

W. McKAY.
Lanterns.

No. 141,008.

Patented July 22, 1873.

Fig. 1.

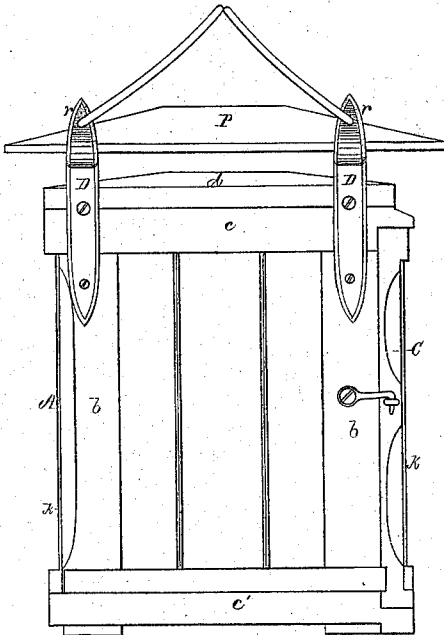


Fig. 2.

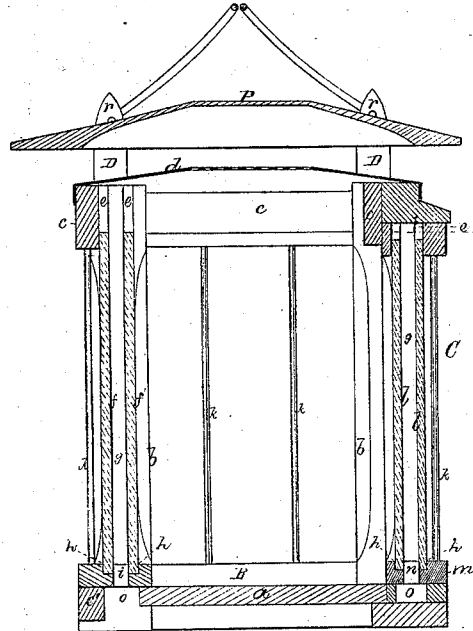


Fig. 3.

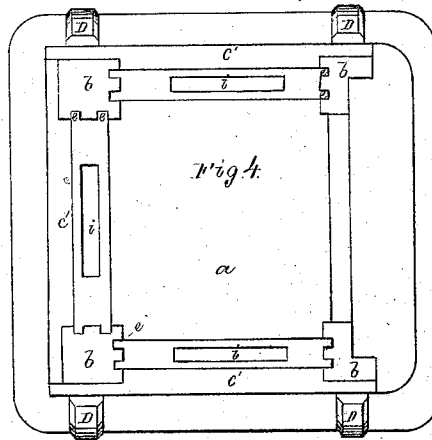
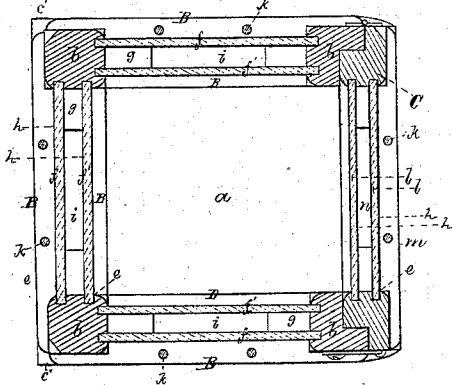


Fig. 5.

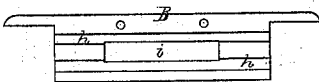
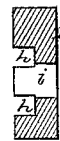


Fig. 6.



Witnesses.

S. W. Aiken
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William McKAY.

by his attorney

R. M. Eddy

UNITED STATES PATENT OFFICE.

WILLIAM MCKAY, OF NEWBURYPORT, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND CHARLES E. BAYLEY, OF SAME PLACE.

IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. **141,008**, dated July 22, 1873; application filed
April 23, 1873.

To all whom it may concern:

Be it known that I, WILLIAM MCKAY, of Newburyport, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Lanterns; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side view, Fig. 2 a vertical section, Fig. 3 a horizontal section, and Fig. 4 a bottom view, of one of my improved lanterns.

My invention consists in a lantern provided with one or more air-induction passages, arranged between glass panes or plates in the side of such lantern, and opening at or near the tops of such plates into the flame-chamber of the lantern, and having air inlets or openings *i* at their lower parts; also, in the combination of a grooved separate threshold with the lantern-case, provided with an opening through its bottom, and grooves in its posts at the ends of such opening, all being essentially as hereinafter explained; also, in the said threshold, provided with an air-passage through it and grooves for receiving the glass plates, all as set forth.

The frame *A* of this lantern consists of a base-plate, *a*, four posts, *b b b b*, erected above it, and certain base and cornice pieces or bars *c c c' c'*, the whole being arranged as shown, and covered by a metallic plate, *d*, having a series of holes made through it at or near its middle. The several posts are grooved on their inner sides at *e e* to receive, on each side of the lantern, except that in which the door is arranged, two parallel plates, *f f'*, of glass or other transparent or light-diffusing material, arranged with a space, *g*, between them. At their lower edges these two plates are inserted in grooves *h h* made in a threshold, *B*, extending between the contiguous posts, and resting upon the base *a* and the base-bar *c'*, in manner as shown.

Fig. 5 denotes a top view, and Fig. 6 a transverse section, of one of the said thresholds.

It will be seen that the threshold is held in place by the glass plates going into its grooves, and also into those of the posts. In such threshold there is a passage or slot, *i*, for

air to pass upward into the space between the two glass panes, both of which extend a short distance above the bottom of the next contiguous cornice-piece *c*, in manner as shown. Outside of the panes there may be a series of guard or protection wires, *k k*, to extend from the threshold up to the cornice-bar over such, in manner as represented. The door *C* of the lantern-case is a rectangular frame provided with a pair of glass plates, *l l*, and a threshold or bar, *m*, applied to it, in manner as shown. Through the bottom of such door there is a passage, *n*, and there may be such another at top in order to admit air to course between the two plates. The passage *o* is to enable the glass plates to be inserted in or withdrawn from the door-frame, as occasion may require. Such, also, is the purpose of the openings or spaces *o o* in the bottom part of the lantern-case, they also serving to admit air to the passages through the thresholds. Over the top plate *d* of the lantern-chamber is a cap-plate, *P*, supported by posts or corner-brackets *D*, arranged as shown. Fig. 7 is an edge view of one of such brackets, its upper part being provided with a notch, *q*, to receive the plate *P*. The part *r*, extending above the said notch, is to support the bail or handle of the lantern.

With a lantern so made the air for supply of combustion of the lamp or candle placed in the lantern or its flame-chamber passes up between the glass panes of each side pair, and enters the lantern at the upper ends of such plates. This not only permits light to pass through the panes, but causes the flame to be steady, renders it less liable to smoke, and to be accidentally extinguished.

The grooved movable threshold, combined with the frame, formed with the bottom opening *o*, and having its posts grooved, as described, admits of the ready application of a glass pane to the lantern-case, or the removal of a pane therefrom; or to remove the panes from the frame it will only be necessary to raise the guard-wires out of the threshold, and next force the panes upward out of the threshold, and finally remove the threshold from the frame, and next draw the frames down through their grooves in the posts and the opening *o*. In

case of accidental breakage of a glass frame another may be readily substituted, the frames not being held in place by putty.

As this lantern is designed specially for use on shipboard, or as a signal-lantern, it can be easily repaired in case of breakage of one of its glass panes.

I make no claim to a lantern constructed as represented in either of the United States Patents 95,184, 96,897, in which the air for the supply of the flame passes downward between concentric glass tubes, and through openings at their feet, and thence into the lower part of the flame-chamber, and impinges directly against the flame, and thence passes upward through the flame-chamber.

In my arrangement, the air-induct, between each pair of the glass plates, is at the bottom of such plates, the air passing upward between such plates and flowing into the upper part of the flame-chamber, from whence it descends

within such to the flame, whereby advantages are secured in the operation of the lantern.

I claim as my invention—

1. A lantern provided with one or more air-induction passages, *g*, arranged between glass plates *f f'*, and opening into the upper part of the lamp or flame-chamber of such lantern, and provided at their lower parts with one or more air-inducts, *i*, all being substantially as specified.

2. The combination of the grooved separate threshold B with the lantern-case A, provided with the opening *o* and the grooves *e* in the posts at the ends of such opening, all being substantially as described.

3. The threshold B, provided with the grooves *h* and the air-passage *i*, arranged in it as described.

Witnesses: WILLIAM McKAY.

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I. T. BROWN.