

(No Model.)

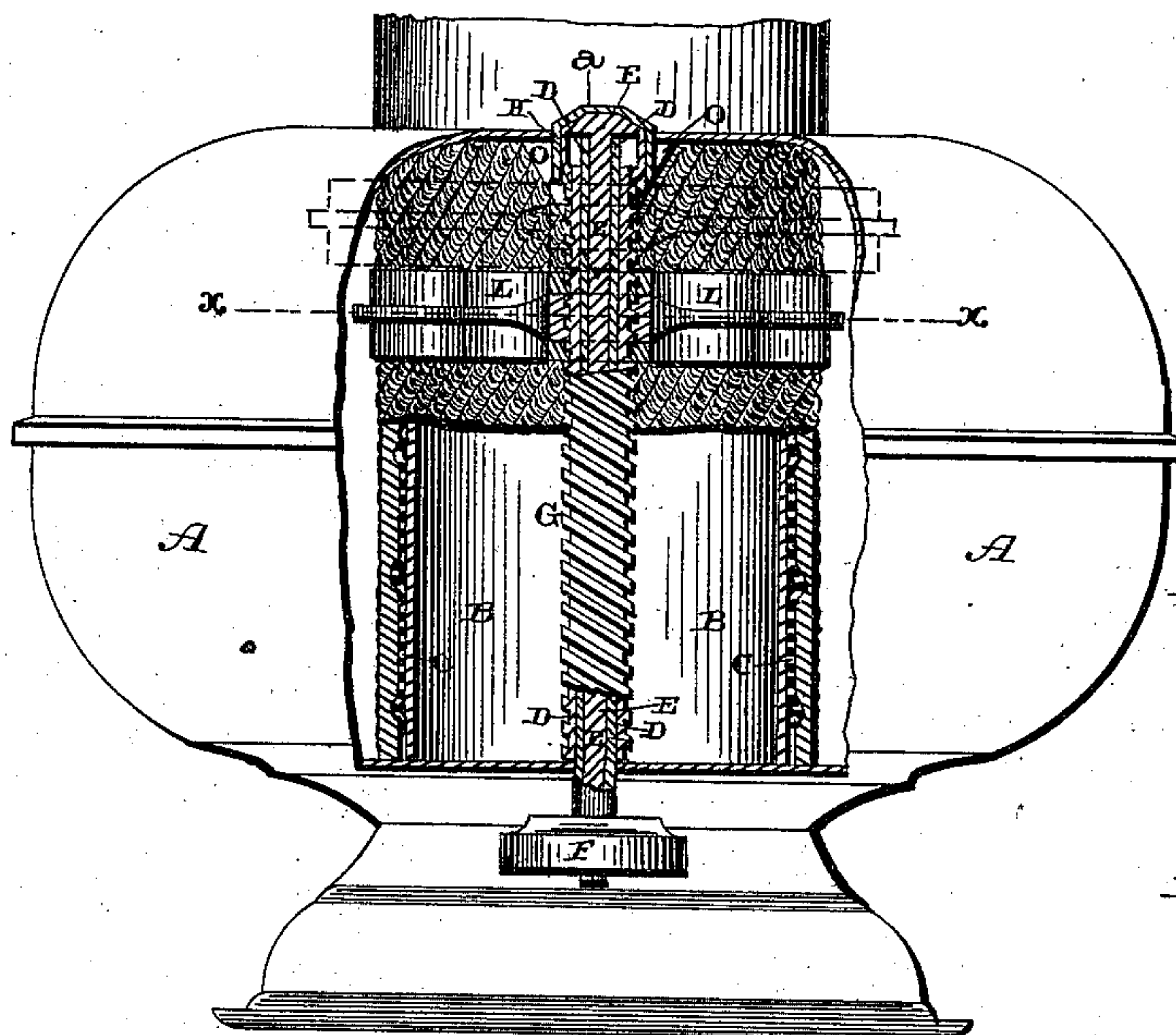
Z. DAVIS.

WICK RAISER FOR CENTRAL DRAFT LAMPS.

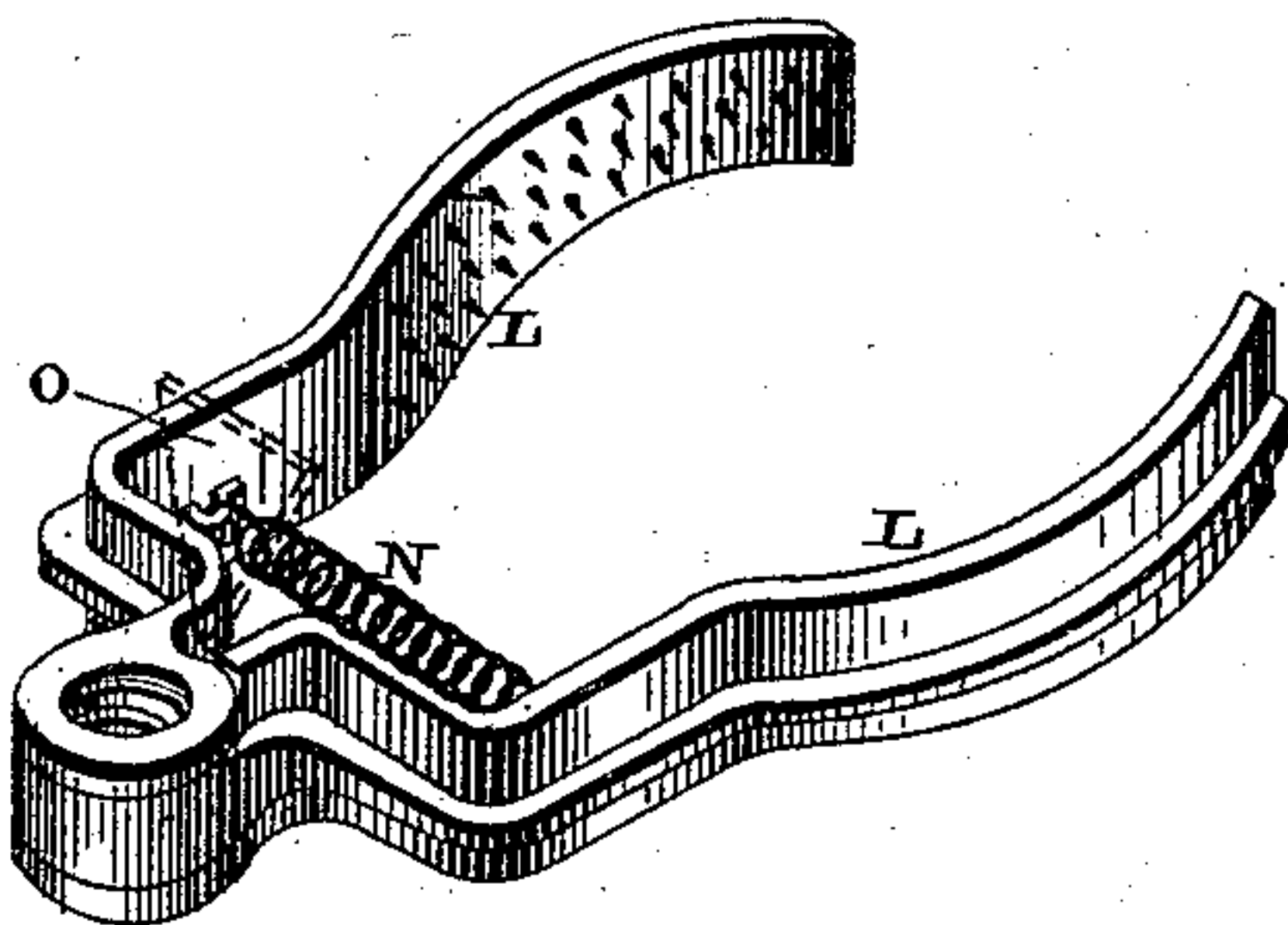
No. 408,591.

Patented Aug. 6, 1889.

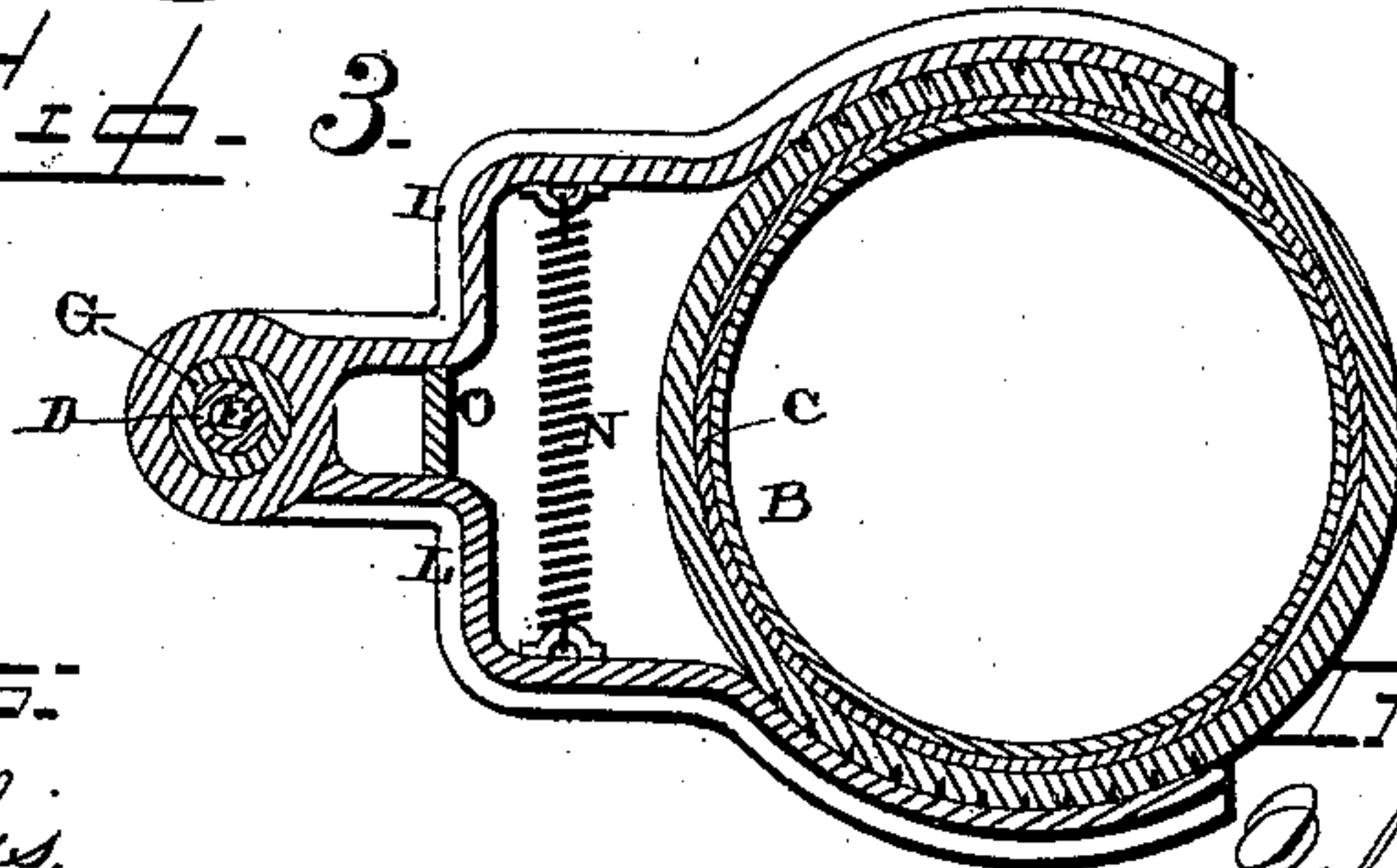
File 1.



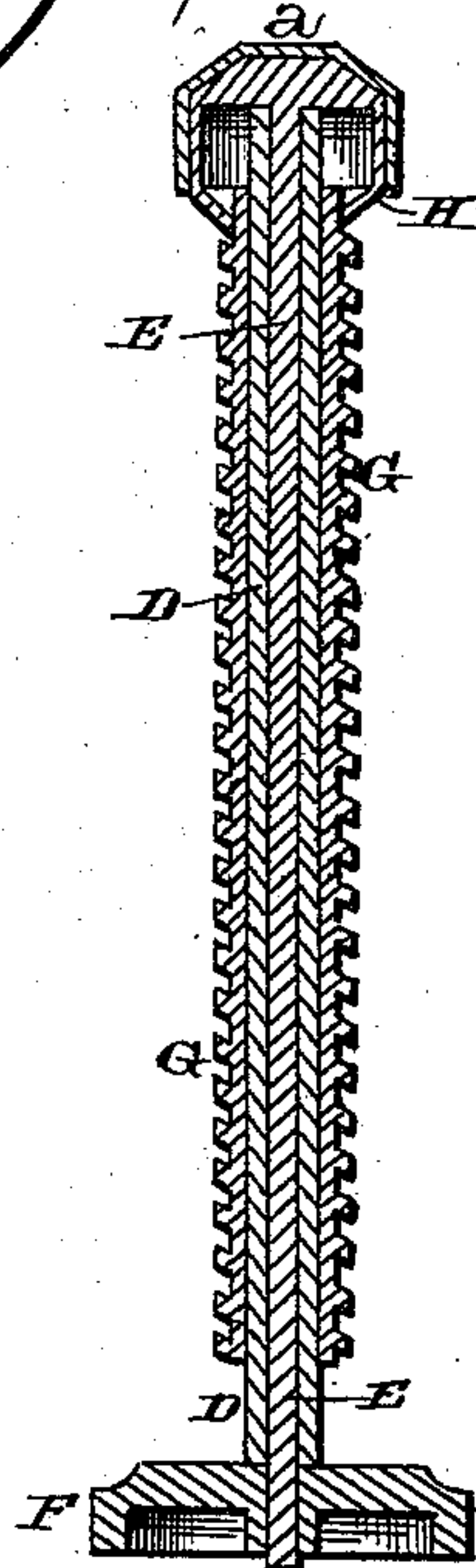
File-2.



714 - 3.




File 4.



Witnesses:

Edm. P. Ellis,  
Allen S. Pattison

*Inventor:*

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



# UNITED STATES PATENT OFFICE.

ZEBULON DAVIS, OF CLEVELAND, OHIO.

## WICK-RAISER FOR CENTRAL-DRAFT LAMPS.

SPECIFICATION forming part of Letters Patent No. 408,591, dated August 6, 1889.

Application filed August 15, 1888. Serial No. 282,762. (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 Wick-Raisers for Central-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  
10 make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in wick-raisers; and it consists in the combina-  
15 tion of the lamp-bowl having a tube extending through one side, an operating-rod which extends up through the tube, an operating-screw which surrounds the stationary tube and operates the wick-raising devices, and  
20 which is connected to the operating-rod at its upper end by means of a metallic connection which is so shaped as to form a chamber, and the wick-raising devices which are operated by the screw-threaded tube, as will be more  
25 fully described hereinafter.

The object of my invention is to produce a wick-raiser which can be operated from the lower portion of the bowl and to dispense with an opening through the top of the bowl,  
30 so as to avoid the sweating of oil which takes place when an opening is made through the bowl.

Figure 1 is an elevation, partly in vertical section, taken through the wick-raising mechanism. Fig. 2 is a perspective of the wick-raising arms and the depending wedge by which they are separated as they approach to their highest point. Fig. 3 is a horizontal section, taken on the dotted lines X X of Fig.  
40 1, through the wick-raising devices. Fig. 4 is an enlarged vertical section of the parts which operate the wick-raiser.

A represents the bowl of the lamp, B the central-draft tube, and C the perforated wick tube or hoop provided with ridges or corrugations, so as to cause it to better engage with the wick in the usual manner.

Projecting from the top of the inside of the lamp-bowl A, down to or through its bottom,  
50 is a stationary guiding-tube D, of any desired diameter, and up through which the revolving operating-rod E passes. The upper end

of this rod projects just above the top of the stationary tube, and the lower end of the rod projects down through the lower end of the tube and has the hand-wheel F secured rigidly thereto. This rod has no other than a turning motion, as its only office is to cause the revolution of the screw-threaded tube G. This revolving screw-threaded tube G does not extend up as high as the top of the stationary tube, but it projects downward, so as to come in contact with the bottom of the bowl, and entirely incloses all of the stationary tube inside of the lamp-bowl, except that small portion which extends beyond its upper end. The upper end of the revolving operating-rod and the upper end of the revolving screw-threaded tube are connected together by a cap or sleeve H, which is bulged or curved outward, so as to form a chamber around the upper end of the stationary tube, and this chamber serves to break or destroy the capillary attraction of the oil, which would rise through the bottom of the revolving screw-threaded tube G, pass up over the top of the stationary tube, and then pass down around the operating-rod, and thus cause a leak which in time will empty the lamp-bowl. This chamber entirely destroys all capillary attraction, and hence no leak can possibly take place where the parts are constructed as here shown.

In order to steady the upper end of the operating-rod, as well as to raise the chamber above the highest point to which the lamp will be filled, the top of the bowl of the lamp is bulged or rounded upward, as at *a*, and into this bulged or rounded portion *a* the upper end of the operating-rod extends. This bulged portion is also used for the purpose of raising the chamber sufficiently high to prevent it from being filled or flooded in case the lamp-bowl is tipped to one side.

The wick-raising arms L, which are provided with serrations or projections upon their inner sides to engage with opposite sides of the wick, are mounted upon the revolving screw-threaded operating-tube G. These arms extend parallel for a short distance from the tube and then diverge, and are connected by a suitable spring N. This spring N serves to hold the arms with sufficient force against opposite sides of the wick and the wick-tube C to cause the wick to move



with the arms as they are raised or lowered by the revolving screw-threaded tube. The projections or serrations upon the inner sides are just sufficient to take a firm hold upon  
 5 the wick and the perforated wick-tube without destroying the capillary attraction of the wick at any one point. As the wick is not tied to the wick-tube in the usual manner, and as the arms do not interfere with the free  
 10 capillary attraction of the wick, the supply of oil to the flame is alike at all points.

Secured to the under side of the top of the lamp-bowl is the depending wedge O, which, as the arms are raised by the revolving screw,  
 15 catch between them and force them apart, so as to release the wick. This forcing apart or separation of the arms only takes place when the arms are raised into contact with the wedge O by the revolving screw, and then the  
 20 cone by catching between them overcomes the tension of the spring and forces them apart. As soon as these arms are lowered to that point where the tapering projection no longer acts upon them they are at once drawn  
 25 toward each other by the spring and again grasp the wick from opposite sides. While these arms are forced apart by the conical projection the wick can be entirely removed or adjusted upon the central-draft tube into  
 30 any desired position.

By constructing and arranging the parts as here shown no part of the wick-raising device extends above the top of the bowl and no opening is made through the bowl, except

the one at its bottom for the operating-rod to 35 pass through.

Having thus described my invention, I claim—

1. The combination of the lamp-bowl, the stationary tube placed inside thereof, an op- 40 erating-rod which extends through this tube, a metallic connection which is so shaped as to form a chamber and connected to the operating-rod, a screw-threaded operating-tube which surrounds the stationary tube and is 45 attached to the metallic connection, and the wick-raising devices which are placed upon and operated by the screw-threaded tube, substantially as shown.

2. The combination of the lamp-bowl A, 50 the stationary tube D, placed inside of the bowl for making a tight joint therewith at its lower end, an operating-rod E, which passes through the stationary tube, the metallic connection H, so shaped as to form a chamber 55 around the upper end of the tube D, a screw-threaded operating-tube which incloses the stationary tube, and the spring-actuated wick-raising devices provided with screw-threads engaging said operating-tube, substantially as 60 described.

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

ZEBULON DAVIS.

Witnesses:

F. L. ALCOTT,  
 W. B. WHITING.