2 Sheets—Sheet 1.

E. M. LOWDEN.

Lamp.

No. 232,521. Patented Sept. 21, 1880.

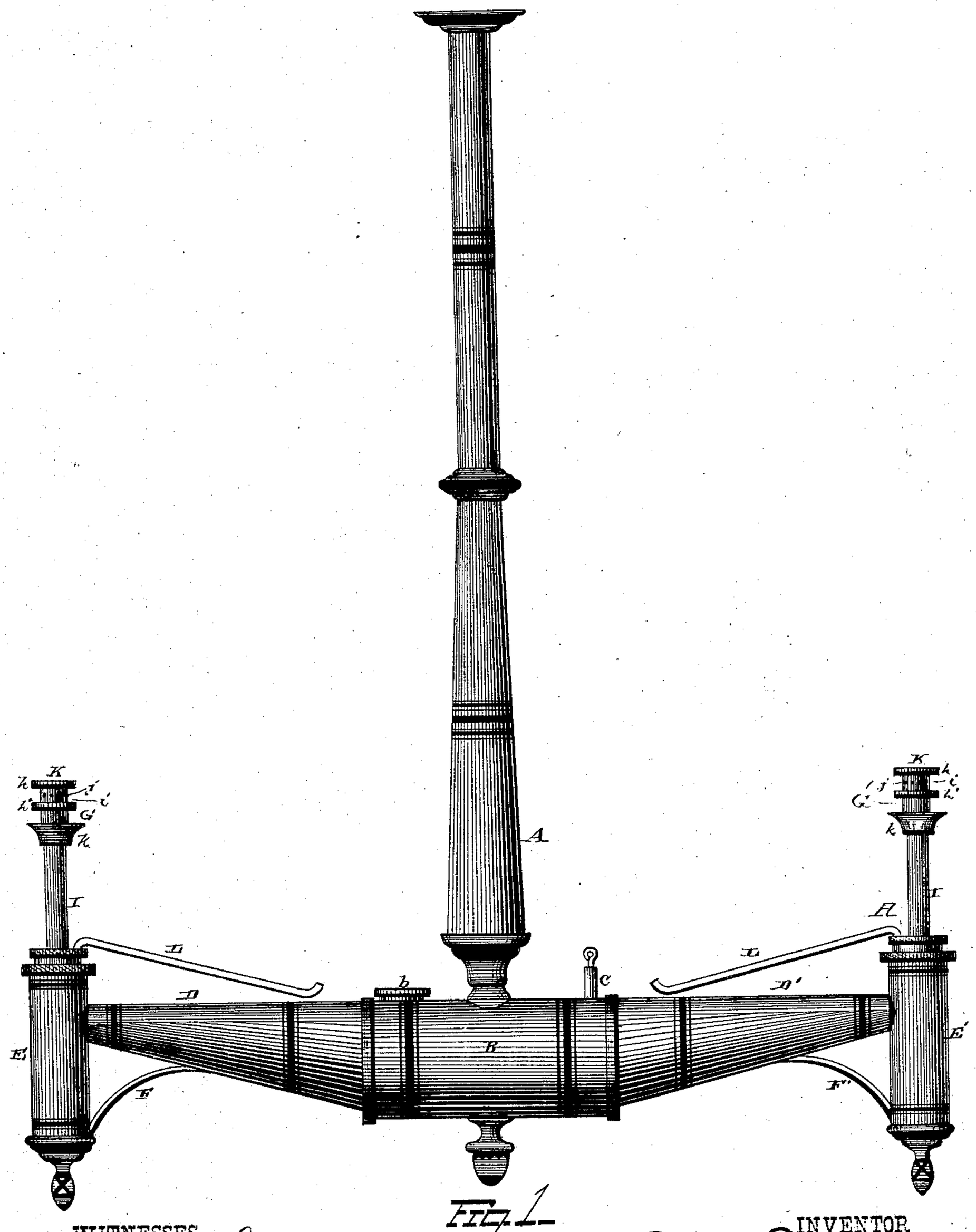

Fig. 1.

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2 Sheets—Sheet 2.

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Fig. 2.

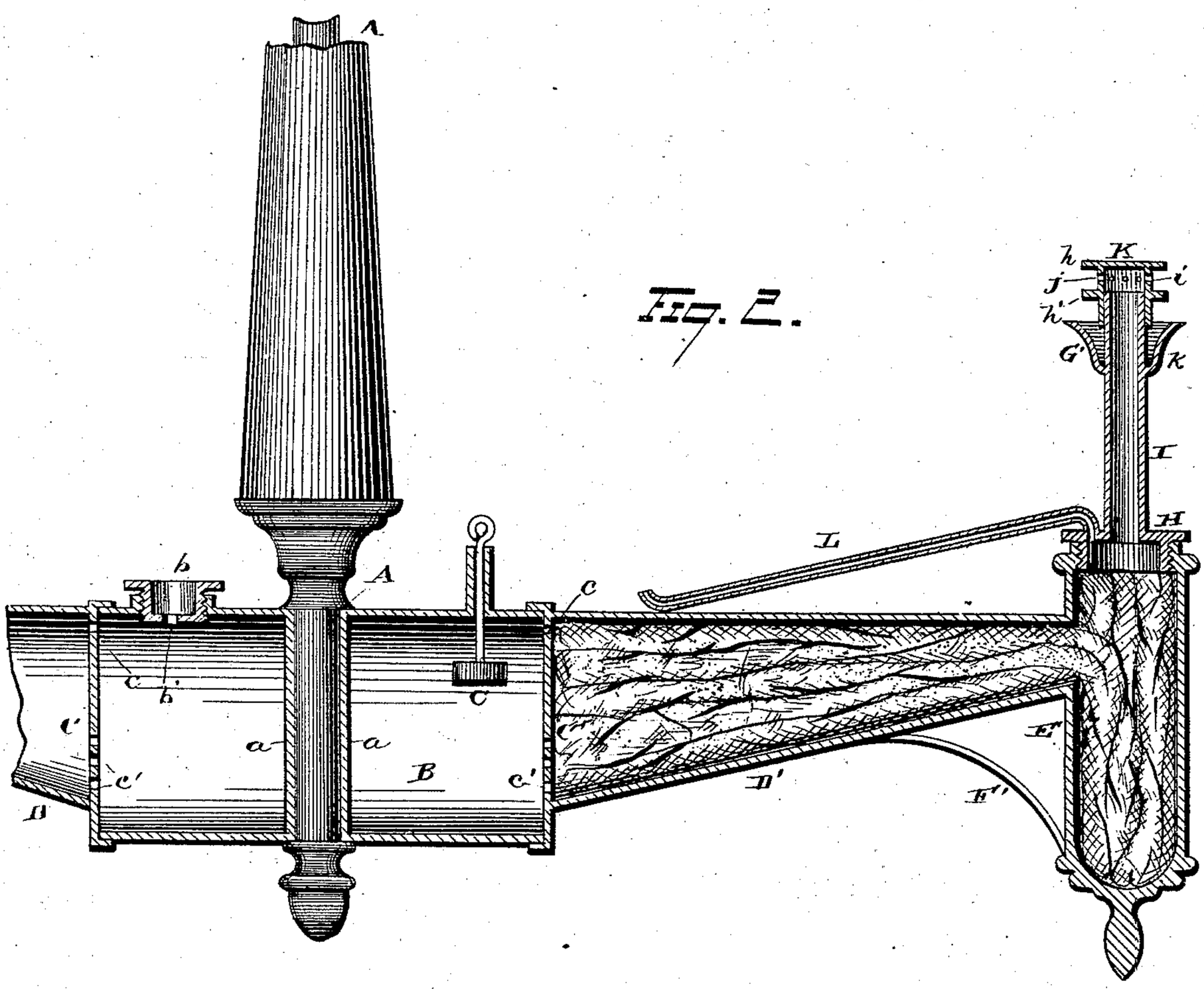
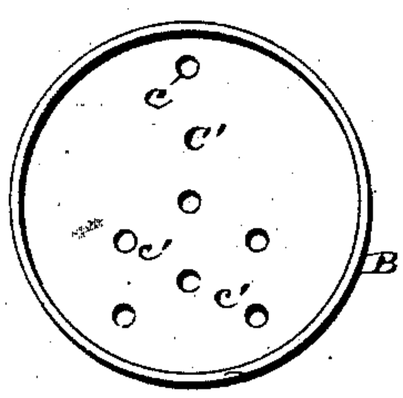


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD M. LOWDEN, OF NEW YORK, N. Y.

LAMP.

SPECIFICATION forming part of Letters Patent No. 232,521, dated September 21, 1880.

Application filed January 3, 1880.

To all whom it may concern:

Be it known that I, EDWARD M. LOWDEN, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fount-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 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in fount-lamps, the object being to provide a fount-lamp which shall be simple and durable in its construction, of small initial cost, and rendered safe from danger of explosions; and to these ends my invention consists in the novel construction and combinations of parts, as will hereinafter be described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view, in side elevation, of my improved fount-lamp. Fig. 2 is a vertical section of the same; and Fig. 3 is a transverse section through one arm of the lamp, showing the diaphragm located between the main body of the fount and supply-arm or conduit connected therewith.

A is the pendant of the lamp, which may be of any desired design and construction.

B is the main body of the fount, having a tube, *a*, secured through its center for the reception of the lower end of pendant A. Fount B is provided with a filling-aperture and a cap, *b*, having a vent-hole, *b'*, formed therein for the passage of air into the fount.

C is an indicator connected with the fount for registering the height of oil therein, and thus enabling the fount to be filled to any desired extent without danger of the oil running over and escaping from the filling-aperture.

The opposite ends of the main body B of the fount are provided with diaphragms C C', each of which is provided with upper and lower perforations, *c c'*, perforations *c* serving as air-passages, while the lower perforations, *c'*, serve as oil-passages. To the outer sides of the diaphragms C C' are secured the hollow arms D D', which are of irregular conical form, the upper sides being straight and in the same horizontal plane as the upper side of the main body B of the fount, while the lower sides of the arms are upwardly tapered.

E E' are wick-tubes attached to the outer ends of the hollow arms D D', and properly braced by the braces F F'. The upper ends of wick-tubes have vapor-burners G G'; removably secured thereto by means of screw-caps H H.

Vapor-burners G G' are each constructed as follows: I represents a wick-tube of any desired length, having a burner-head, K, connected with its upper end, said head K consisting of the two disks *h h'* and intermediate cylinder *i*, having any desired number of small perforations *j* formed therein for the escape of the vapor. Below the lower disk, *h'*, is placed a lighting-cup, *k*, into which oil is poured and lighted for heating the burner-head and vaporizing the burning-fluid for lighting the lamp. To the lower end of the tube I, or to the screw-cap H, is secured one end of a small vent-tube, L, the opposite end of which extends toward the pendant a sufficient distance to enable any explosive gases generated in the wick-tube to be allowed to escape therefrom and be discharged at a safe distance from the burner, and thus avoid explosions.

Instead of having the vent-tube L terminate between the pendant and wick-tubes, as shown in the drawings, they may extend to the lower or upper end of the pendant and be attached thereto, and may be made straight or spiral and left plain, or may be suitably ornamented, as desired, and their outer ends attached to the upper ends of the wick-tubes.

In the operation of the lamp the burner-tube is filled with wicking or other absorbent or capillary material, which extends into the wick-tube. The hollow arms are also filled with wicking or any other equivalent absorbent material, which extends into the bottom of the wick-tubes. Oil or other burning-fluid is then introduced into the main body B of the fount through the filling-aperture, and when the indicator denotes that the fount is filled the screw-cap is inserted and secured in

the filling-aperture. The oil flows through the perforations *c'* in the lower portion of the diaphragms into the hollow arms, filling the latter, and also flowing into the wick-tubes, thus supplying the wick-tubes for the burners. When a portion of the oil has been consumed, so that its level in the main fount is below the opening at the juncture of the hollow arms and wick-tubes, the inclosed wicking will serve to draw the oil from the fount and conduct it to the wick-tube.

My improvement prevents the puffing of the burner caused in fount-lamps of ordinary construction by the sudden flow of oil from the main fount into the wick-tubes when the lamp is suddenly moved or accidentally shaken. The diaphragms located between the main body of the fount and the hollow arms serve to insure a gradual and limited flow of oil to the burners, and thus secure an even and continuous flame. The vent-hole in the filling-cap allows air to freely enter the upper portion of the fount when the oil has been partially consumed, and thus prevent the formation of a partial vacuum, which would prevent the fluid from flowing freely to the wick-tubes. The vent-tube connected with the burner-cap provides a safe escape for any explosive gases that may be generated in the wick-tube, and, in connection with the vent-hole in the filling-cap, insures a free circulation of air for supplying the burner.

Instead of attaching separate wick-tubes to the outer ends of the hollow arms, the outer ends of the latter may be formed into wick-tubes, if desired.

It is evident that many slight changes in the construction and relative arrangement of the several parts of my improvement may be made without involving a departure from the spirit of my invention; and hence I would have it understood that I do not limit myself to the exact construction and arrangement of parts shown and described; but

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a lamp, the combination, with the main fount provided with hollow tapering arms having wick-tubes secured to their outer ends and wicking or equivalent material placed within the hollow arms and extending downwardly into the wick-tubes, of diaphragms interposed between the hollow tapering arms and opposite ends of the main fount, said diaphragms provided with oil-passages in their lower portions and with air-passages in their upper portions, substantially as set forth.

2. In a lamp, the combination, with the main fount provided with hollow tapering arms having wick-tubes secured to their outer ends and wicking or equivalent material placed within the hollow arms and extending downwardly into the wick-tubes, of diaphragms interposed between the hollow tapering arms and opposite ends of the main fount, said diaphragms provided with oil-passages in their lower portions and with air-passages in their upper portions, and bent tubes connected with the wick-tubes and extending laterally therefrom, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

EDWARD MORTIMER LOWDEN.

Witnesses:
CHARLES W. SPARHAWK,
MILLARD FILLMORE WALTON.