

(No Model.)

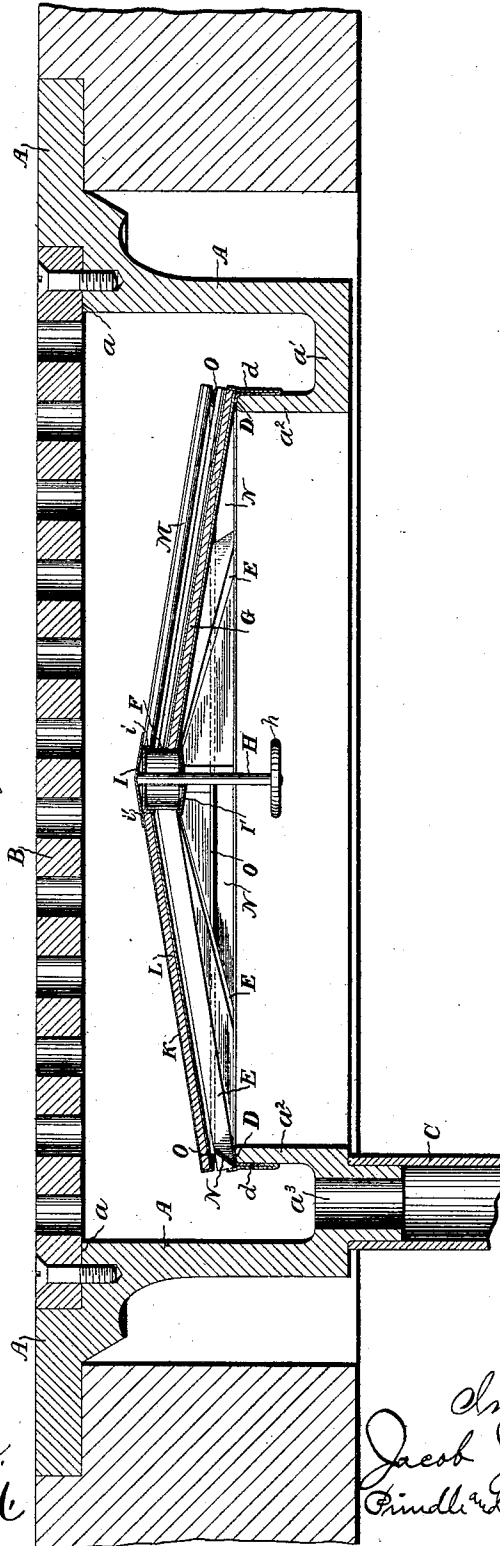
3 Sheets—Sheet 1.

J. JACOBS.
VENTILATING VAULT COVER.

No. 606,554.

Patented June 28, 1898.

Fig. 1.



Witnesses.
Frank P. Prindle.
Henry C. Hazard.

Inventor.
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Prindle & Russell, Attorneys.

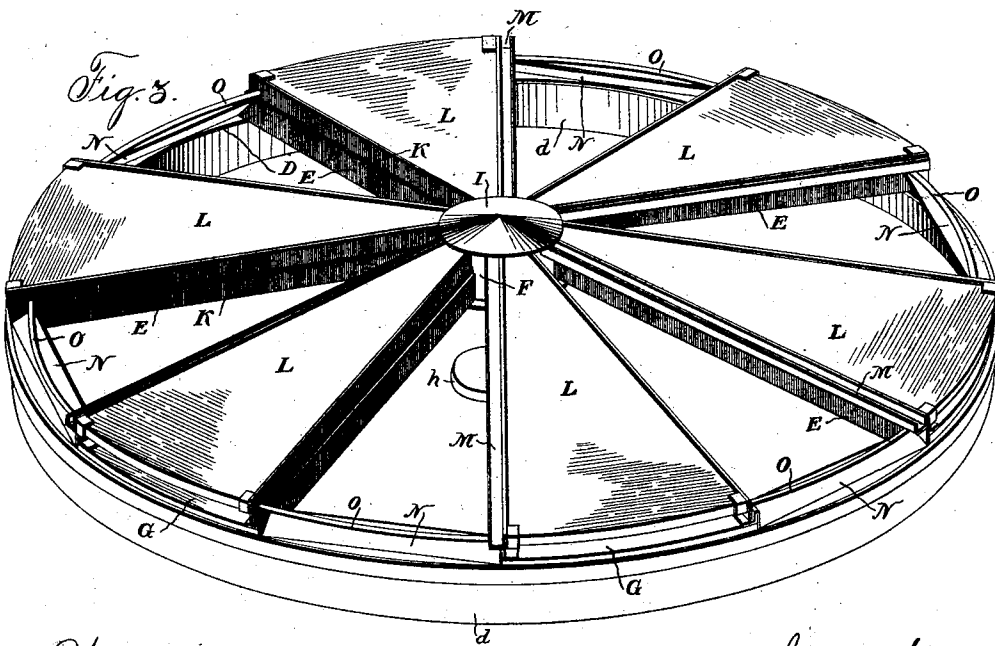
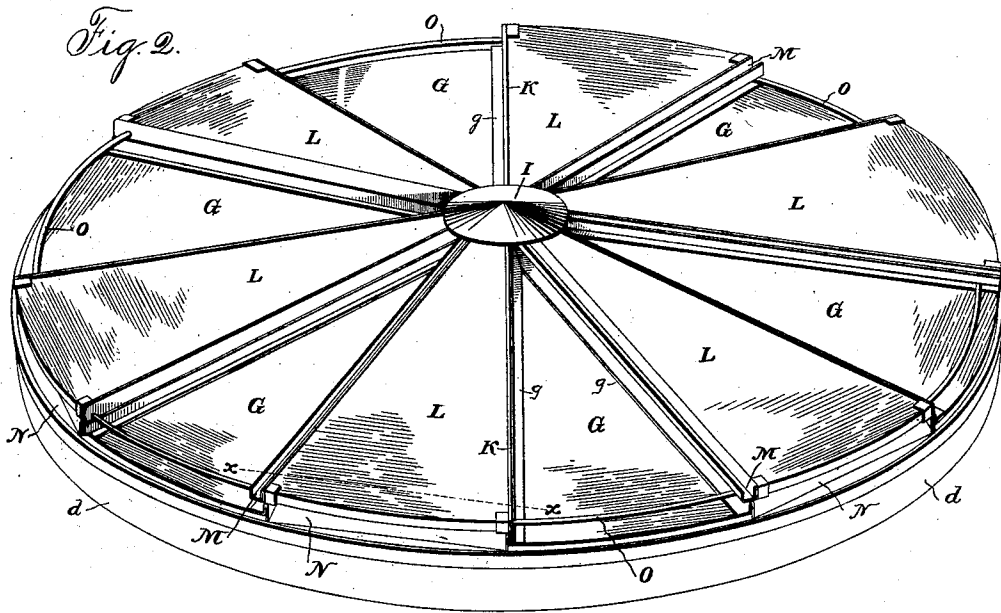
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Fig. 4.

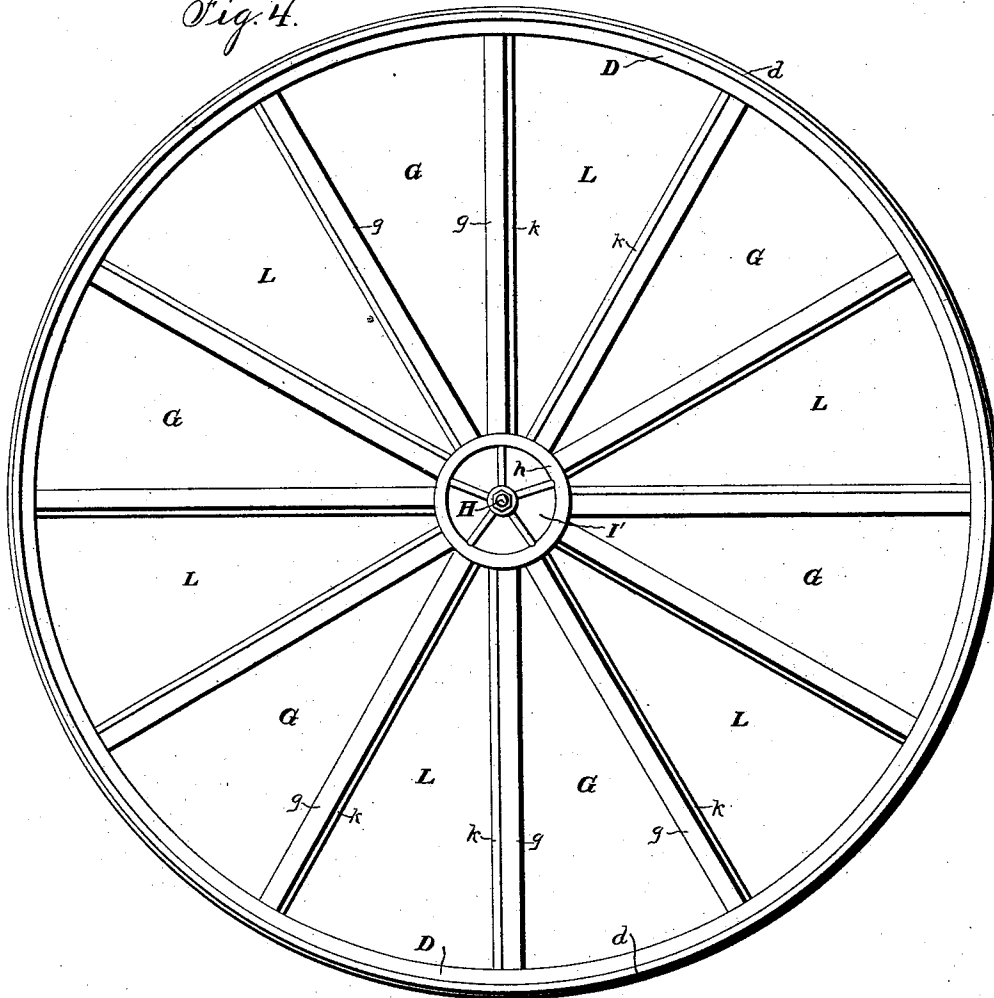
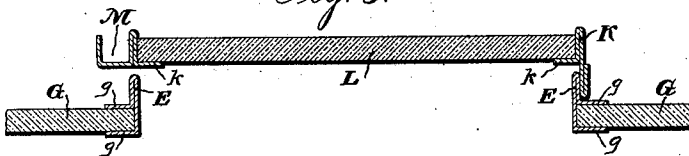


Fig. 5.



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UNITED STATES PATENT OFFICE.

JACOB JACOBS, OF BROOKLYN, NEW YORK.

VENTILATING VAULT-COVER.

SPECIFICATION forming part of Letters Patent No. 606,554, dated June 28, 1898.

Application filed December 31, 1897. Serial No. 664,931. (No model.)

To all whom it may concern:

Be it known that I, JACOB JACOBS, of Brooklyn, in the county of Kings, and in the State of New York, have invented certain new and useful Improvements in Ventilating Vault-Covers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section through a vault-cover embodying my invention. Figs. 2 and 3 are perspective views of the ventilating device, showing the same closed and open, respectively. Fig. 4 is a bottom view thereof closed, and Fig. 5 is a detail view in section on the line *x x* of Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to provide a light-transmitting ventilating-cover for vault-openings that will be perfectly watertight when in a closed position; and to this end said invention consists in the illuminating and ventilating vault-opening cover, having the features of construction substantially as hereinafter specified.

In the carrying of my invention into practice I place within the vault-opening a ring A, having around its upper edge a horizontal annular flange *a* to rest on the masonry or brickwork at the edge of the hole and having a circumferential groove or rabbet to form a seat to support a circular open-work or perforated cover-plate B, with its top surface flush with the surface of the walk or pavement. At its lower edge the ring has an inwardly-turned annular flange *a'*, from the inner edge of which rises an annular vertical wall or curb *a''*, the space between the latter and the ring A being a gutter or channel for water, which is passed off therefrom through an opening *a'''* in the flange *a'*, that communicates by means of a pipe C with a sewer or other place of discharge.

Resting upon the upper edge of the wall or curb *a''* is a ring or band D, that has a vertical flange *d*, which fits over said curb, and to said ring D is attached the outer ends of a number of substantially equidistant bars or rails E and E, that extend in radial lines from a small circular center piece or ring F. Al-

ternate spaces between the bars E and E are open, and each of the others is glazed by a segment-shaped piece of glass G, that has each of its opposite sides contained within a groove in the side of a bar formed by two parallel horizontal flanges *g* and *g*, the joints between the glass and bars being puttied or cemented to render them water-tight. Each bar E is extended vertically well above the top flange *g* to prevent the passing of water across into the adjacent open or unglazed space.

Extending through the ring F, at the center thereof, is a vertical shaft H, that at its upper end is connected to a spider or frame formed of a hub I and a series of radially-extending bars K and K, corresponding in number and position with the bars E and E beneath. The hub I rests upon the upper end of the ring F and has an annular flange *i* at its edge, that encircles said ring. The lower end of the ring is engaged by a disk or plate I', fastened to the shaft H, and thereby the spider is retained in position against vertical movement. Alternate spaces between the bars K and K are left open and the remainder filled with segment-shaped pieces of glass L and L, each piece being supported between a pair of bars by an inwardly-projecting flange *l* on each of the bars and there secured and a tight joint formed by putty or cement. The outer end of the flange is bent upward and then inward over the outer end of the piece of glass.

By the partial revolution of the shaft H, by means of a handle *h* thereon, the plates of glass L and L may be moved into position directly over the open spaces below them, so as to cover them, or to one side of said spaces, so as to leave the same open, and thus prevent or permit the passage of air. To limit said movement of the glasses L and L, so that their position shall be such as to exactly cover or completely uncover the openings beneath, one of the bars K and K of each glass-supporting pair is projected downward sufficiently far to encounter when moved in either direction the upwardly-projecting parts of the pair of bars E and E, between which the subjacent plate of glass L is supported. Moreover, when in a closed position the over-

lapping of the bars E and K adds to the weather-proof character of the construction. The other supporting-bar K for each piece of glass L is provided with a groove or channel M, that extends from the hub I out to or slightly beyond the outer end of the glass to form a gutter for the reception and guidance of water. Said channel is adapted to overhang or extend sufficiently beyond the side of the sub-
 10 adjacent opening as to prevent the passage of water into the same.

In the space between each pair of bars E and E, at the outer ends thereof, is placed an upwardly and inwardly inclining plate N, that rests on the ring D, and whose upper edge is
 15 placed in a plane well within the plane of the outer edge of the plate of glass L, used to cover the same, so that any water dripping from said plate of glass cannot possibly run or splash into the opening. Said plate N also closes the
 20 opening against the direct admission of rain or snow.

The hub I has at its top a flange *i'*, that projects over the inner ends of the glass and
 25 bars to enable the production of water-tight joints at these points.

To rigidly support or brace the bars K and K, I employ a metal ring O, to which their outer ends are fastened. This ring is espe-
 30 cially desirable if, as in the construction shown, the bars are formed of sheet metal, since without the ring they are supported only by their connection with the hub I, and this with sheet metal would hardly be suf-
 35 ficient to withstand the shocks and strains of rough usage.

Preferably the bars and plates of glass of both the stationary and pivoted members of my cover incline from their respective cen-
 40 ters downward and outward, so as to cause the ready passage of water over and off of them into the gutter at the bottom of the ring A.

It will be apparent that by the light open framework used to support the glasses the
 45 cover has large light-transmitting capacity both when opened and closed and when opened permits the passage of large volumes of air.

While designed primarily for use as a vault-
 50 cover of the type placed below the surface of the pavement, it is obvious that with the parts

omitted that this use requires the invention may be used elsewhere than in pavements.

Having thus described my invention, what I claim is—

1. In a ventilating and lighting cover, the combination of a frame formed of a ring and a series of radially-arranged bars that extend inward therefrom, between only some of which
 60 glasses are placed, no glasses being placed between the others, and inwardly-inclined plates being between the outer ends of bars between which are no glasses, and a pivoted frame over the other, having glasses adapted to be moved
 65 over and from the openings in the frame beneath, substantially as and for the purpose described.

2. In a ventilating and lighting cover, the combination of a stationary frame having a series of radially-arranged bars, between only
 70 some of which glasses are placed, said bars being extended above the surface of the glass, and a second similar frame, having bars extended downward in position to engage the upward extensions of the other frame-bars,
 75 substantially as and for the purpose described.

3. In a ventilating and lighting cover, the combination of a stationary frame having segment-shaped openings, alternate ones of
 80 which are glazed, and a pivoted frame having segment-shaped openings, alternate ones of which are glazed, and having along an edge of each glass a channel or gutter, substantially
 85 as and for the purpose described.

4. In a ventilating and lighting cover, the combination of a ring having an inwardly-projecting flange and a curb rising from the
 90 latter, a stationary frame consisting of a ring resting on said curb, and having a downwardly-extending flange surrounding the curb, and provided with glazed and unglazed openings, and a pivoted frame having glazed and unglazed openings, substantially as and
 95 for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of November, 1897.

JACOB JACOBS.

Witnesses:

ALEX. SÆDES,

WM. B. JACOBS.