(No Model.) 2 Sheets—Sheet 1.

J. JACOBS.

ILLUMINATING TILE.

No. 385,268. Patented June 26, 1888.

Fig. 1.

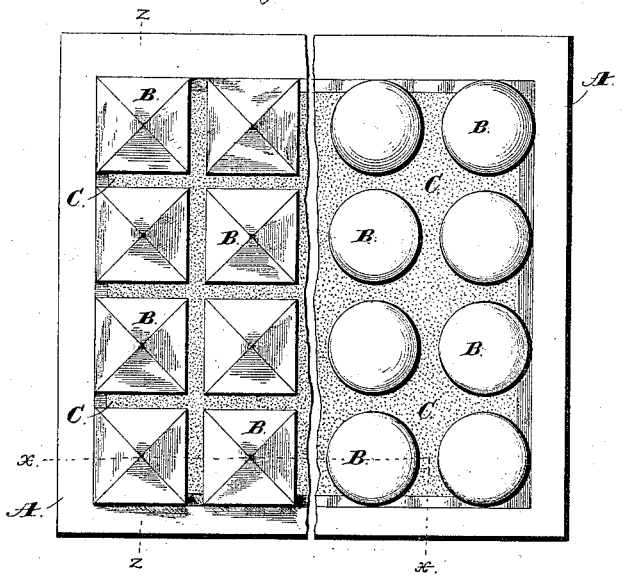
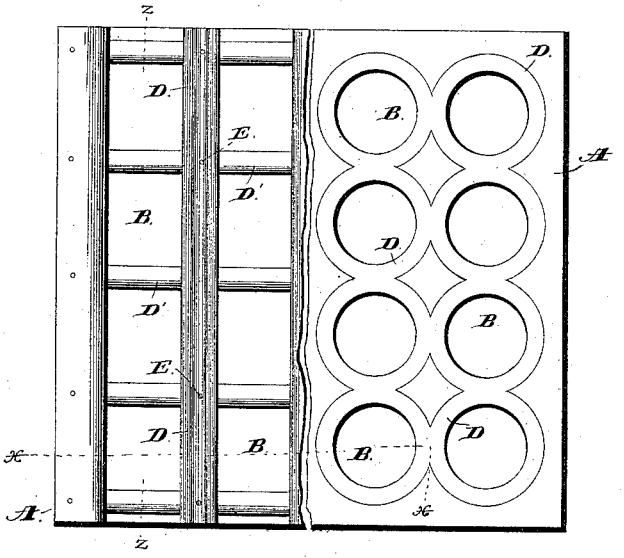


Fig. 2.



Witnesses:
Jas. E. Hutchinson.
Chas. J. Williamson.

Inventor
Jacob Jacobs, by
Pindle and Russell, his Attys

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

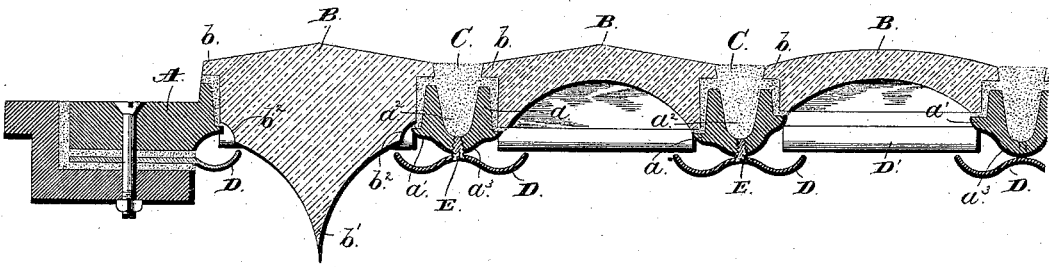
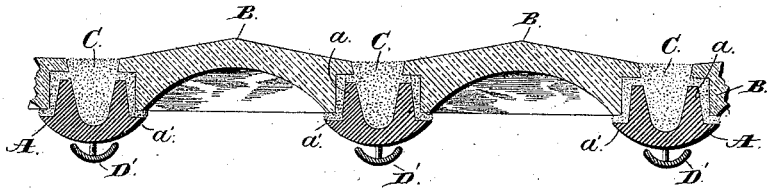


Fig. 4.



Witnesses:
Jas. E. Hutchinson.
Chas. J. Williamson.

Inventor.
Jacob Jacobs, by
Brindle and Russell, his Attys.

UNITED STATES PATENT OFFICE.

JACOB JACOBS, OF NEW YORK, N. Y.

ILLUMINATING-TILE.

SPECIFICATION forming part of Letters Patent No. 385,268, dated June 26, 1888.

Application filed March 17, 1883. Serial No. 88,553. (No model.)

To all whom it may concern:

Be it known that I, JACOB JACOBS, of New York, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Illuminating-Tiles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my tile. Fig. 2 is a like view of the lower side of the same. Fig. 3 is an enlarged section upon line *x x* of Figs. 1 and 2, and Fig. 4 is a like view upon line *z z* of said figures.

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

The design of my invention is to increase the efficiency of illuminating roof and sidewalk plates; and to this end said invention consists, principally, in the construction and combination of the lens and supporting-plates, substantially as and for the purpose hereinafter specified.

It consists, further, in the means employed for collecting and conducting away moisture condensing upon the lower surface of the illuminating-plate, substantially as and for the purpose hereinafter shown.

In the annexed drawings, A represents a metal plate, which in plan view has any desired exterior size and shape, and is provided at suitable points with light-openings *a*, that are made round or square, as will best suit the place for which said plate is intended. Each light-opening *a* has around its lower end a horizontal ledge, *a'*, from which to the upper end of said opening the walls have a slightly-outward flare. Between the said light-openings the upper side of the plate A is provided with grooves a^2, which connect with each other, and, if desired, form gutters, into and through which water falling upon said plate may pass. The lower side of said plate is provided between said light-openings with a downward-swelling rib, a^3, as seen in Fig. 3.

Within each light-opening *a* is placed a lens, B, that corresponds thereto in shape horizontally, and while having such dimensions as to give to its lower end a bearing upon the ledge *a'*, does not fill its said opening closely. At its upper end said lens is convex and has a flange or head, *b*, which extends horizontally outward over the surrounding plate, and at its edge has a downward and an outward inclination.

In setting the lenses B the space between each and the sides and upper end of its light-opening *a* is filled with cement C, while any opening between the lower end of said lens and the ledge *a'* is in like manner filled. Should the grooves a^2 be desired for use as gutters, said cement extends no farther than the edge of the projection *b;* but if it is desired to make the best practicable walking-surface, said grooves are also filled, and said cement is made flush with the upper ends of said lenses.

Each lens B has a double bearing upon the ledge *a'* and upon the plate beneath the flange or head *b*, while when the space around said head is filled with cement the latter forms a lock upon the inclined edge of said head and renders impracticable the displacement or injury of said lens from ordinary use.

In order that moisture condensing upon the lower surface of the illuminating-plate may be collected and conveyed safely away, the lower face of the lenses B are made concave, and I secure to the lower face of each rib a^3 a double gutter, D, which in cross-section has the form of a printer's brace, and has such width as to cause its edges to project beneath the lower faces of the lens B. Said gutters are secured in place by means of bolts E, which pass vertically through the same and through said ribs. When the lenses B are round, the gutters D are made circular and are connected together, as seen in Fig. 2, but when square lenses are employed said gutters are made straight and secured to the inclined ribs, and other short gutters, D', are arranged transversely beneath the ends of said lenses, and are arranged to have their ends extend over and empty into the gutters D at each side. Said gutters may, if desired, be cast upon or to the frame A, but are preferably formed separately and secured in place, as described.

When it is desired to use a lens with a pendant, *b'*, the portion immediately below or outside of the ledge *a'* is grooved to produce a neck, b^2, as shown in Fig. 3, in order that wa-

ter may drop into the gutters instead of passing downward along the surface of said pendant.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. An illuminating-tile which is composed of a metal plate that is provided with light-openings, glass lenses which are cemented within such openings and have each vertically-parallel sides surmounted by an integral frustum-head that projects horizontally upon all sides and is flat upon its lower side, and cement that is placed upon said plate and caused to fill the space between and beneath the heads of the lenses, substantially as and for the purpose specified.

2. An illuminating-tile which is composed of a metal plate provided with recessed light-openings, glass lenses which are cemented within such openings and have each vertically-parallel sides surmounted by an integral frustum-head that projects horizontally upon all sides and is flat upon its lower side, and cement which is placed upon said plate and caused to fill the space between the heads of the lenses, substantially as and for the purpose shown.

3. As an improvement in illuminating-tiles, the metal body or plate provided with light-openings and having its upper side recessed between such openings, a glass lens which is placed within each opening and has vertically-parallel sides surmounted by an integral frustum-head that projects horizontally upon all sides and is flat upon its lower side, and cement which is placed within and caused to fill the space between the sides of said lens and its opening and between the periphery of its head and the peripheries of the heads of the adjacent lenses, said parts being combined to produce a walking-surface of cement and glass, substantially as and for the purpose specified.

4. The frame-plate provided with light-openings and having rounded ribs upon its lower side between such openings, in combination with lenses which are cemented within said light-openings and have concave lower ends, and troughs that are arranged beneath the lowest portions of said ribs, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of February, 1883.

JACOB JACOBS.

Witnesses:
WILLIAM FITCH,
HENRY C. HAZARD.