Aug. 18, 1942. E. G. GARDNER 2,293,202

SPACE HEATER

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Fig. 1.

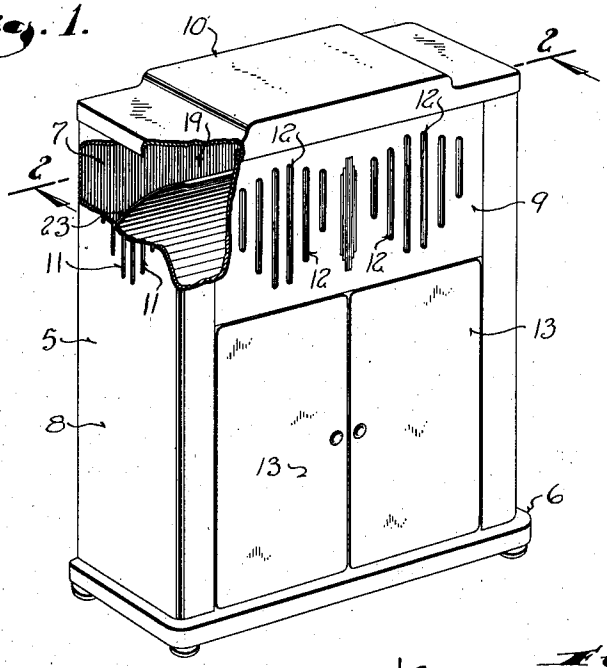


Fig. 3.

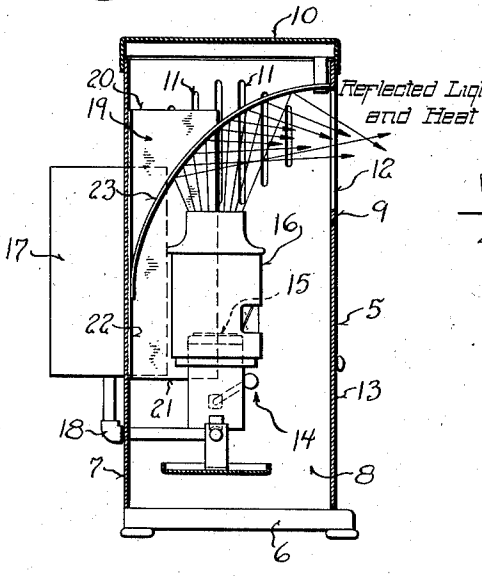
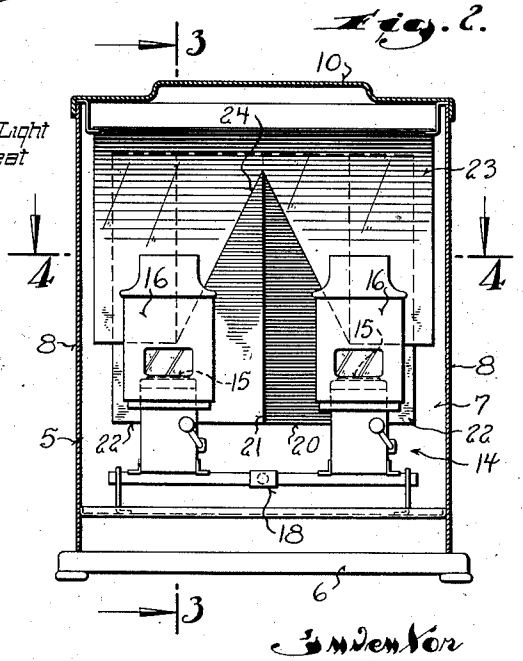


Fig. 2.



Inventor

Emmet G. Gardner

By Dallmeyer Jones

Attorneys

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Fig. 4.

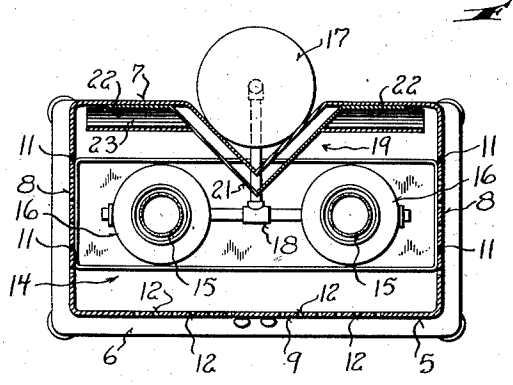
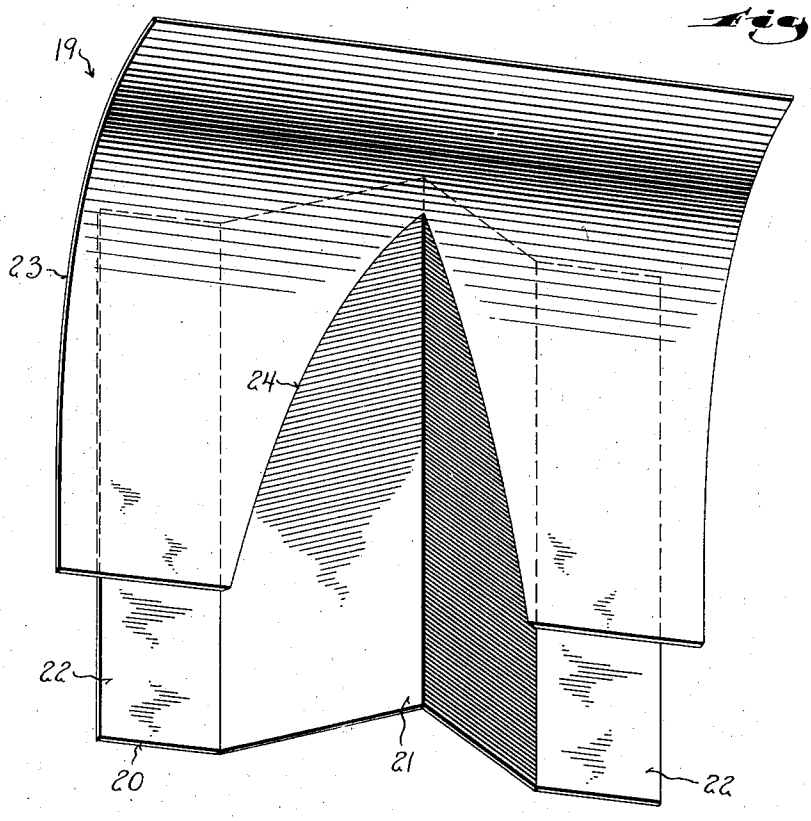


Fig. 5.



Inventor
Emmet G. Gardner
By Dashiell & Jones
Attorneys

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UNITED STATES PATENT OFFICE

2,293,202

SPACE HEATER

Emmet G. Gardner, Milwaukee, Wis., assignor to National Enameling & Stamping Company, Milwaukee, Wis., a corporation of New Jersey

Application June 16, 1939, Serial No. 279,385

1 Claim. (Cl. 126—93)

This invention relates to space heaters, and refers particularly to portable kerosene heaters of the cabinet type.

The cabinets of these heaters are designed to promote circulation of air past the burner units and into the space being heated. To this end, the cabinet is open at its bottom; and the front and side walls have grilled openings in their upper portions, from which the heated air issues.

One of the objects of this invention is to improve the circulation of air through the cabinet by providing a novel reflector unit so arranged inside the cabinet as to provide substantially an unobstructed path for the air flowing upwardly past the heater unit and discharging from the openings in the upper portion of the cabinet.

Another object of this invention is to so arrange the deflector unit in the cabinet that the flickering light of the flames burning in the burner units is reflected thereon to shine through the grilled openings in the front wall of the cabinet.

With the above and other objects in view which will appear as the description proceeds, this invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described, and more particularly defined by the appended claim, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claim.

The accompanying drawings illustrate one complete example of the physical embodiment of the invention constructed in accordance with the best mode so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a space heater embodying this invention;

Figure 2 is a vertical sectional view through the heater taken on the plane of the line 2—2 in Figure 1;

Figure 3 is a vertical sectional view taken through Figure 2 on the plane of the line 3—3;

Figure 4 is a cross sectional view taken through Figure 2 on the plane of the line 4—4; and

Figure 5 is a perspective view of the reflector unit per se.

Referring now particularly to the accompanying drawings, in which like numerals indicate like parts, the numeral 5 designates a cabinet preferably formed of sheet metal and having a frame-like base 6 on which a back wall 7, side walls 8, and a front wall 9 rest. The top of the cabinet is closed by a wall 10.

The side walls 8 have grilled openings 11 in their upper portions and the upper portion of the front wall has two sets of grilled openings 12. The lower portion of the front wall is cut away to provide a doorway which is closed by doors 13.

Opening the doors 13 affords access to a pair of burner units indicated generally by the numeral 14. These burner units are of conventional design, and each has a wick 15 and a chimney 16. Fuel is supplied to the burner units from a tank 17 set into a recess in the back wall and connected with the burner units through a supply pipe 18.

Attention is directed to the fact that the burner units are substantially wholly below the lower edges of the grilled openings 11 and 12.

Positioned in the cabinet behind and above the burner units is a deflector unit 19. This deflector, as best shown in Figure 5, comprises a piece of sheet metal 20 having a medial portion 21 formed into a forwardly protruding V, and side flanges 22 which lie substantially in a common plane.

Attached to this piece is a curved piece of sheet metal 23, the lower rear portion of which joins the flanges 22, and the medial portion of which is cut out as at 24 to fit the V 21. The top of this curved piece 23 extends forwardly a substantial distance so that the depth of the reflector unit is substantially equal to the depth of the cabinet.

The reflector unit is mounted in the cabinet with its flanges 22 engaging the back wall and its curved member extending from behind the burner units upwardly across the top thereof to the front wall 9 above its openings 12, the V 21 being located between the burner units, as best shown in Figure 4 to accommodate the fuel supply tank 17.

Hence, it will be apparent that the reflector unit promotes a more efficient circulation of air through the heater, for the cold air rising up through the open bottom of the heater is more effectively deflected outwardly through the grilled openings 11 and 12.

In addition, the curved wall of the reflector has a bright light reflecting inner surface so that the flickering light of the flame burning at the wicks 15 in the burner units and shining up through the chimneys 16 is reflected to be visible through the openings 12.

The flickering light reflected on this curved surface and visible through the grilled openings 12 gives the heater a warm glow which materially enhances its appearance when in use, especially in a darkened room; and as attractiveness

is a vital factor in the salability of devices of this character, this light reflecting feature is of substantial importance.

What I claim as my invention is:

A space heater of the character described comprising: an upright cabinet having front and side walls each provided with an opening near its upper portion, and a rear wall; two burner units in the cabinet each having a wick at which a flame burns, and a tall open topped chimney; said burner units being disposed at opposite sides of the center of the heater and being so located with respect to said opening that the tops of the chimneys project substantially no higher than the bottom of the openings; reflector means in the cabinet having a curved portion extending in an arc from a point on the rear wall below the tops of the chimneys across the open tops of the chimneys to join with the upper portion of the front wall above the opening therein so as to be directly impinged by heat and light rays emanating from the open tops of the chimneys and to reflect the same directly through said front wall opening; and a substantially V-shaped vertical reflector portion protruding forwardly from the curved reflector portion between the burner units to directly reflect light and heat sideways toward the openings in the side walls.

EMMET G. GARDNER.