

No. 742,064.

PATENTED OCT. 20, 1903.

E. B. RAYMOND.

OIL BURNER.

APPLICATION FILED OCT. 28, 1902.

NO MODEL.

Fig. 1.

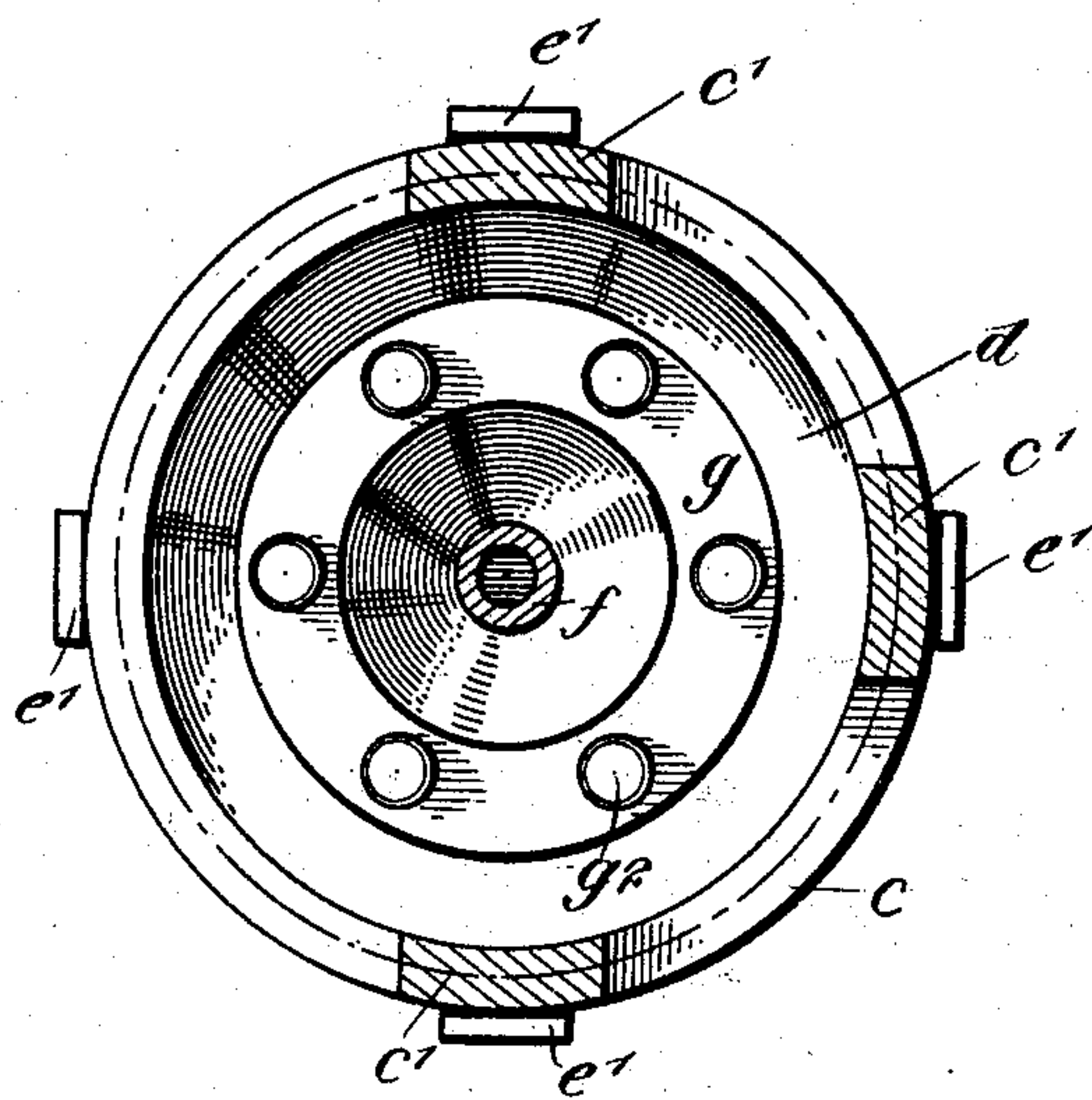
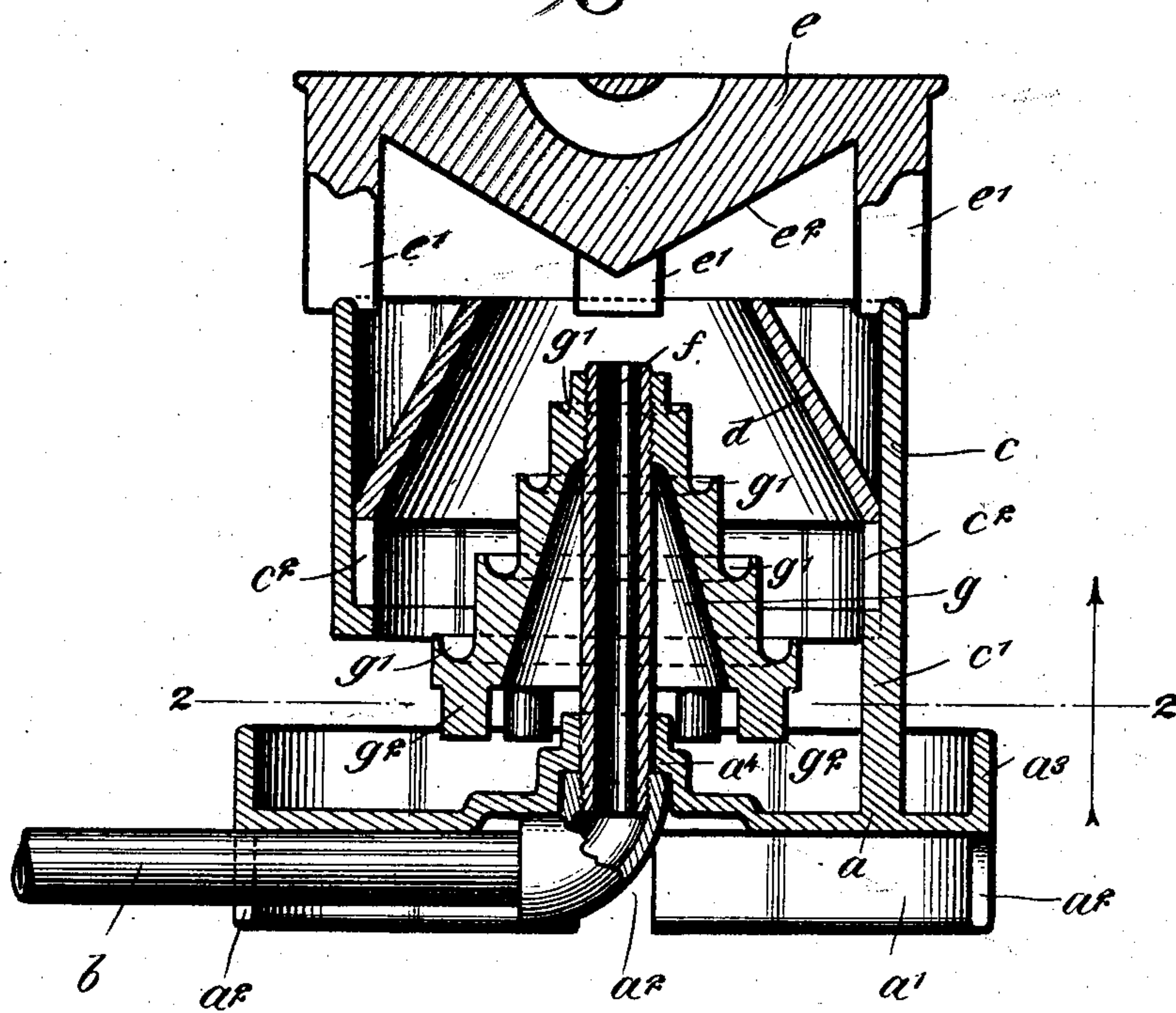


Fig. 2.

WITNESSES:

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EMMET B. RAYMOND, OF DALLAS, TEXAS, ASSIGNOR TO RAYMOND OIL BURNER COMPANY, A PRIVATE CORPORATION OF NEW JERSEY.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 742,064, dated October 20, 1903.

Application filed October 28, 1902. Serial No. 129,123. (No model.)

To all whom it may concern:

Be it known that I, EMMET B. RAYMOND, a citizen of the United States, and a resident of Dallas, in the county of Dallas and State of Texas, have invented a new and Improved Oil-Burner, of which the following is a full, clear, and exact description.

This invention relates to a burner which may be used either with crude or refined oils, and the burner is adapted particularly to be applied to the fire-boxes of stoves.

It comprises certain novel features of construction which will be fully pointed out hereinafter.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a vertical section of the invention, and Fig. 2 is a section on the line 2 2 of Fig. 1.

The base *a* has a downwardly-extending flange *a'*, adapted to rest on a support and formed with openings *a''*, so as to permit the oil-supply pipe *b* to be passed to the burner from any desired direction. The base *a* also has an upwardly-extending flange *a'''*, forming a pan in which the oil is ignited.

Supported on the base *a* by legs *c'* is the preferably cylindrical body *c*, and in this body are arranged ribs *c''*, on which the frusto-conical mixer *d* is loosely placed, this mixer tapering toward its upper end and having said end commensurate with the top of the body *c*. Supported by legs *e'* on top of the body *c* is a cap *e*, the under side *e''* of which is of conical form, producing a deflector for the burning gases.

The oil-supply pipe *b* passes within a nipple *a''* in the center of the base *a*, and from this nipple *a''* a vertically-disposed supply-pipe *f* extends. This pipe is open at its inner end and has a cone *g* screwed or otherwise fastened thereto. This cone has a series of annular cups *g'* formed thereon, said cups gradually increasing in capacity from the top downward, and on the bottom of the cone are formed a number of downwardly-projecting

lugs *g''*, which are employed in case the cone is screwed onto the pipe *f*, these lugs facilitating the engagement of a suitable instrument with the cone to screw or unscrew the same.

In the use of the burner it is placed within the fire-box of the stove on the grate thereof, and the air-feed is forced to pass into the bottom of the body *c* and through the conical mixer *d*. The valve (not shown) of the supply-pipe is then opened and the oil is allowed to flow from the top of the pipe *f* through the cups *g'* of the cone *g* and into the pan formed by the flange *a'''*. When this has been done, the oil in the pan should be ignited and the flame thereof will heat thoroughly all of the parts of the burner and the flame will be communicated to the oil in the cups *g'*. After the oil in the pan *a'''* has been consumed the flow through the pipe *f* should be regulated so that the oil will be burned before it overflows from the lowermost cup *g'*, or, in other words, when the apparatus is normally at work there is no burning oil in the pan *a'''*. The mixer *d* forces the air inward toward the burning oil, and the cap *e*, with its deflector-like surface *e''*, becoming highly heated by the flame will increase the combustion of the burning gases, so that such combustion will be complete and no smoke will be developed by the burner.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the scope of my claims.

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

1. An oil-burner, consisting of a base provided with a downwardly-projecting flange having openings, an upwardly-projecting flange forming a cup, and a central nipple with which an oil-supply pipe is adapted to be connected, a cylindrical body supported by legs on the base and provided with internal ribs, a hollow cone having a series of exterior annular cups, a tube, to the upper end of which the cone is removably secured, said tube extending downwardly through the cone and secured to the nipple of the base, a con-

ical mixer supported upon the ribs of the body and into which the cone extends with its upper end terminating short of the top of the mixer, and a cap having a conical lower
5 face and provided with legs resting upon the upper edge of the body, as set forth.

2. An oil-burner, comprising a base provided with a pan on its upper face and with a central nipple with which an oil-supply pipe
10 is adapted to be connected, a cylindrical body supported by legs upon the base, a hollow cone having a series of exterior annular cups, a tube to the upper end of which the cone is removably secured, said tube extending down-
15 ward through the cone and secured to the nipple of the base, a conical mixer supported in the said body and into which the cone extends with its upper end terminating short of the top of the mixer, and a cap having a
20 conical lower face and provided with legs resting upon the upper end of the said body, as set forth.

3. An oil-burner, comprising a pan, an oil-supply pipe leading through the bottom of
25 the pan and projecting upwardly therefrom, a hollow cone having a series of exterior annular cups and secured at its upper end to the upper end of the supply-pipe, a cylindrical body supported by legs on the pan, a
30 conical mixer in the body and into which the cone extends with its upper end terminating short of the top of the mixer, and a cap having a conical lower face and provided with legs resting upon the upper end of the said
35 body, as set forth.

4. An oil-burner, comprising a pan, a cylindrical body of less diameter than the pan and supported above the bottom thereof by
40 legs, a tube projecting centrally upward from the bottom of the pan and with which a sup-

ply-pipe is adapted to be connected, a hollow cone having a series of exterior annular cups, said tube extending up through the cone and to the upper end of which the cone is detach-
ably secured, a conical mixer removably sup- 45 ported in the body and into which the cone extends, and a removable cap having a conical lower face and provided with legs resting upon said body, as set forth.

5. An oil-burner, comprising a pan, a cy- 50 lindrical body of less diameter than the pan and supported above the bottom of the pan, a tube projecting upwardly from the bottom of the pan and with which a supply-pipe is adapted to be connected, a cone having a se- 55 ries of exterior annular cups and detachably secured to the upper end of the said tube, a removable mixer within the body and into which the cone extends, and a removable cap supported on the upper end of the body, said 6c cap being of greater diameter than the body, as set forth.

6. An oil-burner, comprising a pan, a cylindrical body of less diameter than the pan and supported above the bottom of the same, 65 a tube projecting upward from the bottom of the pan and with the lower end of which, below the bottom of the pan, a supply-pipe is adapted to be connected, a cone on the upper end of the tube and having exterior annular 7c cups, a mixer within the body and into which the cone extends, and a cap supported on the upper end of the body, as set forth.

In testimony whereof I have signed my name to this specification in the presence of 75 two subscribing witnesses.

EMMET B. RAYMOND.

Witnesses:

SAMUEL D. ROSER,
EVAN MORGAN.