

(No Model.)

2 Sheets—Sheet 1.

J. G. PENNYCUICK.

DEVICE FOR ILLUMINATING BASEMENTS AND DARK ROOMS.

No. 583,580.

Patented June 1, 1897.

Fig. 1.

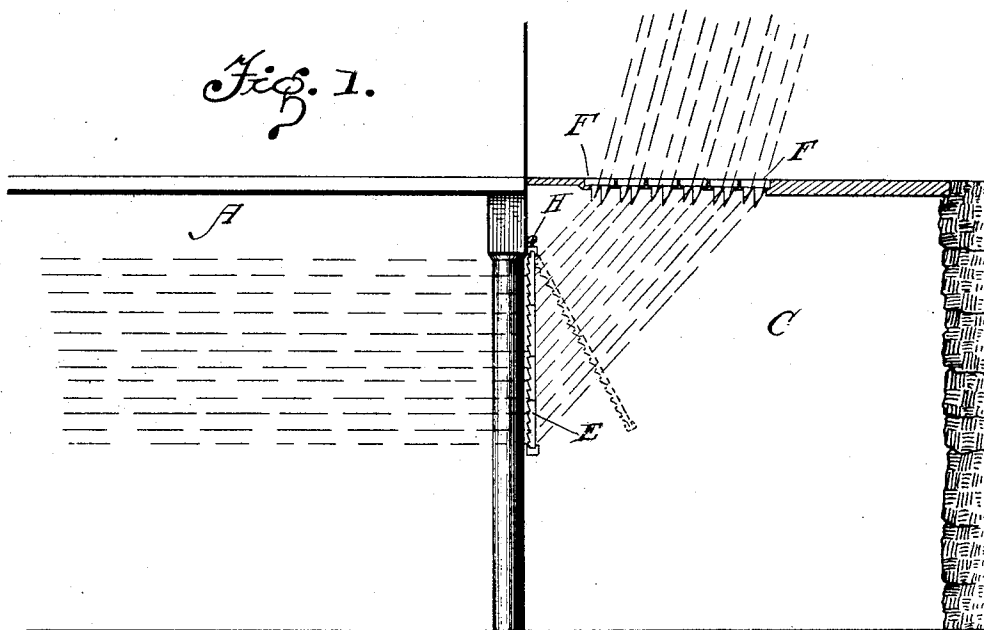
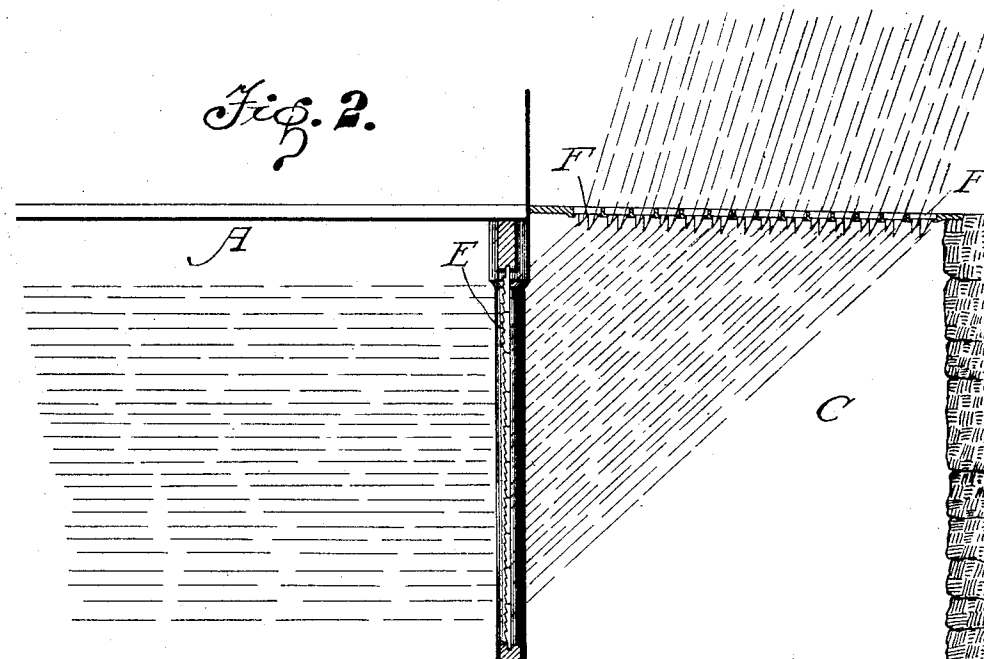


Fig. 2.



Witnesses:-

A. P. Appleman
C. A. Longfellow

Inventor:

James G. Pennyquick
By James W. Parker
Att'y.

(No Model.)

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Fig. 4.

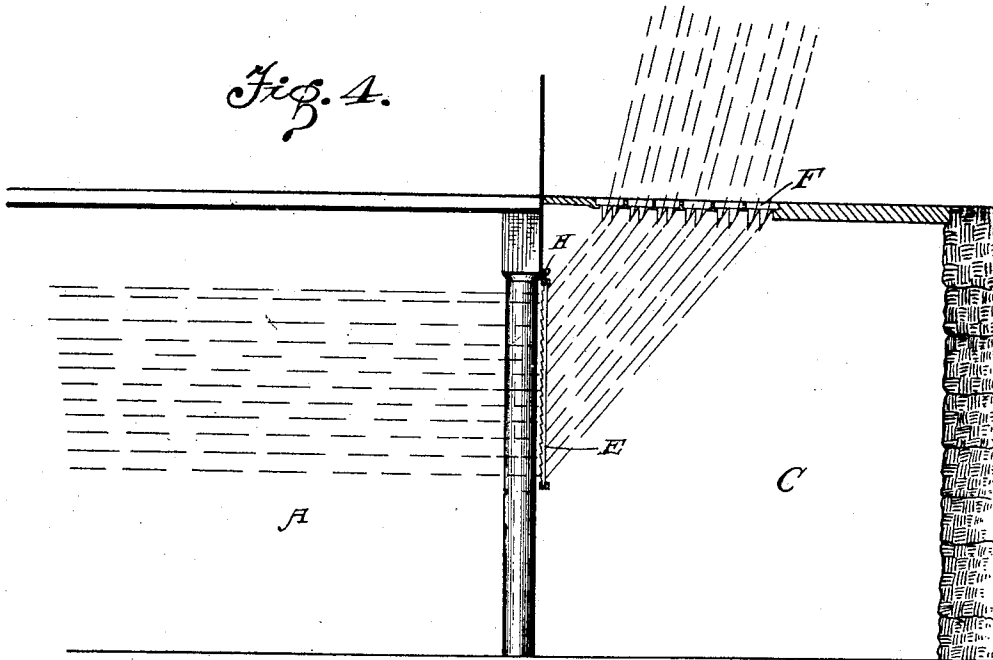
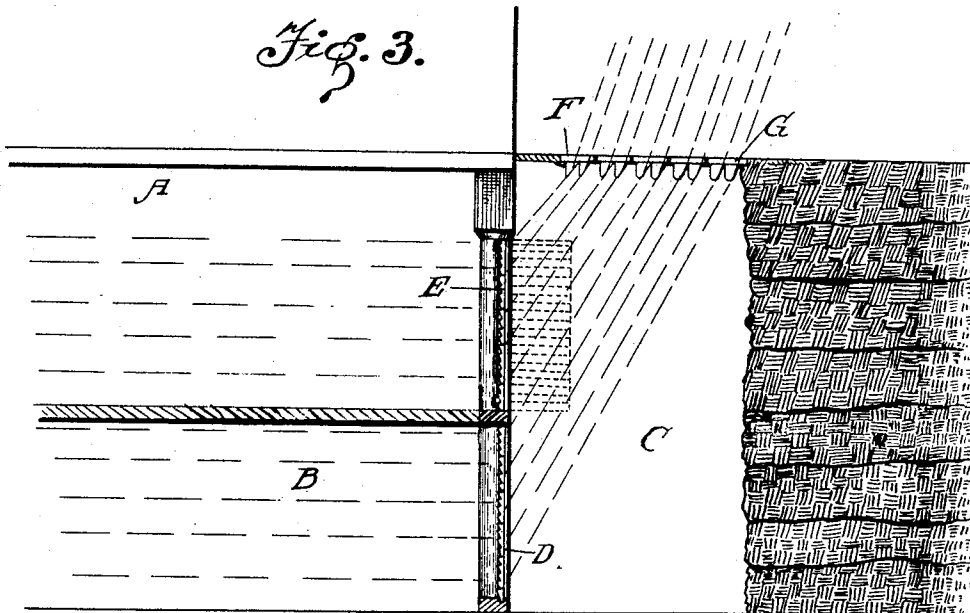


Fig. 3.



Witnesses:

A. R. Appleman
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Inventor:

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UNITED STATES PATENT OFFICE.

JAMES G. PENNYQUICK, OF TORONTO, CANADA, ASSIGNOR TO THE LUXFER PRISM PATENTS COMPANY, OF WEST VIRGINIA.

DEVICE FOR ILLUMINATING BASEMENTS AND DARK ROOMS.

SPECIFICATION forming part of Letters Patent No. 583,580, dated June 1, 1897.

Application filed March 26, 1897. Serial No. 629,290. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. PENNYQUICK, a subject of the Queen of Great Britain, residing at Toronto, in the county of York, Province of Ontario, and Dominion of Canada, have invented certain new and useful Improvements in Devices for Illuminating Basements and Dark Rooms, of which the following is a specification.

My invention relates to improvements in devices for lighting basements and dark rooms.

Figure 1 is a view of a basement with a hinged or movable prism-plate and prism-tiles. Fig. 2 is a view of a basement with a fixed prism-plate and prism-tiles. Fig. 3 is a view of a basement and subbasement with prism-tiles and prism-plates, the basement prism-plate being pivoted to swing with the door. Fig. 4 is a view of a basement with prism-tiles varying in angular arrangement systematically.

The drawings are intended to give an illustration of the use of the invention with some of its modifications.

Like parts are indicated by the same letters in all the figures.

A is the basement; B, the subbasement; C, the vault; D, the prism-plate in the subbasement; E, the prism-plate of the basement; F, the prism-tiles associated with the prism-plate E; G, the prism-tiles associated with the prism-plate D. The prism-plates are composed of prism-lights (this being the trade-name) of the general nature of the prism-lights shown in my Patent No. 312,290, and by this means whatever light falls upon them is directed, as indicated in dotted lines, so as to be carried toward the rear and diffused throughout the basement or subbasement.

The prism-lights and prism-plates obviously may be faced so as to act as either refractors or reflectors—in other words, may be turned with either side inward. The prism-tiles must be located to receive the light and of such character as to throw the light onto these prism-plates, and I therefore, in the case of basement and subbasement structures, prefer to divide the prism-tiles into two sections. One section I arrange with angles suitable to direct the light, preferably by reflection, upon the prism-plate E, and the other section I ar-

range with angles less sharply inclined and adapted to throw the light onto the prism-plate D. The prism-tiles F and G are intended, preferably, to be substantially the prism-tiles or vault-lights of my Patent No. 568,789. The angular arrangement of the faces of the prisms on the prism-tiles and of the faces of the prisms on the prism-plates or prism-lights and the inclination of the prism-tiles and the inclination of the prism-plates may, of course, obviously be varied to suit the circumstances and the necessities of each case. The prism-plate E is shown in one case as hinged at H to swing outwardly at the bottom, and in Fig. 3 the prism-plate is shown as supported so as to swing like a door, and elsewhere in the figures the prism-plates are shown as fixed. In other words, such prism-plates may be movable or fixed, so as to accommodate the various conditions as they arise.

The results sought to be accomplished by this invention can be attained by the use of my said prism-tiles in a pavement and my said prism-lights in the prism-plates or "lucidux," as I have called the prism-plate which separates the vault from the basement, or separates the room, into which the light is first received, from that into which it is intended to be led, or which intervenes between the prism-tiles and the room to be lighted so as to be traversed by the light, and which leads the light from the device onto which it is first received or from the room into which it is first received to the apartment where it is intended to be utilized.

The ideal form of the device is obviously that which distributes the light transmitted by the prism-tiles uniformly over the receiving-surface of the prism-plate, whence it is discharged or led in substantially parallel lines back through the prism-plate and into the basement or room to be lighted; but for all ordinary purposes such results can be substantially accomplished, as previously stated, by the use of my patented prism-tiles and prism-plates, and hence they sufficiently illustrate the general idea.

However, in Fig. 4 I have shown a different form of prism-tile for the pavement. In this case the prism tile or tiles have their an-

gles varying systematically from the building toward the street, and of course this variation may be either by increasing the angles inwardly or outwardly, the object being to produce uniformity of light on the prism-plate, and this may be done, of course, by throwing the light as indicated in the figures, or by throwing the light from the prism-tiles near the building onto the bottom of the prism-plate and the light from near the street onto the top of the prism-plate. In the ordinary construction of buildings there is an outer vault under the pavement, and there is a considerable downward projection of the supporting-framework of the building at the front of the pavement. The pavement is in many instances from one to two feet higher than the bottom of the girder which forms the top of the basement-openings, and my invention presents a practical means for getting the light around this girder, so to speak, and of leading it from the vault into the dark basement.

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

1. A device for lighting basements and dark rooms, consisting of a body of transparent prism-tiles projecting substantially horizontally from the building-front, in combination with a transparent prism-plate arranged at the front of the basement or room to be lighted, and between such room and the prism-tiles, the arrangements of the angles of the prisms and the inclination of the prism-plate and prism-tiles being such that the light received upon the prism-tiles is transmitted to and passes through the prism-plates and is thence led back into the basement or room to be lighted.

2. A device for lighting basements and dark rooms, consisting of transparent prism-tiles arranged to form a pavement, in combination with a transparent prism-plate at the front of the basement and between the basement and the vault, the prismatic tiles of the pave-

ment and the prism-plate arranged with reference to each other and the angles of their prisms being such that the light received upon the pavement is transmitted to and through the plate and thence is directed along in substantially parallel lines into the basement.

3. A device for lighting basements and dark rooms consisting of a series of transparent prism-tiles and a supporting-frame therefor, the whole constituting a substantially flat and plane surfaced pavement, such tiles having systematically-varying reflecting-surfaces in combination with a prism-plate at the front of the basement to receive the light from the prism-tiles in the pavement and lead it back into the dark basement.

4. A device for lighting basements and dark rooms consisting of a series of transparent prism-tiles and a supporting-frame therefor, the whole constituting a substantially flat and plane surfaced pavement, such tiles having systematically-varying reflecting-surfaces and lengths in combination with a prism-plate at the front of the basement to receive the light from the prism-tiles in the pavement and lead it back into the dark basement.

5. A device for lighting basements and dark rooms consisting of a body of transparent prism-tiles projecting substantially horizontally from the building-front, in combination with a transparent prism-plate arranged at the front of the basement or room to be lighted and between such room and the prism-tiles, movably supported so that its inclination with reference to the prism-tiles may be varied, the arrangements of the angles of the prisms and the position of the prism-tiles being such that the light received is transmitted to and through the prism-plate and thence led back into the part desired to be lighted of the basement or room in question.

March 25, 1897.

JAMES G. PENNYCUICK.

Witnesses:

FRANCIS W. PARKER,
HENRY WATERMAN.