J. M. WILLBUR.

Ventilating Vault-Light.

No. 208,552. Patented Oct. 1, 1878.

Fig. 1.

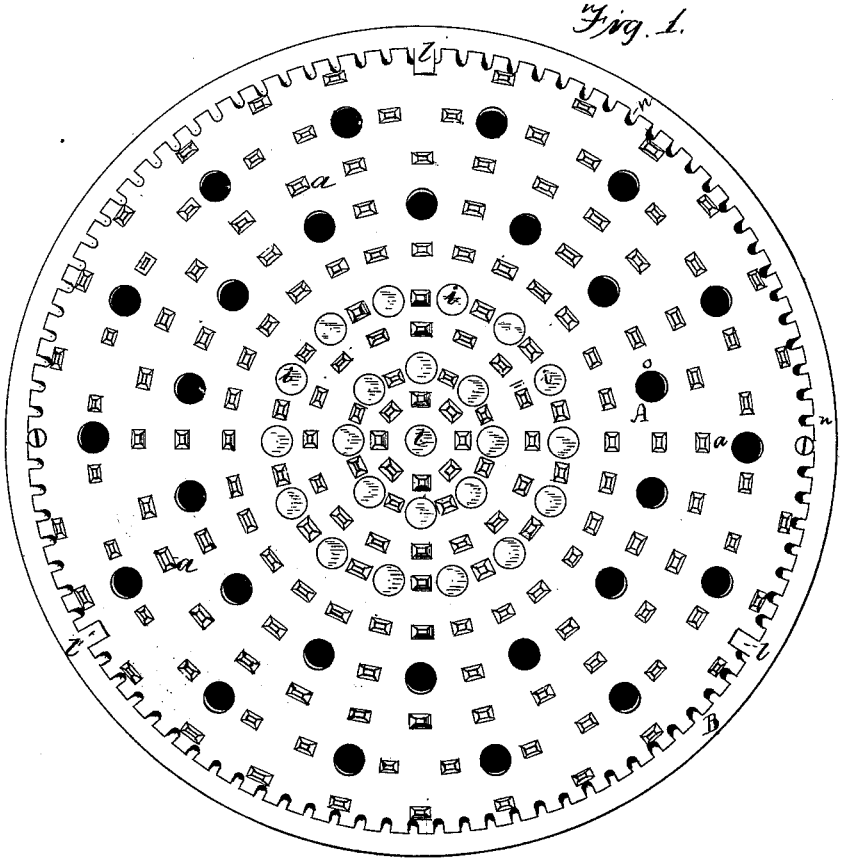
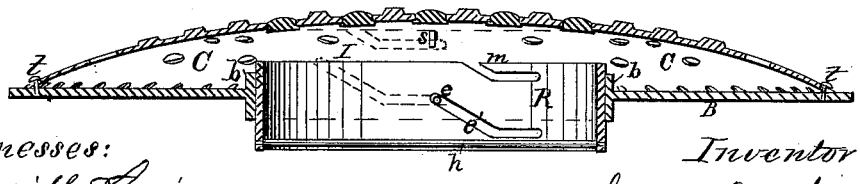


Fig. 2



Witnesses:
Granville Lewis
McKenny.

Inventor
James M. Willbur
By Hill, Ellsworth & Spear,
His Attys.

UNITED STATES PATENT OFFICE.

JAMES M. WILLBUR, OF NEW YORK, N. Y.

IMPROVEMENT IN VENTILATING VAULT-LIGHTS.

Specification forming part of Letters Patent No. **208,552**, dated October 1, 1878; application filed July 15, 1878.

To all whom it may concern:

Be it known that I, JAMES M. WILLBUR, of the city, county, and State of New York, have invented a new and useful Improvement in Ventilating Vault-Covers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top-plan view, and Fig. 2 a transverse vertical section.

Similar letters of reference in the accompanying drawings denote the same parts.

The objects of this invention are, first, to prevent water from leaking through vault-light covers, frames, &c., and running down into the building or compartment below; and, secondly, to provide for ventilating such building or compartment through the vault-light, roof-light, or floor-light above.

To these ends the invention consists, first, in a new mode of combining vault-light cover or frame and ventilator; secondly, in a vault-light frame or cover adapted to be converted, when required, into a protected ventilator; and, thirdly, in the combined mechanism and the parts thereof forming the cover and ventilator, substantially as I will now proceed to set forth.

In the drawings, A is a concavo-convex metal plate, having projections *a a* arranged in any suitable manner upon its upper surface, and having a series of notches or openings, *n n*, around its lower edge. As shown in the drawings, it has also a series of glass lights, *i i*, at its upper portion, and a series of openings, *o o*, between its periphery and the space occupied by the glass lights. This plate is supported upon and fastened by any suitable means to a lower annular plate, B, having a vertical flange, *b*, around its central opening.

The object of this construction is to provide a clear passage for the rays of light to pass from the lenses *i i* down to the compartment below, and for the air from the compartment below to pass up through the central illuminating-space I, then over the wall or flange *b*, then through the annular chamber C, and then out through the openings *o* or notches *n*, while at the same time it will not allow any water that works through or under the plate A to pass into the building or room below, but will receive it temporarily in the chamber C and discharge it through the notches *n*. So far as described, the use of the holes *o* is not material, and they may be omitted or closed with lenses, if preferred, as the openings *n* will suffice both for ventilation and the discharge of leakage water.

When constructed in the form shown, or the equivalent thereof, means may be provided to stop the ventilation whenever desirable; and to this end, as a means of accomplishing the purpose, I have arranged a rotating and sliding ring, R, in connection with the flange *b*, said ring fitting accurately within the flange, and having a cross-rod or handle, *h*, by which it can be turned. Two pins, *e e*, projecting from the flange *b* into slots or grooves *e'* made through or in the ring, cause the turning of the ring to raise or lower it, as will be readily understood from Fig. 2; and when it is thus raised, a hook, *m*, on the edge or outside of the ring, is adapted to catch into an eye or staple, *s*, attached to the under side of plate A, and thereby lock the ring in its elevated position, closing the ventilating-passage, and cutting off all communication between the drip-receiver and the lighting-space.

Other devices may be substituted for this ring where the form of the apparatus will admit of it, the essential requisite being merely that means should be provided to close the air-passage when desirable. With the construction here shown, the ring, when raised, not only closes the air-passage, but locks the upper plate down, forming a safety-fastening, in addition to the screws *t t*, which secure the two plates together. Lugs *l*, cast upon the lower plate and engaging with some of the notches in the upper plate, prevent any person from turning the upper plate to disengage it from the hooks *m*, and also serve to protect the screws from breaking, and to guide the workman in registering the upper plate correctly upon the lower one.

The frames, in any desirable forms, and with lenses adapted to the purpose, may be employed for vault-lights, deck-lights, floor-lights, roof-lights, or other analogous uses. The lower plate, B, is to be secured in place by any of the well-known means for such purposes, and the

upper plate suitably attached to it either before or afterward. The upper and lower plates may be cast or formed in a single piece, if desired, instead of making them in two pieces and fastening them together.

I claim as my invention—

1. The illuminated vault light cover having an upper and a lower plate with openings that do not register, whereby the cover can at will be converted into a ventilator that will allow air to pass out up through without allowing water to pass down through, substantially as described.

2. In a vault-light frame or cover, the combination of the upper plate having the central lights with the lower plate having the central opening surrounded by an upturned flange, substantially as described.

3. In an illuminated vault-cover, the combination of the upper and lower immovable plates with a movable gate for opening and closing the ventilating-passage, substantially as described.

4. In a vault-light frame or cover, the combination of the upper and lower plates and the ring R with the pins *e* and grooves or slots *e'*, substantially as described.

5. In a vault-light frame or cover, the combination of the upper and lower plates, the ring R, and the hook *m* and eye *s*, substantially as described.

6. In a vault-light frame or cover, the combination of the upper and lower plates, the ring, the hooks and eyes, and the lugs *l* and notches in which they engage, substantially as described.

JAMES M. WILLBUR.

Witnesses:
M. CHURCH,
FRANK MCKENNY.