(No Model.) 2 Sheets—Sheet 1.

J. JACOBS.

ILLUMINATING TILE, SIDE WALL, &c.

No. 385,271. Patented June 26, 1888.

Fig. 1.

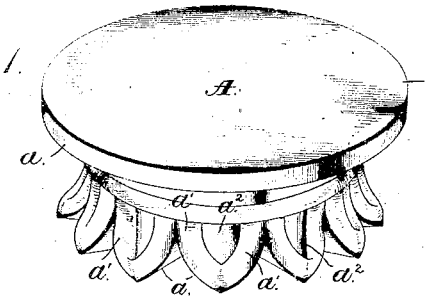


Fig. 2.

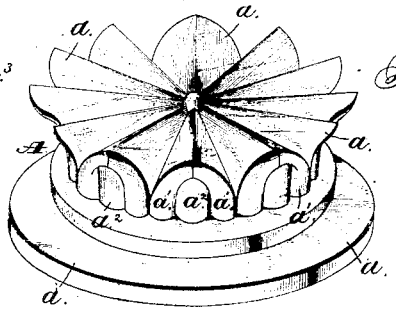


Fig. 3.

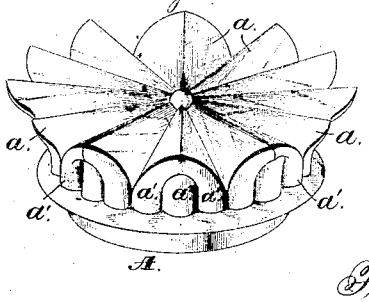


Fig. 4.

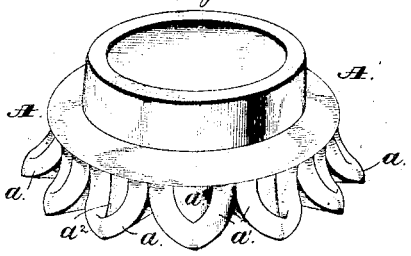


Fig. 5.

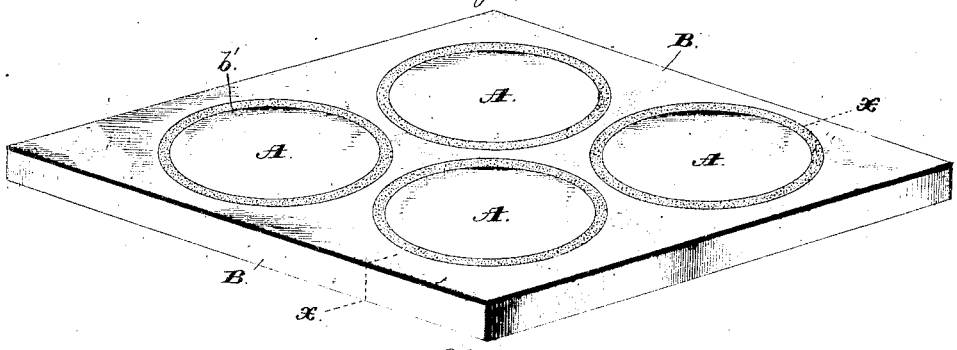
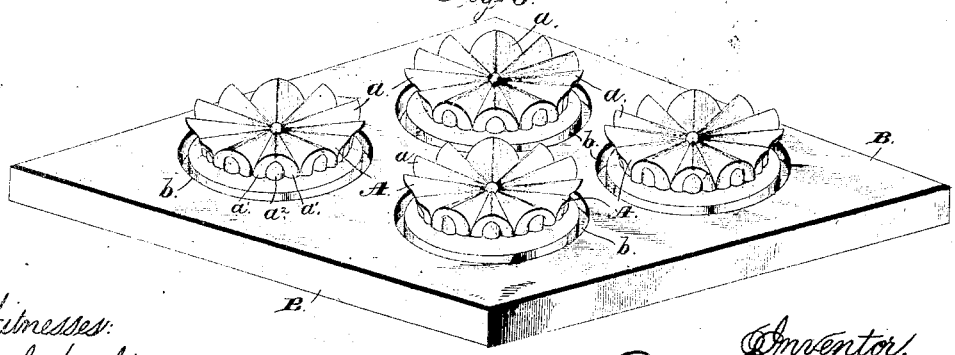


Fig. 6.



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Crindle & Russell, his Attys

(No Model.) 2 Sheets—Sheet 2.

J. JACOBS.

ILLUMINATING TILE, SIDE WALL, &c.

No. 385,271. Patented June 26, 1888.

Fig. 7.

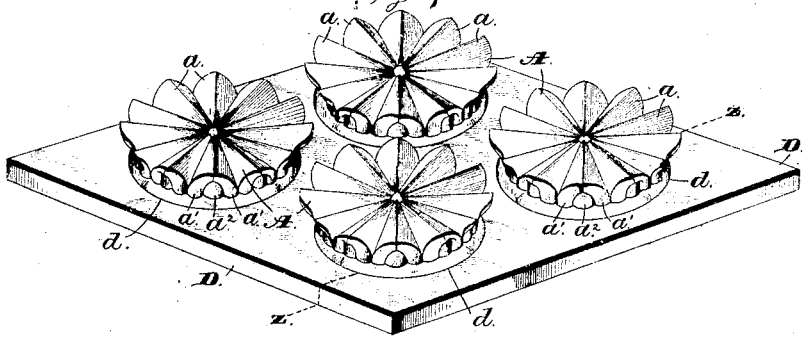


Fig. 8.

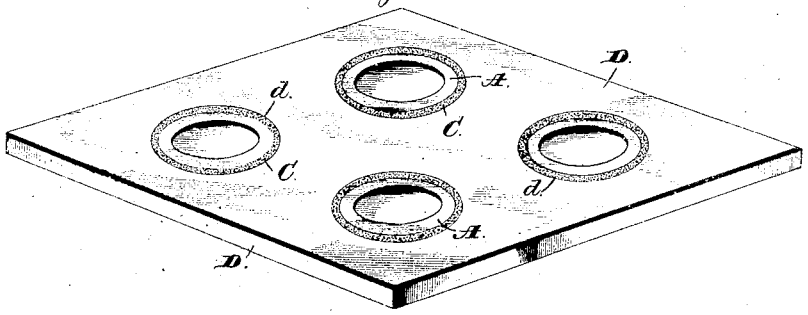


Fig. 9.

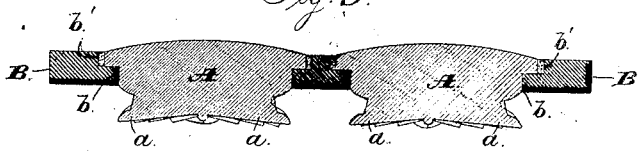
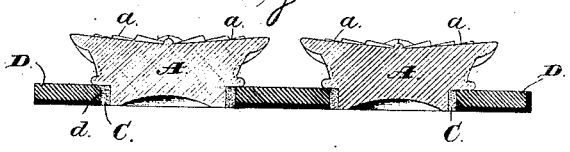


Fig. 10.



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

UNITED STATES PATENT OFFICE.

JACOB JACOBS, OF NEW YORK, N. Y.

ILLUMINATING TILE, SIDE WALL, &c.

SPECIFICATION forming part of Letters Patent No. 385,271, dated June 26, 1888.

Application filed March 19, 1888. Serial No. 267,678. (No model.)

To all whom it may concern:

Be it known that I, JACOB JACOBS, of New York city, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Illuminating Tiles, Side Walls, &c.; 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—

Figures 1 and 2 are perspective views, from the upper and lower sides, respectively, of my lens as constructed for tiling and roofs. Figs. 3 and 4 are like views of said lens when constructed for use in side walls. Figs. 5 and 6 are perspective views of the upper and lower sides, respectively, of a tile containing the lens. Figs. 7 and 8 are like views of the inner and outer sides, respectively, of a wall-plate containing said lens; and Figs. 9 and 10 are sections upon lines $x\,x$ and $z\,z$, respectively, of Figs. 5 and 7.

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

The design of my invention is to increase the illuminating capacity and to improve the appearance of lenses employed in roofs, sidewalks, and the side walls of buildings; and to this end said invention consists in the construction of the lens, substantially as and for the purpose hereinafter specified.

In the application of my invention to a tile I employ a round lens, A, and upon the lower side of the same form a series of ribs, a and a, which radiate from the center and transversely have the form of a pointed arch, the sides of each rib having an outward curve. Said ribs increase in width from their inner ends outward, and at their outer ends each rib vertically has an outward and downward curve and transversely has the form of three half-round beads, a', a', and a^2, as shown.

Above the ribs a and a the lens A has a plain cylindrical form for about one-half its height, and from thence to its upper end has an outward projection, a^3, which forms a head. For the use of said lens I employ a tile, B, consisting of a plain plate of metal, in which is provided a number of light-openings, b and b, that have each such diameter as to enable the ribbed portion of the lens to be passed through and the body of the same to be contained therein, and at its upper end has a recess, b', which is adapted to receive and contain the head a^3 of said lens and a small quantity of cement, C, that is placed between the outer edge of said head and the outer side of said recess. When thus combined with a tile, the entire ribbed portion of the lens is below the tile and its many curved faces operate to refract and reflect the light which passes through the lens, not only downward and radially outward, but even upward, so as to illuminate the lower side of said tile and, if the latter is painted white, make of the same a reflecting-surface. In addition to such practical advantages said lens from below presents a beautiful appearance and has apparently dimensions much larger than the opening into which it is inserted.

For use in side walls the ribbed portion of the lens is the same as that described; but its body is considerably reduced and forms a plain cylinder, and its face is preferably convex, as shown in Figs. 4, 8, and 10. The lens thus constructed has its body inserted from without into a plain opening, d, in a wall-plate, D, and secured in place and made tight by means of cement, C, placed between its periphery and the side of said opening.

When used in a wall, the action of the lens is reversed, and its ribbed portion, instead of reflecting and refracting light which is received through the body of said lens, receives the light directly from outside and reflects and refracts the same through said body into the interior of the room. Seen from the inside, the wall-lens presents all of the beauty of appearance of the tile-lens, as the conformation of its ribbed portion shows plainly through the body.

Having thus described my invention, what I claim is—

1. As an improvement in illuminating tiles and wall-plates, a lens which upon one side is provided with a series of radial ribs that transversely have curved sides, substantially as and for the purpose specified.

2. As an improvement in illuminating tiles and wall-plates, a lens which is provided upon one side with radial ribs that transversely have the form of a pointed arch, substantially as and for the purpose shown.

3. As an improvement in illuminating tiles and wall-plates, a lens which upon one side is provided with radial ribs that transversely have the form of a pointed arch and at their outer ends are curved outward, substantially as and for the purpose set forth.

4. As an improvement in illuminating tiles and wall-plates, a lens which upon one side is provided with radial ribs that transversely have the form of a pointed arch and at their outer ends are ribbed, substantially as and for the purpose shown and described.

5. As an improvement in illuminating tiles and wall-plates, a lens which is provided upon one side with radial ribs that transversely have the form of a pointed arch and at their outer ends are curved outward and ribbed, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of December, A. D. 1887.

JACOB JACOBS.

Witnesses:
GEO. S. PRINDLE,
HENRY C. HAZARD.