Oct. 31, 1933. R. GOTTHOLT 1,933,427

OIL BURNER

Filed Dec. 29, 1932

Fig. 1.

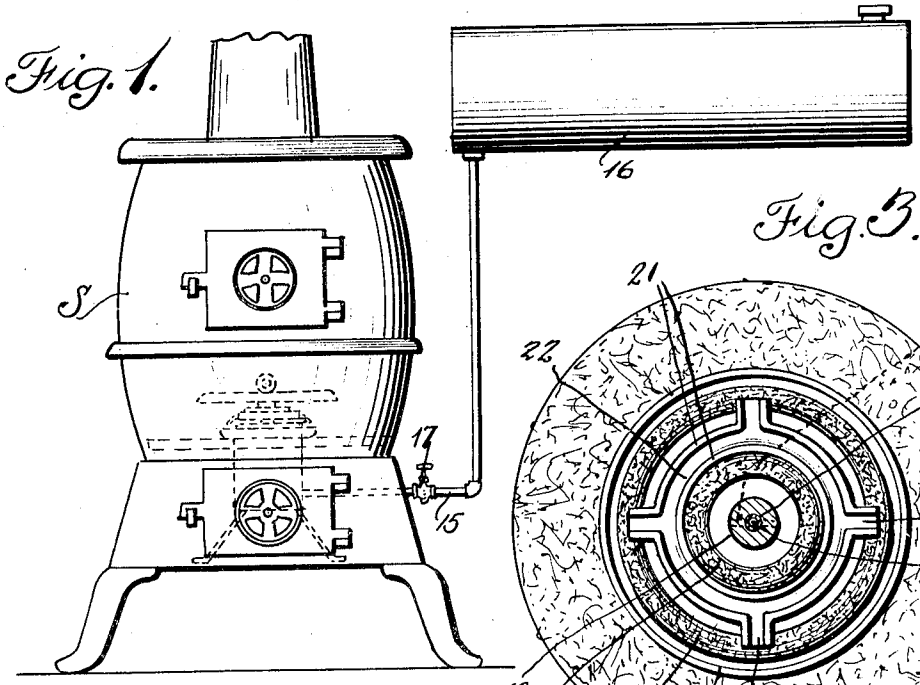


Fig. 3.

Fig. 2.

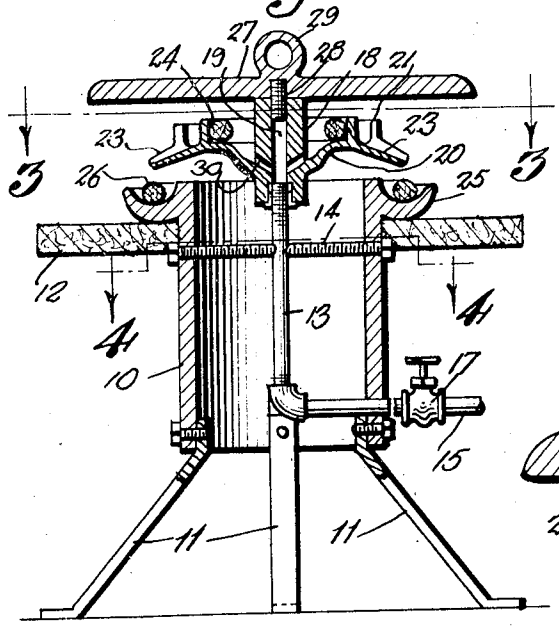


Fig. 4.

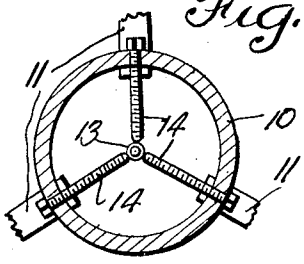
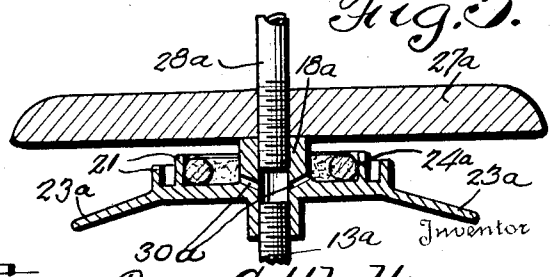


Fig. 5.



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OIL BURNER

Royce Gottholt, Marfa, Tex.

Application December 29, 1932
Serial No. 649,397

2 Claims. (Cl. 158—91)

This invention relates to certain new and useful improvements in oil burners.

The primary object of the invention is to provide an oil burner for heating stoves and the like that is of extremely simple construction with the fuel supply pipe to the burner head readily accessible for cleaning purposes and comprising an auxiliary burner element or wick receiving an excess of fuel fed to the main burner wick for consumption and eliminating the waste or flow of excess fuel from the burner.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:—

Figure 1 is a side elevational view of a heating stove equipped with the improved oil burner that is illustrated by dotted lines within the stove;

Figure 2 is a vertical lonigtudinal sectional view of the oil burner showing the main burner wick in direct communication with the fuel or oil supply and the auxiliary burner wick in communication with the main burner wick;

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 2, showing the guide channels for directing excess oil from the main burner wick to the auxiliary burner wick;

Figure 4 is a horizontal sectional view taken on line 4—4 of Figure 2, showing the centering screws for the oil supply pipe within the guide tube of the burner; and

Figure 5 is a detail sectional view showing another form of flame spreader plate and pipe section extending thereabove to facilitate cleaning of the oil line or supply pipe.

Referring more in detail to the accompanying drawing, the reference character S designates a heating stove in which the grate structure has been removed and the oil burner mounted in the stove as indicated by dotted lines in Figure 1.

The oil burner comprises a pipe section or tube 10 carrying at its lower end supporting feet 11 for mounting the burner on the bottom wall of the ash chamber of the stove and said tube 10, adjacent its upper end, carries an annular plate 12 formed of asbestos or the like occupying the position of the usual stove grate within the stove with its outer edge contacting the wall of the stove to reduce up-draft through the stove and to eliminate the dripping of any excess oil supply onto the bottom of the stove.

A perpendicular oil supply pipe 13 for the burner is located centrally of the tube 10 and is so retained by the radial screws 14 threaded through the sides of the tube 10 with the inner ends thereof engaged with the oil supply pipe 13, the lower end of the oil supply pipe 13 having an elbow connection with an oil line 15 in communication with an oil supply tank 16, the oil line 15 having a manual control valve 17 set therein as illustrated. The oil line 15 extends through a side wall of the stove and also the tube 10 for attachment to the lower end of the oil supply pipe 13, the oil line 15 carrying the valve 17 exteriorly of the stove as shown in Figure 1. A burner head is carried by the upper end of the oil supply pipe 13 above the upper end of the tube 10 and includes a central body portion 18 having a longitudinal bore 19 therein having threaded connection at its lower end with the upper end of the oil supply pipe 13. An annular pan 20 is carried by the central body portion 18 of the body head and said pan is provided with a pair of upstanding concentric annular ribs 21 defining an annular channel 22, the outer rib being broken at intervals to provide oil drippers 23. A burner wick 24 is mounted in the pan 20 inwardly of the inner annular rib 21 and contacting the same as shown in Figure 2.

The auxiliary burner includes an annular trough 25 carried by the upper end of the tube 10 and disposed beneath the drippers 23 of the pan 20, the trough 25 having a burner wick 26 therein.

A flame spreader 27 in the form of a disk plate is detachably secured to the upper end of the central body portion 18 of the burner head by means of a screw nipple 28, the flame spreader plate 27 having a handle 29 rising centrally therefrom to facilitate placement thereof on the burner head.

The flow of oil to the burner head is controlled by the hand valve 17, the oil flowing upwardly through the oil supply pipe 13 to enter the bore 19 of the central body of the burner head and to pass from said bore into the pan 20 by way of the lateral ports 30 extending through the body portion 18 of the burner head above the pan 20 as clearly shown in Figure 2, the oil saturating the wick 24 which constitutes the main burner. The flame is directed outwardly and is deflected by the flame spreader plate 27 for the complete heating of air rising through the tube 10 under control of the usual stove dampers. Excess oil fed to the pan 20 is received in the annular channel 22 and escapes by way of the drippers 23 into the channel mem-

ber 25 for absorption by the wick 26 therein, this wick being automatically ignited by having the flame of the main burner deflected thereon. The mounting of the asbestos plate 12 prevents the upward flow of air exteriorly of the tube 10 and causes the air to flow upwardly through said tube and also prevents any excess oil that may overflow from the trough 25 from entering the bottom of the stove S. When it is desired to clean the oil supply pipe 13 and bore 19 in the central body portion 18 of the body head, the burner plate 27 is removed from the burner head and a suitable instrument may be inserted in the bore 19, ports 30 and pipe 13.

In the form of the invention illustrated in Figure 5, the flame spreader plate 27*a* is connected to and supported upon the central body portion 18*a* of the burner head by means of the fitted pipe 28*a* which projects above the spreader plate and permits access to the oil supply pipe 13*a* without the necessity of removing the flame spreader plate 27*a*.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent, and while there are herein shown and described the preferred embodiments of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

I claim:—

1. In an oil burner of the character described, a tubular member, an oil supply pipe located centrally thereof, a burner head supported on the upper end of the pipe above the tubular member, a flame deflector plate detachably connected to the burner head, and an auxiliary burner element at the upper end of the tubular membel below the burner head, the burner head including a central body portion having an axial bore in communication with the oil supply pipe, an annular burner pan carried by the body portion, the body portion having lateral ports between the bore and pan, a wick in the pan, a wick in the auxiliary burner element and drippers carried by the marginal edge of the pan for directing excess oil from the pan into the auxiliary burner element.

2. In an oil burner of the character described, a tubular member, an oil supply pipe located centrally thereof, a burner head supported on the upper end of the pipe above the tubular member, a flame deflector plate detachably connected to the burner head, and an auxiliary burner element at the upper end of the tubular member below the burner head, the burner head including a central body portion having an axial bore in communication with the oil supply pipe, an annular burner pan carried by the body portion, the body portion having lateral ports between the bore and pan, a wick in the pan, and means for directing excess oil from the pan into the auxiliary burner element.

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