May 19, 1964 R. J. KNAPP 3,133,536

GAS LANTERN STOVE DEVICE

Filed March 10, 1961

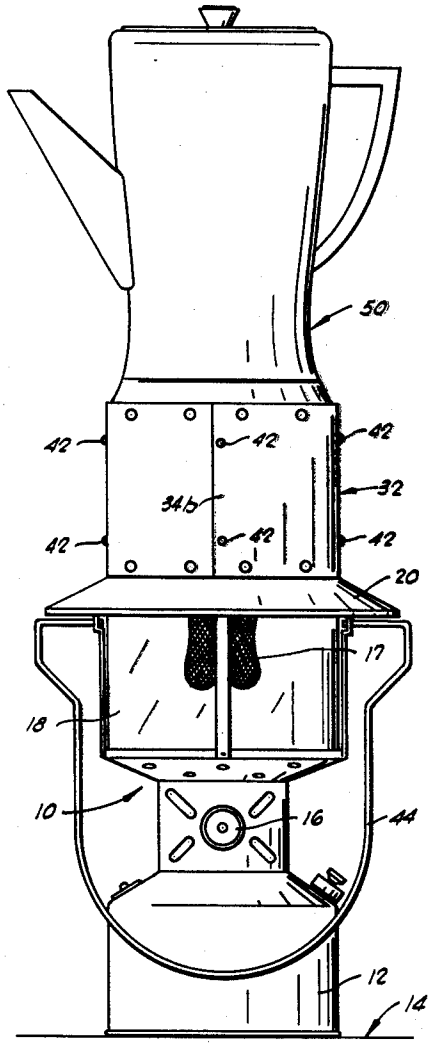


Fig. 1

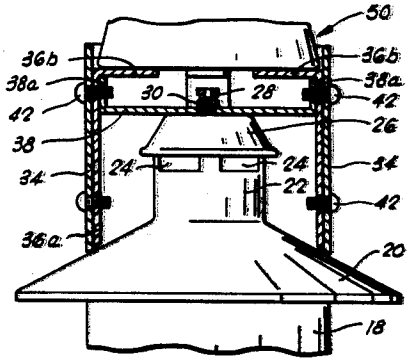


Fig. 3

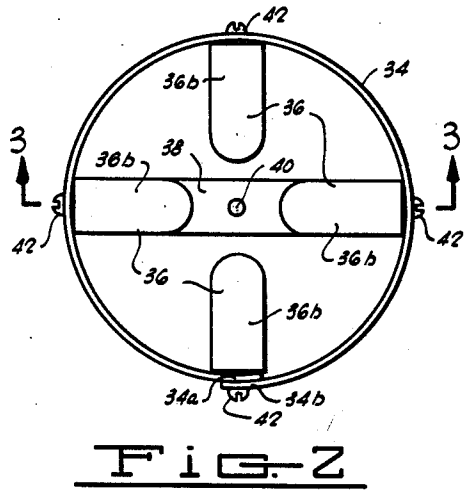


Fig. 2

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3,133,536
Patented May 19, 1964

3,133,536

GAS LANTERN STOVE DEVICE

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Filed Mar. 10, 1961, Ser. No. 94,776
1 Claim. (Cl. 126—258)

This invention relates to stoves, and in particular relates to an attachment for use in combination with portable, combustion-type lanterns, and is used for warming coffee and the like on outdoor camping excursions.

As is well known, fishermen and hunters, for example, frequently camp out overnight and therefore require light, food and drink. Several variations of portable combustion-type lanterns are presently on the market and in common use. These combustion-type lanterns usually burn a liquid fuel, such as kerosene, or a low pressure gas fuel, such as propane. In addition to giving off substantial light, these lanterns also give off considerable heat, the heat being dissipated primarily through an upstanding flue. The upstanding flue is usually protected from rain and the like by a cap, the flue gases and heat passing through the vents in the sides of the flue. The cap is normally held in place by an upstanding rod which passes through the cap, the rod being threaded and receiving a nut which clamps the cap in place.

In accordance with the present invention, a device is combined with the lantern to provide a stove for heating a coffeepot or other utensil. A cylindrical sleeve housing is disposed around the upper end of the flue structure. A cross member is connected within the sleeve housing and has an aperture therein for receiving the threaded rod of the lantern. The cross member is placed over the threaded rod and rests on the flue structure and a nut is threaded over the rod to clamp the cross member to the flue structure, and means are provided within the housing for supporting the utensil to be heated.

Therefore, it is an important object of the present invention to provide a device which will collect and utilize the heat from the flue of a combustion-type lantern to heat a utensil, such as a coffeepot, with the weight of the utensil and its contents being supported by the lantern and the device.

Another object of the present invention is to provide a device of the type described which can be attached permanently to the lantern without substantial adverse effect upon the operation of the lantern.

Another object of the present invention is to provide a device of the type described which can be securely fastened to the lantern in operative position and withstand the normal handling and transportation abuse which portable camping equipment receives.

Another object of the present invention is to provide a device which, by reason of a novel combination of parts, can be constructed of lightweight materials, has only a few parts which are easily fabricated from plate material, and is easily assembled to thereby provide a device which can be economically manufactured.

Additional objects and advantages of the present invention will be evident from the following detailed description and drawings wherein:

In the drawings:

FIGURE 1 is a side elevation of a device constructed in accordance with the present invention shown in operating position on a lantern.

FIGURE 2 is a top view of a device constructed in accordance with the present invention.

FIGURE 3 is a cross-sectional view taken on line 3—3 of FIG. 2.

Referring now to the drawings, a combustion-type lantern is indicated generally by the reference numeral **10**. The lantern **10** has a tank **12**, which also serves as a base, which rests upon a supporting surface **14**. A valve control **16** is provided to control the flow of combustible fuel, such as propane, from the tank **12** to the lamp filaments **17** where the fuel is burned to produce light. A cylindrical glass housing **18** surrounds the filaments **17** and is topped by a protective roof **20**. An upstanding flue portion **22** (see FIG. 3) is provided in the center of the roof **20** and has side openings **24**. A cap **26** protects the top of the flue from rain and is secured in place by a nut **28** threaded onto an upstanding threaded rod **30**. The threaded rod **30** is anchored by some suitable means within the center of the upstanding flue portion **22**.

A stove device indicated generally by the reference numeral **32** is comprised of a cylindrical sleeve housing **34**. The sleeve housing is preferably fabricated from a rectangularly-shaped piece of sheet metal bent to form a cylindrical sleeve with overlapping edges **34***a* and **34***b*. Four strip members **36** are equally spaced around the inner periphery of the sleeve housing **34**. The strip members **36** have portions **36***a* which extend substantially the length of the sleeve housing to serve as stiffening means and are in abutting relation to the housing. Each strip member **36** also has an inturned portion **36***b* at the upper end thereof. The inturned portions **36***b* all project toward the axis of the sleeve housing **34** and are disposed in a common plane perpendicular to the axis of the sleeve housing **34**. A cross member **38** extends between two of the strip members **36** across the diameter of the sleeve housing **34**. The cross member **38** is provided with an aperture **40** aligned with the threaded rod **30** which, in the illustrated embodiment, is the axis of the sleeve housing **34**. The cross member **38** has upturned end portions **38***a* which preferably have square tips to engage the bottom of the inturned portions **36***b* of the strip members **36**.

Each upturned end portion **38***a* of the cross member **38** is provided with a threaded aperture adapted to receive a bolt **42**. Each strip member is preferably provided with at least two threaded apertures at spaced intervals to receive other bolts **42**. The sleeve housing **34** is provided with apertures in alignment with each of the threaded apertures in the strip members **36**, including apertures in both edges **34***a* and **34***b*. A threaded bolt fastener **42** is inserted through each aperture in the sleeve housing **34** and threaded into each of the two threaded apertures of the strip members **36** and into the threaded apertures of the upturned end portions **38***a* of the horizontal cross member **38** to securely interconnect all of the parts.

The sleeve housing is then placed around the upstanding flue **22** with the aperture **40** of the cross member **38** receiving the upstanding threaded rod **30** of the lantern. The threaded nut **28** is then screwed tightly on the rod **30** to hold the cross member **38** and hence the housing **34** in position. If desired, the lower end of the sleeve housing **34** can rest on the roof **20** of the lantern to give added support. However, this is not necessary because the edges of the upturned ends **38***a* of the cross member **38** abut against the lower surface of the inturned portions **36***b* to maintain the device horizontal and prevent tipping due to an unbalanced load resting on the inturned portions **36***b*.

From the above description, it will be apparent that a device has been described which can be permanently attached to a combustion-type lantern without interfering with the operation of the lantern. The bail **44** of the lamp can still be used to carry the lantern. The heating device **32**, by reason of its rigid attachment to the lantern, will not be displaced by the customary rough handling during outdoor excursions. A coffeepot **50**, for example, is easily suported within the cylindrical housing **34** on

the inturned portions 36*b* of the strip members 36 and will be heated sufficiently to percolate the coffee and to maintain the temperature of the coffee as high as desired for an unlimited time. Yet the ability of the lamp to give off light is not impaired.

It will be noted that the stove device 32 can easily be fabricated entirely from sheet metal. The cylindrical sleeve housing is fabricated of a rectangular piece of sheet material. The strip members 36 can readily be stamped from sheet material, the apertures drilled and tapped and the inturned portions 36*b* bent to shape. The cross member 38 can similarly be stamped from sheet material, the aperture 40 drilled, and the apertures which receive the bolts 42 also drilled and tapped. The upturned portions 38*a* can then be bent to shape. The apparatus can then easily be assembled by hand simply by putting the parts in their proper positions and using a screw driver to insert the screws 42. Therefore, it will be seen that the device can be easily and economically manufactured.

Having thus described a specific embodiment of my invention, it is to be understood that various changes may be made therein without departing from the spirit and scope of my invention as defined by the appended claim.

I claim:

In combination:

(*a*) a combustion type portable lantern having a cylindrical, upstanding flue structure, said flue structure having apertures in the sides thereof for venting of combustion gases therethrough;

(*b*) a roof structure beneath and supporting said upstanding flue structure;

(*c*) an upstanding rod extending coaxially through the cylindrical flue structure to a point thereabove and having threads on the upper end thereof;

(*d*) a cap resting on and covering the top of the flue structure, said cap having an upwardly facing horizontal surface defining an aperture receiving said rod;

(*e*) a cylindrical sleeve around the upper end of the cylindrical flue structure and around the cap, said cylindrical sleeve extending above said cap and defining with said cylindrical flue structure an annular passageway for gases;

(*f*) at least four parallel, sheet metal straps each secured to the inner surface of the cylindrical sleeve over a portion of their lengths and spaced circumferentially around said cylindrical sleeve, said sheet metal straps each having an inturned end portion extending radially inwardly from the cylindrical sleeve, said inturned end portions being substantially coplanar with each other to form a support for a cooking utensil, and each of said inturned end portions being of lesser length than the radius of said sleeve to define an opening coaxially positioned in said sleeve over the upper end of said threaded rod;

(*g*) a flat, elongated cross member resting on, and supported by, the upwardly facing, horizontal surface of said cap, said cross member having an aperture therethrough receiving the threaded rod;

(*h*) a pair of upturned end portions formed integrally on each end of said flat, elongated cross member and secured to opposite sides of said cylindrical sleeve in abutting and supporting contact with the inturned end portions of two of said sheet metal straps along horizontal lines of contact whereby said cylindrical sleeve is stably supported on said cap; and

(*i*) a nut on the threaded rod for securing the cap and the elongated cross member on the upper end of said upstanding cylindrical flue structure.

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