(No Model.) 2 Sheets—Sheet 1.

J. MARK.

LENS FOR ILLUMINATING TILES.

No. 602,763. Patented Apr. 19, 1898.

Fig. 1.

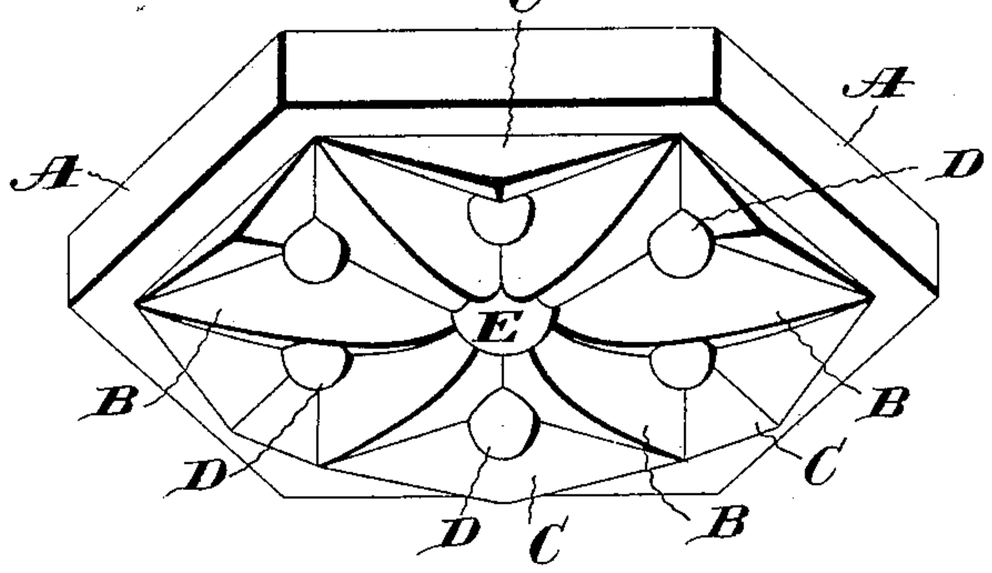


Fig. 2.

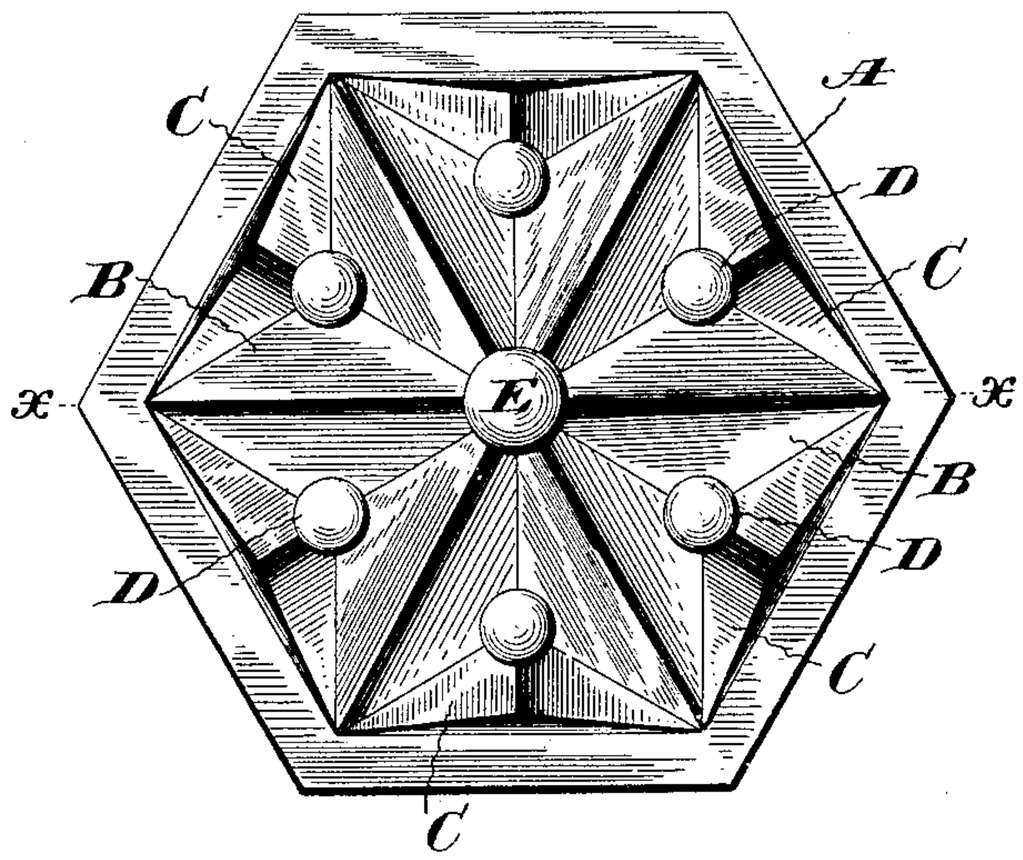
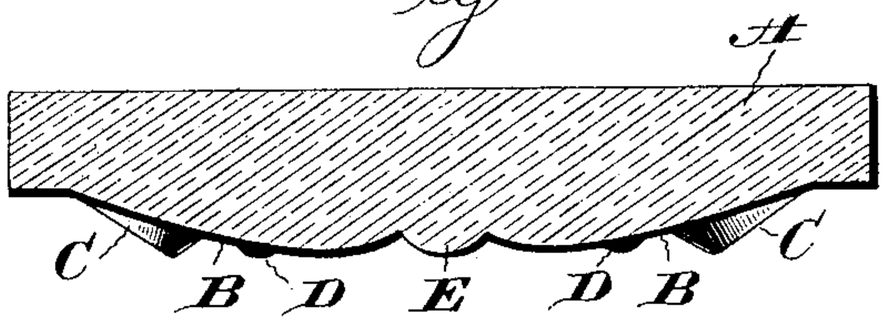


Fig. 3.



Witnesses:
Jas. E. Hutchinson
Henry C. Hazard.

Inventor.
Jacob Mark
by Pindle and Russell
his Attorneys

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

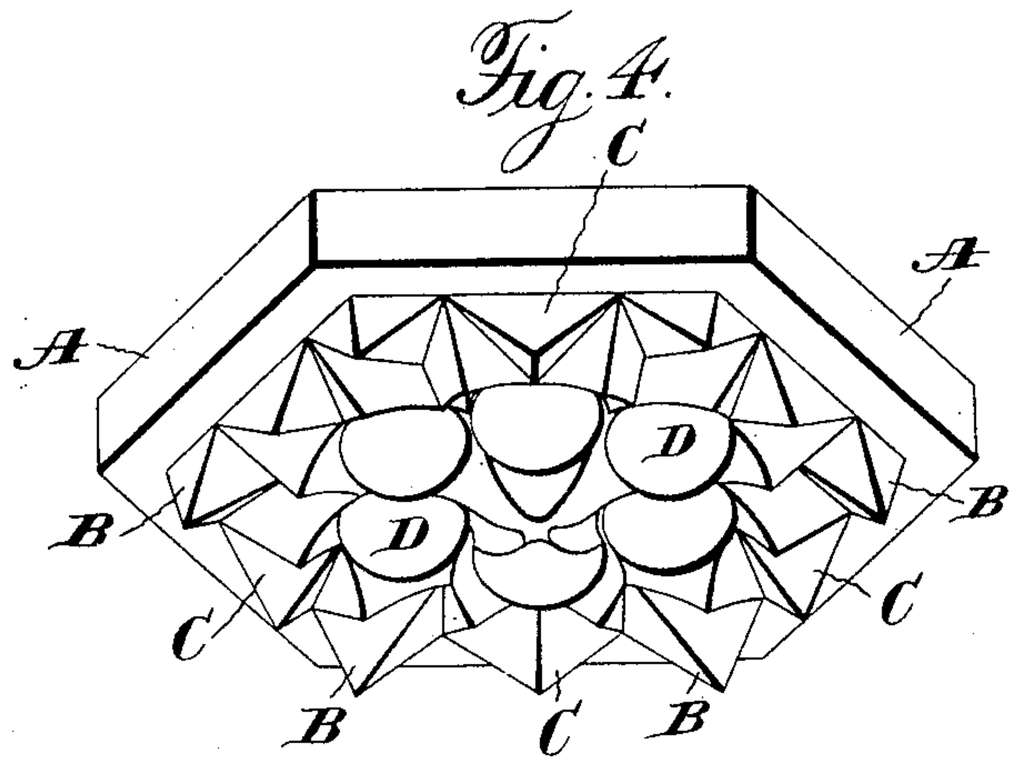
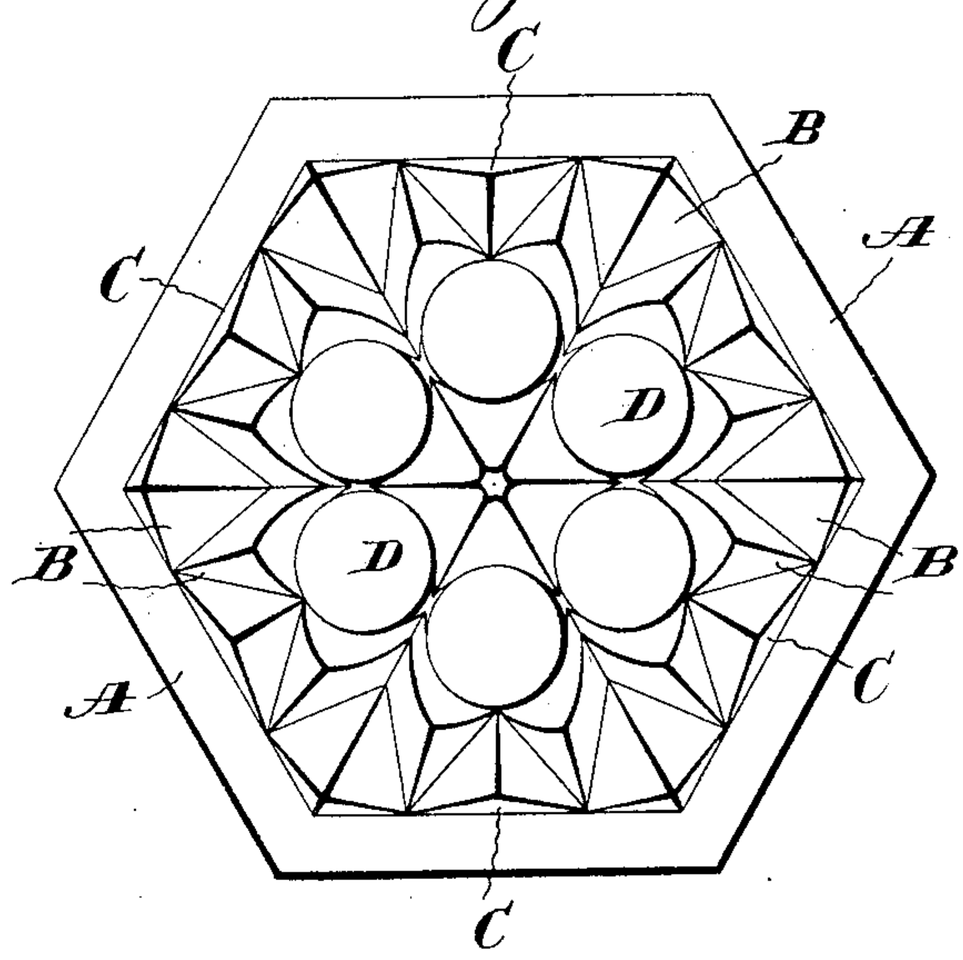


Fig. 5.



Witnesses:
Jas. E. Hutchinson
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Inventor.
Jacob Mark
by Prindle & Russell
his attorneys

UNITED STATES PATENT OFFICE.

JACOB MARK, OF NEW YORK, N. Y.

LENS FOR ILLUMINATING TILES.

SPECIFICATION forming part of Letters Patent No. 602,763, dated April 19, 1898.

Application filed May 28, 1897. Serial No. 638,569. (No model.)

To all whom it may concern:

Be it known that I, JACOB MARK, of New York, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Lenses for 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, in which—

Figure 1 is a perspective view of my lens, viewed from the under or inner side thereof; Fig. 2, a plan view of the under or inner side of the lens; Fig. 3, a section on line *x x* of Fig. 2, and Figs. 4 and 5 are respectively perspective and plan views of a different form of my invention.

The object of my invention is to provide a lens or glass for vault or other lights of such construction as to be both ornamental in appearance and to transmit light to the space to be lighted to the best possible advantage; and to this end said invention consists in the lens having the formation substantially as hereinafter specified.

In the carrying of my invention into practice I employ a lens-body A, whose outline may be hexagonal, as shown, or round, square, or other shape, whose upper or outer surface is flat or plane. On its under or inner side there is formed a series of projections B and B, that radiate from the lens-center. The base of each projection B is diamond shape in outline. From the edges of the base the sides of the projection are sloped or inclined to meet in an apex that lies in a plane coincident with the longer diagonal of the diamond and which is slightly curved convexly. In the angle or space between the outer ends of two adjacent projections B and B is a projection C, that is in shape substantially like a half of one of the projections B, cut in two on a plane passing perpendicular to its base through the apex, the inclined or sloping surfaces of the projection C being toward the similar surfaces of the projections B and B. At the point where the edges of two of the projections B and B and a projection C come together I place a small convex lens or bull's-eye D, and preferably at the center of the lens or the radiating-point of the projections B and B there is a bull's-eye E. It will be noted that the bull's-eyes D and D alternate with the projections B and B.

In Figs. 4 and 5 I show a form of my invention in which the convex lenses D and D are enlarged in size, portions of the projections B and B being removed to permit such enlargement and having their surfaces adjacent to the lenses D and D curved concavely. I also show the projections C and C as relatively smaller and of greater number than is the case with the form of the invention shown in the other figures.

In each form of my invention it is to be noted that a plane radial to the center of the lens passes through the centers of one of the convex lenses D and of a projection C.

My lens presents not only a highly-ornamental appearance, but, because of the numerous reflecting-surfaces provided, it has superior light-transmitting capacity.

Having thus described my invention, what I claim is—

1. A glass or lens for illuminating tiles having projections with adjacent inclined faces that converge to a common point, and a circular series of convex lenses that alternate with said projections, substantially as and for the purpose specified.

2. A glass or lens having a side formed of a series of convex lenses arranged in a circle and a series of projections with inclined sides also arranged in a circle, each convex lens being arranged in such relation to a projection, that a plane radial to the center of said circle, passes through the centers of lens and projection, substantially as and for the purpose specified.

3. A glass or lens for illuminating tiles having a series of projections radiating from a common point, with inclined or sloping sides, other projections with like sides disposed between adjacent ones of the first mentioned, and convex lenses placed at points where the sides of the other projections come together, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of May, 1897.

JACOB MARK.

Witnesses:
JOHN D. CAREN,
FREDERICK HULSE.