

[54] **WOOD HEATER WITH VIEWING WINDOW**

546,644 11/1922 France..... 126/60

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[51] Int. Cl..... **F24m 9/00**

[58] Field of Search 126/60, 61, 62, 63,
126/64, 200

[56] **References Cited**

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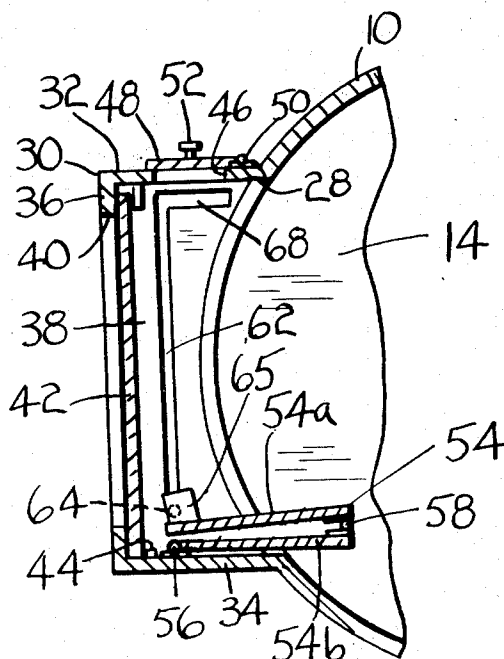
FOREIGN PATENTS OR APPLICATIONS

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[57] **ABSTRACT**

A heater having an enlarged side window for viewing a fire within the heater. The window is supported in a side projecting window housing having top vent means serving to prevent soot from gathering on the inside surface of the window. A collapsible door is hinged at the bottom in the window housing and has a down or open position and an up or closed position, the latter position shielding the window from the firebox in the heater. Operating knobs are secured to the door and project through slots in the ends of the window housing. Such knobs have a locked position at the top of the slot for holding the collapsible door in its up position.

6 Claims, 6 Drawing Figures



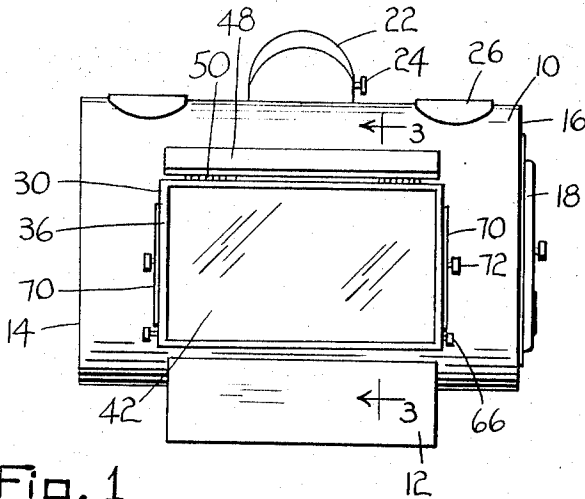


Fig. 1

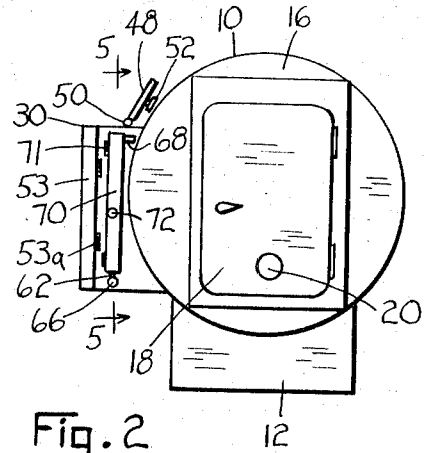


Fig. 2

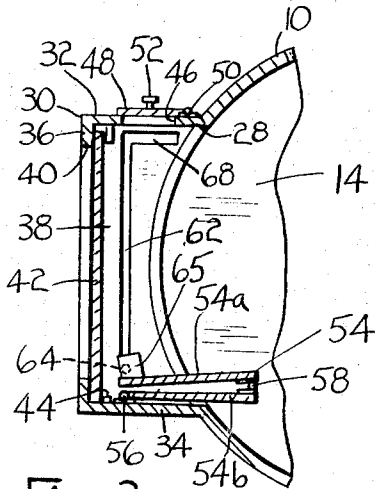


Fig. 3

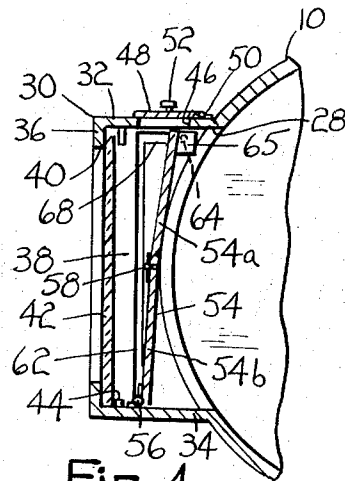


Fig. 4

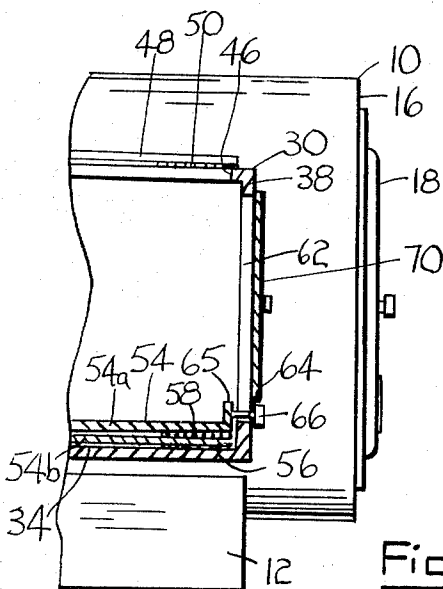


Fig. 5

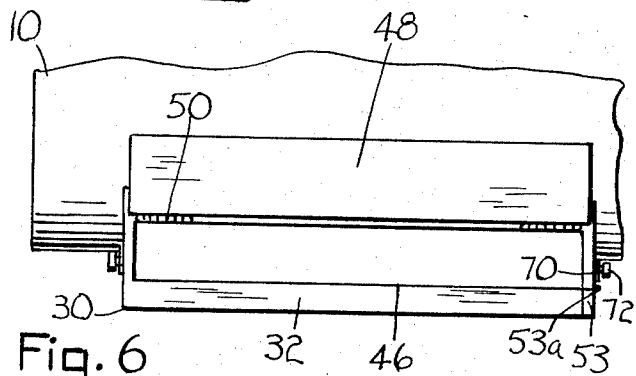


Fig. 6

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WOOD HEATER WITH VIEWING WINDOW

This invention relates to new and useful improvements in wood-type heaters or stoves.

An object of the present invention is to provide a heater construction having an enlarged side window through which the fire can be viewed.

Another object is to provide a heater of the type described employing a novel window arrangement and a collapsible door on the inside of the window for shielding said window from the firebox, and also employing novel means for operating the collapsible door between a downward open position and an up closed position.

Another object is to provide a heater having a viewing window on one side thereof with vent means arranged to keep the window clear of soot.

Another object is to provide a heater having a side window which is readily removable for cleaning.

The invention will be better understood and additional objects and advantages will become apparent from the following description taken in connection with the accompanying drawings which illustrate a preferred form of the device.

In the drawings:

FIG. 1 is a side elevational view of a heater embodying features of the present invention;

FIG. 2 is an end view taken from the right side of FIG. 1;

FIG. 3 is a fragmentary sectional view taken on the line 3—3 of FIG. 1; and showing the collapsible door in a down or open position;

FIG. 4 is a view similar to FIG. 3 but showing the door in an up or closed position;

FIG. 5 is an enlarged sectional view taken on the line 5—5 of FIG. 2; and

FIG. 6 is an enlarged fragmentary plan view.

Referring now in particular to the drawings, the heater comprises a cylindrical firebox or stove portion 10 seated on a base 12. Base 12 may or may not be secured integrally to the firebox. Firebox 10 has a rearward end 14 and a forward end 16 provided with a loading door 18. Loading door 18 has a draft control 20 therein, and the firebox has a flue pipe 22 and a damper 24. The firebox 10 has one or more flattened projections 26 on its top surface providing cooking or warming surfaces for pots or kettles.

One side of the firebox has an enlarged opening 28 covered by a laterally extending window housing 30. This housing has a top wall 32, a bottom wall 34, a side wall 36, and end walls 38. The side wall 36 has an opening 40 covered by a transparent pane 42 such as glass designed to withstand temperatures up to the maximum to which it may be subjected by a fire in the firebox. The window and its housing 30 are of enlarged size so that a good view of the fire is available somewhat similar to a fireplace.

The window is confined behind the front wall 36 by projections 44. Upper wall 32 of the window housing has a vent opening 46 which extends substantially the full length of the window housing, and this vent opening is associated with a draft door 48 having a hinged connection 50 with the top wall of the window housing. Door 48 has a finger operating knob 52 thereon. One end 38 of the window housing has a door 53, FIGS. 2 and 6, hinged at 53a, arranged to allow the glass to be removed therethrough for cleaning.

Mounted in the window housing 30 is a collapsible door or wall 54 having a longitudinal hinged connection

56 with the bottom wall 34. Such hinge connection is spaced inwardly only a short distance from the inside of the window. Collapsible door 54 is formed of two plate portions 54a and 54b connected together by longitudinal hinge means 58. By means of the hinge connections 56 and 58 the door 54 is adapted to lie flat as shown in FIG. 3 so that the window will not be obstructed or it is adapted to be expanded upwardly as shown in FIG. 4 so that the window will be shielded from the fire. Two plate portions 54a and 54b are shown for illustration, but it is to be understood that the door may be made up of more than two sections.

The end walls 38 of the window housing have vertically extending slots 62 through which project stems 64, FIG. 5, secured to tabs 65 in turn secured to door portions 54b adjacent to the free end thereof and at right angles thereto. Stems 64 terminate at their outer end in finger gripping knobs 66.

To operate the door 54 between lower and upper positions, the operator grasps the knobs 66 and moves them upwardly in the slots 62. Such upward movement of the knobs 66 and their stems 64 extends the door 54 to its up or closed position. Slots 62 have inward extensions 68 at the top FIGS. 2, 3 and 4, in which the stems 64 are disposed for maintaining the door in its upper or closed position.

The outer surface of end walls 38 of the window housing have upright elongated plates 70 hinged thereto by hinges 71 disposed on the outer edge of said plates. Plates 70 are arranged to cover the slots 62 and extend at least as high as the top of slot 68. These plates have finger gripping knobs 72 thereon and terminate short of the bottom of slots 62 an amount to clear knobs 66 when the door 54 is open. The plates 70 can also be closed in the up or closed position of collapsible door 54 if desired since the stems in such up position are disposed inwardly in slots 68 out of the way of these plates. In fact, with the plates 70 in closed position and the collapsible door in its up position, the said plates are disposed in front of stems 64 to prevent outward movement of such stems, thus insuring that the collapsible door will stay up.

In the operation of the heater, a fire laid in the firebox is controlled by the dampers 20 and 24. In normal heating operation of the stove, the collapsible door 54 is placed in its down or open position and the fire can be viewed through the window 42. However, there are times when it is desired that the window 42 be shielded from the inside, and at such times the door 54 is moved to its up position. For example, when the fire is first being started, it is desired that the door be closed. This is to prevent the inside surface of the window from getting covered with soot. Also, when the dampers are closed for overnight operation to retain a fire for a long time, the collapsible door is also closed. This also prevents the window from being coated with soot on its inside surface. It is to be understood also that the door can be closed any time that there is no desire to view the fire through the window.

The top draft door 48 is closed normally at the time that the collapsible door 54 is closed and likewise such draft door is opened normally at the time that the door 54 is in its down or open position. The draft or vent opening 46 serves the purpose of venting this area of the stove so that when the door 54 is in its down position, by-products of the fire do not move laterally toward the window but rather enough of a draft is pro-

vided through the vent opening to maintain such by-products in the firebox proper.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims. For example, the structure may not require the hinge 56 between the bottom plate portion 54b of the collapsible door and the bottom wall 34 since the bottom portion will automatically stay in place in view of the guided positioning stems 64 in slots 62.

Having thus described my invention, I claim:

1. A heater comprising a firebox having forward and rearward ends, a loading door in one of said ends, an enlarged opening in the side of said firebox, a window housing secured to said firebox in laterally projecting relation in the area of said opening, said housing having top and bottom walls as well as end walls and an outer side wall, means in said side wall defining an opening of enlarged size disposed in substantial horizontal alignment with the opening in the side of the firebox, a transparent window pane covering said opening in the side wall of said window housing, and a collapsible door in said window housing disposed inwardly toward said firebox relative to said window, said collapsible door having a lower open position exposing said window to the firebox and an upper closed position shielding the window from the firebox.

2. The heater of claim 1 including vent means in the

top wall of said window housing disposed inwardly toward said firebox relative to said window.

3. The heater of claim 1 including vent means in the top wall of said window housing disposed inwardly toward said firebox relative to said window, said vent means extending substantially the full length of said window housing.

4. The heater of claim 1 wherein said collapsible door comprises at least two plates longitudinally hinged together with one of said plates longitudinally hinged to the bottom of said window housing whereby said door in its lower position is folded with the plates lying one above the other in substantially parallel relation and in its upper position is expanded with the plates substantially in vertical alignment.

5. The heater of claim 4 including a longitudinally extending stem secured to an end edge of an uppermost one of said plates, said stem extending through a vertical slot in one of said end walls of the window housing for manual engagement whereby to open and close said door by moving said stem vertically in said slot.

6. The heater of claim 4 including a longitudinally extending stem secured to an end edge of an uppermost one of said plates, said stem extending through a vertical slot in one of said end walls of the window housing for manual engagement whereby to open and close said door by moving said stem vertically in said slot, and means defining a notch leading angularly from said slot at the upper end thereof for receiving said stem to hold the door in its closed position.

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