

(No Model.)

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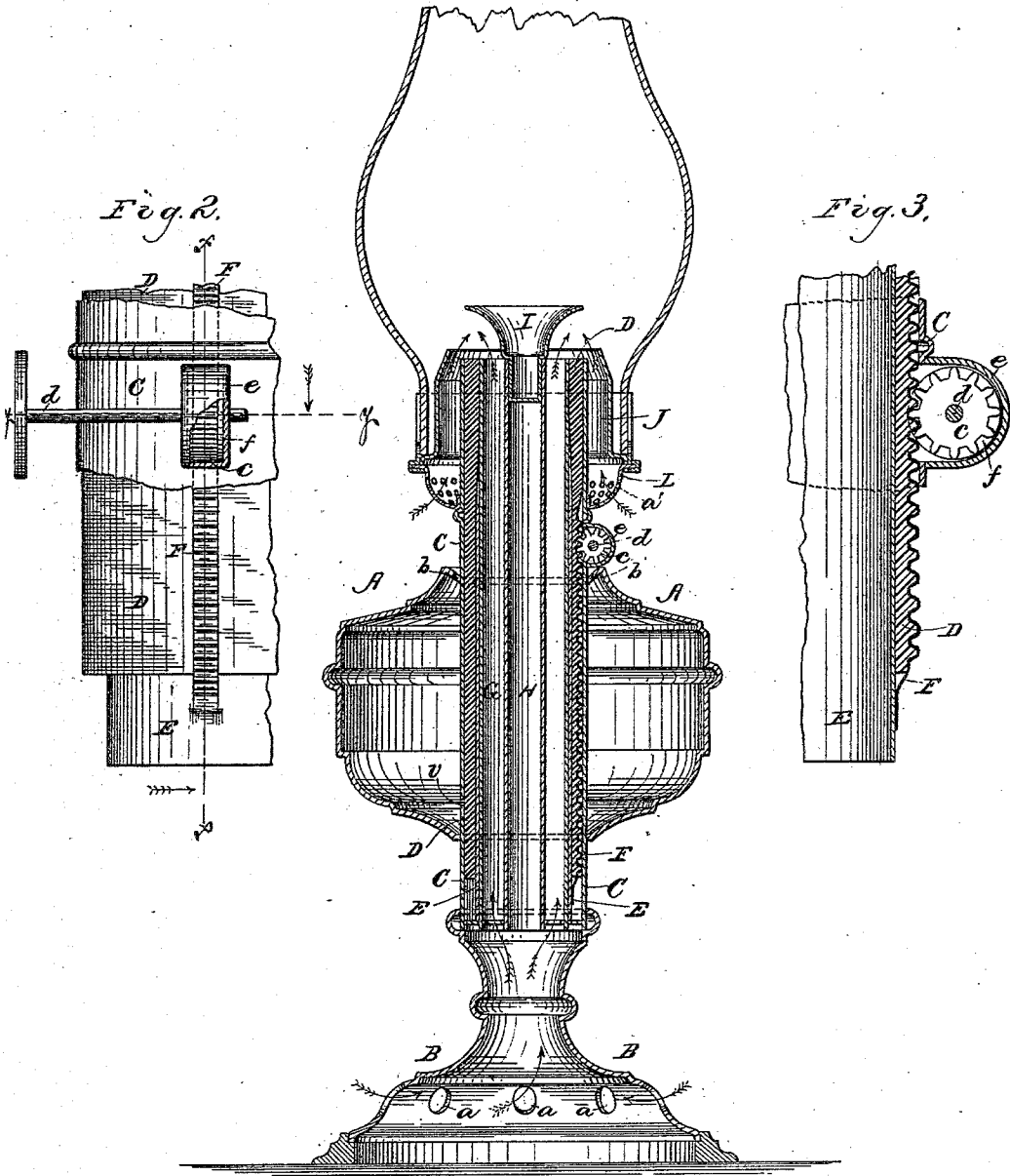
W. P. CASPERSON.

LAMP.

No. 296,522.

Patented Apr. 8, 1884.

Fig. 1.



Witnesses,  
*Henry Frankfurter,*  
*W. S. Baker.*

Inventor,  
*Wm. P. Casperson*  
 per. *A. W. Stout*  
 Attorney,

(No Model.)

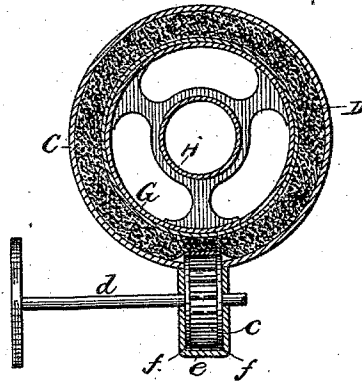
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W. P. CASPERSON.  
LAMP.

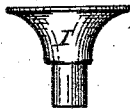
No. 296,522.

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*Fig. 4.*



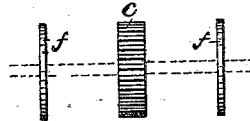
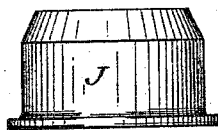
*Fig. 5.*



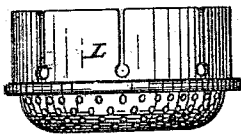
*Fig. 6.*



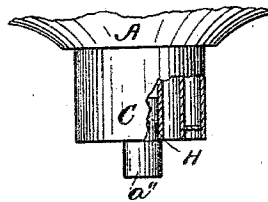
*Fig. 7.*



*Fig. 8.*



*Fig. 9.*



Witnesses,

*Henry Frankfurter.*  
*W. H. Baker.*

*Inventor:*  
*W. P. Casperson*  
*per: A. W. Stout*  
*Attorney.*

# UNITED STATES PATENT OFFICE.

WILLIAM P. CASPERSON, OF CHICAGO, ILLINOIS.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 296,522, dated April 8, 1884.

Application filed October 1, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WM. P. CASPERSON, of Chicago, county of Cook, and State of Illinois, have invented certain Improvements in Lamps, of which the following is a specification.

My said improvements will be hereinafter described with reference to the accompanying drawings, in which—

Figure 1 represents a central vertical section of a lamp embracing the same in its construction; Fig. 2, an elevation of a portion of the same, and Fig. 3 a vertical section of a portion also; Fig. 4, a horizontal section of the several tubes or shells and the wick in position, taken through the pinion-box *e*; Figs 5, 6, 7, 8, and 9, detail views of several parts.

A indicates the fount, C the outer shell, D the wick, E a tubular wick-carrier, which is embraced by the circular wick; F, a double rack fastened to the lower outer surface of the carrier and extending upward in contact with the wick on the outside. It is formed of a simple metal plate or strip bent into a zigzag line, so as to form teeth on both faces. The teeth on the inner face engage with the wick, while those on the outer face engage with the teeth of the pinion *e*, which is mounted on the shaft *d*, which has its bearings in and is inclosed by the box *e* on the outer shell, C. The rack is flexible, and that is a desirable quality, and its manufacture is very easy and cheap. It is not essential that its lower end should be fastened to the carrier, for the pressure of the pinion will cause the carrier and the wick to move together without fastening.

A is the fount for the oil, and down through its central portion pass the outer tube or shell, C, the carrier E, the inner shell, G, forming, with the outer shell, C, an annular chamber for the wick D and the carrier, and lastly the central tube, H. The wick-chamber is made liquid-tight at the lower end, as shown, and open at the upper, and the upper end of the central tube, H, furnishes a socket for the flame-spreader I, which is designed to spread the flame evenly and outwardly through the glass chimney. The device L is slipped upon the outer shell, C, and is cone-formed below, and perforated for the admission of air; but above it is

cylindrical and provided with vertical slots to render it sufficiently elastic. The ring J is provided with a horizontal flange extending outwardly at the lower end, which serves as a seat for the chimney, and its upper end is contracted in order to converge the currents of air from below upon the wick while burning. The body of the fount, where the shell C passes through it below, is soldered tightly to it, but a space is left between the shell C and the upper end of the fount for the escape of gas and the admission of air, and the edge *b* of the shell of the fount is depressed next the shell C, in order that any oil that may flow down on the outside from the wick may run back into the fount again.

In order that the wick may be fed with oil from the fount, an orifice, *v*, is made in the shell C a little above the bottom of fount for the passage of the oil into the wick-chamber. Such being the location of the oil-passage, there is the least possible danger of the flame from the wick reaching the oil in the fount.

In order that the lamp may be attached to any gas-fixture, the plug *a'* is used. It is provided with a screw-hole in its lower end, by which it may be so attached, while its upper end is inserted in the lower end of the central tube, H.

The wick-carrier, instead of being made of tin, as the other internal tubes may be, is made of sheet-iron, in order that its upper end, when brought near the flame, may not be soldered to the inner shell, G, of the wick-chamber. My design is that the upper end of the wick-carrier shall not extend as high as the flame, as all of the wick that is designed to be consumed is above it, but by carelessness it may be forced so high as to reach the flame.

The shortening of the lamp, and the easy working of my devices for raising the wick, and the having these devices interior, instead of upon the exterior, as they have been in other lamps heretofore in use, have been special objects with me. As shown in Fig. 1, my rack extends quite as high as the wick-carrier, and the pinion *e* is nearly as high as the upper ends of both, and the wick and carrier are pulled up (which is a better move-

ment) instead of being pushed up, as in other like devices.

On the shaft *d*, on either side of the pinion *c*, are the disks or washers *f* within the box *e*, and by their agency the rack is held true to a vertical position, as their diameters are at least equal to that of the circle described by the points of the teeth of the pinion, and these disks absolutely exclude the fibers of wick from contact with the teeth of the pinion.

It will be observed that all the delicate operative parts are inclosed, and dust and dirt are excluded.

The base *B* is made of sheet metal spun in any form required, and furnished with the apertures *a* for the passage of air into the interior space between the wick-chamber and the central tube, *H*.

If it be desired to weight the base, that may be done by spinning the sheet metal upon and around a ring or disk of iron or lead, or as shown in Fig. 1.

I am aware that in the Letters Patent of the United States for a wick-raiser, dated November 17, 1868, issued to J. B. Alexander, there is described and shown a rack made of

one piece of sheet metal by bending the same along the center line thereof into corrugations, to serve as supporting-points for the teeth of a pinion, and by bending the edges thereof back from the wick-tube at nearly a right angle, to serve as guides for the pinion; but such rack is not, however, in immediate contact with the wick itself, but with a wick-tube, which itself incloses a tubular wick-clasp that contains the wick; and such construction I hereby disclaim.

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

The combination of the described rack *F* and pinion *c*, and of the disks *f*, mounted on shaft *d*, one on each side of the pinion, and having a diameter at least as great as that of the circle described by the points of the teeth of the pinion, adapted to guide the rack in a true vertical position, and compress the wick on each side of the rack, and prevent the teeth of the pinion from coming in contact with the wick, substantially as described.

WILLIAM P. CASPERSON.

Witnesses:

WM. E. YOUNG,  
OSCAR CHARLES.