C. E. GODLEY.

OIL LAMP.

APPLICATION FILED AUG. 18, 1911.

1,052,912.

Patented Feb. 11, 1913.

2 SHEETS—SHEET 1.

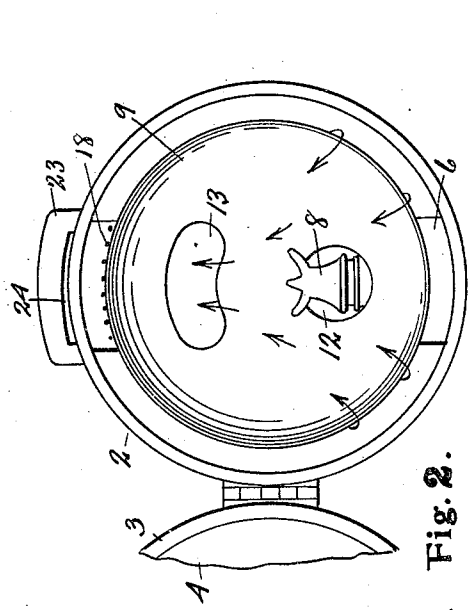

Fig. 2.

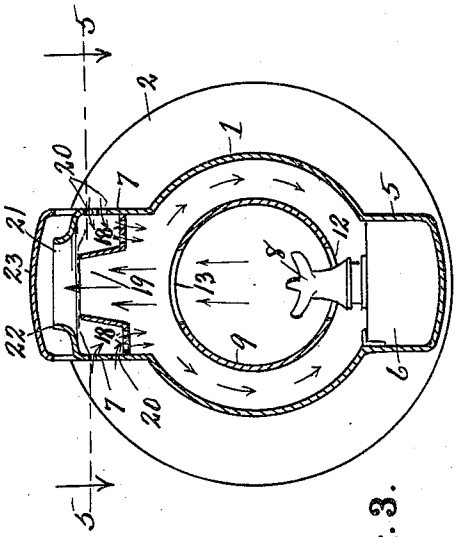

Fig. 3.

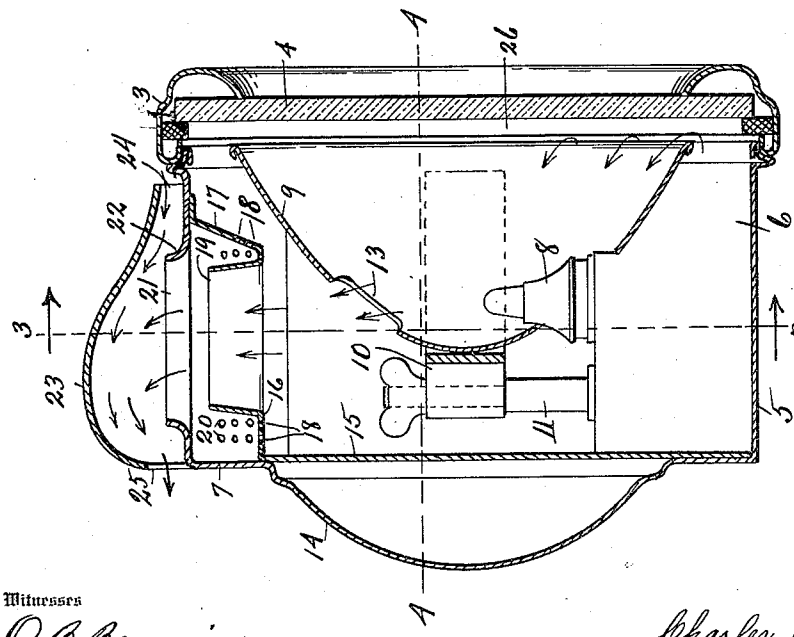

Fig. 1.

Witnesses

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Fig 4.

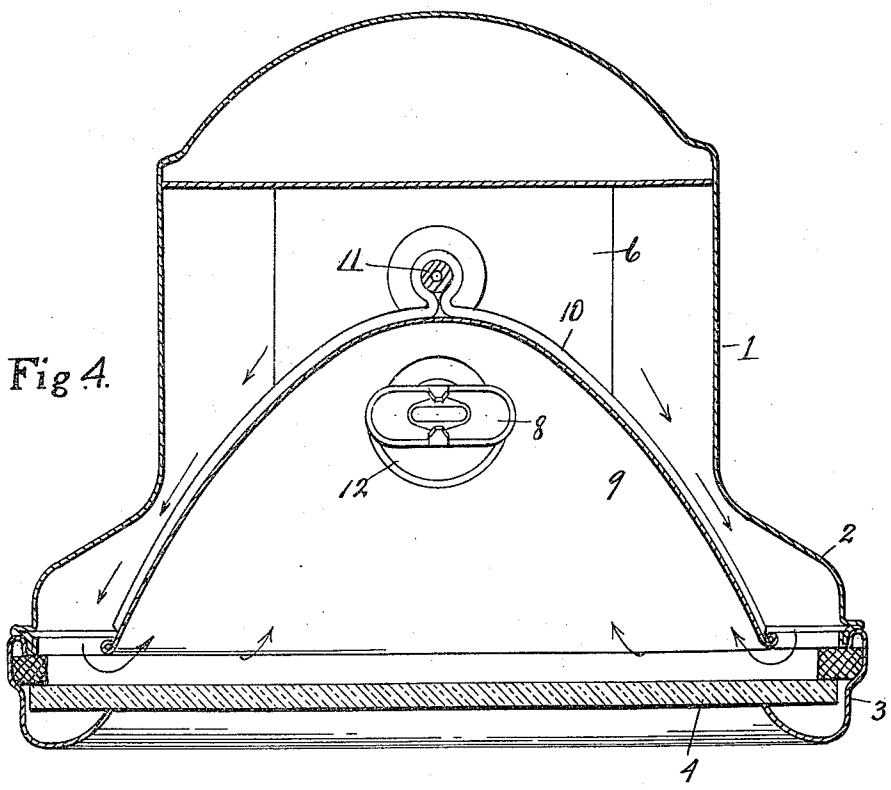
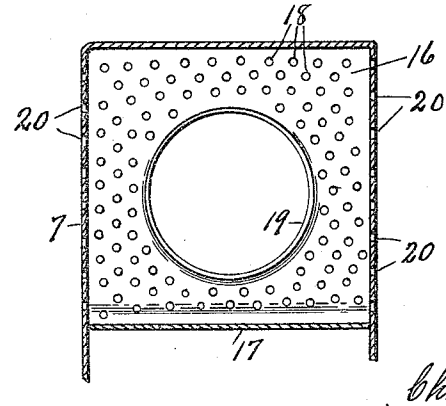


Fig 5



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UNITED STATES PATENT OFFICE.

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OIL-LAMP.

1,052,912. Specification of Letters Patent. Patented Feb. 11, 1913.

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To all whom it may concern:

Be it known that I, CHARLES E. GODLEY, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Oil-Lamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to oil lamps and consists in the construction and arrangement of parts hereinafter more fully set forth and pointed out particularly in the claims.

One object of my invention is to provide a lamp of the character described, known as a driving lamp, wherein the arrangement is such as to prevent the sweating of the front lens, thereby insuring a clear and unobstructed light through the medium of the downwardly directed air drafts which support combustion and which are directed across the inner face of the glass before entering the combustion chamber.

A further object is to prevent such an inward rush of air through the openings which admit air to support combustion as to affect the flame and interfere with the steady burning thereof.

A further object is to provide for a free and unobstructed passage from the combustion chamber of the vapors of combustion.

A further object is to provide a lamp with a cap of such a form as to conform to the lines of the air currents passing therethrough, thereby avoiding any obstruction to the passage of the vapors of combustion from the lamp.

The above objects are attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is the central vertical section through a lamp embodying my invention. Fig. 2 is a reduced front elevation with the door open and partially broken away. Fig. 3 is a vertical transverse section through the lamp as on line 3—3 of Fig. 1, with the font and burner appearing in elevation. Fig. 4 is an enlarged horizontal section through the lamp as on line 4—4 of Fig. 1. Fig. 5 is an enlarged sectional view through the hood as on line 5—5 of Fig. 3.

Referring to the characters of reference, 1 designates the body of the lamp which is mainly cylindrical in form and is provided at the front with a flaring portion 2. Hinged to the flaring portion of the body is the door 3 carrying the front lens 4.

The body or cylindrical shell of the lamp is provided with two panels, the lower panel 5 forming the housing or receptacle for the lamp font itself, and the upper panel 7 serving as the medium through which air is drawn to support combustion, and through which the gases from combustion are discharged. When the lamp font 6 is in position within the housing 5 the top thereof stands substantially flush in the wall of the cylindrical body of the lamp. Mounted in the lamp font is a suitable burner 8. Mounted upon the font is a parabolic reflector 9 which is secured in place by means of a strap 10 attached thereto, which engages a post 11 on the font. The front edge of the reflector extends forwardly to a point substantially on a plane with the front edge of the lamp body. The burner 8 projects upwardly through an opening 12 in the reflector, and is so positioned as to cause the flame therefrom to become properly focused within the reflector, which becomes in effect the combustion chamber of the lamp, the wall of which surrounds the burner upon all sides. In the upper wall of the reflector, directly over the burner, is a vent opening 13 for the escape of the combustion gases.

The rounded rear end 14 of the lamp is separated from the cylindrical body portion thereof by a vertical shield or partition 15, having at its upper end a horizontally projected plate 16 provided at its forward edge with an upwardly extending portion 17 secured to the top of the upper panel 7, as clearly shown in Fig. 1. The plate 16 is provided with perforations 18 and with a central conical tube 19 projecting upwardly therefrom and adapted to serve as a flue for the combustion gases, the lower end of said flue being directly above the opening 13 in the reflector through which said gases pass from the burner. In the sides of the hood or panel 7 are perforations 20 through which air is admitted to support combustion, said air passing downwardly through the perforations in the plate 16 which baffle it to such an extent as to prevent it rushing into the lamp with sufficient force to interfere with the steady burning of the burner flame.

It will be noted that the openings 20 are below the top of the tube or flue 19, thereby preventing a possible clash between the escaping gases and the inflowing air.

To allow of the escape of the combustion gases from the lamp the top of panel 7 is provided with an opening 21 which is surrounded by a raised or upwardly drifted edge 22. Directly over this opening and mounted upon the top of the panel 7 is a ventilated cap 23. To facilitate the escape of the gases of combustion from the cap I have provided an opening 24 in the front edge thereof, and at the rear of said cap in line with said front opening a rear opening 25. By this arrangement the cool air which enters the front opening of the cap is caused to pass directly over the opening 21 in the top of the panel and out the rear opening 25, thereby forcing the hot air and the gases from underneath the cap preventing the clogging thereunder of the gases of combustion. By reason of the upwardly drifted edge 22 of the opening 21 the air currents entering the front of the cap are deflected upwardly and across said opening instead of being driven downwardly thereinto, thus facilitating rather than retarding the escape of the gases of combustion and obviating the choking of the lamp. To accommodate these upwardly deflected air currents the cap is shaped to conform to the lines thereof, as clearly illustrated by the course of the arrows in Fig. 1.

It will now be understood that the air currents to support combustion enter through the perforated sides of the panel or hood 7 below the top thereof and below the top of the flue 19, passing into the top of the lamp through the perforated plate 16 and downwardly around and in the rear of the reflector 9. It will be noted that the organization of my lamp is such as to leave an open space 26 between the front edge of the reflector and the glass, and an opening between the edge of the reflector and the shell of the lamp. In order to reach the flame of the burner to support combustion and to maintain the circulation induced by the upper passage of the heated air and gases from the burner the air entering the body of the lamp must pass to the front thereof around the edge of the reflector and between the reflector and the glass 4 as indicated by the arrows in Figs. 1, 2, and 3. The passing of the currents of air across the inner face of the glass prevents the accumulation of moisture thereon commonly termed sweating, and also affords a clear unobstructed light, said air currents after crossing the face of the glass entering the reflector to supply therein the necessary oxygen to the blaze of the burner.

This lamp because of the control of the air currents therein will burn steadily with great brilliancy, and because of the thorough manner in which the hot gases are discharged it will not become overheated.

Having thus fully set forth my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a lamp the combination of the lamp body, a burner therein, a flue communicating with said burner for the escape of the combustion gases, a hood over said flue having an opening in the top thereof, an oblong cap over said hood having front and rear openings only for the passage of air therethrough over said opening in the hood, and the sides of the hood below the cap having apertures for admitting air to the lamp to support combustion.

2. In a lamp the combination of the body, a burner therein, an upwardly projecting flue to receive the combustion gases, a hood over said flue having an opening in the top registering therewith, the margin of said opening being turned upwardly, a cap over said hood having front and rear openings for the passage of air therethrough, the air entering the front opening being deflected upwardly by the upwardly turned margin around the opening in the hood, the cap in shape conforming to the lines of the deflected air current.

3. A lamp comprising a body, a burner therein, an upwardly extending flue to carry air and heated gases from said burner, a hood over said flue having a central opening in line therewith, a cap over the opening in the hood having front and rear openings, the sides of the hood having perforations for the entrance of air to support combustion, such perforations being below the top of the flue, and means for baffling the inflowing air to prevent the rush thereof into the body of the lamp.

4. A lamp comprising a body, a burner therein, a flue for the escape of the heated gases, a hood over said flue having a central opening for the passage of said gases there being a perforated wall around said flue and the sides of the hood having apertures below the top of the flue, a cap over the opening in said hood having relatively small openings at the front and rear for the passage of air therethrough, and means for preventing the air entering said cap flowing downwardly through the opening in the top of the hood.

In testimony whereof, I sign this specification in the presence of two witnesses.

CHARLES E. GODLEY.

Witnesses:
MARIE BROESAMLE,
E. S. WHEELER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."