No. 614,034. Patented Nov. 8, 1898.

A. STEWART.

ALCOHOL LAMP.

(Application filed Mar. 24, 1898.)

(No Model.)

Fig. 4.

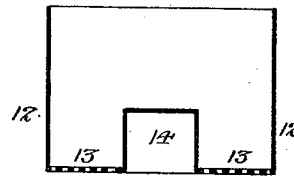


Fig. 1.

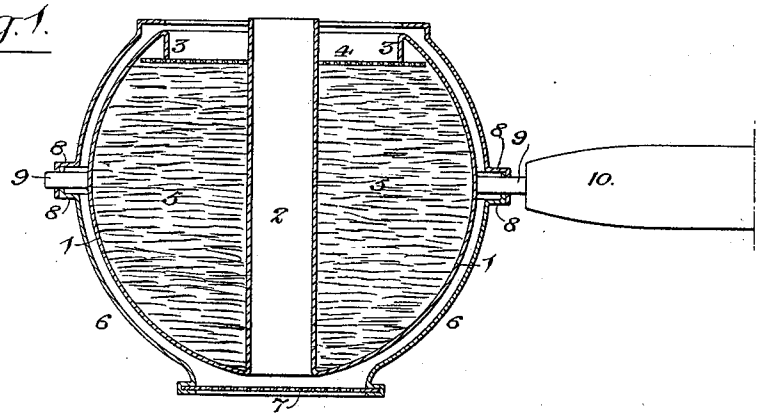


Fig. 2.

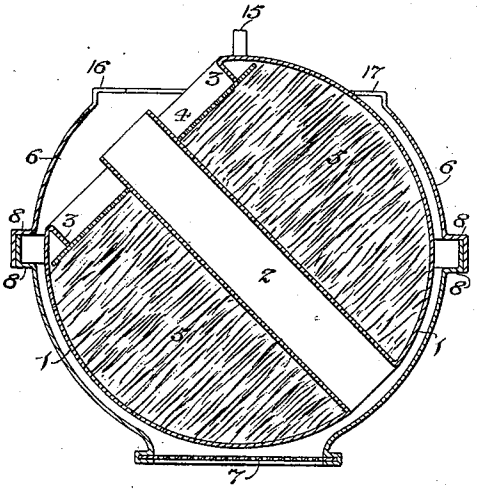
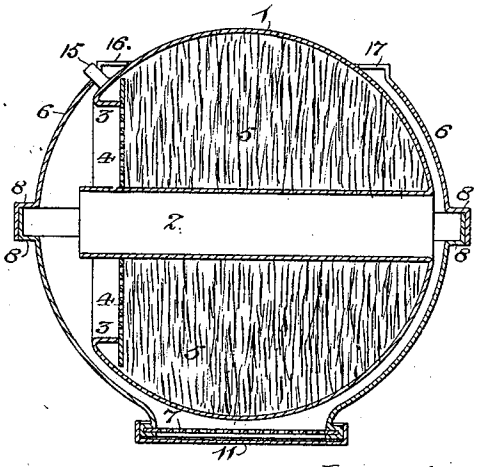


Fig. 3.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALEXANDER STEWART, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO GILBERT T. SUTTERLEY AND GEORGE H. SUTTERLEY, JR., OF SAME PLACE.

ALCOHOL-LAMP.

SPECIFICATION forming part of Letters Patent No. 614,034, dated November 8, 1898.

Application filed March 24, 1898. Serial No. 675,012. (No model.)

To all whom it may concern:

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

The object of my invention is to provide an alcohol-lamp composed of but few parts and of cheap and simple construction, in which lamp provision is afforded for readily regulating the size of the flame or completely extinguishing the flame when desired. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of an alcohol-lamp constructed in accordance with my invention. Fig. 2 is a transverse section of the same, showing the parts adjusted so as to restrict the size of the flame. Fig. 3 is a similar view showing the parts adjusted so as to extinguish the flame, and Fig. 4 is a sectional view of a measuring and filling cup intended to be used in connection with the lamp.

The lamp-fount 1 is of spherical form, flattened at the top and having a central tube 2 passing through it, the top portion of the fount having an inturned and depending flange 3, which confines a piece of perforated plate or wire-netting 4 upon the top of a mass of asbestos fiber 5, or similiar refractory material, with which the body of the fount is filled.

The outer casing 6 of the lamp corresponds in shape to the fount, but is preferably so much greater in diameter than the latter as to provide an air-space between the two, this space receiving air at the bottom through a sheet of perforated plate or wire-gauze 7 and the air being discharged at the top inwardly over the upper edge of the lamp-fount 1 and against the flame arising from the opening at the top of the fount in the same manner that the air is directed against the flame of an ordinary oil-lamp by the hood of the same.

In the present instance the outer casing 6 of the lamp is composed of upper and lower sections having at their meeting points overlapping angular flanges 8, which are suitably secured together and form a hollow rib which may be utilized for the support of the lamp upon the frame of a chafing-dish or other structure in connection with which the lamp is intended to be used. The casing of the lamp may, however, be made of a single piece, if desired, and instead of having a projecting rib it may be provided with suitable legs for its support.

In the present instance the hollow projecting rib of the casing has bearings for trunnions 9, which project from diametrically opposite points on the lamp-fount, one of these trunnions being provided with a suitable handle 10, whereby the fount may be readily turned within the casing, so as to either partially restrict the area of the opening for the escape of the flame, as shown in Fig. 2, or turn the opening of the fount wholly within the casing, as shown in Fig. 3, thereby completely extinguishing the flame. The swinging movement of the fount is restricted by means of a pin 15, which enters slots 16 and 17 in the casing of the lamp.

Any downdraft of flame through the opening at the bottom of the casing when the opening of the fount is turned down partially or wholly within said casing is prevented by reason of the gauze plate 7, which covers said opening in the bottom of the casing, and to prevent vaporization of the alcohol when the lamp is not in use the opening in the bottom of the casing may be tightly closed by the use of a close-fitting cap 11, as shown in Fig. 3, and, if desired, a similar cap may be applied to the top of the casing.

The fount is charged, as usual, by pouring the alcohol into the mass of asbestos or other absorbent refractory material filling the fount, and in order to prevent the overcharging, as well as to avoid the necessity of pouring into the fount small quantities of alcohol at a time, as the same is slowly absorbed by the refractory material, I use a measuring and filling vessel 12—such, for instance, as shown in Fig. 4—this vessel consisting of a cup fitting snugly to the flange 3 of the fount and having a perforated bottom 13 and central hood 14, adapted to fit snugly upon the upper end of the central tube 2 of the lamp. When this filling vessel is properly adjusted to its position on top of the lamp, it may be filled with a proper charge of alcohol, which will find its way through the perforated bot-

tom of the vessel and through the gauze sheet 4 into the refractory packing 5 of the fount, the charge contained in the vessel being sufficient to properly saturate the filling without excess.

Although I have shown and prefer the spherical form for the lamp fount and casing, it will be evident that the same may be cylindrical, if desired, without departing from the essential features of my invention.

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

1. The combination, in a spirit-lamp, of the outer casing with the lamp-fount having a burner or flame-opening and mounted so that it can be turned in the casing, the arrangement of the parts being such that the burner or flame-opening coacts with the casing to restrict or extinguish the flame.

2. A spirit-lamp consisting of an outer casing having top and bottom openings, and a lamp-fount having a burner or flame-opening at the top and mounted so that it can be turned in the casing, the arrangement of the parts being such that an air-space is formed between the lamp-fount and the outer casing, and the burner or flame-opening of the fount coacts with the casing to restrict or extinguish the flame.

3. The combination in a spirit-lamp, of the casing having openings at top and bottom, and a lamp-fount having a central draft-tube, and an opening at the top for the escape of the flame, said fount being mounted within the casing so that it can be turned therein.

4. The combination of an outer casing having openings at top and bottom, a screen applied to said bottom opening, and a lamp-fount having an opening at the top for the escape of the flame, said fount being mounted within the casing so that it can be turned therein.

5. The combination of the casing composed of upper and lower parts having at their meeting edges hollow flanges secured together and forming a projecting hollow rib, with a lamp-fount having trunnions adapted to bearings in said hollow rib, so that it can be turned within the casing.

6. The combination of a spirit-lamp having a fount with filling of refractory absorbent material, and an opening at the top for the escape of the flame, with a measuring and filling vessel adapted to said opening at the top of the fount and having a perforated bottom.

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

ALEXANDER STEWART.

Witnesses:

DAVID E. SIMON,

EDWARD KINGSTON.