

No. 615,586.

Patented Dec. 6, 1898.

G. T. SUTTERLEY.
ALCOHOL LAMP.

(Application filed Aug. 1, 1898.)

(No Model.)

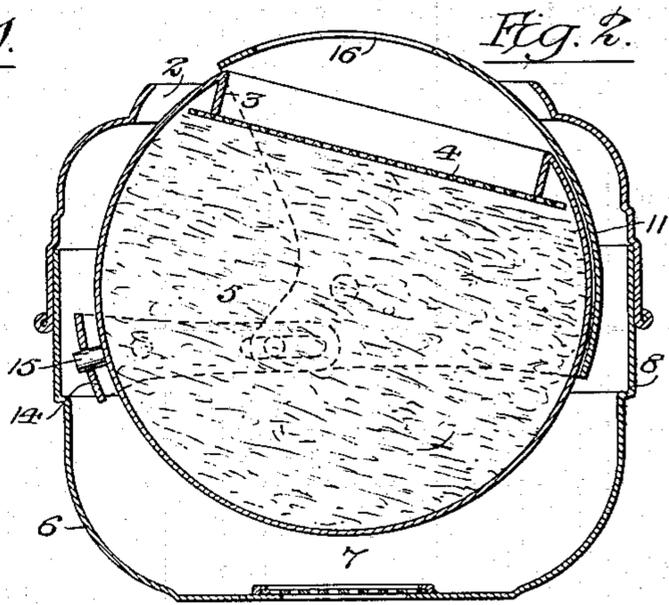
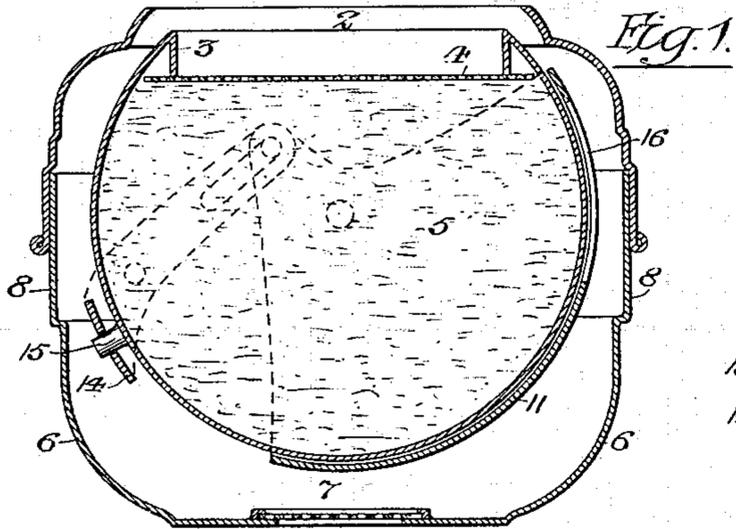


Fig. 3.

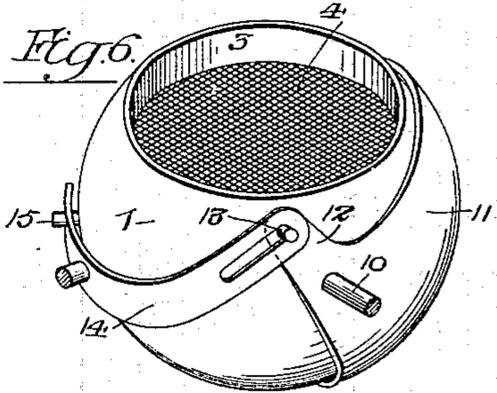
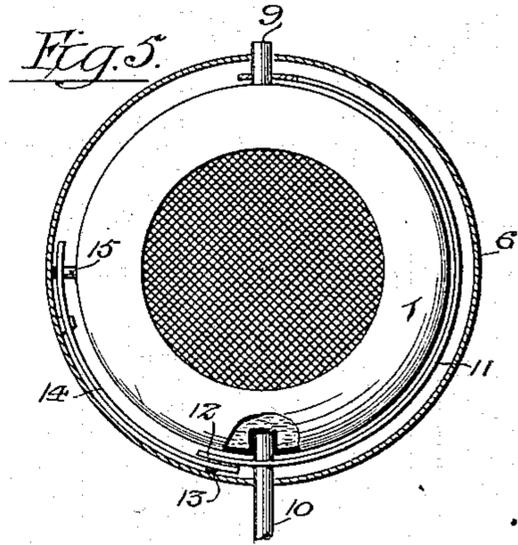
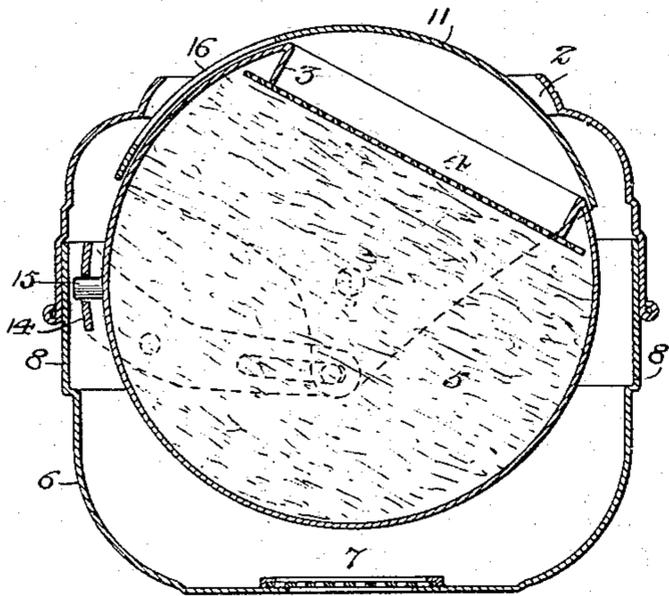
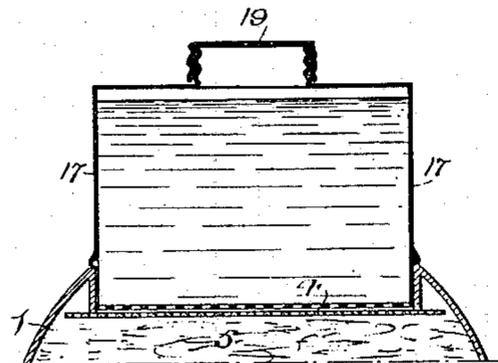


Fig. 4.



Witnesses:-

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UNITED STATES PATENT OFFICE.

GILBERT T. SUTTERLEY, OF PHILADELPHIA, PENNSYLVANIA.

ALCOHOL-LAMP.

SPECIFICATION forming part of Letters Patent No. 615,586, dated December 6, 1898.

Application filed August 1, 1898. Serial No. 687,443. (No model.)

To all whom it may concern:

Be it known that I, GILBERT T. SUTTERLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Alcohol-Lamps, of which the following is a specification.

My invention consists of certain improvements in the alcohol-lamp forming the subject of Alexander Stewart's application for Letters Patent filed March 24, 1898, Serial No. 675,012, one object of my present invention being to effect the diminution or extinguishment of the flame without tilting the lamp-fount to as great an extent as is necessary in the previous construction or in some cases without tilting the fount at all, and a further object of the invention being to provide means for preventing the evaporation of the alcohol when the lamp is not in use, such means being also, by preference, available as a measuring and filling device whereby alcohol may be supplied to the absorbent contents of the lamp-fount. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse section of an alcohol-lamp constructed in accordance with my invention, showing the parts in the position which they assume when the lamp is burning with a full flame. Fig. 2 is a similar view showing the parts in the position assumed when the lamp is burning with a diminished flame. Fig. 3 is a similar view showing the parts in the position assumed when the lamp is extinguished. Fig. 4 is a view illustrating the application to the lamp of the cap for preventing evaporation and providing for the filling of the fount. Fig. 5 is a sectional plan view, partly in elevation; and Fig. 6 is a perspective view of the operating parts of the lamp. Figs. 5 and 6 are on a smaller scale than the other figures.

The lamp-fount 1 is in the form of a segment of a sphere, a portion of the spherical casing being cut away, so as to form an opening 2, bounded by a flange 3, which is formed by turning down the edges of the casing, as shown in Fig. 1, this inturned flange 3 serving to confine a sheet 4 of wire-gauze or perforated plate upon the top of a mass 5 of asbestos fiber or other absorbent material with

which the lamp-fount is filled. The fount is contained within an outer casing 6, which has at the bottom an opening covered by a sheet 7 of wire-gauze or perforated plate, said casing 6 being of so much greater diameter than the lamp-fount that a space is afforded between the two for the circulation of air and for the reception of a swinging flame reducer and extinguisher, as described hereinafter.

The casing of the lamp has hollow flanges fitting snugly to each other and constituting a hollow rib 8, which may, if desired, serve as the means of supporting the lamp-casing upon the frame of a chafing-dish or other structure in connection with which the lamp is intended to be used, this hollow rib also having bearings for a trunnion 9 at one side of the lamp-fount and for a shaft 10, the inner end of which is seated in a recess at the opposite side of the lamp-fount, said shaft carrying the swinging flame reducer and extinguisher 11, which likewise constitutes a segment of a sphere and is intended to fit as closely to the casing of the lamp-fount 1 as is consistent with its free swinging movement.

The swinging segment 11 has a projecting arm 12, and a pin 13 on this arm engages with a slot in one arm of a lever 14, which is pivoted to the outer casing 6 and has another slotted arm engaging with a pin 15, projecting from the lamp-fount, as shown in Fig. 5. Hence when any movement is imparted to the shaft 10 tending to swing the segment 11 upward or downward there will be a corresponding movement of the lamp-fount, the relative length of the arms of the lever 14 being such, by preference, that the extent of movement of the segment 11 is much in excess of that of the lamp, so that the diminution of the flame, as shown in Fig. 2, or the extinguishment of the flame, as shown in Fig. 3, may be effected without tipping the fount to such an extent as to involve any risk of spilling the alcohol therefrom in case the absorbent filling of the fount has been saturated to excess.

In order to preserve the flame in a central position when the volume of the same has been diminished, as shown in Fig. 2, the controller-segment 11 has an opening 16 formed therein, through which the flame passes when

the parts have been adjusted, so that the forward edge of the said controller-segment overlaps the body of the fount at the far side of the opening therein, as shown in Fig. 2.

5 In order to prevent the evaporation of alcohol from the lamp after the same has been extinguished and the controller-segment has been restored to its normal position, I use a plug 17, which fits snugly to the flange 3,
10 bounding the opening in the top of the fount, and in order that this plug may serve also as a means of measuring the proper charge of alcohol for the lamp and of applying this charge of alcohol to the absorbent filling of
15 the fount I make the plug hollow, perforate the bottom of the same, as shown in Fig. 4, and provide the top of the plug with an opening adapted to be hermetically closed by means of a screw-cap 19. If, therefore, the
20 hollow plug is filled with alcohol and the screw-cap is applied thereto, none of the alcohol will escape from the perforated bottom of the plug, because no opportunity is afforded for air to enter the plug above the
25 alcohol therein; but if the cap 19 is removed the alcohol will flow into the lamp-fount and will saturate the absorbent filling of the same. The renewed application of the screw-cap then again closes the plug 17, so as to pre-
30 vent any evaporation of alcohol from the fount.

Although I have described the lamp-fount as constituting a segment of a sphere and although I prefer to adopt this form, it will be
35 evident that the same may be cylindrical, if desired, the shape of the controller being likewise modified.

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

1. An alcohol-lamp consisting of a fount of 40 cylindrical cross-section having an opening at the top and mounted so as to swing, with a curved controller-segment also mounted so as to swing on the same axis as the fount, substantially as specified. 45

2. An alcohol-lamp in which are combined an outer casing, a lamp-fount mounted so as to swing therein, and a controller-segment mounted so as to swing between the lamp-fount and the casing, substantially as specified. 50

3. An alcohol-lamp in which are combined a fount mounted so as to swing, a swinging controlling-segment, and a connection between the two, whereby simultaneous movement of both by one operating device may be effected, substantially as specified. 55

4. An alcohol-lamp in which are combined a swinging fount, a swinging controller-segment having a projecting arm, and a lever 60 having a fixed pivot and two arms one engaging with the fount and the other with the projecting arm of the controller-segment, substantially as specified.

5. An alcohol-lamp in which are combined 65 a lamp-fount having an opening for the escape of the flame, a hollow plug fitting snugly to said opening and having a perforated bottom and an opening in the top, and means for hermetically closing said opening in the
70 top of the plug, substantially as specified.

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

GILBERT T. SUTTERLEY.

Witnesses:

F. E. BECHTOLD,
JOS. H. KLEIN.