

(No Model.)

D. G. BEECHING.
ILLUMINATING TILE.

No. 510,831.

Patented Dec. 12, 1893.

Fig. 1.

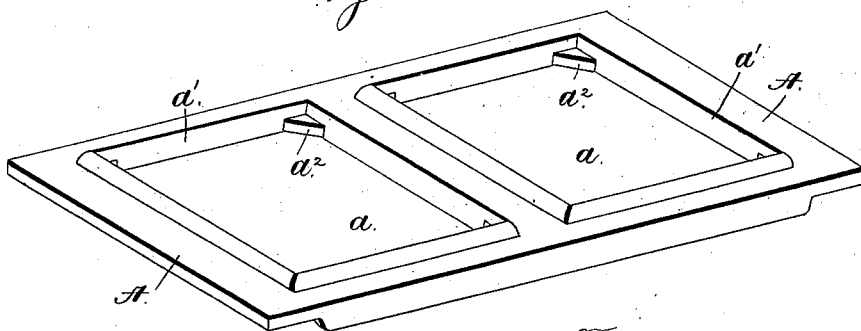


Fig. 2.

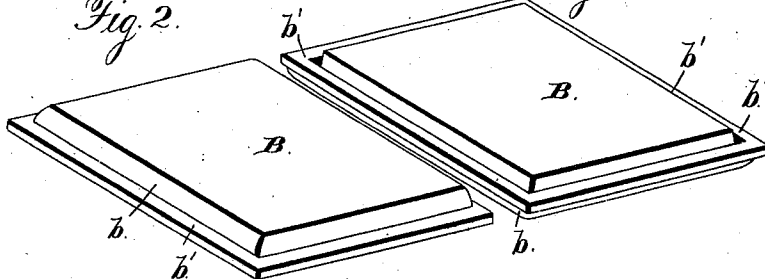


Fig. 3.

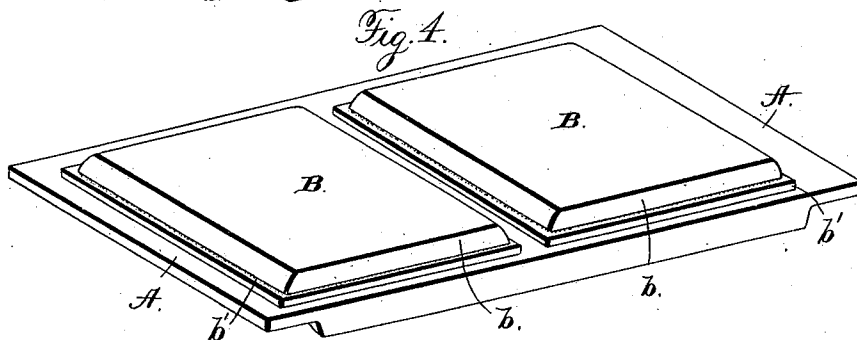
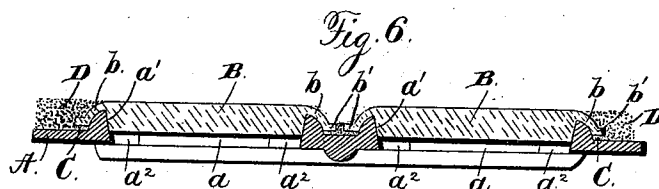
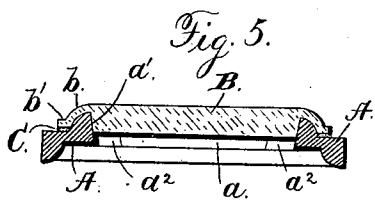


Fig. 4.



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

Inventor.
D. G. Beeching, by
C. W. Russell, his Attys.

UNITED STATES PATENT OFFICE.

DAVID G. BEECHING, OF NEW YORK, N. Y.

ILLUMINATING-TILE.

SPECIFICATION forming part of Letters Patent No. 510,831, dated December 12, 1893.

Application filed October 16, 1890. Serial No. 368,268. (No specimens.)

To all whom it may concern:

Be it known that I, DAVID G. BEECHING, 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; 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 from the upper side of my improved tile before the insertion of the lenses. Figs. 2 and 3 are like views of a lens from the upper and lower sides respectively. Fig. 4 is a perspective view of the tile from the upper side after glazing; and Figs. 5 and 6 are cross sections of the same and show, respectively the construction preferred for roofing purposes and a modification of the same for use as a walking surface.

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

The design of my invention is mainly to simplify the construction and to lessen the cost of an illuminating tile patented to me upon the 20th day of February, 1883, No. 272,629, and to such end my said invention consists, in the construction of the tile and the combination therewith of lenses having the form shown, substantially as and for the purpose hereinafter specified.

In carrying my invention into practice, I employ a tile A, which has such size and shape as will best adapt it for the purpose intended, and is provided with light openings a and a' , that preferably are square in outline because of the superiority of the light-transmitting area of such shape. Said openings are each surrounded by a curb a' that is constructed, preferably, with a downwardly and outwardly curved outer side, and, for the support of lenses to be placed therein, are provided at their four corners, below the top edges of said curbs, with small inwardly projecting ledges or lugs a^2 and a^3 .

Fitted into each light opening a is a lens B which conforms to and substantially fills the same from the plane of the tops of the ledges a^2 upward, and is provided with a peripheral flange b that projects downward and outward over the curb a' .

Between the lower edges of the flanges b and the surface of the tile are left spaces

which are filled with cement C, applied in a plastic state, that, when hard, effectually secures the lenses B in place and operates as a seal to prevent inward passage of water or air. In consequence, however, of the elevation of the curbs a' above the surface of the tile A, but slight liability would exist of passage of water through the light openings, were the cement omitted or should it become imperfect.

Projecting horizontally from the flanges on the lenses and extending entirely around the latter, are short, supplemental flanges, or ledges b' whose function it is to act as guides in "cutting off," or removing, superfluous cement from between the lenses in the process of setting them. Careless workmen, failing to remove the requisite amount of cement leave the latter extending to a level as high as the curbs a' , and as this is objectionable and it is necessary that the level of the cement should be below that of the curbs, some expedient must be resorted to, to insure that such latter shall be done. By providing these flanges and employing in conjunction with them a flat cutting tool of sufficient width to extend across from one of said supplemental flanges or ledges on one lens to a contiguous one on the other, I effect this result, as said flanges serve as a guide for the tool and a gage to determine the height to which the cement shall extend, making it certain that all of the latter above them shall be removed. In addition to this, it is made certain that there shall be no hollows or depressions left in the surface of the cement to catch and hold water, or dirt, as such surface will be made perfectly even and smooth by the tool passing over it, guided by the flanges.

I do not claim as being new with me a lens or glass having a horizontal flange or ledge, as such is old in the art to which my invention pertains. My invention is limited to a tile having lenses provided with horizontal flanges which lenses are secured in place by cement whose level is gaged or fixed by means of said flanges whereby the above-indicated important results are obtained.

All needed support for a lens is afforded by the inwardly projecting ledges at the corners of the lens-openings. As it is therefore unnecessary to have a continuous ledge extending entirely around the opening, a material

gain in light-transmitting area, and reduction in the weight of the tile A is effected.

Where the tile is used for a footwalk or floor, I prefer to fill the spaces between the upper, projecting portions of the lenses with a cement D that is adapted to furnish a firm foothold, in which event the upper surface of the tile is composed entirely of glass and cement.

The omission from around each light opening of the second curb shown in my hereinbefore named patent materially lessens the cost of the tile by reducing its weight and enabling it to be more easily molded and cast, and renders practicable the employment of a concrete filling for the spaces between the lenses.

Having thus described my invention, what I claim is—

As an improvement in illuminating tiles, a tile having light openings which are each surrounded by an upwardly projecting curb, lenses fitted to said openings and having flanges overlapping and engaging such curbs, and from which project horizontal, supplemental flanges or ledges and cement to hold said lenses in place whose level between adjoining lenses is gaged by the supplemental flanges or ledges thereon, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of September, A. D. 1890.

DAVID G. BEECHING.

Witnesses:

ABNER R. LATSON,
CHARLES B. JENNINGS.