J. K. INGALLS.

Vault-Covers.

No. 134,062. Patented Dec. 17, 1872.

Fig. 1.

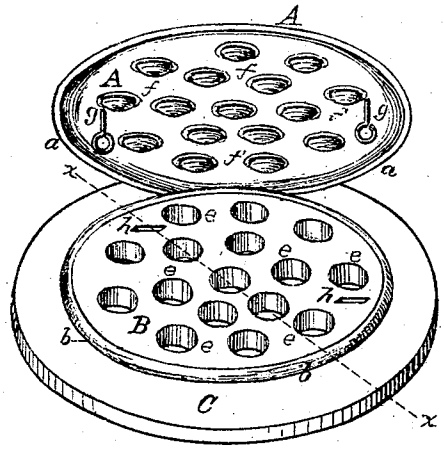
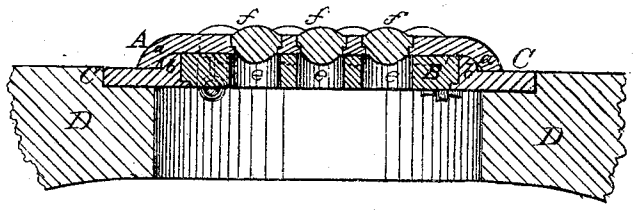


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOSHUA K. INGALLS, OF GLENORA, NEW YORK.

IMPROVEMENT IN VAULT-COVERS.

Specification forming part of Letters Patent No. **134,062**, dated December 17, 1872.

To all whom it may concern:

Be it known that I, JOSHUA K. INGALLS, of Glenora, in the town of Starkey, county of Yates, and State of New York, have invented new and useful Improvements in Vault-Covers; and I do hereby declare the following to be a full and exact description of the same.

My invention has for its object to provide a cover for vaults, areas, and similar situations, so made as to adapt it to ventilation and other uses which may at different times be required, as that by the removal of the upper section, which excludes water, it becomes a ventilating-cover, admitting of the free circulation of air, and still furnishing a walk or way for pedestrians; and, by the removal of a secondary section, an opening is formed for the introduction of fuel, &c.; and it consists in an open grating of metal, or a perforated metal plate, to cover the openings in sidewalks or area-space of buildings, and, in combination therewith, a cover having apertures preferably corresponding in position with those in the grate, which apertures are filled with glass, similar to the illuminating vault-covers now in use, for the purpose of excluding moisture, the said cover being secured to the grating or frame thereof by any suitable means that will admit of its ready disconnection and removal for the purpose of ventilation; and the grating or perforated plate being also removable, when required, for introducing fuel or other material into the space underneath.

Many of the illuminating vault-covers heretofore made and used have not been so constructed as to admit ventilation to the room lighted by them, and great inconvenience has been experienced on that account. Resort is often had to removing the glasses during warm weather; but this renders the cover unsightly and exposes the premises beneath to the intrusion of rain and water from the washing of the sidewalk. Inventions have been made to effect ventilation by means of sliding and revolving registers, by which a portion of the apertures in each plate is left unglazed, and, by sliding or revolving, are made to coincide, and thus admit the air. But the liability of this arrangement to become filled with dirt renders them nearly inoperative and impracticable.

By my invention these objections are obviated. My illuminating lid and cover is but slightly raised above the general surface of the walk, and presents the appearance of the ordinary cover. When the lid is removed for ventilation, there is presented a neat open grating, flush or nearly flush with the surrounding walk or area covering, and affording perfect security to the feet of the smallest child. In case of a shower of rain, or for any cause requiring it, the lid can be immediately replaced, and the premises secured against wet or storm. Over areas and next to the building, in all spaces other than door-fronts or sidewalks, my lid may be hinged so as to be raised upon its edge; or it may be slightly raised so as to afford ventilation.

As shown in the drawing, Figure 1 is a perspective view, showing the illuminating-cover A partially raised to expose the open grating B; and Fig. 2 is a vertical section on line *x x* through the grating and cover, shown in position as when in use with the illuminating-cover on.

A is the upper section or illuminating-cover. B is the metallic grating, C the frame thereof, and D D the area covering or sidewalk. I make my covering-lid A the same as the ordinary illuminated vault-covers are made—that is, with the openings therein set with glass—but with a deflected rim around the edge, as shown at *a a*. This edge is made to rest upon the area-platform frame, or upon a frame, C, made expressly to sustain the cover. The central space of this frame is filled with an open grating, B, with apertures *e e*. The illuminating-apertures in the lid are filled with glass *f f*. The open grating B I usually make permanent in the frame; but when the opening is intended to receive coal or other articles I make it separate from the frame, upon and in which it is made to rest by means of a seat and rabbet, as shown at Fig. 2. Upon the frame, and outside of the open grating, I form a bead, *b*, raised slightly above the surface, and so as to be embraced by the deflected rim of the cover, to prevent the inflow of water between the frame and lid; and when great security is required I place a ring, of rubber or other packing, between the edge of the cover and the bead upon the frame. I furnish one or more eyes, *g g*, to the lid, of sufficient length to pass through holes *h h*, provided in the

grating, and which I secure by means of hooks, keys, or any known device, and when the open grating is made separate from the frame I secure the same to its place by means of buttons, hook and chain, or by any device known and employed for fastening gratings in coal-holes. The frame C is secured to the sidewalk or over the area by means well known in the trade. The grating being in place I secure my illuminating-lid thereto, as already described.

Whenever ventilation is required, I undo the fastenings and remove the lid. When, in consequence of storm or cold weather, ventilation is no longer desirable, the lid is replaced and secured.

When required, I use my invention in an upright position, as in the risers under steps and platforms, and in other situations, as occasion may require. When it is practicable I hinge the lid to the frame, and, when occasion requires, slightly raise it, or fully raise it on one side, as the situation permits.

In making my cover I do not confine myself to any particular form or size of apertures, nor to any precise order of arrangement for said apertures; nor yet to the same number of apertures, respectively, in the lid and in the open grating, since, with very small glasses, it is obvious the grating might be made with bars into long and narrow apertures, leaving spaces open under an entire row of glasses, and yet be sufficiently near for security. Neither do I confine myself to any specific method of fastening the lid to the grating, or the grating to the frame, or the latter to its place, since various methods of effecting similar objects are well known to the trade.

What I claim as my invention is the following:

1. The open grating B, forming a continuous and safe footway, in combination with an illuminating-lid A, with its glazed apertures so arranged as that the light shall be transmitted through the apertures of said open grating, without material obstruction, said lid being capable of being opened or closed at pleasure, as set forth.

2. In combination with the glazed lid A, formed with the deflected rim *a*, the open grating B, having the raised bead *b*, substantially as set forth.

3. In combination with the glazed lid or cover A, an open grating, B, made removable from the frame C or other support thereof for the admission of articles to the space below, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSHUA K. INGALLS.

Witnesses:
J. FRASER,
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