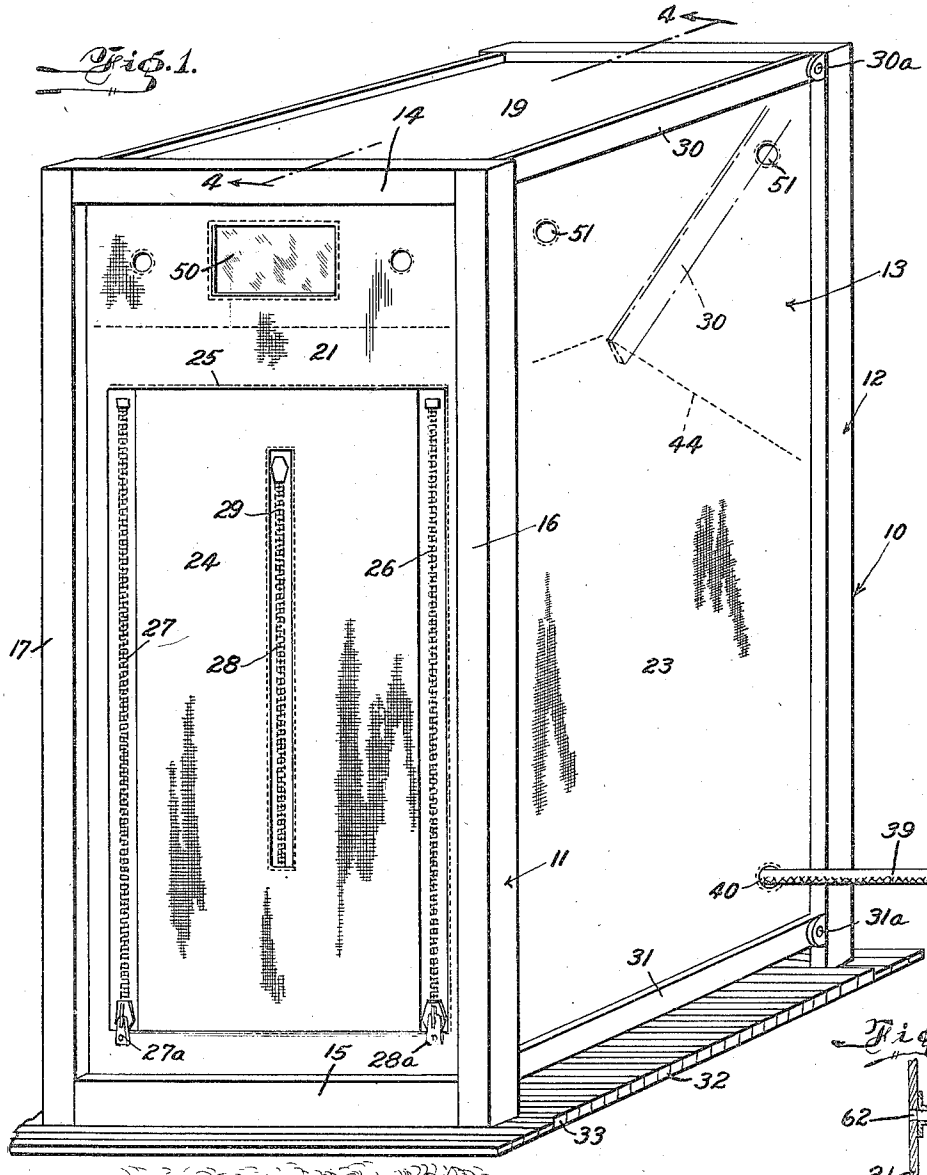
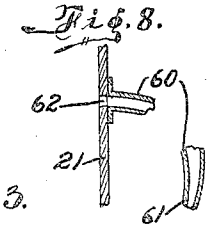


Fig. 8.



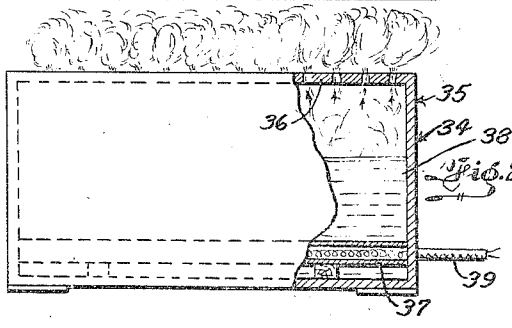


Fig. 2.

Fig. 3.



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Fig. 4.

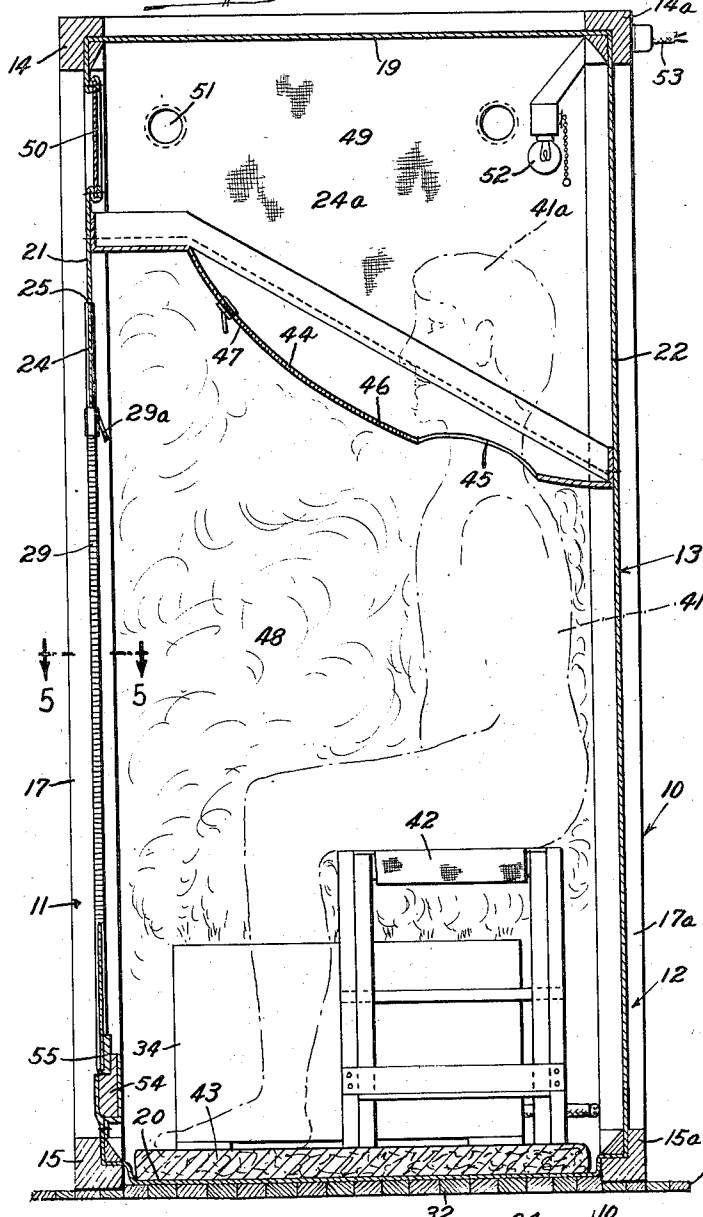
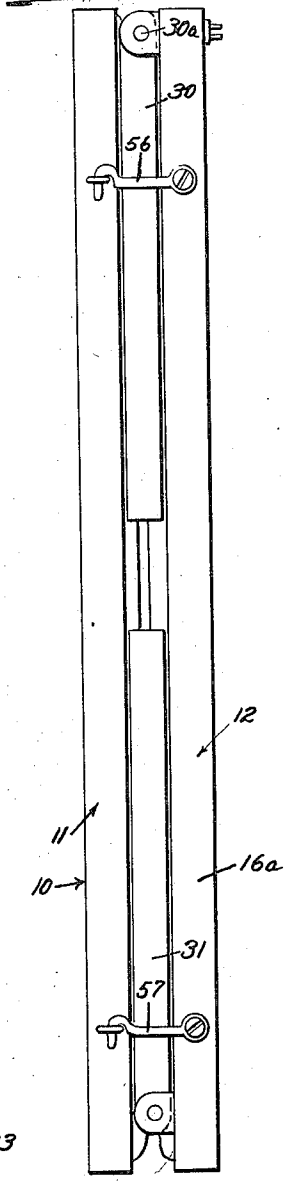


Fig. 7.



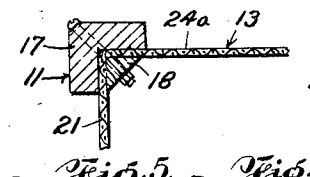


Fig. 5.

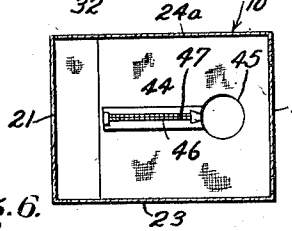


Fig. 6.

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2,539,710

PORTABLE AND FOLDABLE STEAM CABINET

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Application April 4, 1946, Serial No. 659,576

10 Claims. (Cl. 4—164)

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This invention relates to certain medical devices to be used in homes, and particularly it aims to provide a portable and foldable steam cabinet in which a steam vapor or similar treatment may be effected by the person in his own home.

Another object of this invention is to provide a device as characterized hereinbefore which may be taken to the place of use and set up in a quick and efficient manner, but which normally may be collapsed or folded in a novel manner and stored in a flat condition, requiring small space for such storing.

Still a further object of this invention is to provide such a portable and foldable cabinet in which means are provided to generate steam right within the cabinet and in which this generated steam may be medicated or vapors of any desired character produced, the amount and temperature of such steam or vapor also being adapted to be regulated by the user right within the cabinet.

Still further objects of this invention will be apparent as the specification of the same proceeds, and, among others, I may mention: to provide a device of the type indicated which will be simple in construction, light in weight, inexpensive to manufacture, and which will include the whole body and head of the user but in which the head will be normally protected from steam, while it may be exposed to the same when desired, the amount of steam permitted to be acting on the head of the user being regulated by the person within the device, which device also will be easily used, made of flexible, light-weight material, and still will have reliable closure means adapted to be easily opened for entering the same.

In the drawings, forming a part of the specification and accompanying the same:

Fig. 1 is a perspective view of a foldable and portable steam cabinet, constructed according to my invention, in an open, operative, position;

Fig. 2 is a detail showing a steam producing electrical unit, being a part of my invention;

Fig. 3 is a cross sectional view of said electrical steam producer;

Fig. 4 is a vertical sectional view of the device shown in Fig. 1, the section being taken on the line 4—4 in said figure;

Fig. 5 is a sectional detail showing the corner construction of my device;

Fig. 6 is a diagrammatical, cross sectional, view of my device showing a partition wall therein, the figure being on a smaller scale than the other figures;

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Fig. 7 is an elevational view of my device in a folded condition, and

Fig. 8 is a fragmentary detail showing a modification in my device.

Referring now to the drawings more in detail, by characters of reference, the numeral 10 indicates my device, in general, being mainly composed of a front frame 11, a rear frame 12, and a flexible, light, preferably fabric, material 13, water and steam proof, forming the side walls and top and bottom, of the cabinet, as indicated in Figs. 1 and 4.

The front frame 11 is composed of a top member 14, a bottom member 15, and right hand and left hand side members 16 and 17, while the rear frame is preferably entirely identical to the front one, formed of the same material and of the same elements, indicated by the numerals 14*a*, 15*a*, 16*a*, and 17*a*, respectively. The frames are formed of angular shapes, as indicated in Figs. 4 and 5, and the said flexible, light, steam-proof, fabric elements 13, forming the top, bottom, and sides of the cabinet, are secured into the corners formed by the angles of the frames through triangular pieces 18, as will be understood.

As has been mentioned, said fabric sheets 13 will form a top 19, bottom 20, a front wall 21, a rear wall 22, a right hand side wall 23, and a left hand side wall 24*a*, for my cabinet, when the same is in an expanded, operative position.

The major portion of the front 21 is separated from the rest of it, as indicated at 24, and secured to it only at the upper edge, as by the seam 25, and this separated portion I employ as the entrance door of the device. For this purpose I provide readily opened or closed securing means 26 along the right hand side thereof, and similar means 27 for the left hand side, said means preferably being in the form of slide fasteners, as indicated in the drawings, and as will be understood. When it is desired to enter into the device, the slide fasteners will be opened, and the door flap 24 will be lifted, whereupon the slide fastener may be closed, thereby sealing the door.

I also provide a central slot or slit, indicated at 28, in the door flap, which also may be closed by a slide fastener device 29. The purpose of this slot will be explained hereinafter. Upper and lower securing bars 30 and 31, respectively, are pivoted at the upper and lower ends of the right hand rear frame slide member 15*a*, and, of course, similar securing members will be provided on the upper and lower ends of the left hand side rear frame member 17*a*. (Not shown.)

When it is desired to use my foldable and

portable steam cabinet, the same will be put into the operative, extended, position of Fig. 1, by setting up the front and rear frames 11 and 12 vertically in parallelism with one another, and stretching the top, bottom, and side, fabric walls between the two, whereupon the right hand and left hand securing and stretching bars 30 and 31 will be swung on their respective pivots 30*a* and 31*a* into the position shown in Fig. 1, their front ends engaging the respective front frame members 16 and 17, whereby the device is in an open, stretched position, forming a chamber, and remaining in such condition by the action of the stretcher bars 30. The front ends of said bars may be releasably secured in such position in the respective front frame members by any appropriate means well known in this art. (Not shown.)

My device is very light in weight and can easily be moved to any place desired, like in a room, and preferably it will be set on a foldable base 32, formed of wooden slabs or slats 33, hingedly connected to one another, as will be understood.

A steam producing device, generally indicated by the numeral 34, will be placed within the cabinet, formed by the expanded structure described, said steam producing device preferably being in the form of a box or casing 35, having a perforated top 36. An electrical heating unit 37 is placed within the box 35 and the box will contain an appropriate liquid 38, usually water, which will be evaporated and turned into steam through the action of the electrical heater 37. The current to the heater will be supplied by the cable 39, which may enter the device through an appropriate hole 40.

The purpose of my device is to readily set up a foldable and portable steam cabinet, at any desired place, like in the home of the user, who then may enter the same, close the door 24, and produce steam of a desired temperature through the steam producer 34. The user is diagrammatically indicated in Fig. 1 at 41, and a foldable and collapsible chair 42 may be provided for his or her comfort. An appropriate rug or inner bottom lining 43 may be placed on the bottom 20 of my device, said inner rug 43 being removable, and the purpose of the same being to absorb moisture, perspiration, etc. After using the device, and before folding the same, said bottom lining or rug 43 may be removed through the door 24 and dried out for the next use.

I also provide a specifically constructed partition wall 44 across the upper part of my device, the same being secured to the front and rear walls and the two side walls of the same, as indicated in Fig. 4, and also being of light, flexible, steam-proof, material, like a fabric. The purpose of this diaphragm is to place the head of the user in a separate compartment from his body, so that, when desired, his body may be treated with steam in the lower part of the cabinet, while his head will be in the upper compartment, which may be sealed from the steam. The diaphragm, or transverse partition wall, 44, therefore, will be arranged across the upper part of the device and will have a neck opening 45, continued in a slit or separation 46. Slide fastener means 47 are employed on the slit or separation 46 whereby the same may be closed on the neck opening 45 to any desired extent, as indicated in Fig. 4. The user will pass his head through the opening 45, and the slit 46 there above in the partition wall 44, whereupon he

may close the slide fastener 47 until the slit 46 and the neck opening 45 closely engage his neck and substantially prevent the steam from the lower compartment 48 of my device to enter into the upper compartment 49, whereby the head, diagrammatically indicated at 41*a*, of the user, will not be exposed to the effect of the steam.

Of course, if the user so desires, he may open the slide fastener 47 to any desired extent and permit steam to enter into the upper compartment 49 and have effect upon his head 41*a* similarly to affecting his body in the lower compartment 48.

I also may employ a window 50, shown in the upper part of the front wall of the device, which window may have a thin, transparent, material, like an appropriate plastic. Of course, similar windows may be employed in the rear and side walls of the device, as desired, and the purpose thereof is to permit light to enter into the upper compartment where the head of the user is located.

Holes 51 may also be provided at desired places in the upper parts of the walls of the device to permit air to enter into the head compartment of it.

In addition to the window 50, or in place of it, I may employ an electric light 52 in the upper compartment of the device, being fed from an appropriate source of current by the cable 53.

Referring to the front door construction of my device, the side fasteners 26 and 27 may have their operating members 27*a* and 28*a* on the outside, while the operating member 29*a* for the slide fastener 29 in the center slit 28 will be manipulated from the inside.

Upon entering the device, the user will open the central slit 28, will reach out and will close the side fasteners 26 and 27, thereby sealing the door flap 24, whereupon he may withdraw his arm and close the central slide fastener 29 from the inside. Upon leaving the device, this operation will be performed in a reverse order.

A reinforcing and stiffening rabbeted cross bar 54 may be secured into the lower part of the front wall 21 and the lower end 55 of the front door flap 24 may engage said bar 54 and be more sealingly and reliably secured when the front door 24 is closed.

When it is desired to fold the device after its use, the pivoted stiffening bars 30 and 31 will be released from the front frame 11 and will be folded along the respective rear frame members, as indicated in Fig. 7, whereupon hooks 56 and 57 may be employed between the front and the rear frames 11 and 12, as indicated in said figure. The flexible top, bottom, and side walls of the device are folded between the frames 11 and 12, and the whole device is in an easily transportable or storable flat condition. The swinging and folding of the stiffening bars is indicated in Fig. 1, at 30, by dot and dash lines in an imaginary manner.

It is understood that instead of plain water steam, I may employ desirable other liquids, mixtures, or medically treated water, and produce steam of a desired medical character. The amount and temperature of the steam produced may be regulated by well known devices, like regulating electrical heater unit 37, the means for which are well known and form no part of this invention, wherefore they are not shown.

In Fig. 8 a modification is indicated. In this modified form, no air openings 51 are provided in the walls of the device. Instead of that, a

tube 60 communicates with the outside through one opening in a wall, the front wall 21 being indicated in Fig. 8, and the user may take the inner open end 61 of the tube into his mouth and so breathe, even while the device is fully sealed. Air enters the tube through its outer open end 62 in the front wall 21.

The platform or base 32 has the main purpose of protecting the floor of the premises where my device is to be set up. It also saves the rugs, etc. in a room and makes for cleaner operation.

While I have shown preferred embodiments of my invention, it is to be understood that changes and variations may be resorted to in the elements, construction, and combinations thereof, and I reserve my rights to such changes and variations as are within the spirit of this specification, and the scope of the claims hereunto appended.

What I claim is new, and want to protect by Letters Patent in the United States, is:

1. A foldable steam cabinet, comprising two frames each having a substantially flexible steamproof sheet material stretched over it, flexible sheets of substantially steamproof material permanently secured to said frames all around their circumferences, the two frames being adapted to be placed on one another when the device is out of use, and said flexible material between them then being adapted to be folded into flat condition, the said frames also being adapted to be set up generally vertically and spaced apart from one another, when the device is to be used, forming the front and rear walls, respectively, for the same, and said flexible material then being stretched between the frames forming the bottom, the top, and the two sides of the cabinet.

2. In a foldable steam cabinet, as set forth in claim 1, one of said frames, to be used as the front of the cabinet, having a flexible sheet material covering the same, a generally rectangular vertical portion of said covering being separated at the two sides and at the bottom from the same, being left integral therewith at the top, said separated section to be used as an entrance door for the cabinet, and having slide fastener means at the two sides thereof for reliable and expeditious closing or opening of the same

3. In a device, as set forth in claim 2, a generally vertical slit in said separated door portion, and slide fastener means, operable from the inside, to open or close said slit whereby the user may open said slit and have access to the outside, when desired.

4. In a device, as set forth in claim 2, a rabbeted bar across the lower portion of said front frame in line with the bottom of said door portion, said door having a bar secured to its bottom, and adapted to substanially sealingly fit into the rabbet of said cross bar.

5. In a device, as set forth in claim 1, said frames being formed of bars, receiving slots along the inner sides of said bars, said coverings for the frames and the sides, bottom and top of the cabinet being formed of one flexible sheet material, the respective portions of said sheet material being placed to snugly line said slots, complementary bars adapted to fit into said slots, and means to secure said complementary bars in said slots and thereby secure said sheet material to said frames.

6. In a device, as set forth in claim 5, said securing means for said complementary bars being releasable whereby the frame members and the flexible sheet material may be taken apart when desired.

7. In a device, as set forth in claim 1, a flexible transverse partition sheet, permanently secured to the walls of said cabinet, and foldable therewith, dividing the same into a larger lower compartment for the body of the user, and a smaller upper compartment for his head, and an opening in said partition for the neck of the user.

8. In a device, as set forth in claim 7, said transverse partition sheet being larger than the cross sectional area of the cabinet, thereby normally being in a sagging position adapted to accommodate persons of various heights.

9. In a device, as set forth in claim 7, a slit in said partition sheet from said neck opening to a desired distance therein, and slide fastener means in said slit whereby the user may readily and quickly widen or narrow said neck opening, as desired.

10. In a device, as set forth in claim 7, said partition sheet being secured on the walls of the cabinet in an inclined position, higher in the front and lower in the rear, so as to accommodate a door opening in said front

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