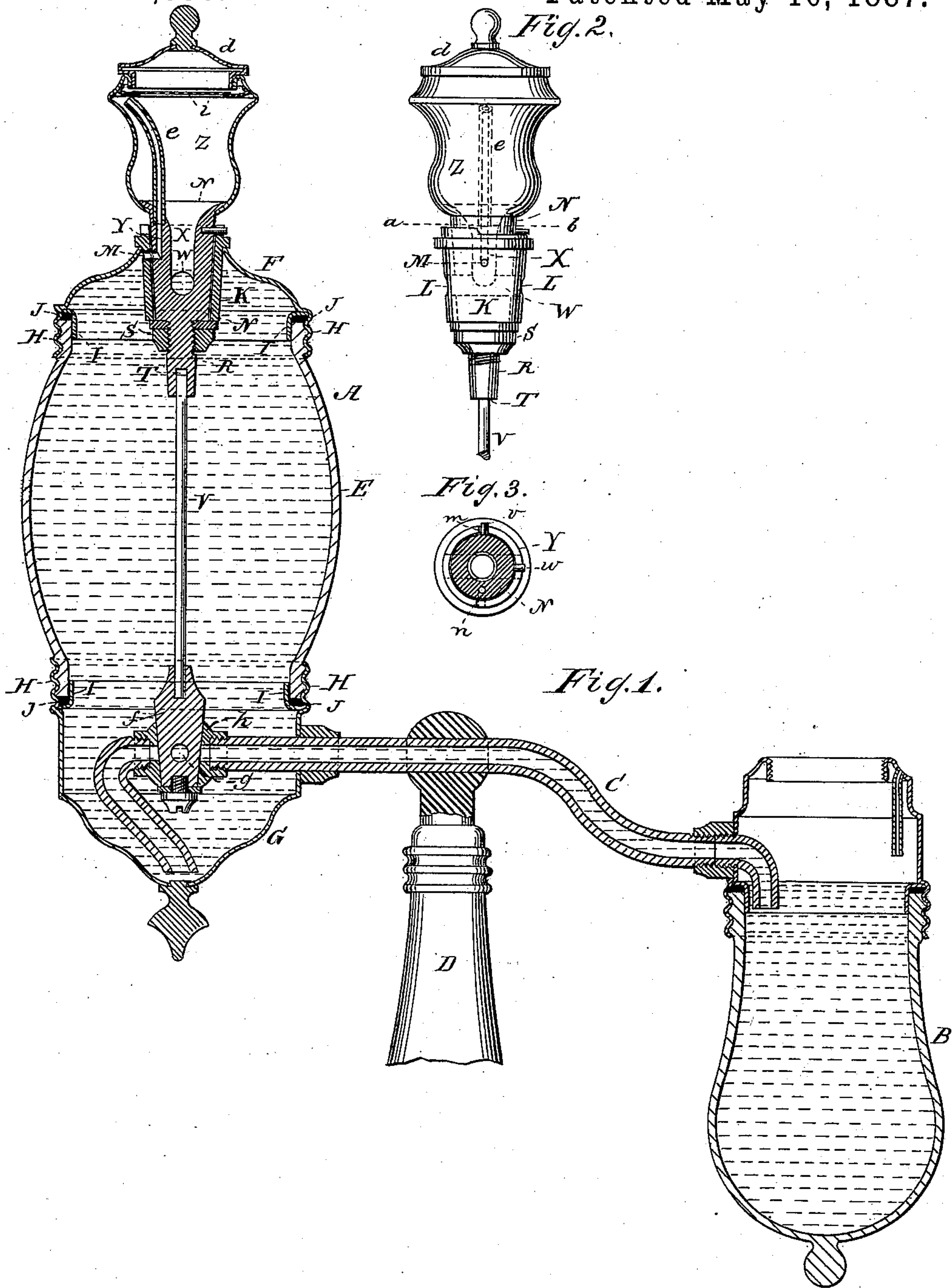


(No Model.)

E. B. REQUA.  
LAMP.

No. 362,536.

Patented May 10, 1887.



WITNESSES:

Edward Wolff,  
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# UNITED STATES PATENT OFFICE.

ELIAS B. REQUA, OF JERSEY CITY, NEW JERSEY.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 362,536, dated May 10, 1887.

Application filed August 26, 1886. Serial No. 211,895. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS B. REQUA, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

The invention relates to the class of lamps composed, essentially, of an elevated reservoir connected with an oil-fount by means which permit the passage of the oil from the former into the latter, which is supplied with a burner and an air-vent; and the invention consists, particularly, first, in certain novel devices for facilitating the filling of the oil-reservoir; second, in the construction of the reservoir, and, third, in the arrangement of the pipe passing from said reservoir to the burner-fount.

The object of the first part of the invention is to provide means by which the pipe leading to the burner-fount may be closed by the operation of opening the valve at the upper part of the reservoir, and opened by closing said valve, and also, to connect with said upper valve, a cup having an air-vent, in order that the filling of the reservoir may be accomplished speedily and without danger of spilling the oil.

The purpose of the second part of the invention is to produce an oil-reservoir for a lamp of the class described above, which is composed of parts readily put together, and which will effectually prevent leakage, and of the third part of the invention to provide a connecting-pipe which will operate after the nature of a siphon to conduct the oil from the reservoir to the burner-fount until the former has been completely emptied.

The particular construction and operation of the devices sought to be protected hereby will be more fully understood from the detailed description hereinafter presented.

In Letters Patent granted to me May 18, 1886, and numbered 342,133, is shown a lamp of the class referred to in this application.

In the accompanying drawings, Figure 1 is a central vertical section of a lamp embodying the elements of the invention. Fig. 2 is a side elevation of a detached portion of same, and Fig. 3 is a transverse section on the dotted line *a b* of Fig. 2.

A in the drawings designates the oil-reservoir, B the burner-fount, and C the connecting-pipe by which the latter is fed from the former. The lamp will be mounted upon any suitable stand—such as that lettered D—if desired. The reservoir A is composed of the glass body E, threaded at its upper and lower ends, and provided with sheet-metal ends, (lettered F G, respectively.) The portions of the ends F G adjoining the glass body E are provided with threaded flanges H, which engage the threaded ends of said body. Upon the inner side of the ends F G are provided flanges I, which are in line with the threaded flanges H, and form in connection therewith a socket to receive the respective ends of the body E. Prior to the insertion of the ends F G upon the glass body of the reservoir A a packing of rubber, cement, or other suitable material will be placed in the socket J, in order to insure the formation of a liquid-tight joint. When the packing has been placed in the socket, the ends F G will be screwed firmly in position, thus compressing the packing and forcing it laterally against the flanges H I, in which condition it will effectually prevent leakage.

In the upper portion of the end F is secured the depending valve seat or casing K, which in the present instance is in the form of a cast-metal thimble or sleeve, having upon opposite sides the corresponding transverse apertures, L, and also, at one side, adjacent to its upper end, the vent-aperture M. The valve-casing K is sustained by the sheet-metal end F, and it incloses the valve-plug N, which is seated therein, and is provided with a threaded stem, R, projecting below the same.

Upon the stem R is provided the washer and nut S, by which the plug N is retained in place without interfering with its being rotated. The lower end of the stem R is provided with a socket, T, which fits upon the upper end of the rod V, and operates as a key by which said rod may be turned at the proper time, as hereinafter explained. The plug N contains a transverse aperture, W, in line with the apertures L in the casing K, and is provided with a vertical inlet, X, leading to said aperture W, as shown in Fig. 1. At one side of the opening X is provided, in the plug N, the vertical passage Y, which may be brought



into line with the vent M, as shown in Fig. 1, or removed therefrom, as desired.

Upon the upper end of the plug N is rigidly secured the sheet-metal cup Z, of ornamental appearance, and provided with a cap, *d*, adapted to be firmly secured in position. The bottom of the cup Z is formed by the upper end of the plug N, and within the said cup is provided the vertical air-tube *e*, connected with the passage Y, above mentioned.

The operation of the devices above described will be explained hereinafter, in connection with the other parts of the lamp, after the construction of the latter has been described.

Upon the lower end of the rod V is secured the valve-plug *f*, containing a transverse aperture, *g*, and seated within the valve-casing *h*, which forms a coupling in the pipe C, and is located in the lower part of the reservoir A. The aperture *g* in the valve-plug *f* is in position to be brought into line with the bore of the pipe C or removed therefrom during the rotation of said plug, and thus forming a passage through the pipe C or closing the same, as may be desired.

The pipe C is in the form of a siphon, passing from the lower inner portion of the reservoir A upward to the valve-casing *h*, and thence out of the reservoir and into the side of the upper portion of the burner-fount B, as shown, the lower end of the pipe in the burner-fount being on a lower plane than that of the end thereof in the reservoir, the purpose of this arrangement being to enable the pipe to completely empty the reservoir of oil during the use of the lamp.

Operation: The arrangement of the transverse aperture in the valve-plug N is such that when the same is in line with the apertures L in the casing K the aperture *g* in the plug *f* will be across the pipe C, closing the same, the object of this arrangement being to secure the closing of the pipe C at the same time that the valve M is opened to fill the reservoir A with oil. In Fig. 1 I illustrate the valve N open, to permit the entrance of oil from the cup Z into the reservoir A. When the valve N is in this position, the cap *d* will be removed and the oil poured into the cup Z in a gradually-flowing stream, whence it will pass downward through the opening X into the transverse aperture W, thence escaping into the reservoir through the apertures L, formed in the valve-casing K. During the filling of the reservoir A with oil the tube *e* and passage Y are in line with the opening M, and constitute an air-vent leading from the upper part of the reservoir to the upper part and at one side of the cup Z. After a sufficient quantity of the oil has been permitted to enter the reservoir A, the valve M will be turned a quarter-revolution, thereby closing the apertures L and removing the passage Y from connection with the vent M, thereby sealing the upper part of the reservoir. The cap *d* may then be replaced, its purpose being merely to afford a

cover for the cup and to add to the appearance of the lamp. In the upper part of the cap Z may be provided a screen of wire-cloth, *i*, for catching any foreign matter in the oil, if desired. When the valve N is closed after the reservoir has been filled, as above described, it will operate through the rod V to rotate the valve-plug *f*, bringing its transverse aperture *g* into line with the bore of the pipe C, thus permitting a passage of oil from the reservoir to the burner-fount B.

In Fig. 1 I illustrate the valve N open, to permit the entrance of the oil upon the cap *d* being removed, and the valve *f* closed to prevent the pressure of air from causing an undue flow of the oil through the pipe C into the burner-fount B. It is obvious that should the pipe C be not closed when the upper part of the reservoir is open the oil in the reservoir, being in a higher elevation than the fount, would pass into and overflow the latter.

By means of the arrangement above described of the valves N and *f*, I render it impossible to open the upper part of the reservoir without closing the pipe C, since the operation of opening the former closes the latter. In order that the opening W in the valve N may be brought into line with the aperture L and that the passage Y may be brought into line with the vent M with certainty, I have provided upon the upper edge of the valve-casing K the shoulders *m n*, against which the pins *v w* may respectively strike during the rotation of the valve. When the pin *v* is in contact with the shoulder *m*, the valve will be open, as shown in Fig. 1, and when the pin *w* comes into contact with the shoulder *n* it will be an indication that the passages through the valve are closed.

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

1. In a lamp, the oil-reservoir, the burner-fount, and the pipe C, connecting the reservoir and fount, one end of the pipe being within the former and the other end within the latter, combined with the depending valve-casing K in the upper end of said reservoir, the valve N, secured in said casing, and having a horizontal discharge-port and a vertical inlet, X, the cup Z, secured upon the upper end of and adapted when turned to rotate the valve N, the rotary rod V, casing *h* in the pipe C, and valve *f*, seated in said casing, the two valves being connected by said rod V, substantially as and for the purposes set forth.

2. In a lamp, the oil-reservoir, the burner-fount, and the pipe C, connecting said reservoir and fount, combined with the valve-casing K in the upper end of said reservoir, and having apertures L M, the valve seated therein and having vertical inlet X, passage Y, and aperture W, the cup Z, secured to and being in communication with said valve, the tube extending from the passage Y to the upper part of the cup, a valve in the pipe C in the lower part of the reservoir, and a rod connect-



ing the two valves, whereby they rotate simultaneously, substantially as and for the purposes set forth.

3. In a lamp, the elevated reservoir, the  
5 burner-fount, and connecting-pipe C, which passes from within the fount to a point within the reservoir above its lower end, and then turns downward to a point adjacent said lower  
10 end, combined with a valve in the upper end of the reservoir for opening and closing the inlet to the reservoir, a valve in the pipe C for opening and closing the passage through

same, and a rod connected at its ends with said valves, whereby the motion of the upper valve is communicated to the lower one, substantially as and for the purposes set forth. 15

Signed at New York, in the county of New York and State of New York, this 24th day of August, A. D. 1886.

ELIAS B. REQUA.

Witnesses:

CHAS. C. GILL,  
A. S. SHOW.