April 4, 1944. E. R. KOPPEL 2,345,677

HEATER SUPPORT

Filed Aug. 21, 1941

FIG. 1.

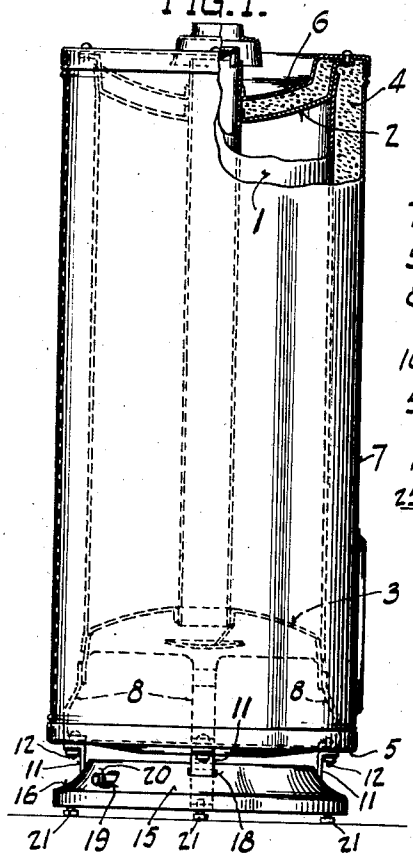


FIG. 2.

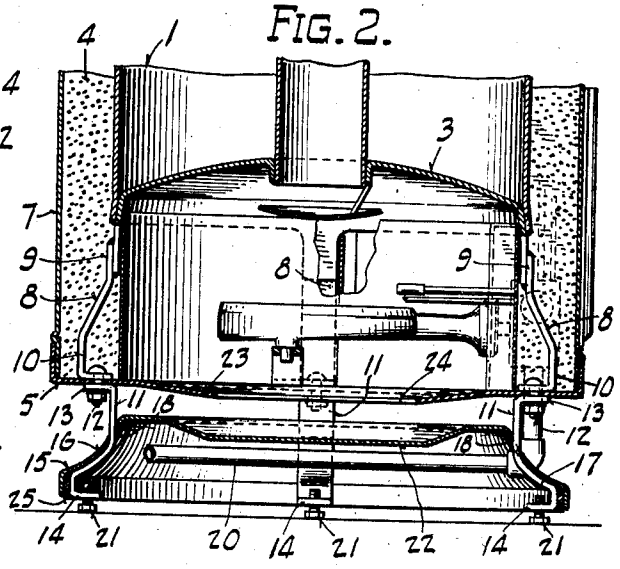


FIG. 3.

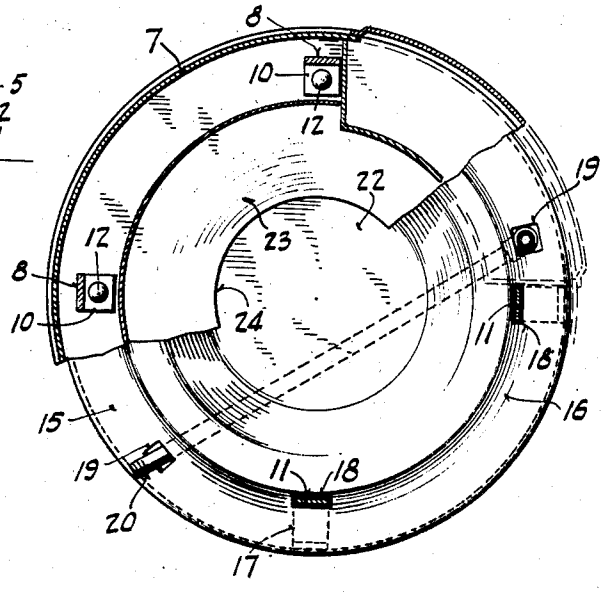
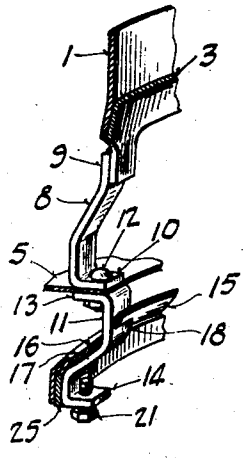


FIG. 4.



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HEATER SUPPORT

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Application August 21, 1941, Serial No. 407,727

8 Claims. (Cl. 122—17)

This invention relates to a heater support for water heaters.

This application constitutes a continuation in part of application Serial No. 316,083, filed January 29, 1940, for a Fluid container, by the same inventor.

One object of the present invention is to provide a rigid and durable support for water heaters that is easily assembled and disassembled.

Another object is to provide a support that presents a pleasing appearance and in which all of the parts thereof are adapted to perform a useful function.

Other objects of the invention will become apparent from the following description and accompanying drawing in which:

Figure 1 is a side elevation of the gas heater embodying the invention, parts being shown in section;

Fig. 2 is a central section on a vertical plane through the support and lower end of the heater;

Fig. 3 is a transverse section through the lower end of the casing, parts being broken away to show the base; and

Fig. 4 is a fragmentary perspective view of one of the supports.

The gas water heater illustrated by Figure 1, in general comprises a cylindrical tank 1 having heads 2 and 3, and a central vertical flue for conducting the hot gas from the burner. The tank is enclosed in insulation 4 disposed between the tank 1 and an external casing consisting of a bottom 5, a top 6 and a cylindrical section 7 that fits between the bottom and top.

Since the present invention is particularly concerned with a heater support it will be understood that this description is directed to the pertinent parts thereof with only a summary statement as to the general elements of the heater. It is not intended, however, to limit the invention to gas heaters of the type mentioned as the support is readily adapted to various types of water heaters, such as gas heaters with external flues, oil heaters and electric heaters.

In the water heater shown the four legs 8 are welded to the tank 1 at their upper ends 9, and have their lower ends 10 flanged horizontally inwardly and secured to the bottom 5 of the casing and to the extension legs 11 by bolts 12.

The four leg extensions 11 with preferably S shaped appearance and with their upper ends 13 horizontally flanged outwardly and the lower ends 14 horizontally flanged inwardly, are disposed below the respective horizontally flanged lower ends 10 of the legs 8. Thus the flanges of the legs and the leg extensions mate when in this position.

Between the legs 8 and the leg extensions 11 passes the bottom 5 of the external casing of the heater which consists of thin sheet metal that serves to retain the insulation 4 and to act as the bottom closure for the gas burner compartment.

The legs 8, the leg extensions 11 and the bottom 5 of the casing are provided with corresponding bolt holes for the passage of the bolts 12 which serve to rigidly hold these parts tightly together when secured in position.

The welding of the legs 8 to the tank 1 at their upper ends and the bolting of their lower ends to the casing and leg extensions 11 in the manner described centrally locates the tank 1 within the external casing and provides a rigid support for the entire heater.

A thin sheet metal shroud 15 of inverted dish shape is provided to enclose the area around the leg extensions 11 and to provide the appearance of a substantial solid base for the heater. The shroud 15 has its upper peripheral surface 16 curved downwardly to engage the outer sloping body portions 17 of the leg extensions 11 to support the shroud thereon.

The curved outer surface 16 of the shroud 15 also permits easy accesibility to the bolts 12 for assembly purposes and slots 18 are also provided in the outer surface 16 for passage of the leg extensions 11. The shroud may have one or more additional openings 19 for passage of the pipe 20.

The leveling screws 21 rest on the floor surface and are threaded into holes in the lower flanges 14 of the leg extensions provided for that purpose. These screws may be adjusted to properly level the heater.

The upper surface of the shroud 15 is depressed to form a pan 22 to catch condensation or other foreign matter which may drip from the bottom of the burner. The bottom 5 of the casing is also depressed as at 23 with a gradual slope towards the large central opening 24 therein which permits passage of air to the burner and is aligned with the pan 22 of the shroud 15 in such manner as to allow condensation to fall through the opening 24 into the pan 22 and to permit heat radiation to vaporize such condensation eliminating the necessity of draining the pan. The slope 23 makes certain that all con-

densate will drain out of the bottom 5 away from the insulation which it is desirable to keep dry.

The flow of air radially across the pan 22 and up through the opening 24 helps to cool the pan and keeps the floor protected against excessive temperature.

A stiffening ring 25 may also be provided to encircle the leg extensions 11 and to rest between these extensions and the shroud 15 which is slipped over the ring 25 after the latter has been affixed in position. The ring 25 may be secured to the shroud 15 and the leg extensions 11 by welding and serves to give added stability to the latter as they have a tendency to bear outwardly against the ring 25. The lower peripheral portion of the shroud is preferably cylindrical to fit over the stiffening ring 25.

The heater support here provided is easily assembled and disassembled and also constitutes a very rigid support that is adjustable to variations in floor surfaces.

The invention also is one in which utility is combined with appearance to save expense in construction.

Thus the shroud encircling the leg extensions gives the pleasing impression of a solid base to the heater without actually acting as such since a heavier and more expensive metal would be required for this function. However, the shroud has utility in that its upper surface provides a pan to protect the floor from excessive heat and to catch condensation from the heater. The shroud being spaced from the bottom 5 provides for the necessary secondary air in the case of gas and oil burners, assuring uniform distribution of the secondary air as well as protection against drafts.

Various embodiments of the invention may be employed within the scope of the accompanying claims.

I claim:

1. In combination, a tank of the class described having integral legs at its marginal edges and an external casing, leg extensions having horizontal flanges at their upper extremities, means for securing the upper extremities thereof to the bottom of the casing and the lower extremities of the legs of the tank, and means on the lower extremities of the leg extensions to support the extensions on the floor and to level the tank.

2. In combination, a tank of the class described having an external casing and supporting legs separating it from the surface on which it rests, a sheet metal shroud with a sloping outer circumferential surface disposed around and resting on said legs, with the latter passing vertically through openings in said shroud, and a pan in the upper surface of said shroud to catch foreign matter falling from the bottom of the tank and to protect the surface on which the tank rests from undue heat, said shroud securing said legs against displacement.

3. In combination, a tank of the class described having integral supporting legs, with a horizontal flange disposed at the bottom extremity of each leg, an external casing separated therefrom by insulating material, leg extensions having horizontal flanges at their extremities, means for securing the upper flanges of the leg extensions to the bottom of the casing and to the bottom flanges of the legs of the tank, and a shroud disposed around said leg extensions.

4. In combination, a tank of the class described having integral supporting legs with a horizontal flange disposed at the bottom extremity of each leg, an external casing separated therefrom by insulating material, leg extensions having horizontal flanges at their extremities, means for securing the upper flanges thereof to the bottom of the casing and to the bottom flanges of the legs of the tank, a shroud disposed around said leg extensions, means in the upper surface of said shroud to catch condensation falling through an opening in the bottom of the casing and to protect the supporting floor surface from undue heat, means secured to the lower flanges of the leg extremities to level the tank, and stiffening means secured to the leg extensions and disposed between the extensions and the shroud to give greater stability to the support.

5. In combination, a heater having a substantially cylindrical tank disposed inside an external casing having a bottom that gradually slopes toward a large central opening, legs secured to the lower end of the tank and to the bottom of the casing to support said tank, leg extensions with their lower ends horizontally flanged inwardly and with their upper ends horizontally flanged outwardly disposed below said legs and bottom of the external casing and rigidly secured thereto by bolts, a shroud with a sloping outer surface disposed around and resting on the said leg extensions and containing a pan in its upper surface located directly beneath the opening in the bottom of the external casing to catch condensation falling therethrough and to protect the floor surface from undue heat, and adjustable leveling screws with their heads resting on the floor and threaded into the lower horizontally flanged ends of the leg extensions.

6. In combination, a heater having a tank disposed inside an external casing the bottom of which gradually slopes toward a large central opening, legs secured to the lower end of the tank and each of said legs having a lower flanged extremity secured to the bottom of the casing to support said tank, leg extensions with their lower ends horizontally flanged inwardly and with their upper end horizontally flanged outwardly disposed below the said legs and bottom of the external casing and rigidly secured thereto by bolts, a shroud with a sloping outer surface disposed around and resting on said leg extensions and containing a pan in its upper surface located directly beneath the opening in the bottom of the external casing to catch condensation falling therethrough and to protect the floor surface from undue heat, the shroud having an opening in its side for the passage of a pipe, and forming in addition suitable passages for secondary air in the case of gas and oil heaters and a protection for the burner against drafts, adjustable leveling screws with their heads resting on the floor and threaded into the lower horizontally flanged ends of the leg extensions, and a stiffening ring secured to the leg extensions and disposed between the extensions and the shroud to give stability to the heater support.

7. In combination, a tank of the class described having substantially vertical leg supports, an outer casing for the tank secured at its bottom to said leg supports about midway of the heighth of the latter, and a shroud separate from said casing and encircling said leg supports below said casing to stabilize and protect the same, said shroud being curved inwardly at the top to provide a substantial air space between it and the bottom of the casing for supplying air to a burner beneath the tank.

8. In combination with a tank of the class described having substantially vertical leg supports, an outer casing for the tank secured at its bottom to said leg supports and having a central opening in its bottom for supplying air to a burner beneath the tank, and a shroud separate from said casing and secured to said leg supports to prevent displacement thereof with its upper surface disposed beneath the bottom of said casing and spaced therefrom to provide the required supply of air to the opening in the latter and at the same time prevent disturbance of the burner flame by extraneous air currents.

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