

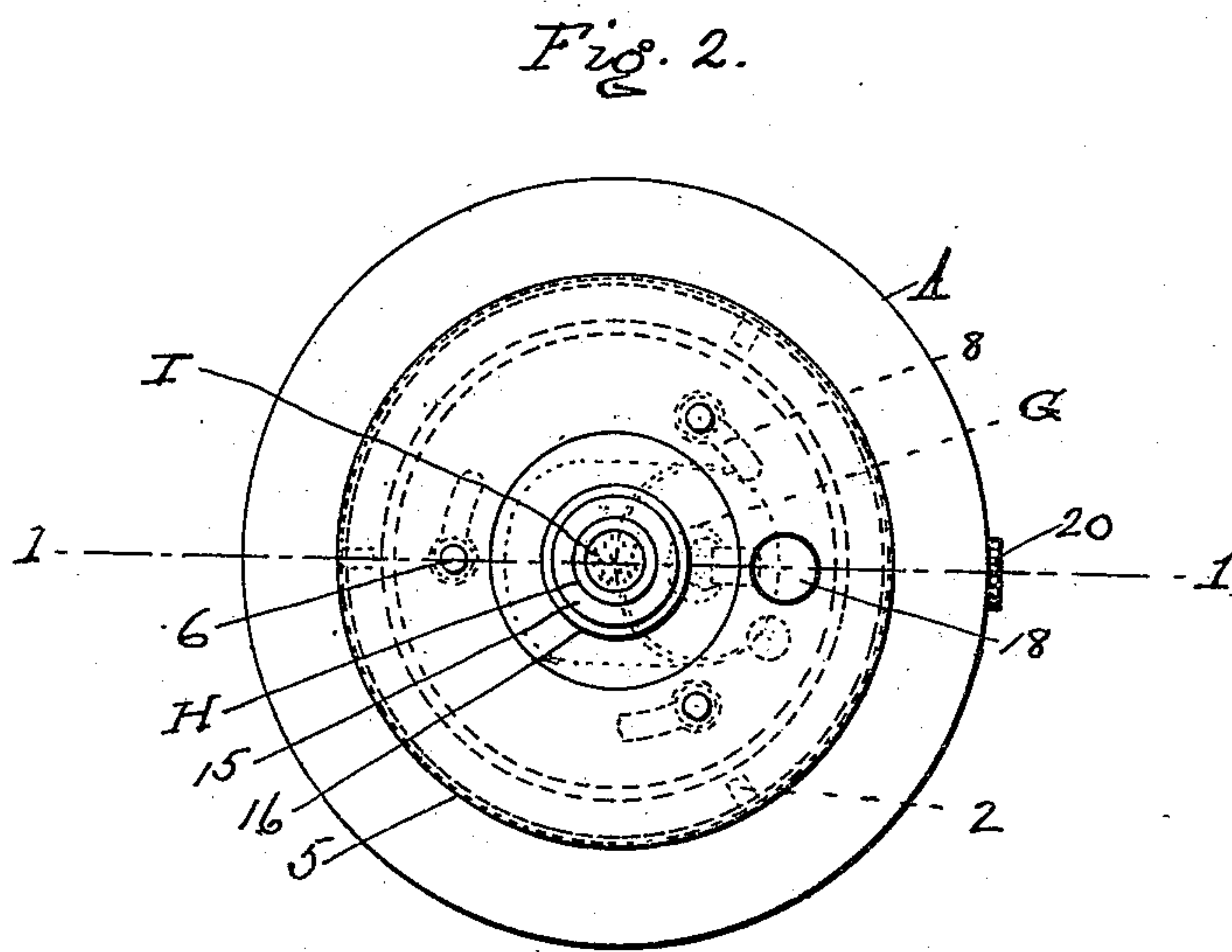
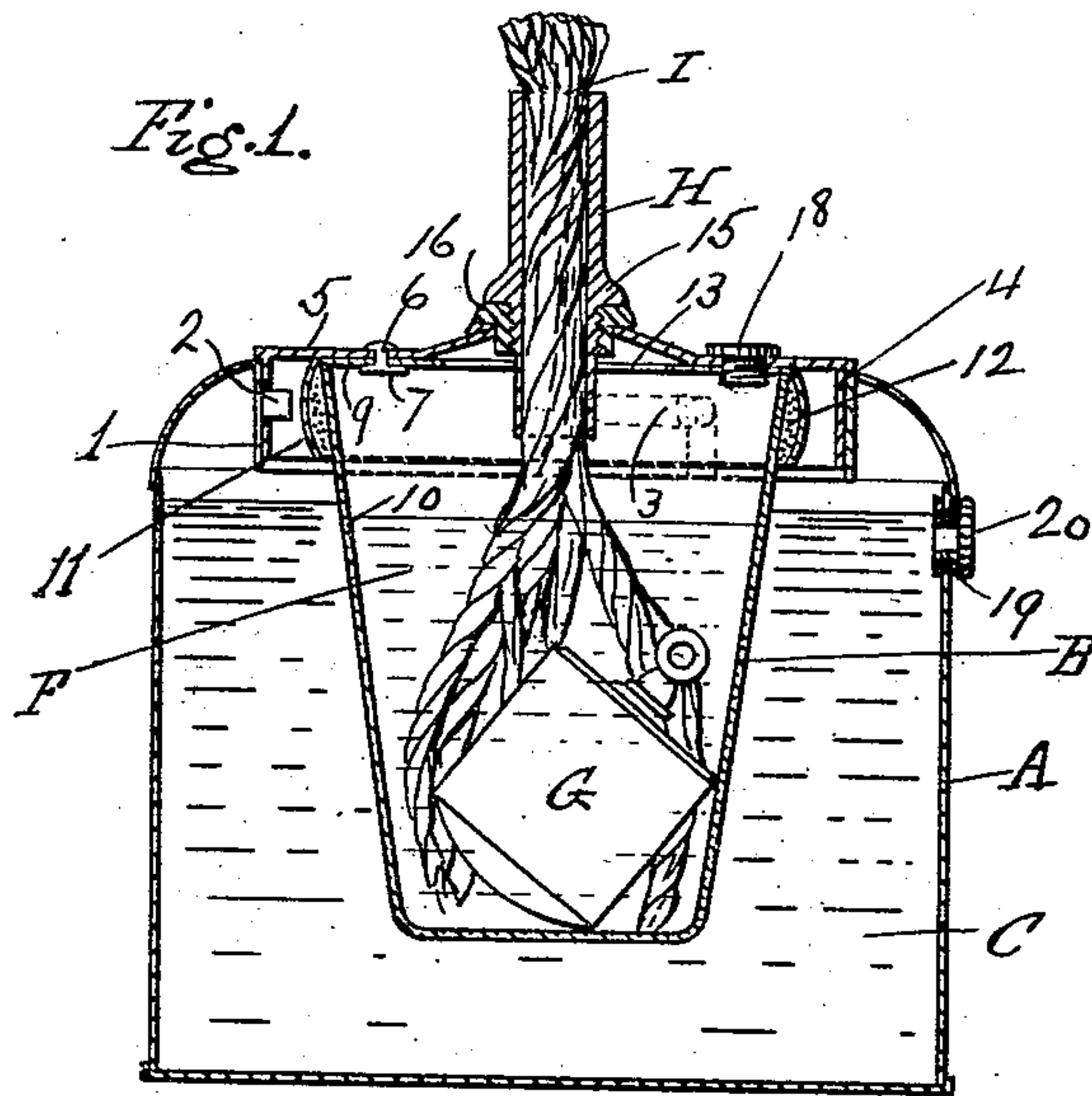
No. 841,559.

P. N. MILSTED.  
LAMP.

PATENTED JAN. 15, 1907.

APPLICATION FILED OCT. 23, 1906.

2 SHEETS—SHEET 1.



WITNESSES

*M. E. Keir*  
*L. H. Grote*

INVENTOR

*Penrose H. Milled*  
BY

*Howson and Howson*

ATTORNEYS

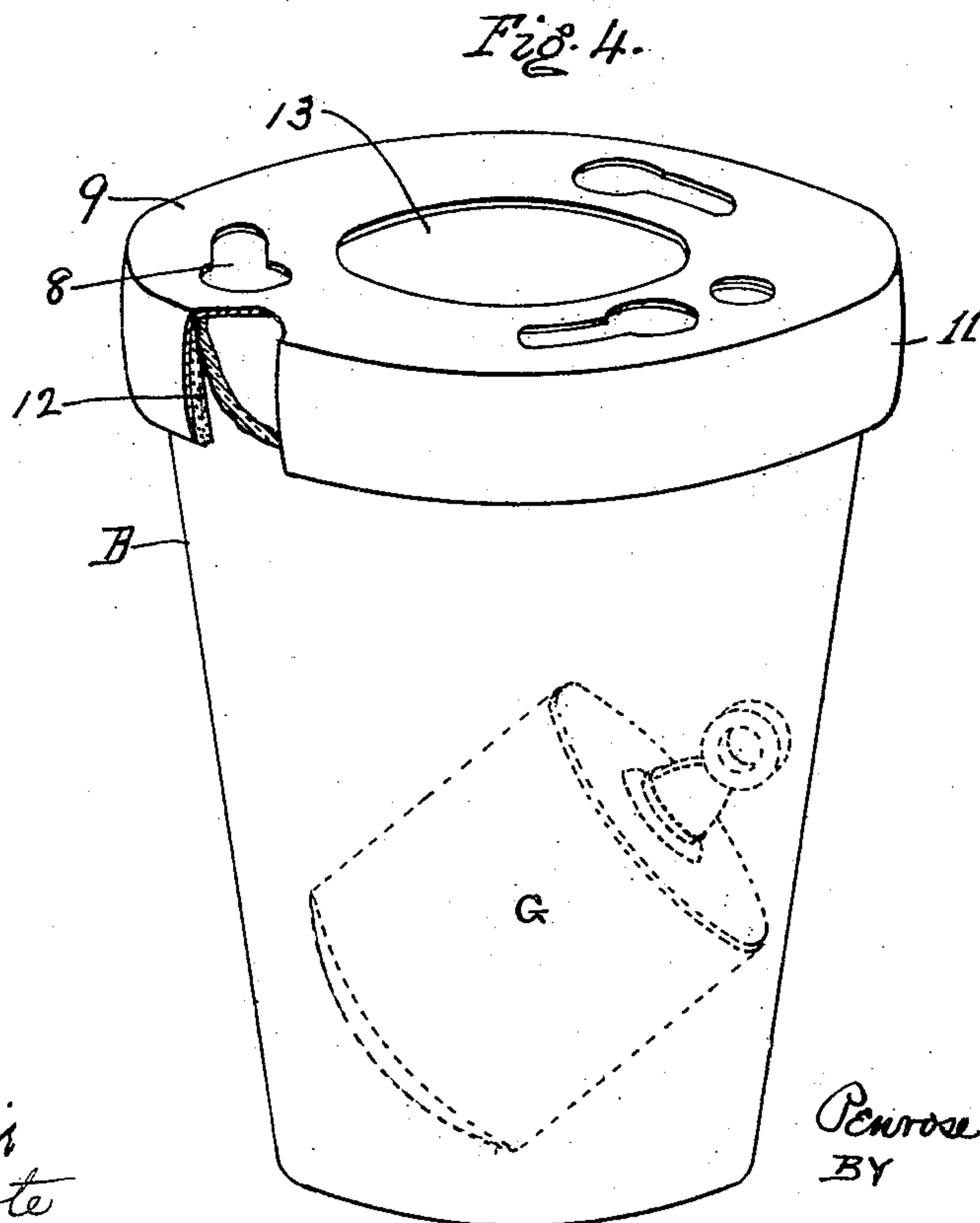
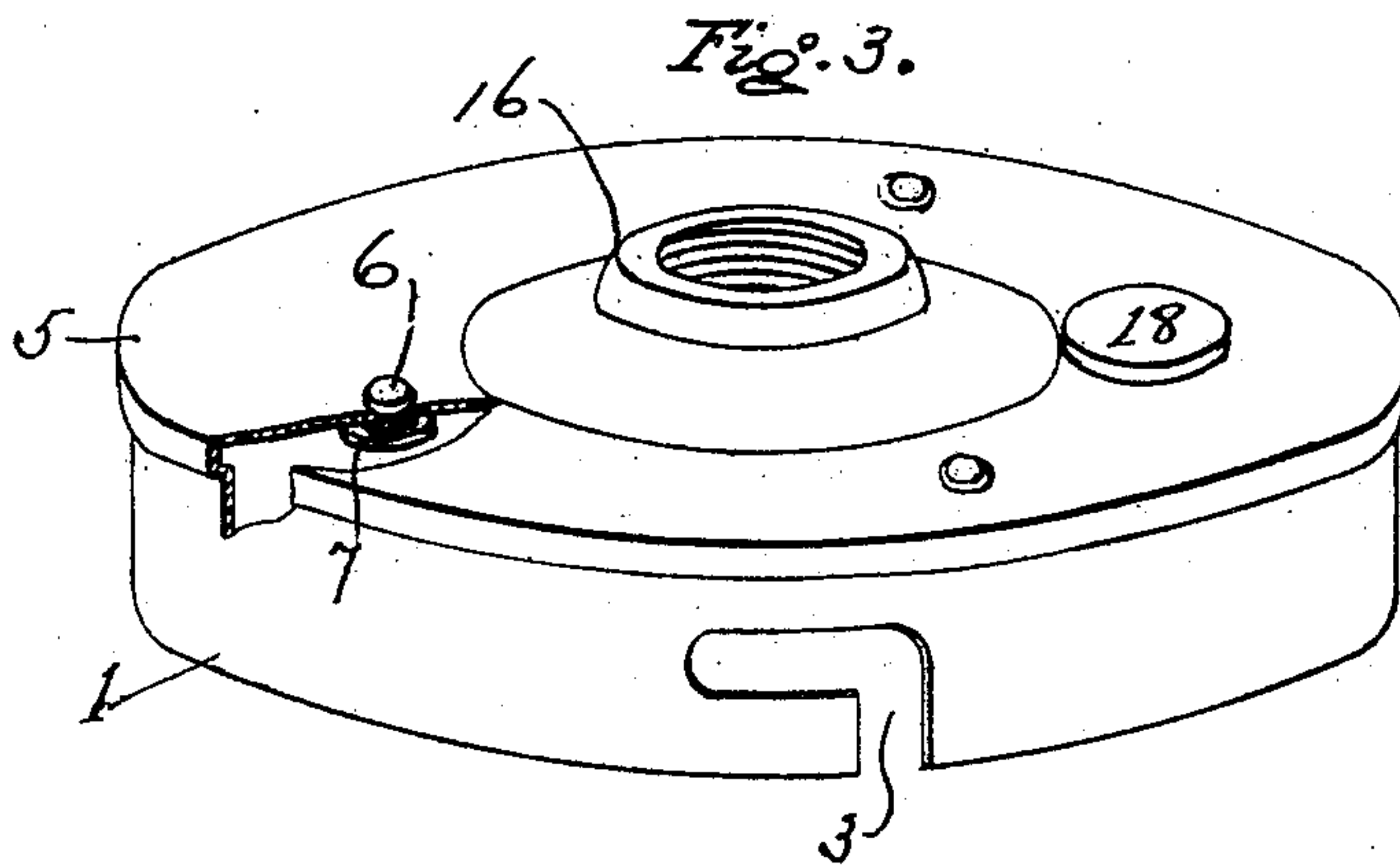
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# UNITED STATES PATENT OFFICE.

PENROSE N. MILSTED, OF NEWARK, NEW JERSEY.

## LAMP.

No. 841,559.

Specification of Letters Patent.

Patented Jan. 15, 1907.

Application filed October 23, 1906. Serial No. 340,118.

*To all whom it may concern:*

Be it known that I, PENROSE N. MILSTED, a citizen of the United States of America, residing in Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Lamps, of which the following is a specification.

My invention relates to lamps; and the particular object of my invention is to secure a safety construction of the same which shall lessen the dangers incident to an accidental overturning or dropping of the lamp when lighted.

The invention is particularly applicable to spirit-lamps, especially alcohol-lamps.

In the accompanying drawings, Figure 1 is a vertical cross-section of my lamps, taken on the line 1 1 of Fig. 2; and Fig. 2 is a plan view of the same. Figs. 3 and 4 are perspective views of the cap and reservoir, respectively.

As ordinarily constructed spirit-lamps are provided with but a single reservoir or chamber, which contains the inflammable spirits, into which the wick is led.

My invention consists in constructing this reservoir of a readily-frangible material, incasing it within a chamber having walls of substantial character, filling the space which intervenes the walls and bottoms of these two parts with a non-inflammable substance with which the spirits in the reservoir will readily mingle—as, for example, water, where the reservoir contains alcohol—and providing means whereby the frangible walls of the reservoir are easily broken upon a shock to the lamp, as by placing within the reservoir a weight having free movement.

Referring to the accompanying drawings, in which my lamp is illustrated adapted for the burning of alcohol, the outer protecting-chamber A, which is constructed of any suitable material, is shown of sufficient size to accommodate the frangible reservoir B, leaving a considerable space intervening the side and bottom walls of the two parts. Water C fills this intervening space. Within the reservoir B is shown alcohol F and the unattached weight G, having free movement and being thus adapted to break the readily-frangible walls of the reservoir upon a shock to the lamp. A wick-tube H, carrying a wick I, which leads into the reservoir B, completes the essentials of my lamp.

The means by which these parts are attached and held together is immaterial. I

have shown the outer chamber A, provided at the circular aperture of its neck with an inwardly-projecting annular flange 1, on which posts 2 coöperate with angled slots 3 in the annular flange 4 of the cap 5 to form bayonet-joints between these two parts. Projecting from the lower face of this cap 5 are short posts 6, tipped with buttons 7, which coöperate with the hole and slot openings 8 in the metal collar 9 of the reservoir B to form a suitable joint between these parts on inserting the buttons into the holes and rotating the parts. To prevent the accidental loosening of this joint, I provide screw-threaded holes in the cap 5 and collar 9, respectively, which register when the joint is tight—that is, when the posts 6 have entered the extreme length of the slots of the apertures 8. A screw-threaded plug 18, entering the holes, prevents the rotation of the parts until it has been removed. These holes serve the further purpose also of furnishing an aperture through which the alcohol may be introduced into the reservoir.

The reservoir B may be secured to the collar 9 by stuffing the space between its wall 10 and the encircling vertical flange 11 of the collar with cement 12. The aperture 13 in the collar 9 is of sufficient diameter to permit the introduction of the weight G. Through this aperture also the wick is introduced to the alcohol. It may be an additional convenience to make the wick-tube H a separate piece provided with a flange 15, below which it is screw-threaded to coöperate with a reciprocally-threaded throat 16 in the cap 5. By unscrewing this wick-tube and removing the wick a further means for filling the reservoir is afforded. An overflow-port from the outer chamber A is afforded by a screw-threaded opening 19 in the side wall normally closed by a screw-threaded plug and washer 20.

The lamp may be made ready for use by filling the outer chamber A with water, adjusting the cap 5 with the reservoir B, within which the weight G has been placed, attached, filling the reservoir B with alcohol, and adjusting the wick-tube and wick. In case the lamp should be overturned the sudden shock throws the weight against the frangible wall of the reservoir, breaks the latter, and the alcohol escapes, mingling with the surrounding water in the chamber A and being thus rendered non-inflammable.

While I have described the lamp as adapt-



ed to the use of alcohol, I do not wish to limit my invention to the use of this spirit alone.

Any inflammable substance may be contained in the reservoir B, and any substance which on mingling with the same destroys its inflammability may be placed in the outer chamber A.

I claim as my invention—

10 1. A lamp having an inner chamber with readily-frangible walls, and a surrounding chamber, in combination with means contained within the lamp for breaking said frangible walls of the inner chamber.

15 2. A lamp having an inner chamber with readily-frangible walls, and a surrounding chamber, in combination with means contained within the lamp for breaking said frangible walls of the inner chamber upon a shock to the lamp.

20 3. A lamp having an inner chamber with readily-frangible walls, and a surrounding chamber, in combination with a weight within said inner chamber.

25 4. A lamp having an outer chamber, a cap therefor provided with an opening, an inner chamber having readily-frangible walls, a

wick leading thereto, means for detachably attaching said inner chamber to said cap, and means contained within the lamp for breaking the frangible walls of said inner chamber. 30

5. A lamp having an inner chamber with readily-frangible walls, an inflammable substance therein, a wick leading thereto, a surrounding chamber, a non-inflammable substance occupying the space between the walls of the inner and outer chambers, and means contained within the lamp for breaking the walls of the inner chamber. 35 40

6. A lamp having an inner chamber with readily-frangible walls, an inflammable substance therein, a wick leading thereto, a surrounding chamber, a non-inflammable substance occupying the space between the walls of the inner and outer chambers, and a weight within said inner chamber. 45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PENROSE N. MILSTED.

Witnesses:

C. SEDGWICK,  
WILLIAM ABBE.