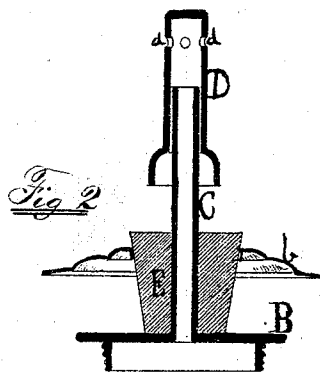
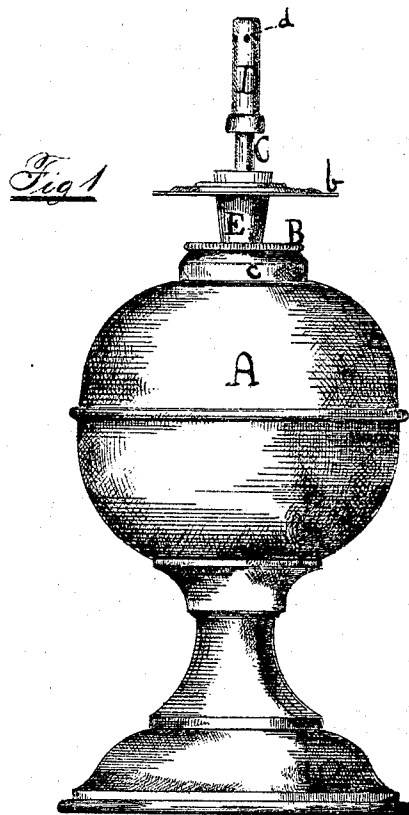


S. D. Baldwin.

Impt. in Lamp Burners

No. 120,613.

Patented Nov. 7, 1871.



Witnesses
L. L. Bond
O. W. Bond

Silas D. Baldwin

Inventor.

UNITED STATES PATENT OFFICE.

SILAS D. BALDWIN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 120,613, dated November 7, 1871; antedated October 28, 1871.

To all whom it may concern:

Be it known that I, SILAS D. BALDWIN, of the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Lamp-Burners, of which the following is a full description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents an exterior view of a lamp with my burner applied, and Fig. 2 a vertical section of the burner.

My invention relates to that class of burners usually called "vapor-burners," but it is applicable to other burners; and its nature consists in the application to the collar or wick-tube of a burner of a cork envelope, or one made of non-conducting material, and a plate or shield, to protect the body of the lamp from the heat radiated by the flame.

In the drawing, A represents the body of the lamp, consisting of a fluid or oil-reservoir supported on a pedestal, and made of any suitable material; B and c, screw and collar, of the usual construction; C, the wick-tube; D, cap; E, cork envelope; b, shield; and d, holes from which the vapor that supports the combustion issues. The cap D fits close upon the wick-tube, and the projection or swell shown is for the convenience of removal. It is prevented from slipping over the wick-tube, and thereby closing the holes d, by being slightly contracted in diameter at the upper end. Between the point of combustion and the collar or on the collar I place a cork or other non-conducting envelope, E, to prevent the heating of the screw and collar and top of the lamp, as it is desirable to keep the lamp cool, particularly when fluids which volatilize at a low temperature are used. This envelope is nearly half the length of the wick-tube, as shown, and slides

on it so that its position may be adjusted. The shield b is a plate or disk made of sheet metal having fine perforations, or of metal gauze, as may be desired, but I prefer the perforated metal. It is attached to the envelope E by pressure. This shield protects the top of the lamp from the heat radiated by the burner, and by projecting out so as to catch the ascending currents of cold air that are caused to rise by the action of the heat it is kept, to a certain extent, cool, and cool enough to prevent radiation from it to the top of the lamp; and as it is made of perforated gauze or its equivalent, any leakage or evaporation at the collar will pass through the openings of the plate, and, by reason of passing through this plate, the vapor becomes dissipated so there will not be any ignition around the base or collar; and if the vapor should ignite, the flame would not pass through the perforated plate.

By the use of this shield and the envelope E I am enabled to prevent ignition around the base and to keep the lamp-reservoir cool, so as to preserve a uniform light or blaze without any regulator, for the evaporation is not materially increased by a continuous use of the lamp, as this deflector-plate keeps the lamp and collar cool and prevents the gas from generating below the point of combustion.

What I claim as new, and desire to secure by Letters Patent, is—

The shield b, when attached to and supported by the non-conducting envelope E resting upon the collar-cap B, substantially as and for the purposes specified.

SILAS D. BALDWIN.

Witnesses:

E. A. WEST,
O. W. BOND.

(90)