

Aug. 19, 1952

S. D. PERLMAN
HEATER OR STOVE

2,607,334

Filed Aug. 10, 1950

2 SHEETS—SHEET 1

Fig. 1.

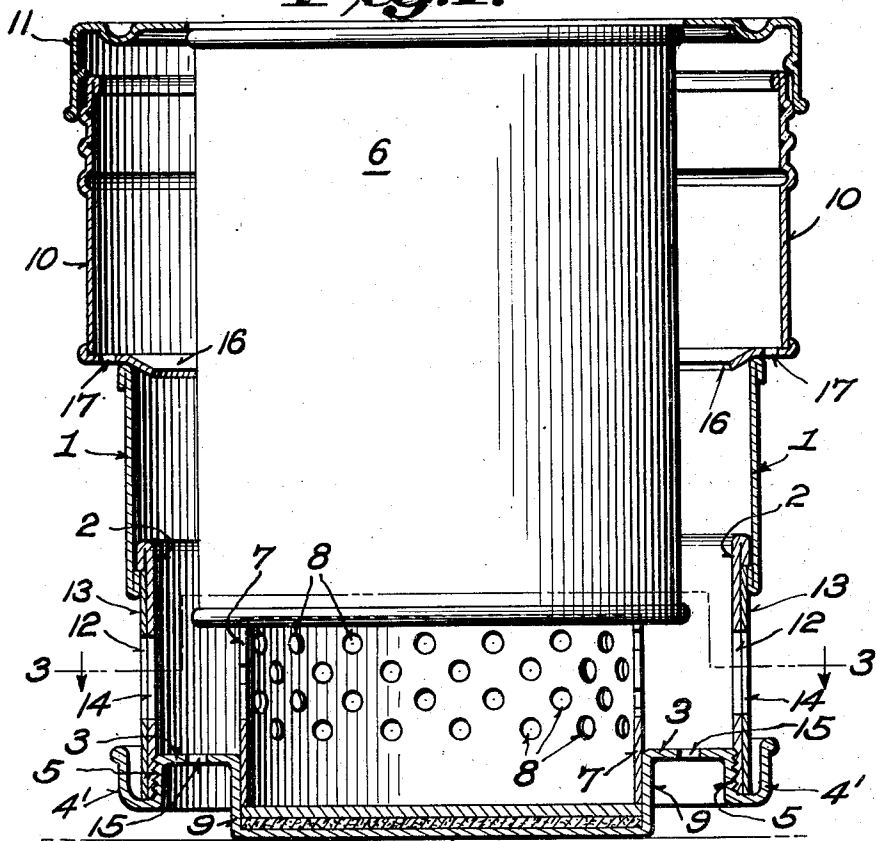


Fig. 4.

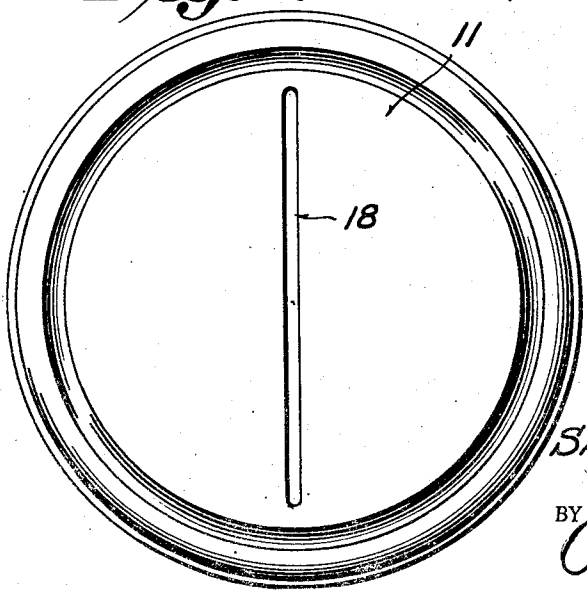
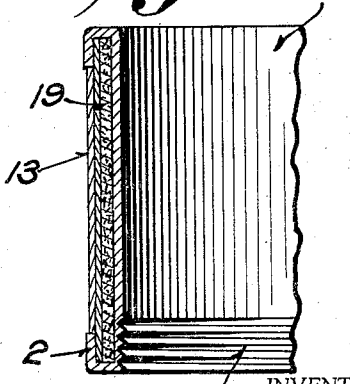


Fig. 5.



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2 SHEETS—SHEET 2

Fig. 2.

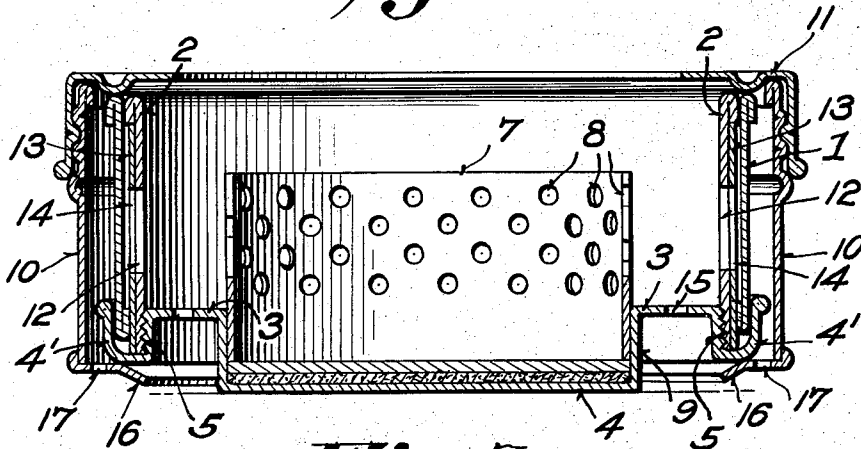
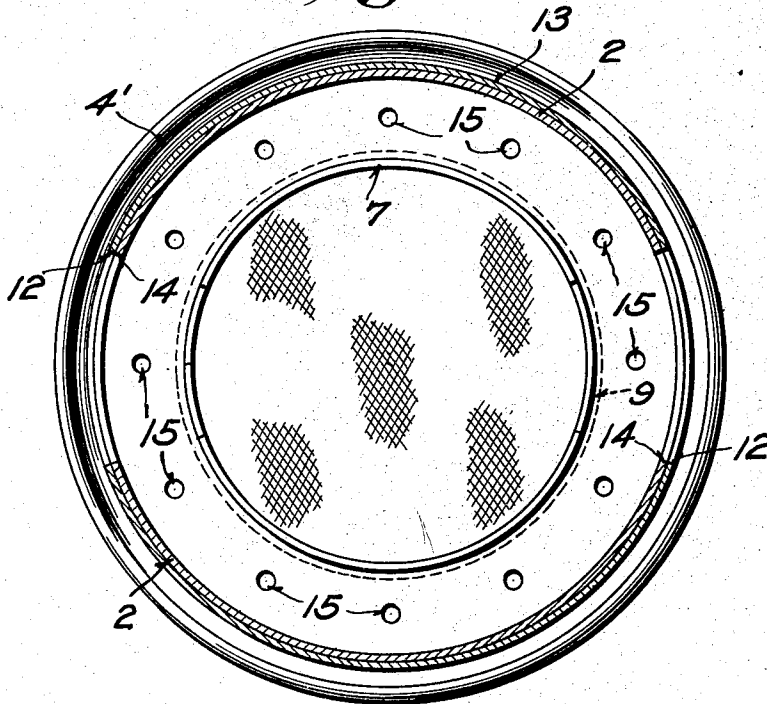


Fig. 3.



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UNITED STATES PATENT OFFICE

2,607,334

HEATER OR STOVE

Samuel Donald Perlman, Washington, D. C.

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3 Claims. (Cl. 126—9)

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This patent application presents certain new and useful improvements in heaters or stoves over that which has been shown in my co-pending application Serial No. 56,215, filed October 23, 1948, now Patent No. 2,530,621, of November 21, 1950, and also my co-pending application Serial No. 134,433, respectively, filed August 10, 1950.

One feature of the present invention is to provide for collapsing the body of the heater into compact form when not in use so as to place the device in good condition for transportation and storage and to enable convenient adjustment of the device from its collapsed condition to its extended form in condition for use.

Another object of the invention is to provide for placing solid fuel in position on the hearth of the heater without dismantling the device or interfering with the burning of the fuel remaining on the hearth and without exposing the burning fuel to the objectionable influence of the outside atmosphere, especially in cold weather which makes the device especially useful in cold climates.

These objects are accomplished without impairing or sacrificing any of the advantages of the original invention and the original device is not changed or altered with respect to its general operation. The present device retains all of the desirable features of my former devices and adds certain improved and desirable features thereto.

In the drawings—

Figure 1 is a vertical longitudinal sectional view of the heater of the present invention in its operable condition.

Figure 2 is a vertical longitudinal sectional view of the heater of the present invention in its collapsed condition.

Figure 3 is a plan section on the line 3—3 of Figure 1.

Figure 4 is a top plan view of the cover.

Figure 5 is a detailed cross sectional view taken vertically through one side of the bottom member or section of the body of the heater.

According to the present invention, the body of the heater is made in sections such as indicated at 1 and 2, which sections are preferably cylindrical in shape and are telescoped as shown so that the uppermost section 1 may be extended into the position shown in Figure 1 or collapsed upon the section 2 as shown in Figure 2. It will, of course, be understood that while only two telescopic sections have been shown, three or more may be employed.

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The lowermost body section 2 is carried by a bottom member 3 which is provided with a central depression 4 constituting the hearth of the present heater. At its outer circumferential edge the bottom member 3 is provided with a bead 4' which is open at its top and receives the lower edge of the body member 2, which member is screw-threaded to one of the walls of the bead 4' as shown at 5 so as to provide a rigid as well as a detachable connection with the body.

As in my prior inventions, the present device is intended for the heating of cans of food, one of which has been indicated at 6 in Figure 1. For the support of the can to be heated there is provided a support in the form of a shell 7 preferably provided with a large number of perforations 8 as shown and this shell is preferably cylindrical in form and fits within the surrounding walls 9 of the hearth 4 and may be connected or not connected thereto as may be preferred. The openings in this shell are of suitable size and number for the passage outwardly there-through of products of combustion and also for the passage inwardly of air from the ports 15 to support combustion.

Preferably the shell or support 7 is shorter than the body section 2 and while its top may be covered or provided with a covering plate as in my prior applications, it is preferably open and uncovered as the can, when seated upon the top edge of the shell or support, provides a desirable covering for the shell. Normally, the upper body section 1 is collapsed upon the lower section 2 as shown in Figure 2 and the body is housed or contained within a casing 10 as in Figure 2 and this housing or casing is provided with a cover 11 whereby the heater is effectually housed and protected when not in use. Any suitable connection may be provided between the cover and the casing or housing 10, that shown being a screw threaded connection.

To set up the heater in its operative condition, as in Figure 1, from its collapsed position as in Figure 2, the cover 11 is first removed, then the collapsed sections 1, 2 are removed as a unit upwardly through the open top of the casing 10; then the section 1 is pulled upwardly upon section 2 to the desired elevation thereon; then the casing 10 is placed in position with its flange 16 resting on the top of section 2. The device is then in condition for receiving a can 6 downwardly through the open top of the casing 10 until it rests upon the top of the baffle 7. Then the cover 11 may be put on the casing if desired.

With the heater in its operative condition, as

shown in Figure 1 of the drawings, to collapse it into the condition shown in Figure 2, the cover 11 is first removed; then the casing 10 is removed upwardly; then the body section 1 is pushed down upon the section 2 to its collapsed position; then the collapsed body sections are placed downwardly as a unit through the top of the casing 10 until said unit rests on the intumed flange 16; then the cover is placed on top of the casing 10, when the device will be in its collapsed condition for transportation or storage.

Section 1 of the body frictionally engages section 2 whereby it is supported and may be disposed at different elevations thereon. In the operative condition of the heater the casing 10 constitutes a part or section of the body. By vertically adjusting the section 1 on the section 2, the flange 16 may be made to occupy any selected elevation within the limits of the height or depth of the sections 1 and 2, whereby the air inlet 17 may thus be vertically adjusted to meet combustion conditions such as may be brought about by the use of different kinds of fuel, atmospheric and temperature changes, etc.

The bottom body section or member 2 may be folded or turned over outwardly at its top as shown, so as to form an annular shoulder, and the bottom edge of the upper section 1 may be turned inwardly or folded upon itself so as to form a shoulder to engage beneath the shoulder of the part 2 and prevent the separation of the body sections.

Provision is made for introducing solid fuel into the heater without removing the can or any of the parts of the heater by providing the lower body member 2 with an opening 12 and also by providing a slide 13 circumferentially embracing the part or body member 2 beneath the top shoulder thereof and mounted so as to be turned circumferentially upon the member 2 and this slide is provided with an opening 14 intended to be registered with the opening 12 so as to afford communication into the interior of the heater when the openings are in alignment. At other times the slide 13 effectually closes the opening 12.

The support or shell 7 is provided with one or more openings in alignment with the opening 12 in the body member 2 so that solid fuel introduced through the registered openings 12 and 14 may be conveniently passed therethrough and deposited upon the hearth 4. While any desired number of such openings 12 may be provided in the body member 2, two such openings have been shown in Figures 1 and 2 of the drawings.

The hearth 4 and the bead 4' support the bottom member 3 slightly above the ground or whatever the heater is placed upon. Inlet openings 15 for the introduction of air are provided in that part of the bottom which surrounds the walls 9 of the hearth and between said walls and the bead 4'. Also, the bottom of the casing or housing 10 is provided with an intumed flange 16 in which are openings 17 intended to supply secondary air to the heater.

It will here be explained that the vertical dimension of the shell 7 is such that unignited products of combustion rising from the hearth will strike the bottom of the can which will then act as a baffle causing the unignited products of combustion to spread radially outward and through the ports or openings 8 in the baffle 7 and into the annular chamber surrounding the

baffle 7, where they will rise between the can and the body and subsequently break into an annular flame around the can when such unignited products of combustion reach the air admitted through the inlet ports 17. The height of the ports above the top of the baffle may be regulated in that the body section 1 may be adjusted vertically on the body section 2 and so the ports 17 may be disposed at various positions between that shown in the drawing and the top of the section 2 to meet combustion changes as may be brought about by the use of different fuels, atmospheric and temperature changes, etc. throughout the entire length thereof.

The cover 11 of the casing or housing 10 preferably rests loosely upon the top of the can and is merely engaged loosely with the top of the housing so that steam and the like escaping from the open top of the can will have an opportunity to escape therefrom and products of combustion will likewise escape thereby providing an updraft such as will draw in air for ignition purposes through the inlet ports 17. It will, of course, be understood that the top of the can is removed before it is placed in the heater. The top of the can need not be entirely removed but may be partially removed therefrom and received upwardly through the slot 18 provided in the cover 11, all as shown in my prior application Serial No. 134,433.

In Figure 5 of the drawings there has been shown a sheet of insulating material 19 such as asbestos between the body 2 and the slide 13, and it will, of course, be understood that such an arrangement is contemplated in Figures 1 and 2 of the drawings. Furthermore, it will be noted that the material of the body 2 is bent over externally on the outside of the member both at the top and the bottom thereof so that the band or ring 13 may be mounted between the annular shoulders provided by such bending over of the material.

Having thus described my invention, what I claim is:

1. A heater comprising a body having an open top, a hearth supported within the body, a marginal baffle within and spaced from the upright wall of the body and rising from the hearth and terminating short of the top of the body, the top of the baffle constituting a support for a receptacle to be heated, the upright wall of the baffle being provided with openings constituting ports disposed for the inward admission of air to the hearth and also for outward escape of products of combustion, a bottom member for the body, said bottom member having an external peripheral bead open at its top and also provided with air induction openings, said body having its lower portion received within the bead and having a threaded connection with a wall of the bead.

2. A heater comprising a cylindrical body made up of telescopic sections, a hearth within the body, a cylindrical shell forming a baffle within and spaced from the upright walls of the body and rising from the hearth, the body having an air inlet disposed to supply air to the hearth, one of the upper body sections having an air inlet located above the top of the baffle, said upper body section being adjustable vertically whereby the elevation of the air inlet thereof may be selectively adjusted.

3. A heater comprising a body having an open top, a hearth supported within the body, a marginal baffle within and spaced from the upright

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walls of the body and rising from the hearth and terminating short of the top of the body, the top of the baffle constituting a support for a receptacle to be heated, the upright walls of the baffle being provided with ports disposed for the inward admission of air to the outer periphery of the hearth and also for outward escape for products of combustion, said baffle also being provided with a fuel inlet opening, the body having air inlet ports disposed to admit air to the ports of the baffle, and a bottom member provided upon the body and located below the hearth, said body being cylindrical in shape and including upper and lower telescoped sections, the lower section having a fuel inlet opening aligned with the fuel inlet opening of the baffle, said body sections being bent to form an external annular shoulder at the top of the lower section and an internal annular shoulder at the bottom of the upper section, the top of the lower section being within the bottom portion of the upper section, the top shoulder of the lower section overhanging the bottom shoulder of the upper section to prevent separation of the sections, and an annular circumferentially movable band surrounding the lower body section and lying between the overlapped portions of the two sections, said band being provided with a fuel inlet

opening for registration with the fuel inlet of the lower body section.

SAMUEL DONALD PERLMAN.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

	Number	Name	Date
10	936,482	Seeley	Oct. 12, 1909
	1,238,080	Ball	Aug. 28, 1917
	1,304,088	Patterson	May 20, 1919
	1,391,415	Schonitzer	Sept. 20, 1921
15	1,437,073	Popper	Nov. 28, 1922
	1,487,474	Rhodes	Mar. 18, 1924
	1,508,334	Ingalls	Sept. 9, 1924
	1,739,138	Giragosian	Dec. 10, 1929
	2,381,906	Howard	Aug. 14, 1945
20	2,517,254	Steele	Aug. 1, 1950
	2,530,721	Perlman	Nov. 21, 1950

FOREIGN PATENTS

	Number	Country	Date
25	2,475	Great Britain	of 1915
	117,757	Great Britain	Aug. 1, 1918
	580,829	France	Sept. 11, 1924
	111,961	Switzerland	Sept. 16, 1925
	599,185	Germany	June 27, 1934