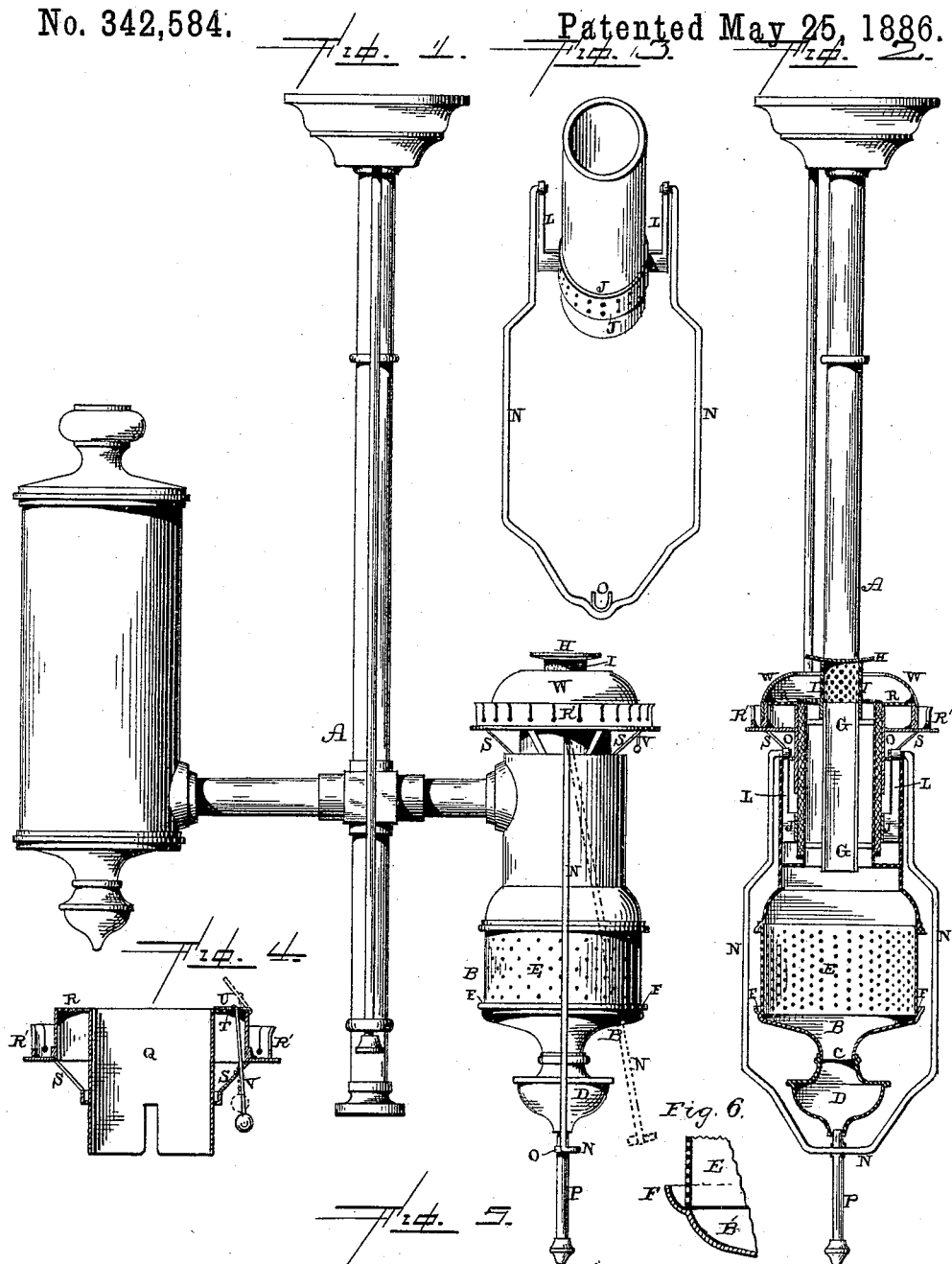


(No Model.)

Z. DAVIS.  
CENTER DRAFT LAMP.

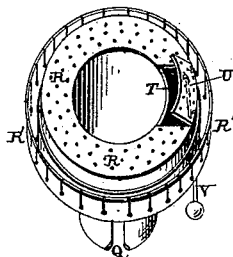
No. 342,584.

Patented May 25, 1886.



WITNESSES.

L. T. Gardner  
Jno. E. Prosperi



INVENTOR.

Zebulon Davis,  
per J. A. Lehmann,  
Atty.

# UNITED STATES PATENT OFFICE.

ZEBULON DAVIS, OF CLEVELAND, OHIO.

## CENTER-DRAFT LAMP.

SPECIFICATION forming part of Letters Patent No. 342,584, dated May 25, 1886.

Application filed October 3, 1885. Serial No. 178,924. (No model.)

*To all whom it may concern:*

Be it known that I, ZEBULON DAVIS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and  
5 useful Improvements in Center-Draft Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use  
10 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in center-draft lamps; and it consists in, first, the  
15 combination, with an Argand burner, of the air-chamber having perforated sides through which the air passes, and an opening through its bottom for the passage of oil into the drip-cup, and the flange or rim around the lower  
20 edge of the perforated portion of the chamber to catch the oil as it runs down the outside of the chamber or burner; second, the combination, with a center-draft lamp, of a ring or band for engaging the wick, rods or  
25 arms extending upward from the band, and a suitable bail or handle connected to the rods or arms for the purpose of raising the ring and the wick vertically; third, the combination, with a central-draft lamp, of a ring or band  
30 for engaging the wick, and provided with two or more rods or arms, which extend upward from it, and a bail or handle which is connected to the rods or arms, whereby the wick is raised from two or more points at once;  
35 fourth, the combination, with a central-draft lamp, of a ring or band for engaging the wick, and provided with two or more rods or arms which extend upward from it, a bail or handle which drops down below the burner, and  
40 a rod which is fastened to the lower end of the burner, and which acts as a guide to the bail; fifth, the combination of the burner, a perforated band or ring, which extends around its top and forms a support both for the cone  
45 and globe, and a door through the band, having a notched operating-rod connected to it, all of which will be more fully described hereinafter.

The object of my invention is to make a

lamp which is especially adapted for lighting  
50 halls, churches, and large rooms where more than an ordinary quantity of light is required, and to provide a lamp by which large circular wicks can be raised and lowered evenly upon  
55 all sides alike, and thus maintain a large flame, which will burn evenly and without smoking.

Figure 1 is a side elevation of a lamp embodying my invention. Fig. 2 is a similar  
60 view taken at right angles to Fig. 1, partly in section. Fig. 3 is a perspective of the wick-raiser. Fig. 4 is a vertical section of the outside wick-tube. Fig. 5 is a perspective of the same. Fig. 6 is an enlarged detail view of the  
65 air-chamber.

A represents a lamp, which may either be given the form of a student's lamp, as is here  
70 shown, or any other that may be preferred.

So far as the supporting-rod at the center, the reservoir, and the particular means employed for raising and lowering the lamp no  
75 claim is made.

Through the bottom of the air-chamber B is made the opening C, into which the drip-cup D is screwed or otherwise fastened. The  
80 drip-cup is made to connect directly to the bottom of the air chamber, as here shown, so that all of the oil which flows down over the outside of the lamp will pass directly down through the air-chamber and into the drip-cup  
85 without overflowing the bottom of the lamp in the usual manner. The upper portion of the air-chamber is formed by a perforated vertical band, E, which, instead of being connected directly with the top of the bottom  
90 portion of the air-chamber, passes down inside of it, so as to leave sufficient space at F for all of the overflow of oil to pass directly down into the bottom of the chamber, instead of flowing over its outside. By means  
95 of the construction here shown all of the cuttings of the wick which may fall down through the central draft-tube drop directly into the drip-cup, and all possibility of any overflow of oil upon the outside of the drip-cup is effectually prevented, and thus there can never be any possible chance of a drip from the lamp.

Placed inside of the inner wick-tube is the vertical tube G, which serves as a support for spreader H. To the under side of this spreader H is connected a perforated tube, I, which extends down over the top of the tube G, and supports the spreader in position. All of the air which passes up through this tube G is made to pass through the perforated tube I, so as to break up any currents of air, and heat the air before it is fed evenly to the inner side of the flame.

It is impossible to raise any large circular wick evenly upon all sides by means of ratchets, and where ratchets, or any similar arrangement of construction of parts are relied upon to raise a large circular wick the wick will be raised unevenly upon one side, and then before it can be made to give the largest amount of light it will begin to smoke upon that side. No amount of trimming will keep the wick even any length of time, for when the wick is lowered and then again raised, it will again move up unevenly and cause one side to smoke before the other side is giving its maximum amount of light. In order to overcome this difficulty experienced in the use of ratchets and all similar devices, I place the ring J around the wick at any suitable point near its lower end, and attached to this ring are any suitable number of arms or rods, L, which extend upward a suitable distance and have the upper end or ends of the bail or handle N loosely connected thereto. This bail or handle extends downward, as shown, below the drip-cup, and has connected to it a semicircular spring, O, to catch over the vertical guiding-rod P, which is secured to the under side of the drip-cup. This rod serves to guide the handle or bail in its movements, and to hold the handle or bail in that convenient position where it can be readily reached by hand, or any suitable instrument for raising or lowering it. As this bail or handle is moved up and down, it carries with it both the ring and the wick, and thus causes the wick to move positively and with great accuracy and upon all sides alike. Where this ring is connected to the wick as here shown and then the ring moved by any suitable means, it is impossible to elevate the wick unevenly under any circumstances. The consequence is that the wick can always be raised so as to give the maximum amount of light without smoking.

As this lamp is intended more especially to be used overhead, it is preferable to move the ring by means of a handle or bail, as here shown; but in case the ring is applied to a lamp which is designed to sit upon a table it is not necessary to use a bail or handle which is constructed exactly as here shown. Other devices may be substituted for this bail without departing from the spirit of my invention.

When it is desired to remove the drip-cup for any purpose, the lower end of the bail is released from the guiding-rod P, and then the

bail can be moved laterally so as to allow the cup to be moved.

The outside wick-tube, Q, has extending horizontally from its top edge a perforated band, R, through which all of the air which is fed to the outside of the burner passes. To the outer edge of this perforated band Q is attached a globe or chimney-holder, R', which is connected to the outside wick-tube by means of the arms S. These arms are placed at suitable distances apart, and serve to convey what little amount of heat is radiated downward. This globe-holder is supported upon the outside of the wick-tube by means of the perforated band and by means of the arms S, thus preventing as much heat as possible from passing down to the body of the lamp.

Through the perforated band Q is made a suitable opening, T, and this opening is controlled by means of the draft-door U, which is connected to the operating-rod V. This rod is notched upon one side so that it will hold the door in a raised position while a light is being passed through the opening to light the wick. As soon as the wick is lighted a light touch upon the lower end of this operating-rod releases the door, and it at once closes from its own gravity.

By means of this opening, through the perforated band Q, a lamp can be lighted in the same manner as gas, and without the necessity of having to remove or detach the globe.

Over the top of the globe-holder is passed the removable cone W, which deflects the air directly to the outside of the flame.

Having thus described my invention, I claim—

1. The combination, with an Argand burner, of the air-chamber having perforated sides for the admission of air and an opening through its bottom for the passage of oil into the drip-cup, and the flange or rim around the lower perforated portion of the chamber to catch the oil as it runs down the outside of the burner, substantially as shown.

2. The combination, with a center-draft lamp, of a ring or band for engaging the wick, rods or arms extending upward from the band, and a suitable bail or handle which has its two upper ends connected to the two arms and its lower portion to extend down around the burner, substantially as described.

3. The combination, with a center-draft lamp, of a ring or band for engaging the wick, rods or arms which extend upward from the band, a bail or handle which has its upper ends fastened to the rods or arms and which has its lower portion to extend down below the burner, a catch on the bail, and a guiding-rod secured to the burner for the bail to catch upon, substantially as set forth.

4. The combination of the burner provided with a horizontal band or ring around its top for the support of the globe, a door in this band or ring, and a notched supporting-rod

connected to the under side of the door, substantially as specified.

5 5. The combination, with a center-draft lamp, of a band or ring which is applied to the wick, two rods which extend upward from the ring upon opposite sides, and a bail or handle having its upper end pronged and connected loosely to the upper ends of the two rods, whereby the bail can be turned at an

angle to the lamp, for the purpose of removing it, substantially as shown.

In testimony whereof I affix my signature in presence of two witnesses.

ZEBULON DAVIS.

Witnesses:

JNO. E. PROSPERI,

A. S. PATTISON.