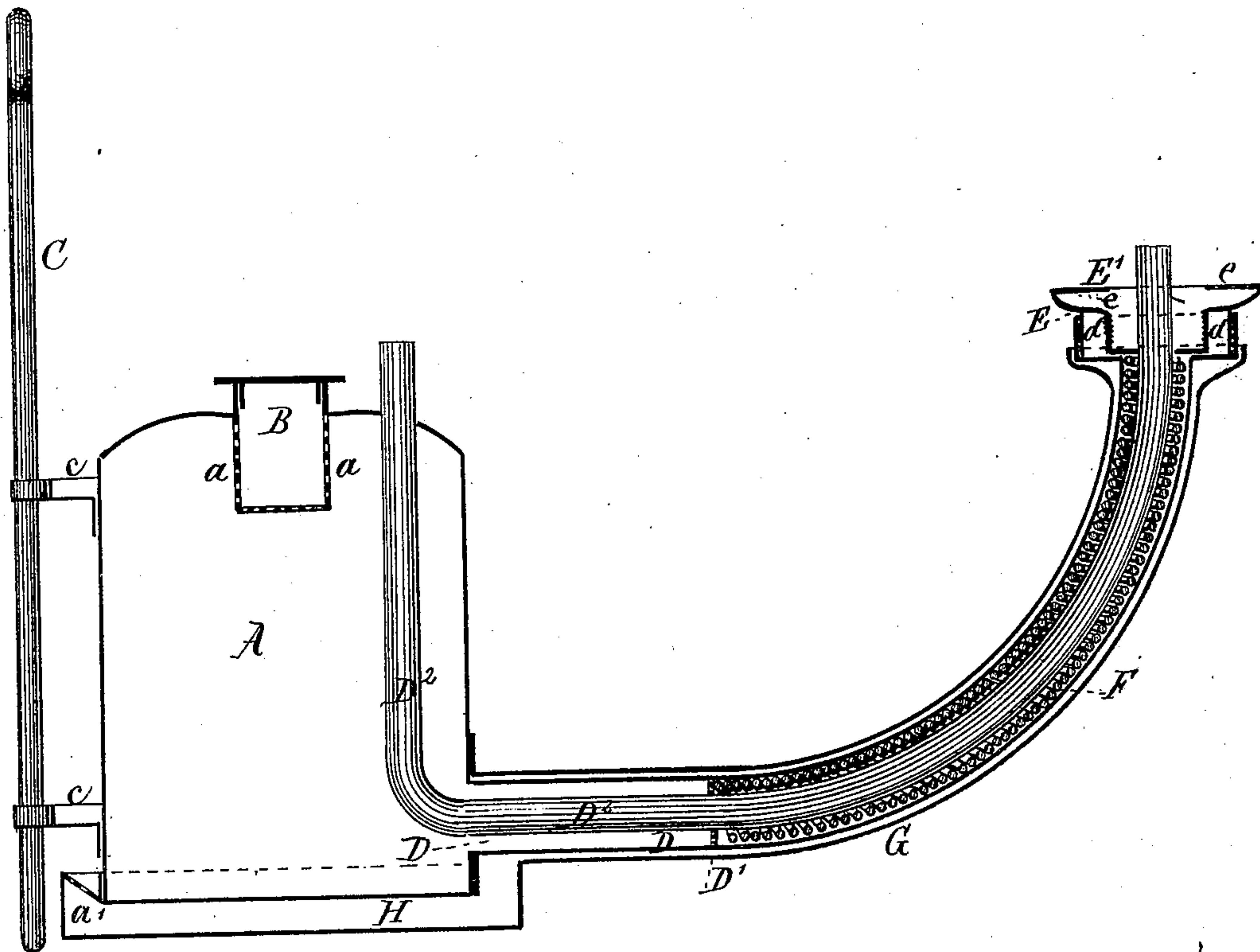


S. S. NEWTON.  
LAMP.

No. 177,417.

Patented May 16, 1876.



Witnesses.  
*Mary Orth*  
*W. B. Lias*

Inventor  
*Stephen S. Newton*  
by *W. A. Soublidan*  
att'y.

# UNITED STATES PATENT OFFICE

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

## IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. 177,417, dated May 16, 1876; application filed March 20, 1876.

*To all whom it may concern:*

Be it known that I, STEPHEN S. NEWTON, of Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Lamps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of the first part of my invention is to so construct an oil-lamp that it may be hung upon the wall, and will not cast an extended or expanded shadow upon the floor; and to this end it consists in combining a body or oil-reservoir, a hanger or bracket, and a curved projecting feeding-tube, with a burner at the end thereof.

The second part of my invention is intended to prevent the overflowing oil from dripping upon the floor; and consists in combining with the oil-reservoir and feeding-tube above-mentioned a drip-chamber and a drip pipe or tube.

The third part of the invention relates to cooling that end or portion of the feeding-tube which carries the burner, this being accomplished by perforating the drip-tube, or both the drip-tube and the drip-chamber, at suitable points, whereby the heating of the feeding-tube by the lamp-flame will create a current of air through said tube.

The fourth part of the invention consists in combining with the curved feeding-tube a flexible protecting-tube, which surrounds the wick, in order to prevent flame from communicating with the oil or gas within the body of the feeding-tube or the oil-reservoir.

The invention further consists of certain details of construction, which will be fully explained.

The view shown is a vertical section taken longitudinally of the curved feeding-tube.

A is the body of the lamp or the reservoir; B, the opening through which it is filled, and a a wire-gauze guard, as is common in many lamps. C is a rod, post, or bracket, to which the body A is attached by means of lugs c. D is the feeding-tube, communicating with the

lower part of the reservoir, and expanded at its outer and upper end into an annular chamber, d. The upper inner edge of chamber d is screw-threaded, and into this thread I screw a collar, E. E' is a collar or plate, perforated as indicated at e, and screwed to, or otherwise secured to, collar E. The collar or plate E' is made, by preference, slightly concave upon its upper surface, and may be made of rubber or other non-conducting material. The burner may be screwed into a thread formed for its reception upon the inner edge of collar or plate E'. D<sup>2</sup> is an air-supply pipe, which is employed to conduct air to the interior of the wick and flame when an Argand or other hollow wick is used. F is a safety-tube arranged within the curved feeding-tube D. It (the safety-tube) is made of coiled wire, or of other flexible material, in order that it may be readily introduced within the feeding-tube, and withdrawn therefrom, such construction adapting it to be rotated within the tube when screwing the collar E, to which, by preference, tube F is attached, into the socket d.

Under some circumstances, especially when I employ a coiled-wire safety-tube, it may be found advisable to leave the lower end of said tube open, and let it abut against a stationary perforated diaphragm, D<sup>1</sup>, which extends across the annular space between the feeding-tube D and the air-supply tube D<sup>2</sup>.

It will, of course, be understood that the wick, when an Argand burner is used, will surround, or partially surround, the air-supply tube D<sup>2</sup>, filling, or nearly filling, the space between said tube and the safety-tube F.

G is a drip-tube, arranged to receive such oil as may overflow from the burner and the collar or flange E, and pass down upon the outside of the chamber d and tube D, and conduct the same into a drip-cup, H, which surrounds the lower end of the reservoir A, to which it is attached by means of a perforated flange, a'.

It will be apparent from an inspection of the drawing that when the lamp is burning a current of comparatively cool air will be drawn through the air-supply tube D<sup>2</sup>, to produce the desired draft upon the inside of the Argand burner; and, also, that as the burner and the upper end of the feeding-tube D be-



come slightly heated, a current will be established in an upward direction between the feeding-tube and the drip-tube G, by which means the oil within the feeding-tube will be kept cool, and the danger of an explosion greatly reduced.

When the air-supply tube D<sup>2</sup> is used, I may make the drip-tube or guard G semi-cylindrical in form, so as to serve merely to collect the overflowing oil and deliver it into the cup H; but I prefer the construction shown.

When preferred, I may connect the drip-cup H with the reservoir A by means of a screw-thread, in order to facilitate the removal of the cup and the emptying of the oil therefrom.

I do not claim, broadly, the safety-tube F under any or all constructions, as I have shown a somewhat similar one in an earlier patent of mine; but I believe that I am, in this patent, the first to employ an elastic flexible tube, so constructed that it can be rotated within a curved feeding-tube of a lamp.

What I claim is—

1. The combination, with the reservoir A and the curved feeding-tube D, of the air-supply tube D<sup>2</sup> for supplying air to the interior of an Argand or tubular wick, substantially as set forth.

2. The combination, with the reservoir A, feeding-tube D, and drip-cup H, of a drip tube or guard, which incloses the feeding-tube, and serves not only as a drip-tube, but also to conduct a current of air in an upward direction around the outside of said feeding-tube.

3. The combination, with the curved feeding-tube of a lamp, of an elastic flexible safety-tube, adapted to be rotated while being introduced within said feeding-tube, substantially as set forth.

4. The combination, with the feeding-tube D and air-supply tube D<sup>2</sup>, of a safety-tube, F, which is open at its lower end to receive the air-supply tube, substantially as set forth.

5. The combination of the feeding-tube D, the perforated diaphragm D<sup>1</sup>, and the safety-tube F, having its lower end open, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEPHEN S. NEWTON.

Witnesses:

EUANDA SPAULDING,  
C. M. BROWN.