

W. H. HOWARD.
FUEL OIL BURNER.
APPLICATION FILED NOV. 25, 1910.

1,019,648.

Patented Mar. 5, 1912.

Fig. 1.

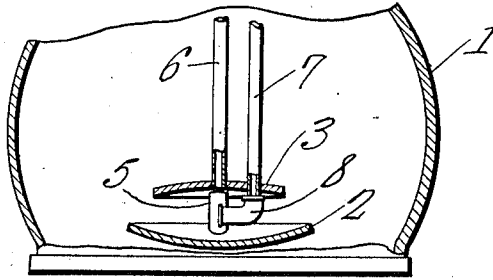


Fig. 2.

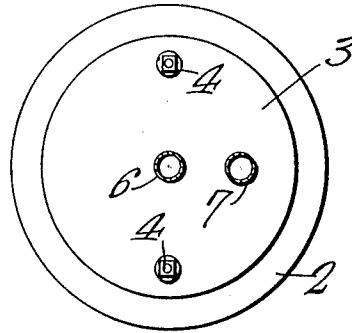


Fig. 3.

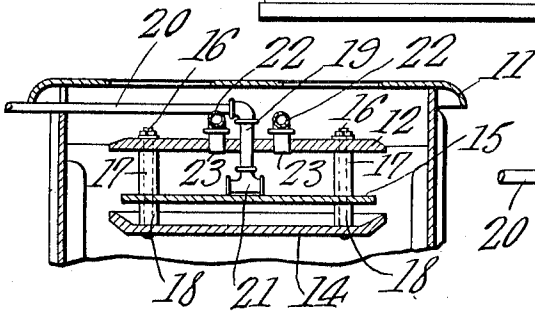
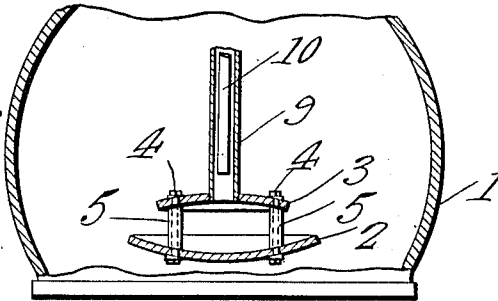


Fig. 4.

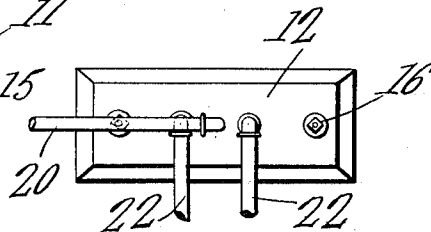


Fig. 5.

Witnesses

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FUEL-OIL BURNER.

1,019,648.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed November 25, 1910. Serial No. 594,099.

To all whom it may concern:

Be it known that I, WILLIAM H. HOWARD, a citizen of the United States, residing at Wheatland, in the county of Oklahoma and State of Oklahoma, have invented a new and useful Fuel-Oil Burner, of which the following is a specification.

It is the object of this invention to provide a burner for the consumption of oil, the burner being so constructed that a maximum degree of heat will be obtained from the fuel.

Another object of the invention is to provide novel means for the dispersion and retention of the fuel, during the burning thereof, and to provide novel means whereby a draft may be supplied to the fuel as it burns.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 is a vertical section, showing one form of the invention, parts being broken away and sectioned; Fig. 2 is a top plan of the burner proper as shown in Fig. 1; Fig. 3 is a vertical section setting forth a modified form of burner; Fig. 4 is a vertical section showing a still further modification in the device, parts being depicted in elevation; and Fig. 5 is a top plan of the burner which appears in Fig. 4.

Referring particularly to Fig. 1, a stove is shown conventionally, and indicated by the numeral 1, the burner shown in Fig. 1 being adapted primarily to be employed in those cases in which it is desired merely to heat the air of an apartment.

The burner shown in Fig. 1 includes a downwardly concaved receiving pan 2, and an upwardly concaved deflector 3, located above the receiving pan 2. The receiving pan 2 and the deflector 3 are united by means of bolts 4 or other securing devices. Collars 5, interposed between the receiving pan 2 and the deflector 3, and surrounding the bolts 4, constitutes a means for maintaining the receiving pan 2 and the deflector 3 properly spaced apart. The fuel-supply pipe 6 extends through the deflector 3, without, however, protruding to any appreciable ex-

tent below the lower face of the deflector. The draft pipe 7 whereby air is supplied to the space between the receiving pan 2 and the deflector 3, is extended through the deflector 3, this draft pipe 7 being provided at its lower extremity, with an elbow 8, the outlet of which is disposed toward the axis of the fuel-supply pipe 6.

It will be seen that as the fuel passes downwardly through the supply pipe 6, the fuel will be received in the pan 2, to be there consumed, the draft pipe 7 delivering air between the elements 2 and 3, to effect a perfect combustion. As the fuel is consumed, the element 3 will serve to deflect the flame outwardly, toward the periphery of the stove 1, thus obtaining a maximum effect by heating a relatively large area of the side wall of the stove 1.

If desired, as shown in Fig. 3, the draft pipe 9 may be of relatively large diameter, so as to inclose the fuel supply pipe 10. Ordinarily, when the device is fashioned as shown in Fig. 3, the draft pipe 9 terminates adjacent the lower face of the deflector, the lower end of the fuel-supply pipe 10 being elevated slightly above the deflector, so that the air may enter the space between the deflector 3 and the receiving pan 2 of Fig. 3, along with the fuel.

The form of the invention shown in Figs. 4 and 5 is adapted primarily to be employed in stoves which are employed for cooking purposes. In Fig. 4, the stove is denoted generally by the numeral 11, and of course may be of any type. The deflector is shown at 12, the receiving pan at 14, a drip plate 15 being disposed between the deflector 12 and the receiving pan 14. Bolts 16, or other securing devices, are extended through the deflector 12, through the receiving pan 14, and through the drip plate 15. These bolts 16 carry collars 17, disposed between the drip plate 15 and the deflector 12, other collars 18 being mounted upon the bolts 16 between the drip plate 15 and the receiving pan 14. Obviously, these collars 17 and 18 serve to maintain the deflector 12, the drip plate 15 and the receiving pan 14 in proper, spaced relation with respect to each other. The fuel supply pipe 19 is extended through the deflector 12. If desired, the upper end of the fuel-supply pipe 19 may carry a laterally extended branch 20, prolonged through the side wall of the stove 11. At its lower end, the fuel-supply pipe 19 carries a T

21, the T resting upon the drip plate 15. Thus the drip plate constitutes an abutment for the lower end of the fuel supply pipe 19, which pipe constitutes the means for supporting the burner, as an entirety. It will be seen that this T 21 serves to deliver the fuel upon the drip plate 15, the fuel flowing over the drip plate in opposite directions. The drip plate 15 is of less length and width than the receiving pan 14, so that the drip plate 15 will discharge peripherally into the receiving pan. Draft pipes 22 are provided, these pipes carrying angular extensions 23 extended through the deflector 12 and rotatable therein, so that the draft pipes 22 may be swung in any desired direction, to extend outwardly through the front of the stove, or to extend outwardly, in opposite directions, through the ends of the stove, as circumstances may warrant. The angular extensions 23 of the draft pipes 22 discharge above, and adjacent the ends of the T 21, a proper combustion being thus secured. The fuel will be distributed by the T 21 upon the drip plate 15, and there be consumed, any excess of oil finding its way into the receiving pan 14 to be consumed there. Obviously, the fuel burning in the receiving pan 14, will serve to heat the drip plate 15, thus promoting the combustion of the fuel.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, an open, imperforate receiving pan; a deflector of no greater lateral extent than the pan, located above the pan; a fuel oil supply pipe and a draft pipe, both having imperforate side walls, and both discharging through the deflector; one pair of securing elements,

the members of which pair are located upon opposite sides of the pipes, and serve to unite the deflector with the receiving pan within the contour of the deflector and the pan; and collars surrounding the securing elements, and abutting against the deflector and the receiving pan.

2. In a device of the class described, a receiving pan; a deflector above and secured to the receiving pan; a drip plate located between and secured to the deflector and the receiving pan, the drip plate discharging peripherally into the receiving pan; a fuel-supply pipe extended through the deflector and terminated adjacent the drip plate; and a draft pipe extended through and rotatable in the deflector.

3. In a device of the class described, a receiving pan; a drip plate above the receiving pan; a deflector above the drip plate; securing devices uniting the deflector, the drip plate and the receiving pan; collars upon the securing devices, upon both sides of the drip plate, to hold the latter spaced from the receiving pan and the deflector; a fuel-supply pipe extended through the deflector; a T upon the end of the fuel-supply pipe, and resting upon the drip plate; and draft pipes extended through the deflector and discharging above and adjacent the extremities of the T.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. HOWARD.

Witnesses:

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