(No Model.)

J. G. PENNYCUICK.

SKYLIGHT.

No. 492,363. Patented Feb. 21, 1893.

Fig. 1.

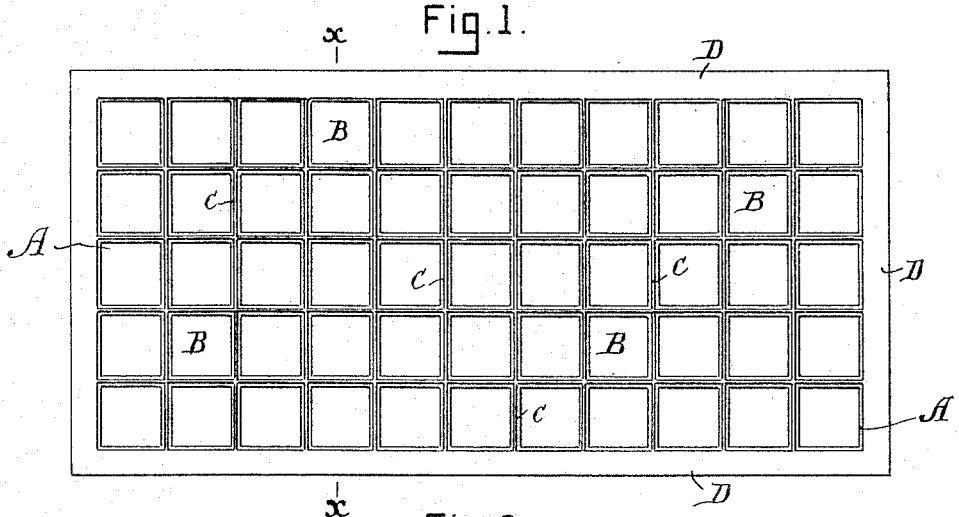


Fig. 2.

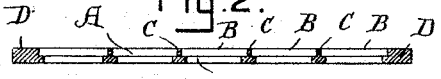


Fig. 3.

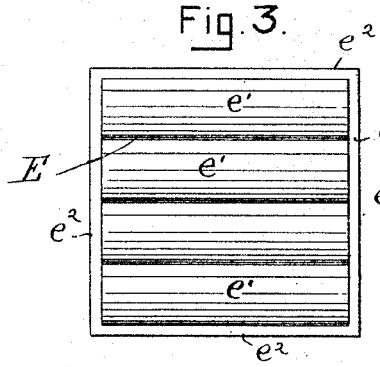


Fig. 4.

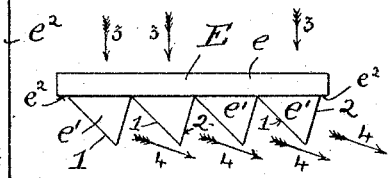


Fig. 5.

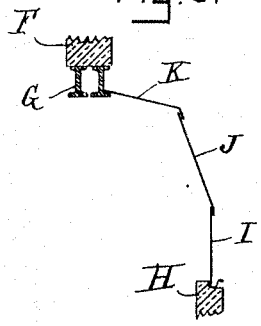


Fig. 6.

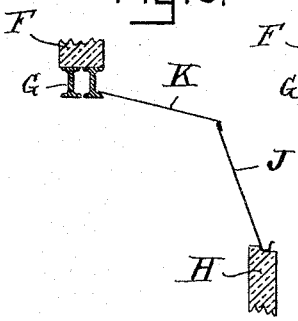
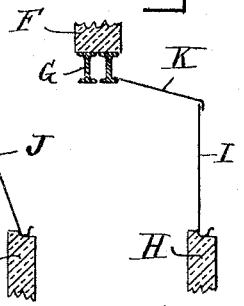


Fig. 7.



Witnesses.

C. J. Garland

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Inventor.

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By H. F. Ennis, Atty.

UNITED STATES PATENT OFFICE.

JAMES G. PENNYCUICK, OF BOSTON, ASSIGNOR TO CLARA G. GARLAND, OF LOWELL, MASSACHUSETTS.

SKYLIGHT.

SPECIFICATION forming part of Letters Patent No. 492,363, dated February 21, 1893.

Application filed February 23, 1892. Serial No. 422,568. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. PENNYCUICK, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Skylights; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to skylights that are arranged over vaults or extensions beyond the line of the main wall of a building and where light is denied beyond the line of light as it would fall from an ordinary skylight, the object being to throw the light received a considerable distance beyond the vertical of the skylight while not obscuring the light immediately beneath the skylight.

The invention consists in the peculiar construction of the lens or glass tile and in the frame for holding the same.

Referring to the accompanying drawings Figure 1 represents a plan or top view of a frame for holding the lenses or glass tiles embodying my invention. Fig. 2 is a cross section of the same taken on line *x x* of Fig. 1. Fig. 3 is a front view of a lens or glass tile embodying my invention. Fig. 4 is a side view of the same. Figs. 5, 6 and 7 show several modes of applying the tiles constructed according to my invention.

A represents a rectangular tile frame divided into a number of sections B by rabbeted braces C, these sections may be round oval or oblong or of any other convenient form, preferably as shown about four inches square, the outer rim or margin D being about one and a half inches wide.

E, Figs. 3 and 4 represents one of the lenses or glass tiles drawn to a larger scale, one side *e* (see Fig. 4) of the lens is perfectly flat and the other side is formed with ribs or projections *e'*, a small flat surface e^2 extending entirely around the outer edge, which surface rests upon the rabbeted beads *c* when inserted in the tile frame A, the ribs or projections each form an obtuse scalene triangle, one surface 1 of the ribs or projections being at about an angle of forty-five degrees to the true flat surface of the tile and the other surface 2 at about an angle of one hundred and five degrees to the said surface *e*, whereby when the light is admitted in the direction of the arrows 3 it will be caught by the surface 1 and transmitted to the surface 2 and be deflected in a line as indicated by arrows 4 in about an angle of one hundred and ten degrees to the direction in which it was admitted, thus each lens throwing the light at rather more than at right angles so that it is diffused for a considerable distance beyond the point of reception, while there is little diminution of the light immediately below the skylight.

In Figs. 5, 6 and 7 I have shown various methods of arranging the tiles, in these views F represents the main wall of a building supported by beams G, and H the rear lower walls. In Fig. 5 I have shown three sets of tiles, one set I standing perpendicular, another set J at a slight angle thereto and another set K at the top. In Fig. 6 I have shown only two sets of tiles, the sets J and K which are both arranged at an angle and in Fig. 7 the sets I and K. In all these cases the light will be diffused a very considerable distance beyond the point of reception but in the example as shown in Fig. 5 it will be transmitted more equally. The inclination of the tiles must in all cases be arranged to suit the particular place in which it is desired to diffuse the light.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A glass tile one side of which has a plane surface and the opposite side having a series of ribs or projections each forming an obtuse scalene triangle in cross section, one side of which projects at an angle of about forty-five degrees and the other side at an angle of about one hundred and five degrees from the plane of the top surface and a small plane surface extending entirely around the tile substantially as set forth.

2. A combined metal and glass tile consisting of a metal frame divided into a number of sections connected by rabbeted beads each section being fitted with a lens, plane on one side and on its opposite side having a series

of ribs or projections each forming an obtuse scalene triangle in cross section, one side of which projects at an angle of about forty-five degrees and the other side at an angle of about one hundred and five degrees from the plane of the top surface substantially as and for the purposes set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

J. G. PENNYCUICK.

Witnesses:
H. P. DOOLEY,
E. M. DOOLEY.