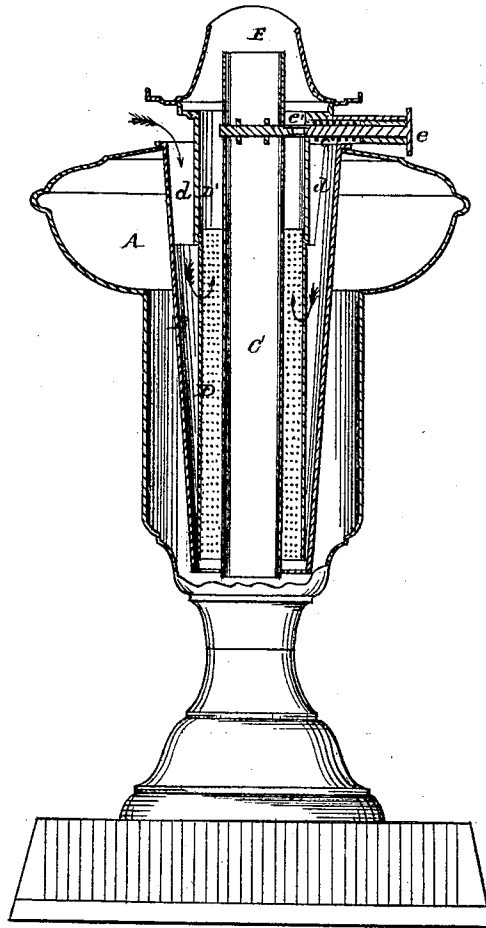


J. S. FISH.

Lamp.

No. 102,240.

Patented April 26, 1870.



Witnesses,
Geo. W. Cobbitt,
J. Holmes

Inventor,
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United States Patent Office.

JOHN S. FISH, OF CLEVELAND, OHIO.

Letters Patent No. 102,240, dated April 26, 1870.

LAMP.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN S. FISH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain Improvements in Non-explosive Lamps, of which the following is a specification.

The nature of this invention relates to the construction of a non-explosive lamp for burning any of the volatile oils, it being so constructed that a current of cold air constantly passes down and around the wick-tube, thus effectually cutting off the possibility of heat being conveyed to the bulk of oil in the lamp.

The figure is a vertical section of the following-described lamp.

In the drawing—

A represents the body or fount of a lamp, which may be made in the form shown, or any other suitable form.

In the top, in a suitable opening, is secured a tube, B, which is made tapering, and extends down nearly to the bottom of the fount.

The bottom of said tube is closed, and from the center rises the wick-tube C.

A straight tube, D, surrounds the wick-tube, and consists of a short tube, D', having secured to it a perforated or gauge tube, D, which meets the tube B at the bottom.

Attached to the tube D' are flanges *d d*, which rest against the tapering sides of the tube, and, coming in contact with it near the bottom, binds it and holds it securely in place. The wick-wheel shaft also prevents it being removed. It cannot be moved without first withdrawing the outer portion of the wick-wheel shaft.

To the top of the tube D is secured the cone E of the burner.

The tube D may be withdrawn from the tube B when desired.

The shaft of the wick-wheel is made in two parts, the thumb-piece *e* having a square socket in it at *e'*, in which the wheel portion rests.

A small spiral spring, *c*, embracing the socket portion, keeps it in place.

This part of the device for raising the wick is attached to the tube D, the other part being secured to the wick-tube C.

The practical operation of this lamp is as follows:

The external air, which feeds the flame, passes in at the opening in the top of the tube B, surrounding the tube D, in the direction indicated by the arrows, and, passing through the perforations of the tube D, is thoroughly distributed along its whole length, equalizing the flow of air, and keeping the whole at a low state of temperature; thence up into the burner E.

If the perforations were carried up higher than shown, the result would not be thus.

By this means a constant influx of external air is caused at the point where most needed, and effectually cuts off any communication of heat from the burner to the body of the lamp. The air is, therefore, made to serve two purposes at the same time.

By the use of the perforated tube the air is more evenly fed to the flame, and will prevent any sudden flashes of the flame from puffs of air from without.

In this manner of construction, too, the burner sets near the body of the lamp, which is essential in obtaining a good light.

Having described my invention,

What I desire to secure by Letters Patent is—

1. The tube D, having its lower portion made of perforated metal, and its upper part D' whole, and provided with flanges *d d*, as shown, and for the purpose described.

2. The tube D, in combination with the tube in a lamp, when the parts are constructed and arranged as described and for the purpose set forth.

J. S. FISH.

Witnesses:

GEO. W. TIBBITTS,
E. T. COWIN.