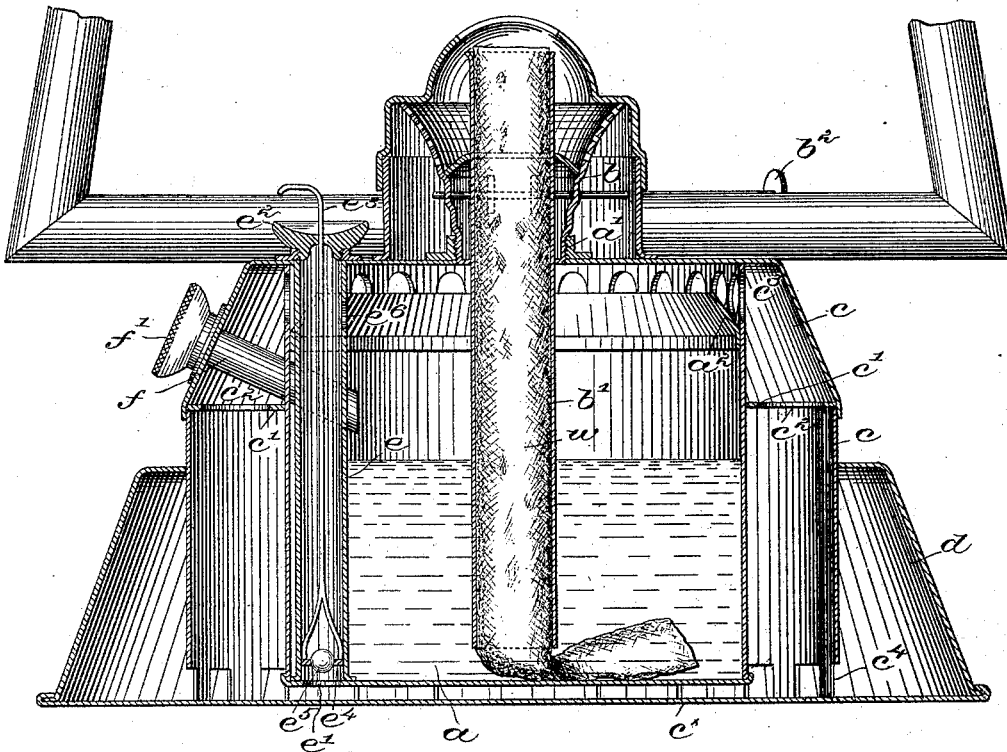


(No Model.)

A. S. VEAZIE & J. H. BEVAN.
LANTERN.

No. 489,999.

Patented Jan. 17, 1893.



Witnesses.

Edward F. Allen.

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UNITED STATES PATENT OFFICE.

ALBERT S. VEAZIE AND JOSEPH H. BEVAN, OF CASTINE, MAINE.

LANTERN.

SPECIFICATION forming part of Letters Patent No. 489,999, dated January 17, 1893.

Application filed March 28, 1892. Serial No. 426,650. (No model.)

To all whom it may concern:

Be it known that we, ALBERT S. VEAZIE and JOSEPH H. BEVAN, of Castine, county of Hancock, State of Maine, have invented an improvement in Lanters, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention has for its object to produce a non-explosive lantern.

In accordance with this invention the lantern is provided with an oil-receiving or wick reservoir to receive the oil and into which the wick enters; and an auxiliary reservoir in normally open communication with the upper portion of the wick reservoir, so that when the lantern is overturned the oil will immediately flow out from the wick reservoir into the auxiliary reservoir thereby preventing the oil from flowing down through the wick tube to the flame to cause an explosion. A suitable pump will preferably be provided by which the oil may be pumped from the auxiliary reservoir back again into the oil-receiving reservoir when the lantern is righted.

Other features of this invention, together with the details of construction will be hereinafter described and pointed out in the claims.

The figure represents in vertical section a lantern embodying this invention.

Referring to the drawing, *a* represents a suitable oil-receiving or wick reservoir which may be of the desired shape or construction, it being provided at its top with an opening surrounded by a threaded ferrule *a'* into which is screwed the burner *b* having a wick tube *b'* which extends down into the oil reservoir and in which is placed a wick, the latter fitting the wick tube tightly for a purpose to be hereinafter described.

In the preferred construction, the wick tube will extend, as shown, nearly to the bottom of the wick reservoir, and aside from this the burner may be of any suitable or usual construction, it being provided with the usual device *b²* by rotation of which the wick may be raised or lowered to vary the size of the flame.

The wick or oil receiving reservoir *a* is contained within an auxiliary reservoir *c* divided by an annular partition *c'* provided with a series of openings *c²* into upper and lower

chambers, the upper chamber communicating with the upper portion of the oil-receiving reservoir through a series of openings *c³* in the side walls of the said oil-receiving reservoir, the latter being preferably provided with an interior annular lip *c³*, arranged just below the said openings *c³* to prevent the oil from too readily escaping through the said openings *c³* by movements of the lantern during its ordinary uses. The vertical wall of the auxiliary reservoir *c* at or near the bottom *c⁴* of the lantern, is provided with a series of openings *c⁴* which communicate with the outer annular reservoir *d*.

A pump cylinder *e* enters through the top of the oil reservoir and extends to the bottom thereof, as shown, the interior of the pump cylinder communicating with the auxiliary reservoir *c* surrounding the oil reservoir by an opening *e'* in the bottom of said oil reservoir. The pump cylinder is closed at its top by a suitable threaded cap *e²* through the middle of which passes the pump wire *e³* carrying at its lower end a suitable plunger *e⁴* fitted with a valve *e⁵*. Reciprocation of the pump wire causes oil contained in the auxiliary reservoir to be raised through the pump cylinder and delivered through an opening *e⁶* into the oil reservoir.

A filling tube *f* normally closed by a threaded cap *f'* is provided, said tube entering the oil reservoir and furnishing means for filling the latter when the supply of oil is exhausted.

The oil is contained within the oil reservoir, as represented in the drawing, the flame drawing the oil from the bottom of the reservoir through the wick *w* contained within the wick tube *b'*.

Should the lantern be overturned the wick, fitting the wick tube tightly, prevents the oil in the reservoir *a* from flowing readily out through the wick tube to the flame, and the said oil will immediately flow over the lip *a²* out through the openings *c³* into the upper chamber of the auxiliary reservoir *c*, thence through the openings *c²* in the annular partition *c'* in said reservoir to the lower chamber thereof and thence through the openings *c⁴* into the outer annular reservoir *d*. The oil reservoir will thus be quickly drained of all oil, and no excess of the latter can flow through

the wick tube to the flame, the latter burning only so long as the oil remaining in the wick will support it. When the lantern is righted the oil may be again pumped back into the oil reservoir by means of the pump *e*. When the oil is exhausted by continued burning of the flame the supply may be replenished through the filling tube *f*. Sufficient air will enter through the opening in the cap *e*² of the pump, through which the pump wire passes, thence through the opening *e*⁶ to the oil reservoir to fill the vacuum caused by the draft of oil by the flame.

While we have herein represented the auxiliary reservoir *c* as subdivided by the annular partition *c'* into upper and lower chambers communicating with each other, and while we have also shown an outer annular reservoir *d* also in communication with said chambers such an arrangement being preferable to facilitate the construction of the lantern, still we do not limit our invention in this respect; the gist of this part of our invention lying in an oil reservoir into which the wick enters and which normally contains the oil to support the flame, combined with an auxiliary reservoir communicating with the upper portion of the oil reservoir and into which the oil may flow from the latter when a lantern is overturned to thereby drain the oil reservoir to prevent an undue quantity of oil flowing to the flame.

We claim—

1. In a lantern, the combination with a main oil reservoir into which the wick enters; of an auxiliary over-flow reservoir, divided into chambers by perforated partitions, and fixed to and communicating with the upper portion of the said main oil reservoir, substantially as described.

2. In a lantern, an oil reservoir; having a closed top, a burner attached to the same and having a wick tube extended through said top and entering the said oil reservoir; substantially to the bottom thereof, combined with an auxiliary reservoir concentric with and surrounding said oil reservoir, and rigidly attached thereto and communicating with the upper portion of the latter, by a series of openings therein substantially as described.

3. In a lantern, the combination with an

oil reservoir, and a surrounding auxiliary reservoir communicating with the latter through openings in its upper portion, combined with an annular lip arranged within said oil reservoir and immediately below said openings, substantially as described.

4. In a lantern, an oil reservoir into which the wick enters, and an auxiliary reservoir communicating with the said oil reservoir through openings in its upper portion, and an annular lip arranged within said oil reservoir immediately below said openings, combined with a pump to draw the oil from the auxiliary reservoir and discharge the same into said oil reservoir, substantially as described.

5. In a lantern, the combination with a main oil reservoir, having openings at the tops of its walls and a concentric surrounding wall rigidly attached thereto forming an auxiliary reservoir, said reservoirs being in direct communication at their upper ends, through said openings of a filling tube opening into the main oil reservoir but extended through the walls forming said auxiliary reservoir, substantially as described.

6. In a lantern, the combination of the oil reservoir *a*, the auxiliary reservoir *c* divided into chambers by the perforated partitions *c'*, and the surrounding annular reservoir *d* in communication with said auxiliary reservoir, all constructed and arranged substantially as shown and described.

7. In a lantern an oil reservoir, a surrounding auxiliary reservoir *c*, communicating with the oil reservoir through openings in its upper portion, combined with a pump cylinder *e* extending through said oil reservoir and communicating with said auxiliary reservoir, at the bottom thereof, a plunger *e*⁴, and valve *e*⁵ therein, and an outer annular reservoir at the base of and communicating with said auxiliary reservoir, to operate, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ALBERT S. VEAZIE.
JOSEPH H. BEVAN.

Witnesses:

WILLIAM H. BEVAN,
CHAS. A. BEVAN.