

(No Model.)

J. DAVIDSON & J. TAYLOR.
SAFETY LAMP.

No. 405,878.

Patented June 25, 1889.

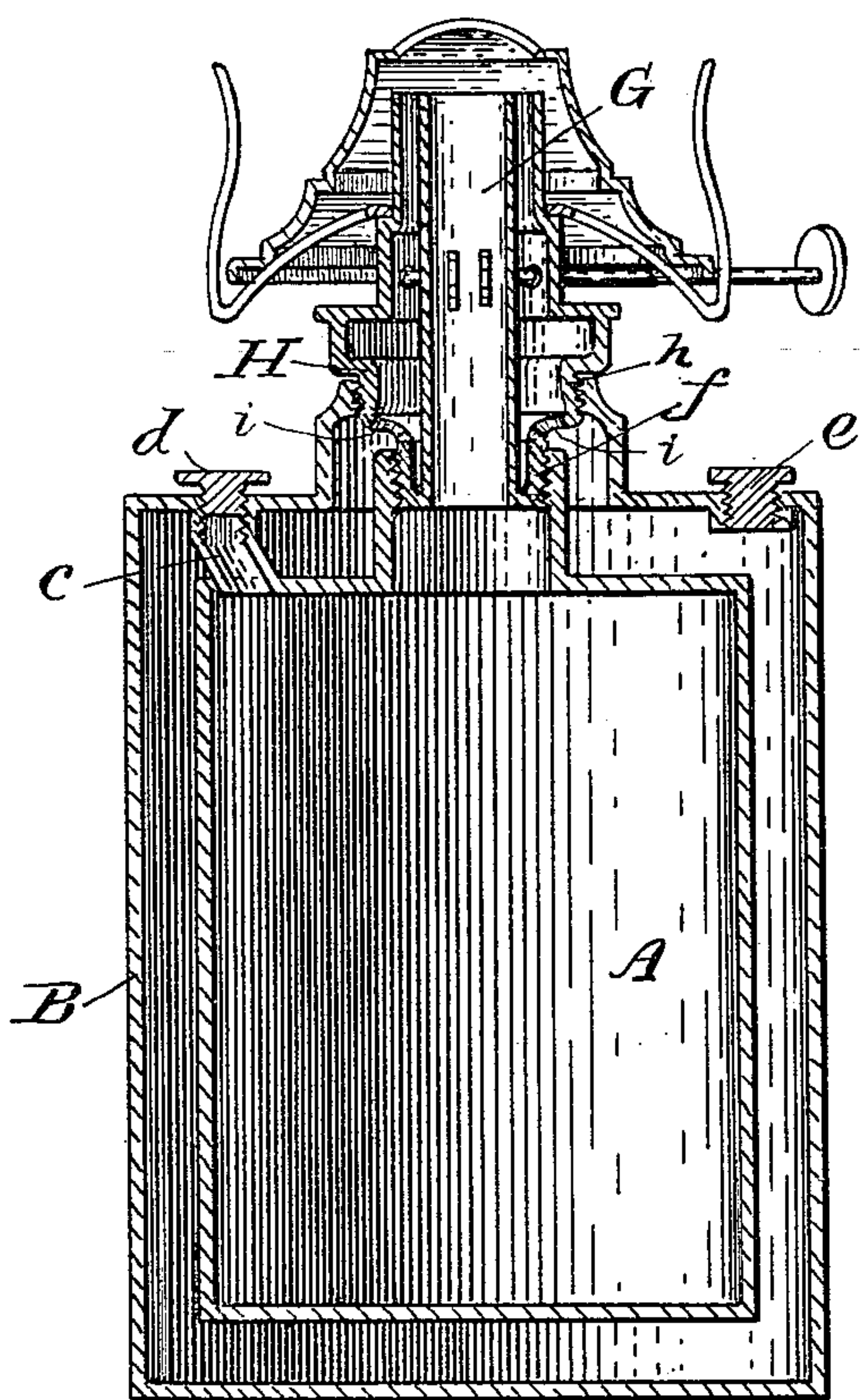


Fig. 1

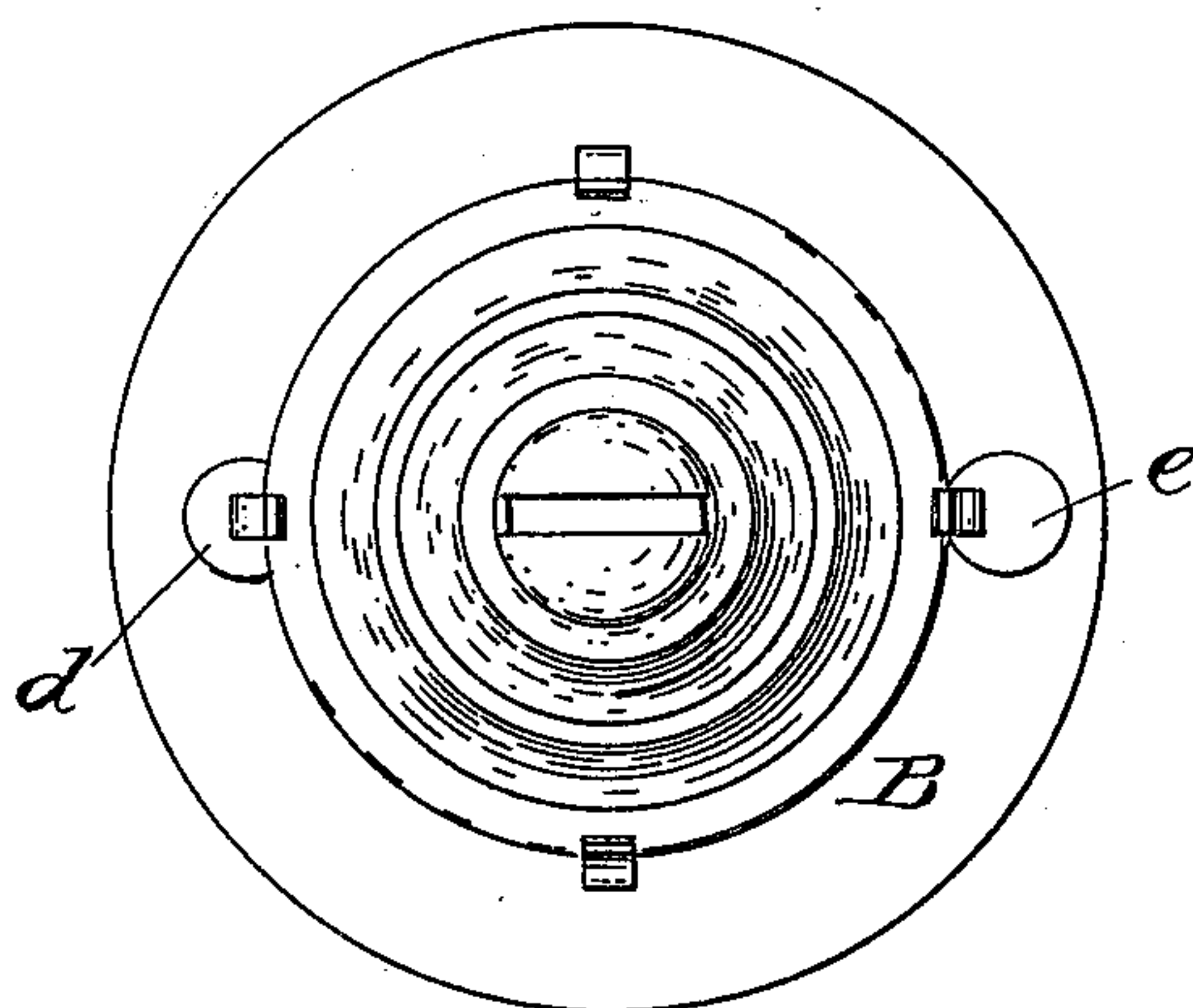


Fig. 2

Witnesses:

Art. Charbonneau.
John A. Sawyer

Inventors.

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John Taylor.

By J. Coursolle
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UNITED STATES PATENT OFFICE.

JOHN DAVIDSON AND JOHN TAYLOR, OF GUELPH, ONTARIO, CANADA.

SAFETY-LAMP.

SPECIFICATION forming part of Letters Patent No. 405,878, dated June 25, 1889.

Application filed November 19, 1887. Serial No. 255,569. (No model.)

To all whom it may concern:

Be it known that we, JOHN DAVIDSON and JOHN TAYLOR, citizens of Canada, both residing at Guelph, in the county of Wellington and Province of Ontario, Canada, have invented certain new and useful Improvements in Safety-Lamps, of which the following is a specification.

Our invention relates to improvements in safety-lamps which are provided with a chamber or receptacle for an extinguishing or non-combustible fluid, and the object of our improvements is to provide a lamp so constructed that in the event of the overturning of the lamp by accident the extinguishing-fluid would immediately cover the end of the wick, which protrudes from the top of the burner, and extinguish the flame, and by flowing over other articles that might be near will render them non-combustible. We attain this object by placing the oil-chamber inside a larger vessel, the space between the inside of which and the outside of the oil-vessel is used as a tank for holding a non-combustible fluid. This inclosed space extends around the wick-tube to its top end, so that in case of the lamp being overturned the fluid will escape and extinguish the flame.

In the accompanying drawings, which illustrate our invention, Figure 1 is a sectional elevation, and Fig. 2 a plan view, of the lamp.

The oil-vessel A is supported in any approved manner in the fluid-vessel B. The oil is introduced through the tube *c*, which opens outward through the top of the fluid-vessel and is covered by the cap *d*. The extinguishing-fluid is poured into the vessel B through an opening in its top, which is closed by the cap *e*. The threaded end *f* of the wick-tube G is screwed into the top of the oil-vessel, and the threaded flange *h* of the neck of the extinguishing-fluid vessel is screwed into the top of this fluid-vessel, and this neck, being considerably larger than the wick-tube and open at the top, will allow the extinguishing-fluid to flow through the openings *i*

and out of the lamp when it is turned to one side. These lamps may be made in any fanciful shape or design and sizes and provided with the ordinary means for ventilation.

We are aware that there are safety-lamps now made and used in which the oil-vessel is partly surrounded by a film of non-combustible fluid for the purpose of quenching fire caused by the upsetting or breaking of the lamp; but so far as we are aware in all such lamps the vessel containing the non-combustible fluid is so closed up that the breaking of the vessel is necessary in order to allow of the escape of the fluid, whereas in our lamp this vessel is always open at the top.

Therefore, while we do not claim, broadly, a lamp having a chamber containing a non-combustible fluid, we do claim as our invention, and desire to secure by Letters Patent—

1. In a lamp, the combination of the wick-tube G, the jacket surrounding the same and open at the top, the vessel A, connected to the lower end of the wick-tube, and the vessel B, surrounding the vessel A and connected to the jacket above the former, the said jacket being provided between the exterior of the vessel A and the interior of the vessel B with openings *i*, as shown.

2. In a lamp, the vessel B, having the contracted top opening, the vessel A, located therein and provided with the neck, in combination with the wick-tube, the jacket surrounding the same and open at its top, said jacket having the projecting surface *h*, formed to fit the opening in the vessel B, the neck *f*, constructed to fit within the neck on the vessel A, and the perforations *i* between the vessels.

Signed at Guelph this 2d day of November, 1887.

JOHN DAVIDSON.
JOHN TAYLOR.

In presence of—

FREDK. MARRON.

W. G. W. GARNHAM.