April 11, 1939. W. DOLIBOIS 2,153,915

HOT AIR GAS HEATER PIPE AND DOME HEATING SYSTEM

Filed July 26, 1937 2 Sheets-Sheet 1

Fig. 3.

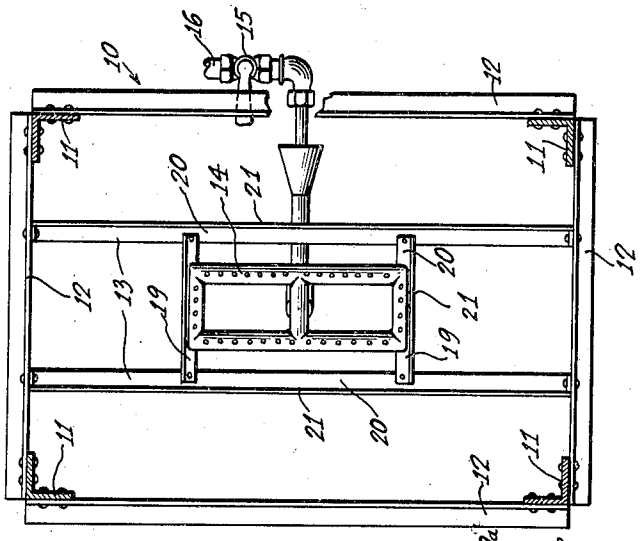


Fig. 2.

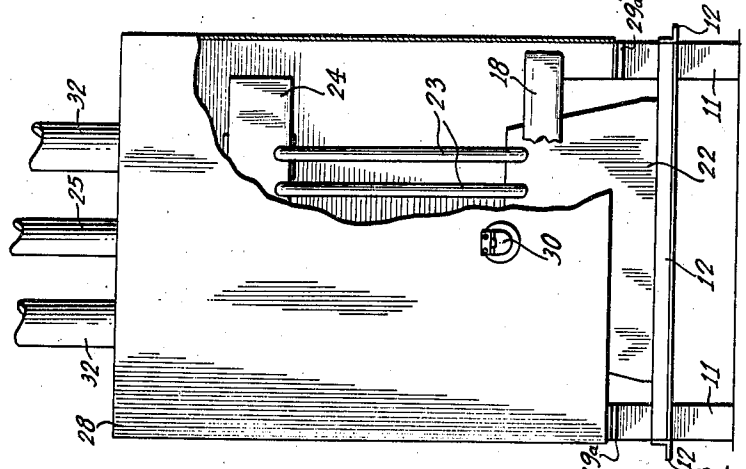
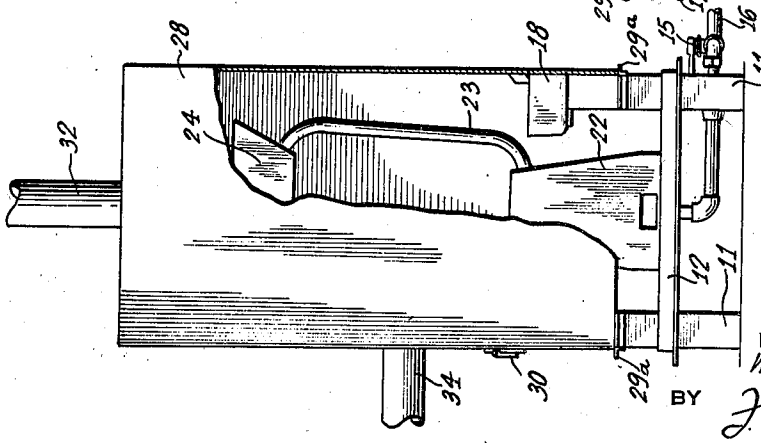


Fig. 1.



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Filed July 26, 1937 2 Sheets-Sheet 2

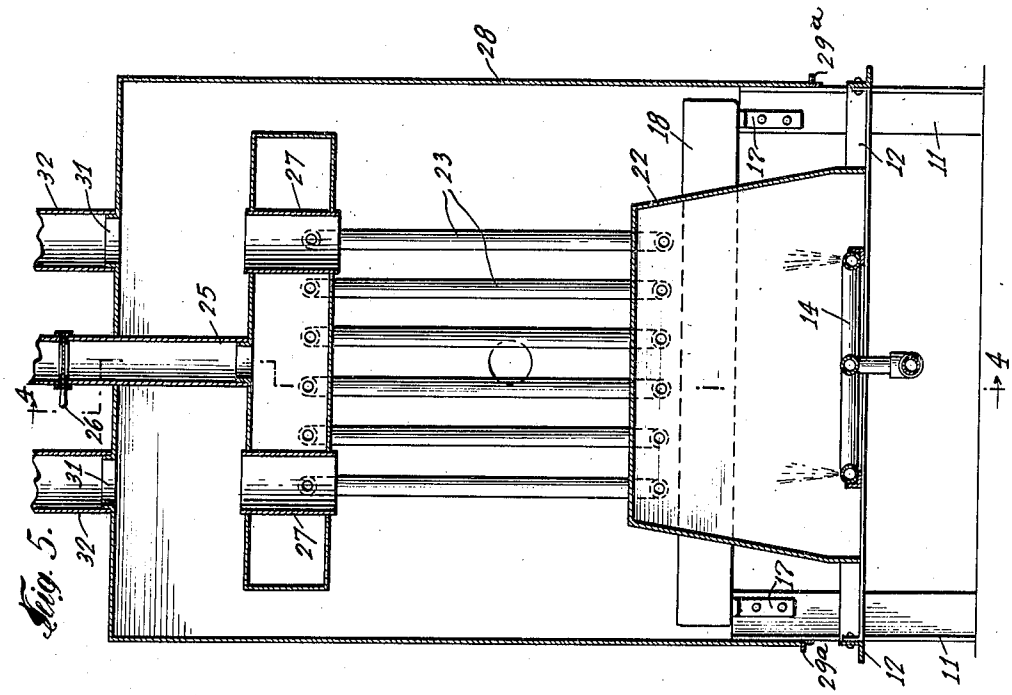


Fig. 5.

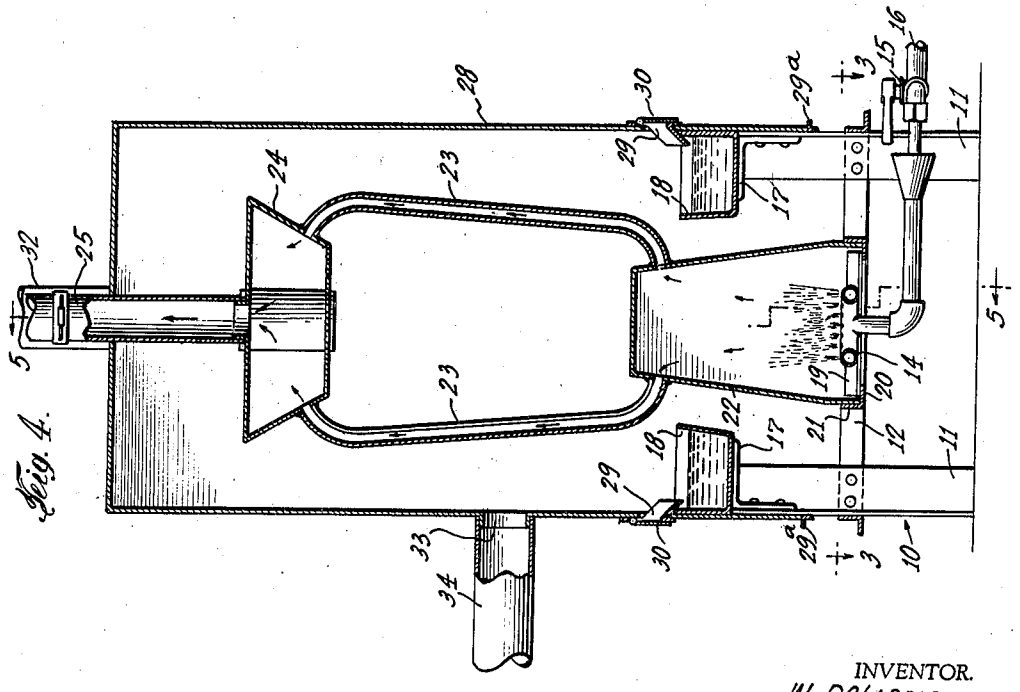


Fig. 4.

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HOT AIR GAS HEATER PIPE AND DOME HEATING SYSTEM

William Dolibois, Penn, Pa.

Application July 26, 1937, Serial No. 155,672

3 Claims. (Cl. 126—116)

This invention relates to gas heaters and more particularly aims to provide a novel hot air gas heater pipe and dome heating system whereby an efficient central heating unit is provided to burn illuminating or any other available gas to heat air and send the heated air through outlets into rooms or chambers located at a distance in the house or building.

A further object of the invention is the provision of such a system which is inexpensive and compact in construction, simple in operation, and whose efficiency is high so that the cost of operation will be kept down to a minimum.

The above and other objects will become apparent in the description below, in which like characters of reference refer to like-named parts in the accompanying drawings which form a part hereof.

Referring briefly to the drawings, Figure 1 is a front elevational view of the device with parts broken away to expose inner construction.

Figure 2 is a side elevational view of the same, with parts similarly broken away.

Figure 3 is a plan view of the pedestal of the device and the burner, taken on the line 3—3 of Figure 4.

Figure 4 is a longitudinal cross-sectional elevational view taken on the line 4—4 of Figure 5.

Figure 5 is a cross-sectional view taken on the line 5—5 of Figure 4, at right angles to Figure 4.

Referring in detail to the drawings, the numeral 10 represents the pedestal which supports the device, and comprises the four legs 11 of angle iron sections, one of which is situated at each corner of the horizontal rectangular frame 12, the four sides of the latter being also formed of angle irons. A pair of spaced apart intermediate bars or angle irons 13 extend between the sides of the frame 12, and supported midway therebetween is a gas burner 14 connected, through a valve or cock 15, with a supply pipe 16.

The legs 11 extend upward above the frame 12, and at their upper ends brackets 17 are secured thereto. The two brackets 17 on each side of the device support between them a trough 18 which is adapted to contain water for the purposes hereinafter set forth. The burner 14, as above-mentioned, is supported between the angle irons 13. The detailed manner of achieving this support is as follows. A pair of short angle irons 19 bridges the bars 13, one on each side of the midpoint of the latter, with the ends of the burner 14 registering in the angles of the members 19. It is to be noted that the vertical webs of the angle irons 13 and 19 are all arranged on the upper sides of these members, so that an endless horizontal shelf is formed, surrounding the burner 14, by the horizontal webs of the members 13 and 19, and a practically continuous wall is formed on the outer periphery of this shelf by the vertical webs of the members 13 and 19. For the purpose of clarifying this construction and simplifying its explanation, let the above horizontal shelf be indicated by the numeral 20 and the wall surrounding the same by the numeral 21.

A substantially frustro-pyramidal hood 22, open at the bottom, is set upon the shelf 20 adjacent the wall 21, above the burner 14. Near its top the hood 22 has a plurality of openings arranged in a row on each side thereof, and to these openings the lower ends of hollow tubes or pipes 23 are connected. The pipes 23 are all substantially U-shaped, and their upper ends are connected to the sloping sides of a box or dome 24. The latter has a central opening in its top to which the flue or chimney pipe 25 is connected, a damper 26 being provided in the flue 25 On each side of the flue opening, the dome 24 has a pipe or tube 27 passing through the dome from top to bottom, to permit heated air from below the dome to pass through these tubes to above the dome, these tube openings being completely walled off and sealed from the compartment within the dome.

A box-like housing 28 encloses the entire heating unit, and rests upon angle irons 29a arranged on the legs 11 around the device. The housing 28 is provided on opposite sides with openings 29 adapted to be kept normally closed by flaps 30, and situated just above each trough 18, by means of which the troughs may be refilled with water when necessary. The housing 28 also has an opening at the top through which the flue 25 passes, and any desirable number of additional openings 31 to which pipes 32 are secured and led to distant parts of the house, such as the rooms of the house. In addition, a side opening 33 is provided in the housing and a pipe 34 leads therefrom to any desirable point at approximately the same level as the heater, to be utilized for drying laundry or other similar purpose.

When the gas burner 14 is ignited, the air contained within the hood 22 will be heated and the heated air will rise through the tubes 23 into the dome 24, the tubes 23 giving off a good part of their heat through their walls into the compartment contained within the housing 28. The heated exhaust gases will then, after having

surrendered a good part of their heat, pass through the flue 25. The hot air trapped within the housing 28 will pass through the various pipes 32 into the rooms of the house. The tubes 27 permit superheating of the hot air which has risen from below.

It is apparent that no foul exhaust gases from the burner can enter the hot air circulating pipes into the rooms of the house, so that pure fresh air will constantly be supplied into the rooms. The device may be readily dismantled for repairs or other purposes in an obvious manner. The whole heating system is very simple in construction and may be manufactured inexpensively and sold at a low price. It is ideally suited for heating small houses and its great efficiency and economy of operation make it very appropriate for householders of relatively small means.

Obviously, modifications in form and structure may be made without departing from the spirit and scope of the invention. The entire device may be square or round in cross-section or in plan view instead of oblong as shown, and the sizes and dimensions of the entire device or any of its parts or members may be varied at will as may be desired.

I claim:

1. A device of the class described comprising a horizontal frame, legs supporting said frame above the floor, a gas burner supported on said frame, a shelf surrounding said burner and having a peripheral wall around the same, a hood open at the bottom supported on said shelf within said wall, a box-like dome above said hood, pipes communicating from the sides of said hood with the sides of said dome, a flue outlet from said dome, a housing supported on said legs and enclosing said hood, pipes and dome, hot air outlets in said housing, humidifier troughs on said legs inside said housing, openings in said housing giving access to said troughs, said hood being substantially frustro-pyramidal in form.

2. A device of the class described comprising a horizontal frame, legs supporting said frame above the floor, a gas burner supported on said frame, a shelf surrounding said burner and having a peripheral wall around the same, a hood open at the bottom supported on said shelf within said wall, a box-like dome above said hood, U-shaped pipes communicating between the sides of said hood and the sides of said dome, a flue outlet in said dome, tubes passing vertically through said dome and being walled off therefrom, rigid projections on said legs, a housing enclosing said hood, pipes and dome and removably resting on said projections, hot air outlets in said housing, said hood being substantially frustro-pyramidal in form.

3. A device of the class described comprising a horizontal frame, legs supporting said frame above the floor, a gas burner supported on said frame, a shelf surrounding said burner and having a peripheral wall around the same, a hood open at the bottom supported on said shelf within said wall, a box-like dome above said hood, U-shaped pipes communicating between the sides of said hood and the sides of said dome, a flue outlet in said dome, tubes passing vertically through said dome, rigid projections on said legs, a housing enclosing said hood, pipes and dome and removably resting on said projections, hot air outlets in said housing, said hood being substantially frustro-pyramidal in form.

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