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PATENTED APR. 7, 1908.

H. A. WATKINS.
LAMP, LANTERN, AND HEATER.
APPLICATION FILED FEB. 24, 1906.

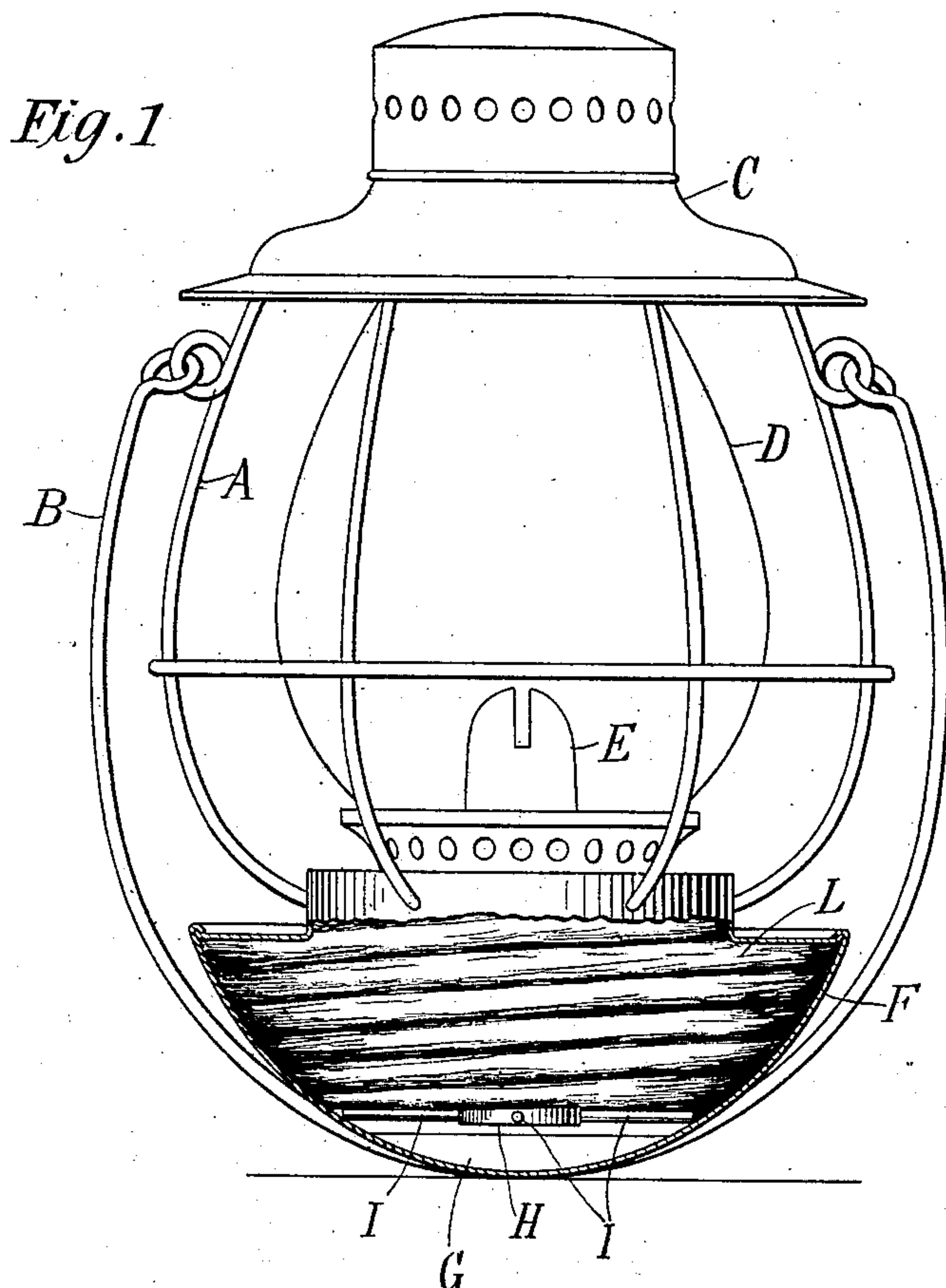


Fig. 3

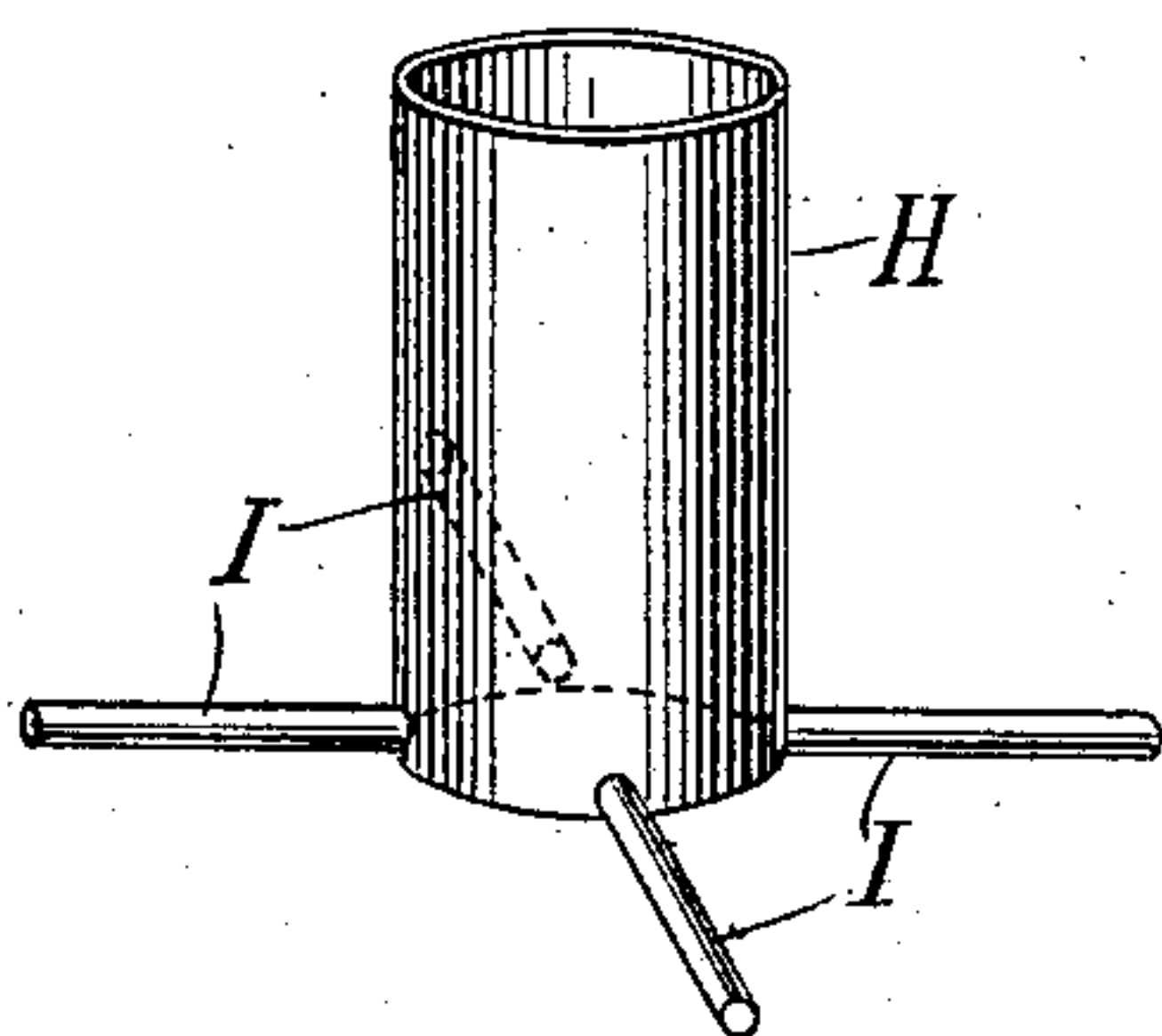
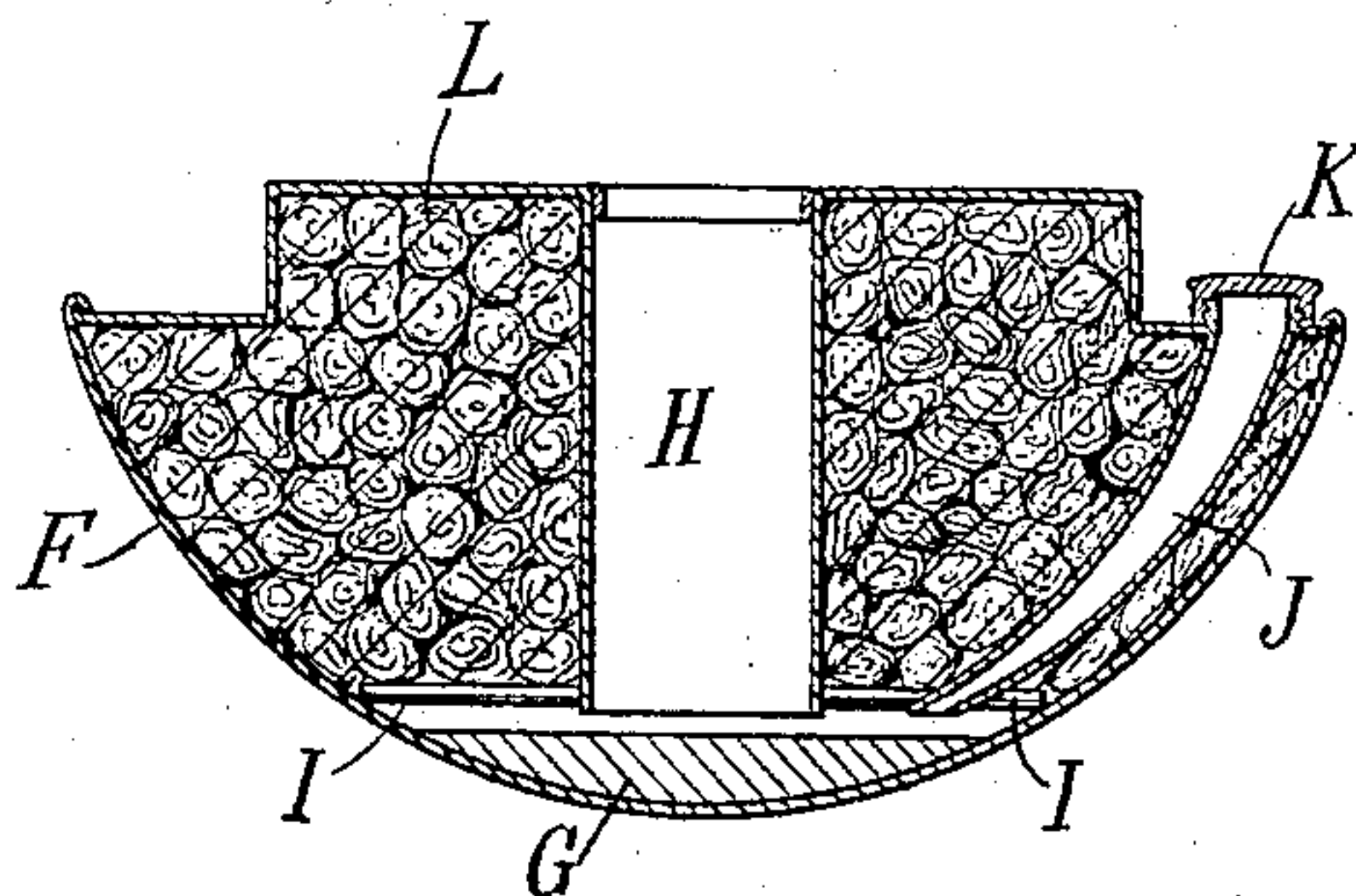


Fig. 2



Witnesses
Raphael Better
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UNITED STATES PATENT OFFICE.

HANBURY A. WATKINS, OF NEW YORK, N. Y.

LAMP, LANTERN, AND HEATER.

No. 884,305.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed February 24, 1906. Serial No. 302,683.

To all whom it may concern:

Be it known that I, HANBURY A. WATKINS, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Lamps, Lanterns, and Heaters, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to lamps, lanterns, and oil-heaters, and has for its object to provide a device for such purposes which shall be free from danger of explosion and which will instantly right itself when thrown on its side.

In carrying out my invention in its preferred form I make the oil chamber, which constitutes the base of the device, rounded, or in the form of a hemisphere, so that the device stands on a rounded or convex bottom. In the latter, at the lowermost point, is a weight, of sufficient mass to counterbalance the weight of the upper part of the device, so that when the device is from any cause thrown on its side the weight in the bottom will promptly rock the same back to the vertical position. By this means the heat of the flame cannot be directed against the glass chimney for any appreciable time, and danger of breaking the chimney from such cause, occasioned by upsetting the lamp, lantern, or heater, is obviated.

The wick chamber, inside the oil chamber or cup, consists of a tube extending from the burner to a point adjacent the weight in the bottom of the base. This tube is provided at its lower end with a plurality of radial fingers, which extend substantially to the sides of the oil chamber and support a mass of non-inflammable absorbent material. The latter absorbs the illuminating oil with which the same is supplied and so prevents leakage. The wick extends down through the wick tube into the oil which drips down from the oil-soaked absorbent material and draws its oil from this supply.

The preferred embodiment of the invention as applied to a lantern is illustrated in the annexed drawing, in which

Figure 1 is a side elevation of the complete lantern, the side of the oil cup being broken away to show the absorbent material inside the same. Fig. 2 is a vertical section through the oil cup and wick tube. Fig. 3 is a perspective view of the wick tube, show-

ing the radial members or fingers which support the absorbent material.

The lantern as shown in Fig. 1 consists of the usual wire guard A, with a bail B, a hood C, chimney D, burner E, and oil chamber or base F. It is to the latter that my present invention is especially directed.

As clearly shown in Figs. 1 and 2, the oil cup is convex in form, preferably hemispherical, and in the bottom of the same is a weight G. The latter is heavy enough to counterbalance the upper parts of the lantern, so that if the lantern should be upset by accident or otherwise thrown on its side on a floor or other substantially even surface the weight will at once, by its tendency to seek the lowest point possible, rock the lantern back to the normal upright position.

Extending downwardly from the burner aperture in the top of the oil cup is a wick chamber H, in the form of an imperforate cylinder tube, terminating a short distance above the weight G. Extending radially from the bottom of the tube, as shown in Fig. 3, are several supporting fingers I, for example four in number, reaching preferably to the sides of the cup. Supported above and by these fingers is a mass of non-inflammable absorbent material L, as for example asbestos. The same is in the form of a loose rope which is wound loosely around the wick chamber before the bowl F and its cover are assembled. This asbestos rope fills substantially the entire space in the font or oil chamber above the supporting fingers and absorbs the oil which is introduced into the font. Below the fingers is a space for the accumulation of oil from the absorbent material, from which accumulation the wick draws oil for consumption at the burner. The font may be filled with oil through the burner aperture and wick chamber, or through a filling tube J at the side, extending down into the wick space and provided with a suitable closure, as the screw cap K.

I am aware that self-righting lamps having weighted convex bottoms have been used heretofore, also that it has been proposed to fill the oil-font of a lamp with absorbent material, and to provide such a lamp with a wick chamber, around which the absorbent material is packed. I therefore do not claim these features broadly, either singly or in combination. The devices which I do claim in combination are specifically different from

those of the prior lamps in several important particulars. In the first place it will be seen that the radial fingers I which support the absorbent filler in my font offer no impediment to the flow of oil down into the space around the wick chamber when the lantern is upright, or back into the absorbent filler when the lantern is on its side. This arrangement permits only a minimum quantity of oil to run down the wick chamber and upon the burner when the lantern is thrown on its side or out of its normal upright position. The imperforate character of the wick chamber also prevents any oil from running directly from the absorbent material upon the burner. The use of absorbent material in the form of a rope or strand is another important feature. This rope or strand can be wound tightly around the wick chamber, if a dense filler is desired, or loosely if a loose filler is desired. In this way the porosity of the filler and the freedom with which the oil may run from the filler into the open space below the same, and vice versa, may be regulated with a fair degree of accuracy. The rope form of the filler also increases the non-conducting qualities of the whole, heat being transferred less readily from strand to strand, or from layer to layer, than through a prac-

tically homogeneous mass of fibers. A lower temperature for the body of oil in the bottom of the font is thus insured.

What I claim is:

1. The combination of a font having a convex weighted bottom, an imperforate tube extending downward from the burner and constituting a chamber for the wick, said tube being open at the bottom, a plurality of supporting fingers extending radially from the lower end of the wick chamber, and a filling of non-inflammable absorbent material supported around the wick chamber by the said fingers, as set forth.

2. The combination of a font having a convex bottom, a weight at the lowest point of the bottom, an imperforate tube constituting a wick chamber, a plurality of supporting fingers extending from the lower end of the wick chamber, and a rope or strand of non-inflammable absorbent material wound around the wick chamber and substantially filling the space in the font above the supporting fingers, as set forth.

HANBURY A. WATKINS.

Witnesses:

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DANIEL P. WOOSTER.