(No Model.)

J. JACOBS.

ILLUMINATING TILE.

No. 422,218. Patented Feb. 25, 1890.

Fig. 1.

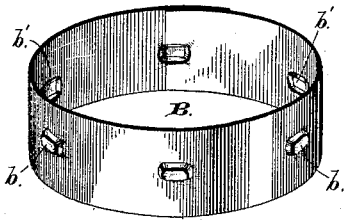


Fig. 2.

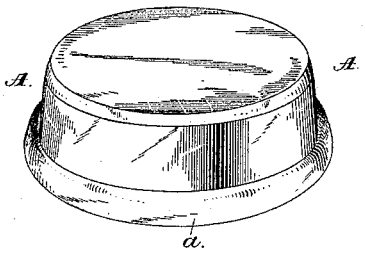


Fig. 3.

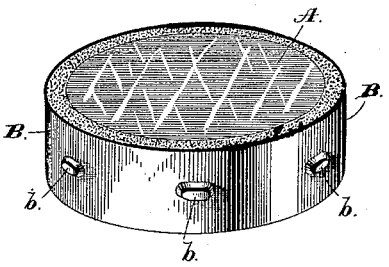


Fig. 4.

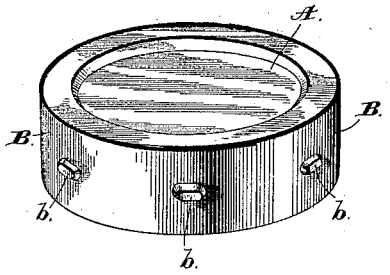


Fig. 5.

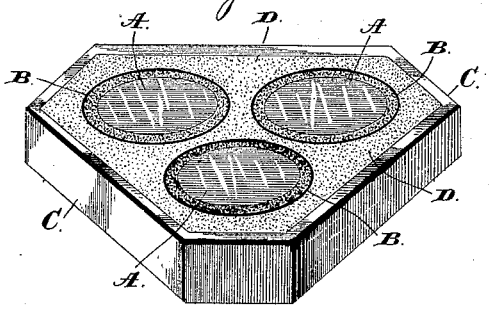
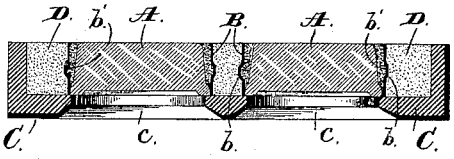


Fig. 6.



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

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. 422,218, dated February 25, 1890.

Application filed April 24, 1889. Serial No. 308,391. (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, in which—

Figure 1 is a perspective view of the ring employed for holding the lens of my illuminating-tile. Fig. 2 is a like view of the lens used with said ring. Fig. 3 is a perspective view, from above, of said parts as combined. Fig. 4 is a like view of the same from below. Fig. 5 is a perspective view of the completed tile, and Fig. 6 is a cross-section of the same upon a line passing through the axes of two lenses.

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

My invention is an improvement upon an illuminating-tile for which Letters Patent were issued to me upon the 31st day of August, 1880, No. 231,805, and is designed to secure an increase in the light-transmitting capacity of the tile; to which end my said invention consists in the relative construction of the lens and its inclosing-ring and the combination of the same in a tile, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ a lens A, which in side elevation has the form shown in Figs. 2 and 6, its sides being straight from its upper end nearly to its lower end, at which latter point is provided a circumferential flange or head *a*. The body of said lens preferably decreases slightly in diameter from said head upward, but may be made with parallel sides, if desired. The lower face of said lens is also recessed, as seen in Figs. 4 and 6, but may be made plain, if preferred.

As a setting for the lens A, I employ a ring B, of suitable material, preferably brass, which has parallel sides and at suitable points around its periphery is provided with projections *b* and *b*, that correspond to and are formed by the production within the interior of said ring of recesses *b'* and *b'*. In depth the ring B corresponds to the like features of the lens A, while its interior diameter corresponds to the diameter of the head *a* of the latter, so that when said lens is placed within said ring the lower end of the latter is just filled by and conforms to the shape of said head, while above the latter an annular space is left between the contiguous surfaces of said parts, which space increases in horizontal dimensions from its lower end upward, and, being filled with brimstone, cement, or other suitable water-proof packing, such as is employed for securing tile-lenses in place, operates to firmly fasten said lens within said ring. The lenses thus inclosed by rings are now placed over light-openings *c* and *c*, that are formed within a metal plate or tile C and are secured in place by means of Portland cement D or other like material, which is applied in a plastic form to the upper side of said tile and fills the space between the peripheries of the rings, so as to be flush with the upper ends of the same, as shown in Figs. 5 and 6, the result being a walking-surface composed almost entirely of glass and cement.

In the tile covered by my hereinbefore-named patent the lower end of the lens is considerably smaller than the inclosing-ring and between the lower ends of said parts is an annular body of cement, while in the herein-described tile the lower end of the lens completely fills its ring, and as a consequence has materially greater light-transmitting capacity than it would otherwise possess, so that a tile provided with the new lenses for a given glass area of its upper surface is adapted to thoroughly light a space which would be but imperfectly lighted by a tile of equal area of glass surface, but provided with the other form of lens.

Having thus described my invention, what I claim is—

1. An illuminating-tile in which are combined a supporting-plate that is provided with light-openings and glass lenses that are placed over such openings and are each set within an inclosing-ring and entirely fill the lower end of the same, which inclosing-rings are made separate from and rest upon said supporting-plate, and cement placed upon

said plate around said lens-holding rings and filling the space between the same and locking them in place, substantially as and for the purpose described.

2. An illuminating-tile in which are combined a supporting-plate that is provided with light-openings, cylindrical lens receiving and holding rings made separate from said plate, and glass lenses that are each provided with a circumferential flange that when said lenses are placed within their respective rings entirely fills the lower portion thereof, said lenses and rings resting upon said supporting-plate, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of April, 1889.

JACOB JACOBS.

Witnesses:
GEO. S. PRINDLE,
JAS. E. HUTCHINSON.