

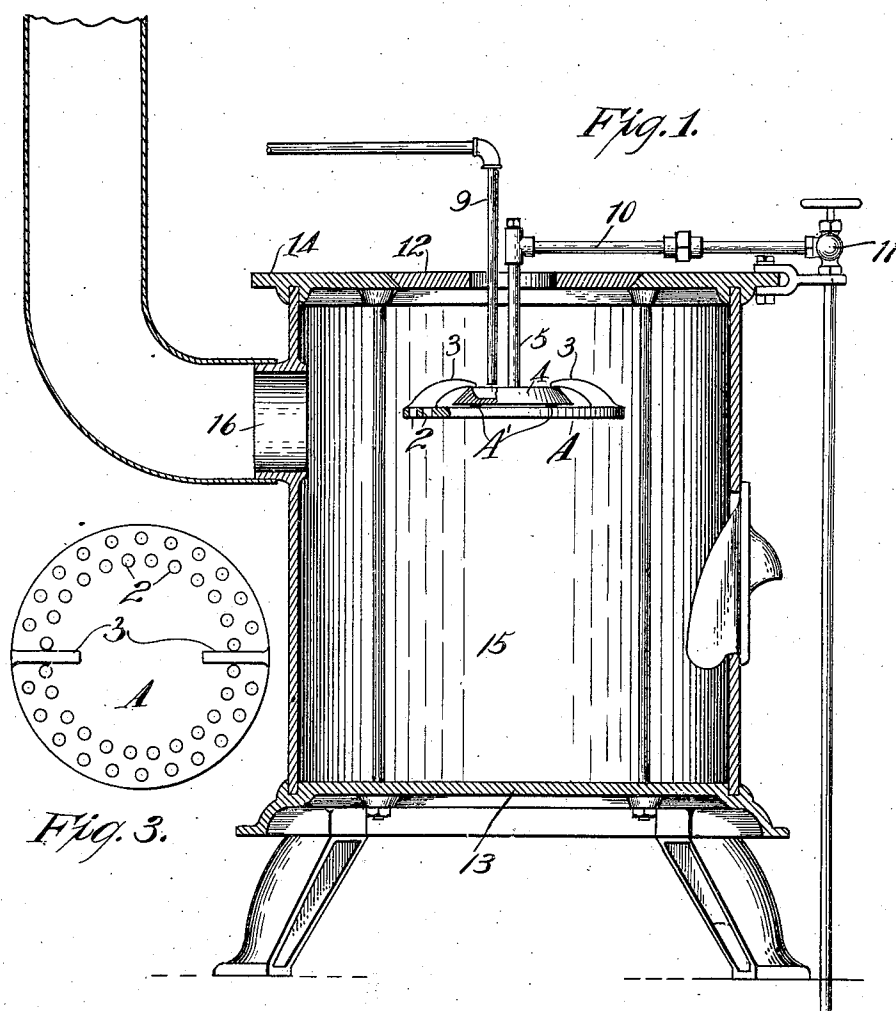
No. 846,993.

PATENTED MAR. 12, 1907.

W. R. GILMORE.

OIL BURNER.

APPLICATION FILED JUNE 20, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM R. GILMORE, OF WILLIAMS, CALIFORNIA.

OIL-BURNER.

No. 846,993.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed June 20, 1906. Serial No. 322,542.

To all whom it may concern:

Be it known that I, WILLIAM R. GILMORE, a citizen of the United States, residing at Williams, in the county of Colusa and State of California, have invented new and useful Improvements in Oil-Burners, of which the following is a specification.

My invention relates to a burner for oil and similar petroleum products.

It consists in the combination of parts and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a vertical section of the improved burner. Fig. 2 is an enlarged section of a burner. Fig. 3 is a plan view of a member. Fig. 4 is a perspective view of the stove-lid.

My invention is especially designed to apply to burners which may be used in conjunction with heating or cooking stoves.

The burner consists of a flat metal plate A, having perforations 2 made through it. These perforations may be as many in number as the necessary draft and passage of the products of combustion require. Upon the opposite sides of this plate are formed or secured the raised or inwardly-projecting lugs 3, and these lugs serve for the purpose of locking the plate or disk 4 to the plate A.

The disk 4 has its lower surface slightly concaved, and pins A' cause it to be spaced a short distance from the plate A to allow the hydrocarbon, which is fed through the disk, to escape around its periphery.

Through the center of the disk is made an opening which receives the pipe 5. This pipe may be screwed or otherwise secured into the disk and connects with the opening through the bottom and center of the disk, which is contracted, as shown at 6.

The top of the disk has an annular depression or channel 7 around the central portion, through which the pipe 5 passes, and this is adapted to receive water, which may under certain conditions be delivered into this channel through a pipe 9. These feed-pipes 5 and 9 extend downwardly through an opening in the top of the stove, so that the burner is suspended just below the top of the stove. Any suitable connection may be made for the supply of oil for the pipe 5, as through the pipe 10, and the supply may be controlled through a suitable needle or other valve, as at 11.

In order to introduce and remove the

burner, I have shown a cover-plate made of semicircle-segments 12, having a central hole through which the pipes pass, as before described, and this cover may fit one of the usual or especially-formed holes in the stove-top. The cover is divided diametrically, as shown, and the meeting edges are rabbeted or otherwise formed to overlap, so that when it is desired to introduce the burner, the cover being removed, the burner can be introduced through the opening, and the cover-segment sections being then replaced the opening will be closed with the exception of the central portion, which is large enough to supply the required amount of air in the form of a downdraft.

For a heating-stove I have shown a construction comprising a base 13 and a top 14 and cylindrical or other shaped body portion 15, the ends of the latter fitting grooves or channels in the bottom of the plate and the whole being held together by bolts extending through the top and bottom. With-in such a structure the burner is suspended with relation to the passage 16, which connects with the chimney, and the operation will then be as follows:

Oil or hydrocarbon being first admitted through the pipe 5 will pass through the disk 4 and will spread under the concave portion, escaping between the periphery and the plate A, where it may be ignited as soon as the plate and disk become sufficiently heated. The hydrocarbon will then become vaporized and the vapor will be discharged in a thin sheet around the disk 4 and diverging in every direction and through the holes 2, which are made through the plate A, thus causing the plate to become red hot. This plate being the receiver of the discharged oil forms a generator and insures a very complete combustion and a strong smokeless flame, which is spread by the draft throughout the stove or range.

It will be understood that this device may be used in conjunction with cooking or other stoves or ranges with similar results. If it is desired to dismount the parts of the apparatus, the cover-sections 12 may be removed, the burner-pipe 10 may be separated by means of a suitable coupling, and after removing from the stove the disk 4 can be disengaged from its holding-lugs 3, so that all parts are opened for easy inspection.

It will be understood that the position of the burner and the draft-opening around it

depends upon the form of the fire-box and is always such as to diffuse and distribute the heat to the best advantage.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an oil-burner, the combination with a stove or heater, of a plate suspended therein and having an opening in its central portion, a second plate of larger diameter than the first plate having means engaging said first plate to suspend the second plate directly from and below the first plate, said second plate having perforations through it outside of the edge of the first plate, and a hydrocarbon-supply pipe fixed to the first plate and connecting with the central opening thereof, said plates being spaced from each other a short distance to form a passage for the hydrocarbon therebetween, and the perforations of the second plate allowing a downdraft to pass near the vapor-outlet between the said plates, and a pipe adapted to

deliver a fluid upon the upper surface of said first plate.

2. A hydrocarbon and oil burner including a plate having vertical holes made around its periphery, and a disk secured to the plate and forming therewith a shallow central chamber with escape-passages around the periphery of the disk, an annular channel formed in the top of the disk, an oil-pipe connecting through the center of the disk, with the chamber beneath, means for supplying water into the annular channel of the disk, and a stove or heater within which the burner is suspended, said heater having an air-passage around the oil-supply pipe, and a draft-passage.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM R. GILMORE.

Witnesses:

T. H. NOURSE,
C. H. HARVEY.