

NO. 766,862.

PATENTED AUG. 9, 1904.

J. A. YOUNG.
OIL BURNER.

APPLICATION FILED SEPT. 26, 1903.

NO MODEL.

Fig. 1.

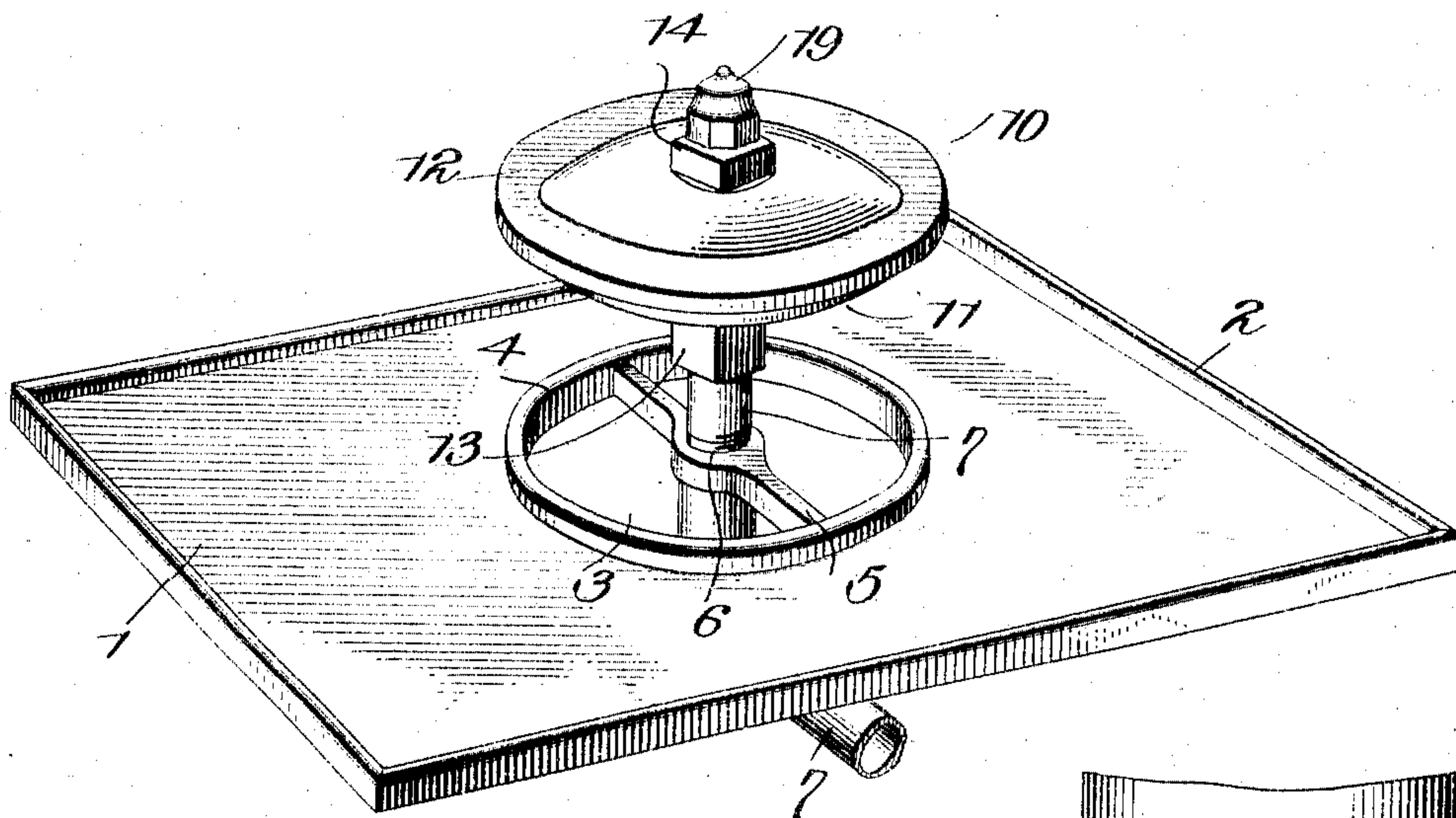
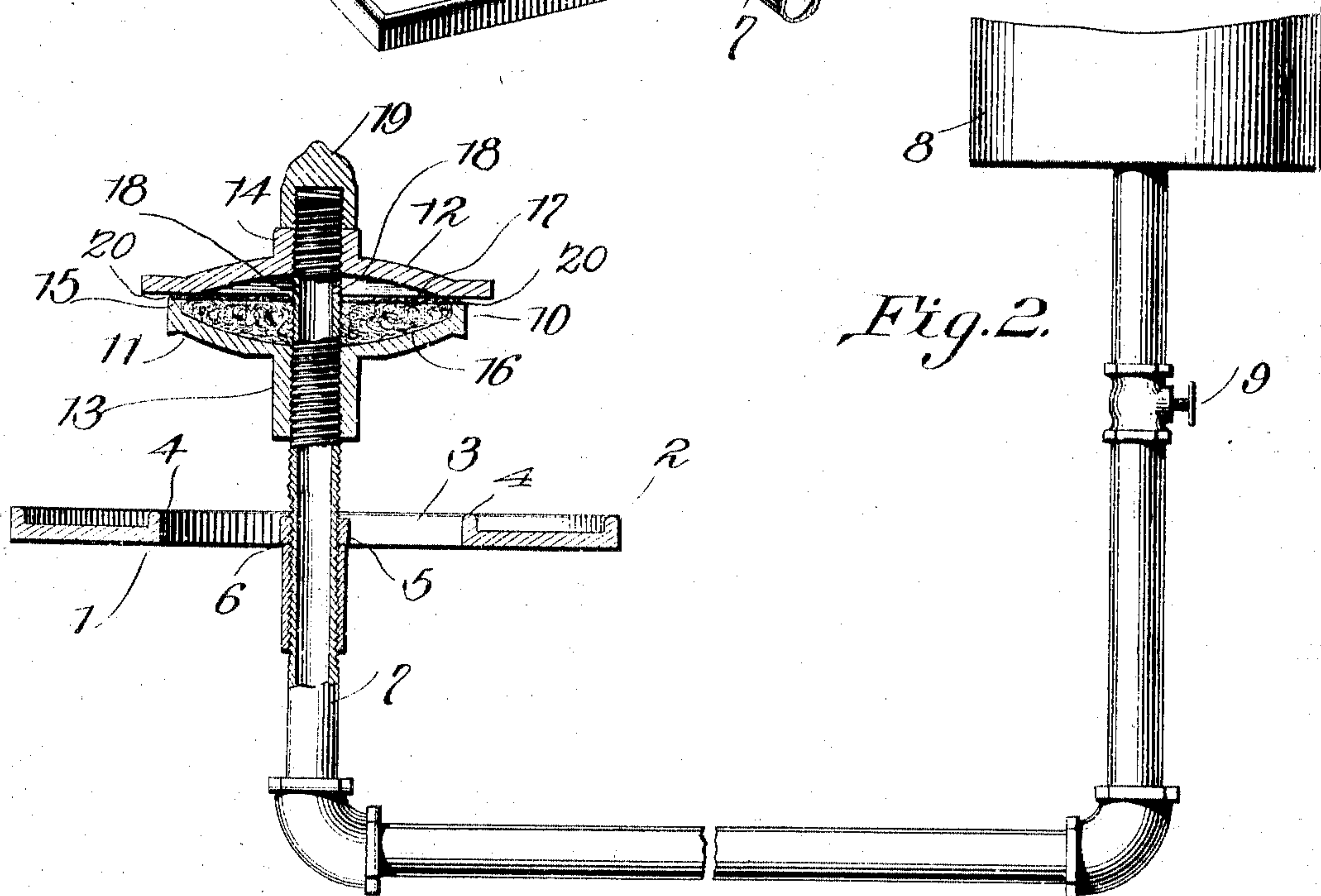


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. YOUNG, OF LOS ANGELES, CALIFORNIA.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 766,862, dated August 9, 1904.

Application filed September 26, 1903. Serial No. 174,832. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. YOUNG, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Oil-Burner, of which the following is a specification.

My invention relates to oil-burners, and particularly to that class of burners which are employed in heating and cooking stoves for burning crude oil, and has for its objects to produce a device of this character of simple construction which will be efficient in operation, one in which the oil will be rapidly converted into vapor and the flow of the latter regulated, and one in which a perfect combustion will be established, thus obviating the accumulation of soot, smoke, or other products of combustion.

To these ends the invention comprises the novel details of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of my improved device. Fig. 2 is a central vertical section through the same.

Referring to the drawings, 1 indicates a base-plate adapted to be seated in the fire-box of a stove and provided with a peripheral upstanding flange 2 and a central air-opening 3, having a surrounding flange 4. These flanges serve in practice to retain upon the plate any oil which may escape thereto, as hereinafter described.

5 is a web extending across the air-opening 3 and provided with a central enlargement having a vertical internally-threaded opening 6, into which is tapped an oil-conducting pipe 7, leading from a suitable oil tank or reservoir 8 and provided outside of the stove with a pin-valve 9 for controlling the flow of oil to a burner 10.

The pipe 7 has an externally-threaded portion arising vertically from the base-plate and terminating a suitable distance above the latter. This vertical portion of the pipe is designed to sustain directly above the air-opening 3 the burner 10, which comprises a lower cup-shaped member 11 and an upper member consisting of a shield or spreader 12,

both of which parts are tapped onto the pipe 7, are removable therefrom, and are provided with squared shanks 13 14, respectively, for engagement by a wrench in removing them. The member 11, which receives the oil flowing through the burner, is provided with a peripheral upstanding flange 15, which prevents the escape of oil and which serves as a bearing for the lower face of shield 12, which latter is adjustable toward and from the lower member and is of a size to project laterally beyond the same. The burner has an inner chamber 16, which is usually filled with asbestos, over which latter is placed a wire-gauze retainer 17, disposed between the asbestos and the shield 12.

18 indicates oil inlet or feed openings formed through the walls of the pipe 7 within the chamber 16 and through which oil is fed to the burner, these openings being located above the retainer 17, whereby liability of their becoming choked by the asbestos filling is wholly obviated, while 19 is a cap tapped onto the upper end of pipe 7 for closing the same.

In practice by opening the valve 9 the oil is permitted to flow through the pipe 7 to the burner, and after the latter has been heated initially the incoming oil is converted into vapor, as usual, and escapes from the chamber 16 through the narrow opening 20 between the flange 15 of the cup 11 and the edge of the shield 12, which latter is adjustable to regulate the size of the said discharge-opening. It will be observed that when readjustment of the discharge-opening is desired this is obtained by first loosening the cap or closure 19 and then properly adjusting the shield or spreader 12, which when adjusted will be retained securely in position by tightening the cap or closure against it, said cap thus performing the function of a jam-nut. The piece of wire-gauze which forms the retainer 17 is extended between the flange 15 and the spreader 12, and it may, if desired, be clamped between said members, so as to prevent it from buckling and becoming displaced from its proper position. It is obvious that when the wire-gauze is thus clamped the flame-orifices will be formed by the in-

terstices between the strands of which the wire-gauze is composed. If a larger flame-orifice is desired and the spreader 12 in order to enlarge said orifice is spaced from the flange 15, it is obvious that the wire-gauze retainer will not be actually clamped; but being extended between the opposing members 15 and 12 it will still be prevented from buckling and will be retained in its proper position.

It will be seen that the air-supply for the support of combustion is compelled to pass through the orifice 3 and that it will therefore necessarily be heated before reaching and commingling with the oil-vapor, thus establishing a more perfect combustion and obviating the accumulation of products of the latter. The efficiency of my improved burner is correspondingly increased.

From the foregoing it will be seen that I produce a device of simple construction which is admirably adapted for the attainment of the ends in view and one in which the parts may be readily removed for purposes of cleaning or renewal. In attaining these ends I do not limit myself to the precise details herein set forth, inasmuch as minor changes may be made therein without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

1. In an oil-burner, an exteriorly-threaded supply-pipe, a cup mounted upon said pipe and having an upstanding peripheral flange, a spreader adjustable upon the threaded portion of the pipe above the cup, a refractory

filling in the cup, a gauze retainer above said filling extending between the flange of said cup and the superimposed spreader, and a cap constituting a closure upon the upper threaded end of the pipe and engaging the upper edge of the spreader.

2. An oil-burner comprising an exteriorly-threaded supply-pipe, a cup-shaped reservoir mounted upon said pipe, a shield or spreader adjustably engaging said pipe to regulate the discharge-orifice between said cup-shaped reservoir and pipe, and a jam-cap forming a closure for the upper end of the pipe and abutting upon the upper side of the spreader.

3. In a device of the class described, an exteriorly-threaded supply-pipe, a peripherally-flanged base-plate having an air-opening surrounded by an upstanding flange and a transverse web having a threaded sleeve exteriorly engaging the supply-pipe, a cup-shaped reservoir mounted upon the said pipe above the air-opening in the base-plate, a spreader adjustably engaging the pipe above the reservoir and adjustable with relation to the latter to regulate the size of the flame-orifice, and a cap constituting a closure for the upper end of the pipe and engaging the spreader to lock the latter in adjusted position.

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

JOHN A. YOUNG.

Witnesses:

H. S. C. LEAVITT,
HARRY JACKINS.