# United States Patent [19]

**Warner**

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[54] **DEVICE FOR BENEFICIALLY ABSORBING, RERADIATING AND DEFLECTING HEAT TO THE OCCUPIED PORTION OF AN ENCLOSURE**


[76] Inventor: **Lawrence L. Warner,** 1670 N.E. "A" **St., Grants Pass, Oreg. 97526**



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[52] **U.S. Cl.** ..... **126/248,** 126/83, 431/172

[51] **Int. Cl.** ..... **F24c 15/00**

[58] **Field of Search** ..... 431/171, 172, 350; 126/83, 126/99 D, 248, 18, 299 R, 97; 98/115 KH



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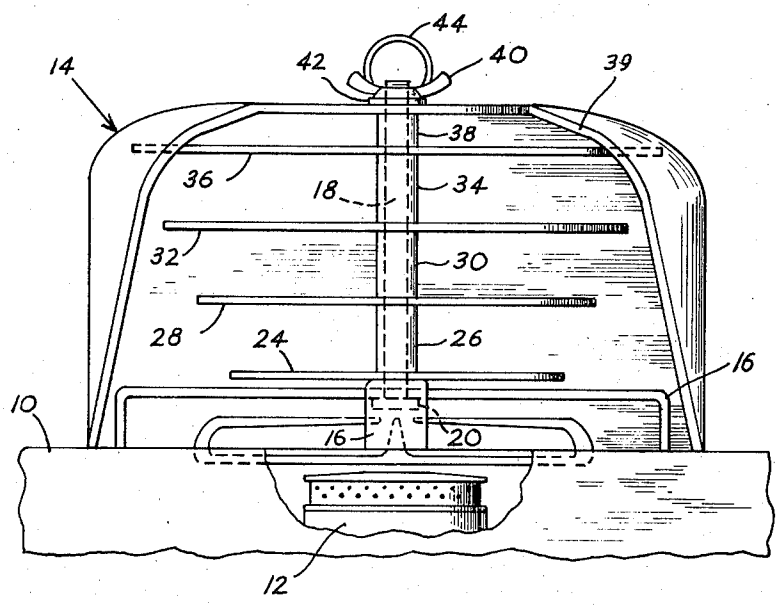
*Primary Examiner*—William E. Wayner
*Assistant Examiner*—W. E. Tapolcai
*Attorney, Agent, or Firm*—Clarence M. Crews



[57] **ABSTRACT**

A heat sustaining and deflecting element is provided in an occupied area required to be heated, which is adapted to be set over a heat supplying source such as a cleanly burning burner, a stove top or an equivalent electrically heated unit and which includes a hood having an open side, so constructed and arranged that a rising breathable air current, produced by convection, will be deflected and redirected substantially horizontally to occupied portions of such area, in combination with highly conductive bodies occupying fixed positions under the hood for absorbing, storing, and subsequently reradiating heat supplied by said source, for redirection by the hood.


**5 Claims, 3 Drawing Figures**



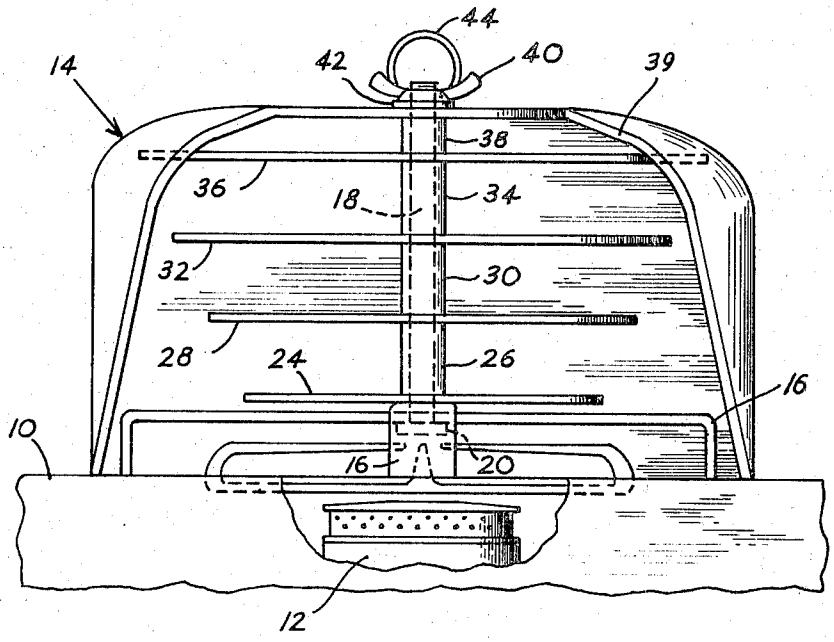



Fig. 1.

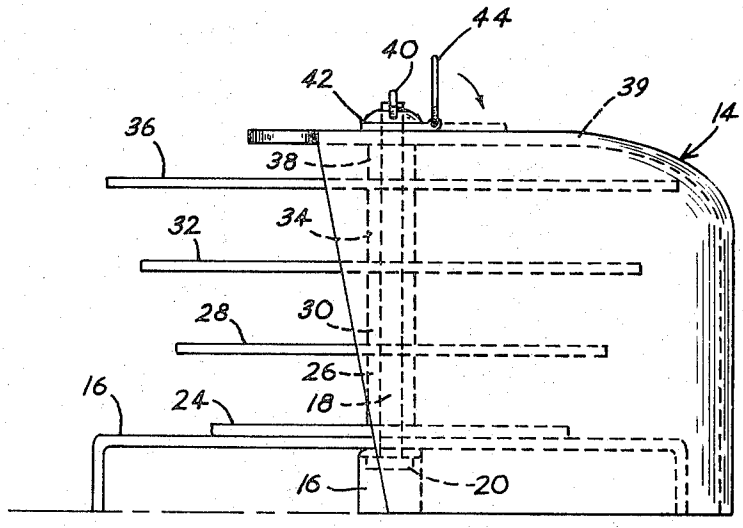



Fig. 2.

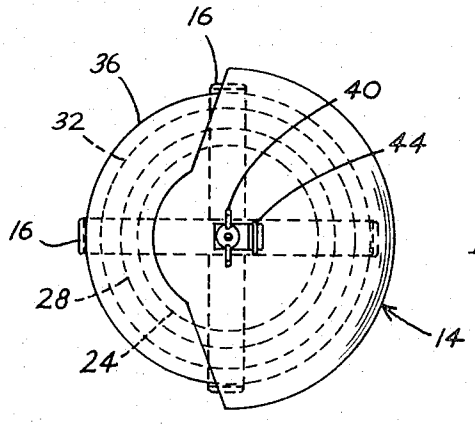



Fig. 3.

# DEVICE FOR BENEFICIALLY ABSORBING, RERADIATING AND DEFLECTING HEAT TO THE OCCUPIED PORTION OF AN ENCLOSURE

This invention relates to means adapted to be placed over a cleanly burning burner, a stove top or equivalent clean heat source in an occupied, enclosed space, for deflecting an upwardly flowing, convection stream of air in a generally horizontal direction to the occupied portion of such space, and for absorbing and reradiating heat from said source to create a supplementary upwardly flowing convection stream, and to deflect a major portion of such supplementary stream substantially horizontally to the occupied portion of such space.

Ordinarily, most of the air heated by a burner or by a heat unit of any type will rise directly to the ceiling of the room in which the heating unit is located and will afford little comfort to persons seated or standing in the room.

It is the purpose of the present invention to provide a heat deflecting hood which, when set over a heat source, will intercept the rising convection current and redirect it horizontally to the lower, occupied portion of the room, and also, particularly, to absorb and store heat energy beneath the hood and to reradiate it while directing it to the lower, occupied portion of the room.

Other objects and advantages will hereinafter appear.

In the drawing forming part of this specification,

FIG. 1 is a view in front elevation of my novel heat absorbing, reradiating and reflecting unit placed over a stove or burner;

FIG. 2 is a view in side elevation of my novel heat absorbing, reradiating and reflecting unit; and

FIG. 3 is a plan view on a much smaller scale than FIGS. 1 and 2, of my novel unit.

In the drawing a gas range **10** includes a burner **12**, over which is placed my novel unit **14.**

My novel unit may advantageously be made entirely of aluminum, although this is not an essential requirement. The unit **14** includes two crossed, supporting members **16** which are mounted on a central upstanding shank of a bolt **18** with freedom for rotary movement relative to the bolt shank and to one another. The members **16** have downturned end portions for supporting the device from the stove top, the downturned ends terminating in a common horizontal plane. The members **16** may be rotatively adjusted relative to the bolt **18** and relative to one another.

The unit **18** has a head **20** upon which the lower member **16** rests. The upper member **16** rests upon the lower member **16.**

A first heat absorbing disc **24** of comparatively small diameter rests directly upon the upper one of the members **16.**

A sleeve **26** fits onto the bolt **18** above the disc **24** and supports a second heat absorbing disc **28** of larger diameter than the disc **24.**

A second sleeve **30** fits onto the bolt **18** above the disc **28** and supports a third heat absorbing disc **32** of larger diameter than the disc **28.**

A third sleeve **34** rests on the disc **32** and supports a disc **36** which is larger than the disc **32.**

Finally, a sleeve **38** rests on the disc **36** and assists in supporting a horizontally extending upper portion of a heat reflecting hood **39.** A wing nut **40** applied to the threaded upper end of the bolt **18** clamps the hood, the sleeves, the plates and the supporting arms firmly together.



The hood covers somewhat more than half of the assembly and its top extends forward well beyond the center bolt **18.** Hot air, deflected by the hood, will sweep forward with it any heated air in its path.

Between the top of the hood **39** and the wing nut **40** a washer **42** is interposed, which washer has pivotally secured to it a carrying ring **44.**

The discs are shown herein as circular and the hood is shown as parti-circular in plan. This is a practical and desirable form, but not an essential form. The hood and discs could be rectangular, or the discs could be elliptical, and the hood parti-elliptical. Other curved forms could be utilized. The number of discs and their spacing could be varied, and the height of the hood could be varied. These details can be selected within limits dictated by diminishing returns. The discs as shown are not provided with perforations through which ascending gases may pass, but such modification is regarded as within the scope of the invention.

It will be noted that the downturned ends of the supporting members **16, 16** terminate in a common horizontal plane, being thus coterminous with one another and desirably coterminous with the hood.

Alternatively, the supporting members **16, 16** could be made unitary with a portable electrical heating unit.

I have described what I believe to be the best embodiment of my invention. What I desire to cover by letters patent, however, is set forth in the appended claims.

I claim:

**1.** A portable heat absorbing, heat reradiating and air deflecting and distributing unit composed of heat conductive material and adapted to be set over an extraneous heat source, which unit includes

a. a supporting means;

b. a hood supported thereby, which hood includes uninterrupted side, back and top portions and has a wide open bottom and a wide open front, for deflecting a rising convection current of heated, breathable air in a generally horizontal direction through the open side of the hood from bottom to top thereof where it may reach and be useful to persons occupying a relatively low portion of such space, said unit further including, largely within the hood, a series of vertically spaced, horizontal, heat absorbing and reradiating plates of progressively increasing area from bottom to top of the hood.

**2.** A unit as set forth in claim **1** in which the heat absorbing plates are substantially circular in cross-section and the hood is substantially parti-circular.

**3.** A unit as set forth in claim **1** in which the supporting means, the plates and the hood top are impaled upon a common headed bolt, are spaced from one another by sleeves that surround the shank of the bolt, and are clamped together in association with the sleeves between the bolt head and a nut which is threaded onto the end of the bolt remote from the bolt head.

**4.** A unit as set forth in claim **3** in which the hood supporting means comprises a plurality of long, narrow crossing members, which members, mounted on the bolt beneath the lowermost disc, have coterminous downturned ends.

**5.** A unit as set forth in claim **4** in which the lower end of the hood is coterminous with the downturned ends of the crossing supporting members.

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