

No. 758,877.

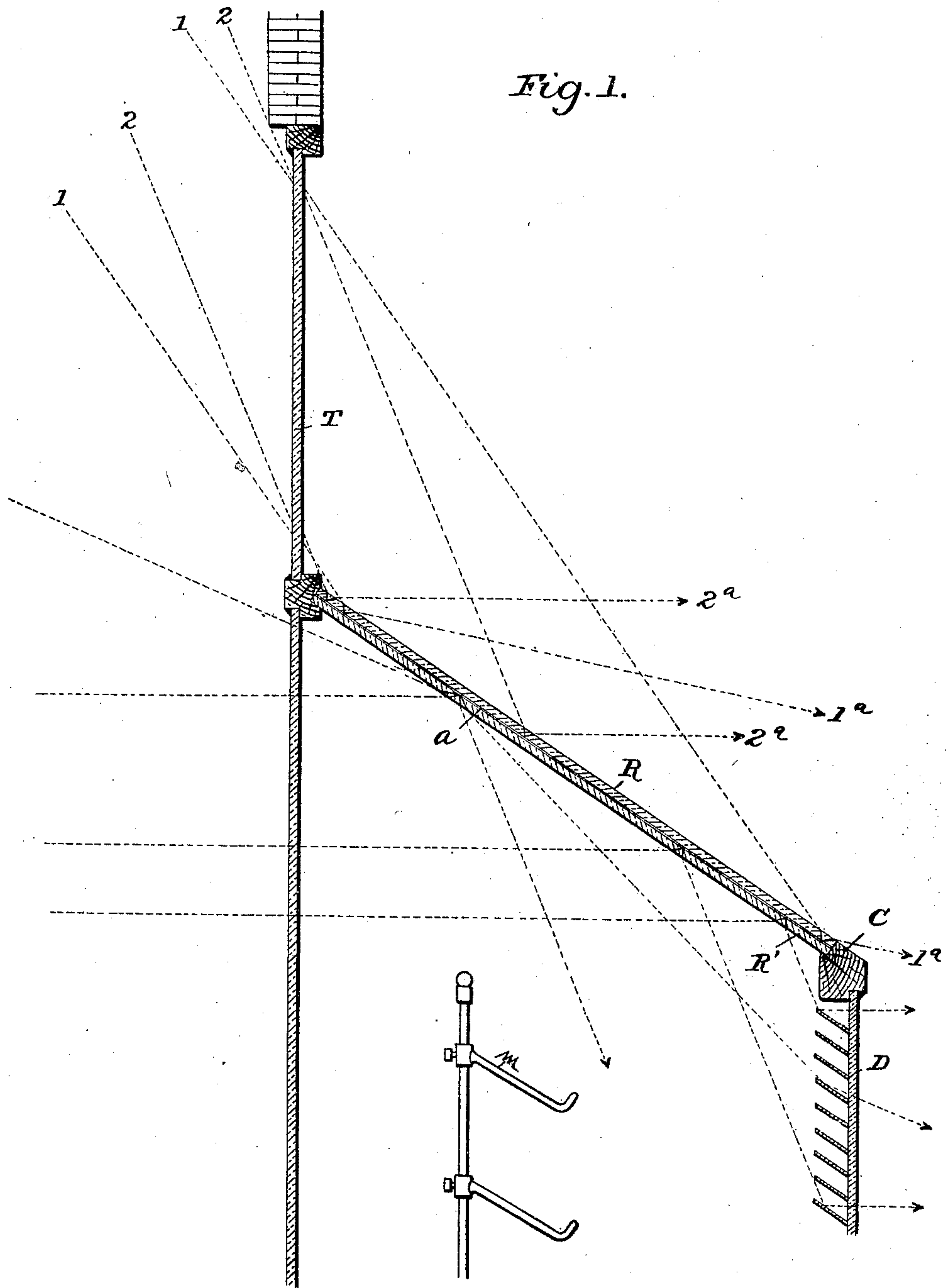
PATENTED MAY 3, 1904.

F. L. O. WADSWORTH.
ILLUMINATING STRUCTURE.

APPLICATION FILED APR. 16, 1898.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

J. G. Hinkel
James H. Shover

Inventor
by *J. L. O. Wadsworth*
Forster Freeman
Attorneys

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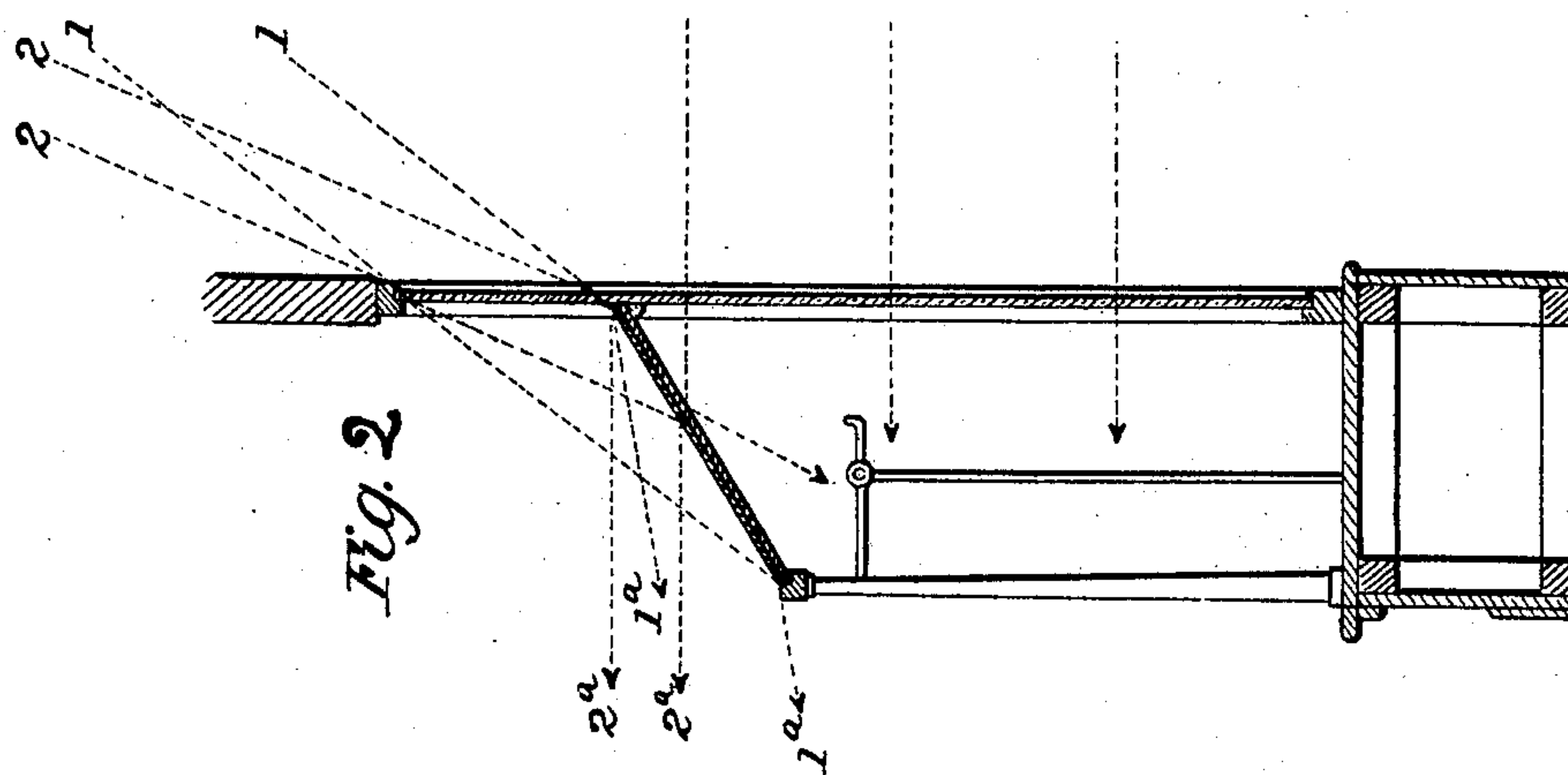
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Witnesses
J. H. Kell
James Stearns

Inventor
by *F. L. O. Wadsworth*
Harold Freeman
Attorneys

UNITED STATES PATENT OFFICE.

FRANK L. O. WADSWORTH, OF WILLIAMS BAY, WISCONSIN, ASSIGNOR,
BY MESNE ASSIGNMENTS, TO PRESSED PRISM PLATE GLASS COM-
PANY, A CORPORATION OF WEST VIRGINIA.

ILLUMINATING STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 758,877, dated May 3, 1904.

Application filed April 16, 1898. Serial No. 677,847. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. O. WADSWORTH, a citizen of the United States, residing at Williams Bay, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Illuminating Structures, of which the following is a specification.

My invention has for its object to utilize light-rays received through transom-windows, which in ordinary structures are lost by falling onto the tops of show-windows, storm-door casings, or onto the floor, and to this end I arrange below the transom-windows a light-deflector and add other features fully set forth hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of part of a show-window and transom-window, illustrating my invention. Fig. 2 is a sectional elevation where the transom is part of the shop-window.

It has become common in stores to build the display-windows inside the face or wall line of the building and also to provide other inside structures—as storm-doors, &c.—such window and door structures, however, extending only a part of the height of the room, so as to secure the advantage of a transom for the admission of light into the room above the said structure.

As shown in the drawings, the transom T is above the inclined top *a* of the case C of the inside show-window W, and said transom may be a part of the shop-window, as in Fig. 2, or a separate sheet of glass, as in Fig. 1. In the usual constructions there is a loss of the light which falls upon the top of the inside structure—as, for instance, all the bundle of light between the line 1 1 is thus absorbed and lost whether the top of the structure be inclined, as shown, or flat or concave or curved outward, as in some instances. To utilize the light thus lost in ordinary structures, I arrange below the transom T and supported by or adjacent to the top of the window or other structure a deflector or reflector R of such character that

the light-rays falling through the transom will be projected in the desired direction into the room, as at 1^a 1^a, 2^a 2^a, &c. As shown in the drawings, the reflector R is flat and lies upon the top *a* and may be a plain mirror. Arranged on the under side of the top *a* is a lower mirror or reflector R', and these two reflectors R and R' are shown arranged back to back. Below the top of the case C is arranged an illuminator or deflecting-panel D. With this arrangement the inclined rays of light 1 1, 2 2 will pass through the vertical transom T onto the upper reflector R and be reflected into the room, while the more or less horizontal or nearly horizontal rays will pass through the window below the transom and be reflected from the under reflector R' and through the medium of the deflecting-panel B distributed in the direction desired. It will thus be seen that with this simple construction inclined rays of light will be reflected into the positions where they are of the greatest advantage. The upper edge of the reflector R is secured at the point of union between the window and transom, and it is inclined downward and inward to the case C, from which extends the illuminator D.

The advantages of the above construction will be understood from the fact that in store-windows which are used for display purposes the entire width and length of the window are frequently filled with goods supported on display-racks, as at *m*, which cut off all direct light from the front, and thus make the very front portion of the store-room behind the show-window one of the darkest parts of the interior. This is a part, moreover, which it is most difficult under these circumstances to illuminate from outside by any ordinary form of prism-plate or illuminating device. The under reflector R' and the illuminator D at the back of the window, arranged as shown in the figures, receive the rays from in front and above and direct them downward and back of the goods in the window and then directly into the darkened space behind the same, so as to produce the same effect as though the front were entirely free. I thus

virtually produce the effect of a direct outside window situated in the plane of the illuminator D. In other cases the character of the goods in the window is such or the surroundings require that in order to display the material to the best advantage illumination is necessary on both back and front. In such cases a proper arrangement of the illuminating-plates will throw the rays or a portion of them, as desired, from above onto the goods in the window to produce the effect desired. This likewise is an effect that cannot be produced by any simple prism-plate or other illuminating device placed in the front of the window.

The deflector in the back of the window may be made up of a series of reflecting-strips, as described and claimed in my Letters Patent No. 693,088, or of specially-constructed prism elements.

Without limiting myself to the precise construction shown, I claim—

1. The combination with a vertical window and vertical transom above the window, of a reflector arranged within the building with one edge at a point between the window and transom, the reflector being inclined downward and inward and arranged to reflect horizon-

tally inward from its upper surface the inclined rays passing through the transom, substantially as described.

2. The combination with a vertical window and transom above the window, of a reflector arranged within the building with one edge at a point between the window and transom, the reflector being inclined downward and inward and having reflecting-surfaces on both sides arranged to reflect horizontally inward from its upper surface the inclined rays passing through the transom and to reflect downward from its under surface rays passing through the window, substantially as described.

3. The combination with the vertical window and transom and show-window case, of a reflector inclined downward and inward and provided with a reflecting-surface at the inner side and a deflecting-panel at the back of the case, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK L. O. WADSWORTH.

Witnesses:

HARRY E. HAY,
W. CLARENCE DUVALL.