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BURNER FOR CHAFING DISH AND THE LIKE

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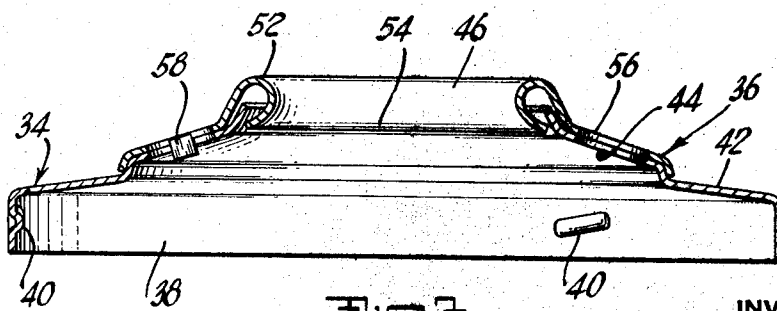
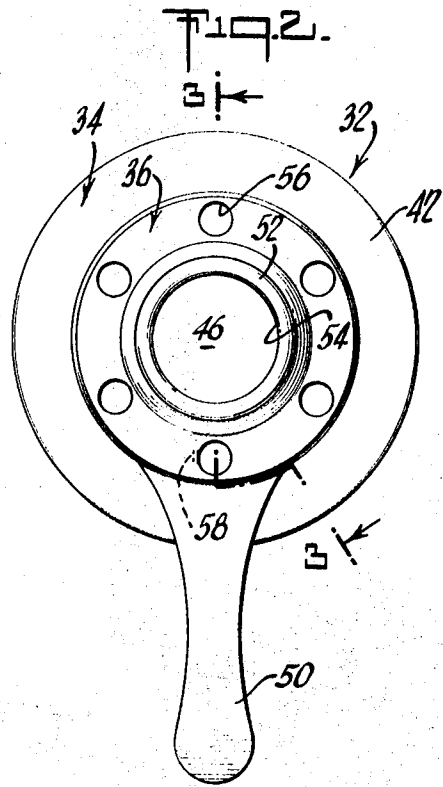
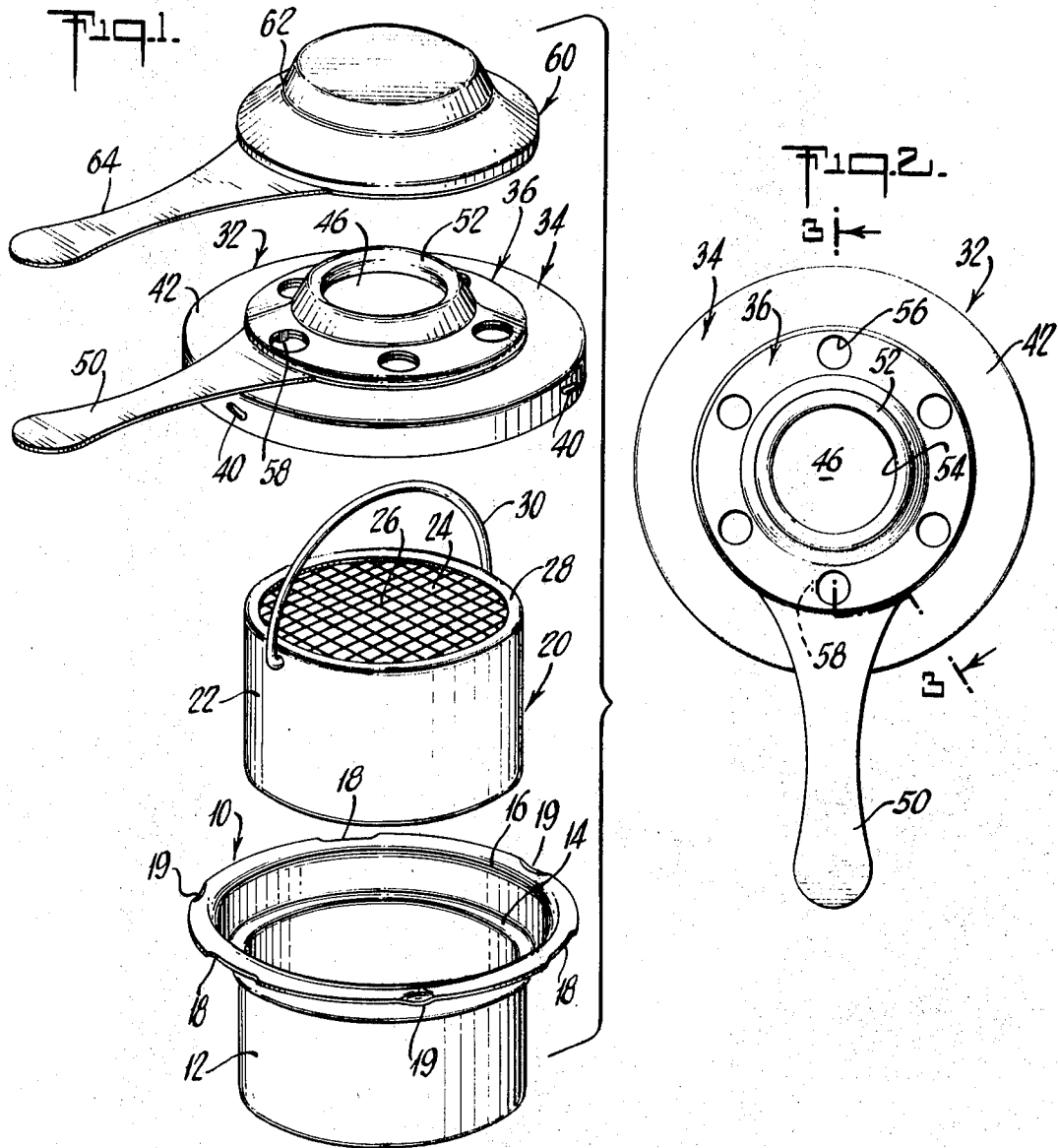


Fig. 3.

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BURNER FOR CHAFING DISH AND THE LIKE
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7 Claims

ABSTRACT OF THE DISCLOSURE

A burner adaptable for use with either liquid fuel or solid fuel, including a removable receptacle for liquid fuel which is replaceable by a standard-sized can of solid fuel.

The present invention relates to a burner of the sort employed with a container, such as a chafing dish and the like, to keep the contents of the container warm. More specifically, the burner embodying the present invention is capable of utilizing either a liquid fuel such as alcohol in a removable receptacle, or a solidified fuel such as Sterno in a standard-sized can which replaces the aforementioned removable receptacle. This capability affords advantages to both the manufacturer and the consumer. The manufacturer can employ a single production line to produce a single burner model which can employ both liquid and solid fuel. This is highly preferable to the more costly arrangement of maintaining two production lines, one producing a first burner model for use with liquid fuel and the other producing a second burner model for use with solid fuel. The consumer benefits by having an option with regard to choice of fuels for the burner. It is a common occurrence for a consumer to have an immediate need for fuel only to find that his local supplier has only one type of fuel—the wrong type—on hand. Similarly, the consumer may have both types of fuel in his home supply for use with other appliances. If he should run out of one type of fuel in the course of entertaining, he can simply use the other type of fuel instead in the burner embodying applicants' invention. Thus, he is spared the annoyance of leaving his company in quest of more fuel, which may not be available due to his supplier's store being closed.

A better understanding of the present invention may be had by reference to the accompanying drawings, of which:

FIG. 1 is an axially-exploded view of the preferred embodiment of applicants' burner, showing each of the four separable components of said burner.

FIG. 2 is a plan view of the two-element cover member.

FIG. 3 is a sectional view of the cover member taken through line 3—3 in FIG. 2.

Referring specifically to FIG. 1, the preferred embodiment of applicants' novel burner is shown therein as comprising a base receptacle 10 having a cylindrically-shaped main portion 12. The lower end of main portion 12 is preferably completely closed, but may have only one or more protrusions extending radially inwardly or a similarly-oriented annular lip for supporting a container in the base receptacle 12, which is preferably shaped to hold a standard-sized Sterno can. At the upper end of the cylindrical main portion 12, a substantially annular portion 14 extends radially outward. From this annular portion 14 a faired portion 16 extends upwardly and outwardly. A plurality of notches 18 are evenly spaced about the circular edge of faired portion 16. The arcuate segments of this edge between the notches 18 each have a downwardly-extending deformation 19.

The fuel receptacle 20 is adapted to hold liquid alcohol, and comprises a can 22 open only at the upper end

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thereof. Can 22 is shaped to fit snugly in the base receptacle 10. Can 22 is filled with a wick material 24 which is covered by the metal mesh 26. A rounded, inwardly-extending lip 28 holds both the mesh 26 and the wick material 24 in place. The can 22 is hingedly fitted with a substantially semicircular handle 30 to facilitate emplacement in and removal from base receptacle 10. When the fuel receptacle 20 is placed in the base receptacle 10, handle 30 may be swung down to nestle in the space afforded by the annular portion 14 and the faired portion 16. When the user desires to employ Sterno as a fuel, he simply replaces the fuel receptacle 20 with a suitably-sized Sterno can.

The cover member 32 comprises two elements, a stationary element 34 and a rotatable element 36. Stationary element 34 comprises a shallow cylindrical section 38 open at its lower end and having a plurality of indentations 40 spaced for registration with the notches 18 in the base receptacle 10. The cover member 32 is attachable to the base receptacle 10 by passing the indentations 40 through the notches 18 and subsequently rotating the stationary element 34 relative to the base receptacle 10 until the indentations 40 engage the deformations 19.

Referring now to FIG. 3, extending upwardly from the shallow cylindrical portion 38 are two shallow truncated conical sections 42 and 44 having a common axis. Conical section 44 is raised above conical section 42, and has a central hole 46 about which are disposed a plurality of smaller holes 48 in a circular array.

As may be seen in FIGS. 1, 2 and 3, the rotatable element 36 of cover member 32 (excepting the handle 50) overlies and generally conforms to the shape of conical section 44 of stationary element 34. Around the central hole 46, the rotatable element has a raised portion forming a chimney 52. The two elements of cover member 32 are rotatably engaged by forming the chimney 52 with a downward extension 54 (see FIG. 3) which may be passed through the central hole 46 of the stationary element 34 and then deformed radially outward by staking or swedging, or by some other suitable method.

Rotatable element 36 has a circular array of holes 56 arranged for variable registration with the similar array of holes 48 in the stationary element. These two sets of holes 48 and 56 are shown in complete registration in FIGS. 1, 2 and 3. Extending downwardly from the edge of one of the holes 56 is a small tab 58 (see FIG. 3) engaging the associated hole in the array 48 and thereby limiting the angular travel of the rotatable element 36 with respect to the stationary element 34. The degree of registration of these two sets of holes 48 and 56 will determine the amount of air that is fed to the fuel and, consequently, the intensity of the flame.

The flame snuffer 60 has a central portion 62 shaped to overlie the rotatable element 36 of cover member 32 so as to cover the central hole 46 and holes 48 and 56. Also, handle 64 is of the same shape as handle 50, thereby facilitating transport of the complete assembly.

The advantages of the present invention, as well as certain changes and modifications to the disclosed embodiment thereof, will be readily apparent to those skilled in the art. It is the applicants' intention to cover all those changes and modifications which could be made to the embodiment of the invention herein chosen for the purposes of the disclosure without departing from the spirit and scope of the invention.

What is claimed is:

1. A burner comprising:

(a) a base receptacle for holding, interchangeably, either a container of liquid fuel or a standard-sized can of solid fuel;

(b) a cover member comprising:

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- (1) a stationary element having a central hole and a plurality of holes disposed thereabout, and being removably attachable to said base receptacle; and
- (2) a rotatable element having a plurality of holes arrayed similarly to said plurality of holes in said stationary element, and engaging said central hole in said stationary element by means of a downward extension passing through said central hole and extending radially outward to form a chimney and to enable said rotatable element to rotate coaxially with respect to said stationary element so as to vary the degree of registration of said pluralities of holes.

2. The burner according to claim 1 wherein each plurality of holes is circularly disposed about said chimney.

3. The burner according to claim 1 wherein one of said plurality of holes in said rotatable element has a tab extending downwardly into the associated hole in said stationary element to limit the angle of travel of said rotatable element relative to said stationary element to a value within which said pluralities of holes may be completely in registration or completely out of registration or in any intermediate degree of registration.

4. The burner according to claim 1 further comprising a removable fuel receptacle comprising:

- (a) a can having an open end and an inwardly-extending lip at said open end;
- (b) wick material contained by said can;
- (c) a metal mesh overlying said wick material and engaging said lip of said can to retain said wick material in place; and
- (d) a substantially semicircular handle hingedly attached to said can at said open end thereof.

5. The burner according to claim 1 wherein said cover

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member has a handle extending radially from said rotatable element.

6. The burner according to claim 5 further including a snuffer having a handle extending therefrom, said snuffer handle being coextensive with and adapted to rest on said cover member handle.

7. The burner according to claim 1 wherein said stationary element of said cover member includes a shallow cylindrical section open at its lower end and having a plurality of spaced indentations, and wherein said base receptacle includes a faired portion having a plurality of notches disposed thereabout and a plurality of downwardly extending deformations disposed between said notches, whereby said cover member may be removably attached to said base receptacle by passing said indentations through said notches and by rotating said stationary element relative to said base receptacle until said indentations engage said downwardly extending deformations.

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