

No. 893,060.

PATENTED JULY 14, 1908.

E. J. DOBBINS.

LIGHT DISTRIBUTER FOR WINDOWS AND THE LIKE.

APPLICATION FILED APR. 4, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

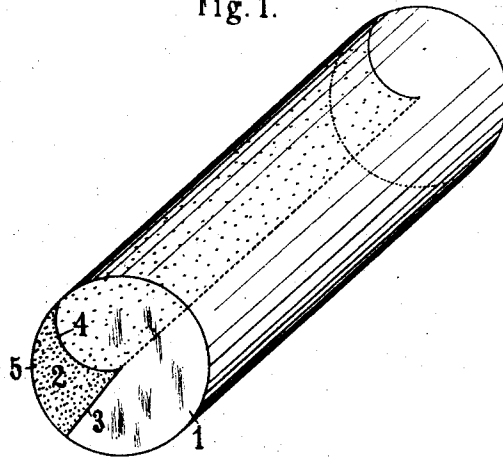


Fig. 2.

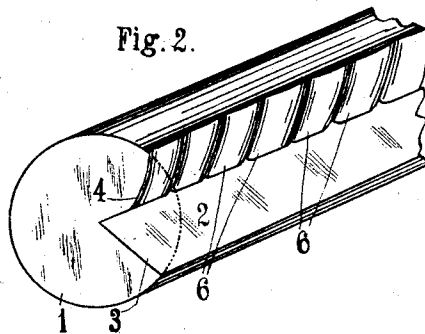
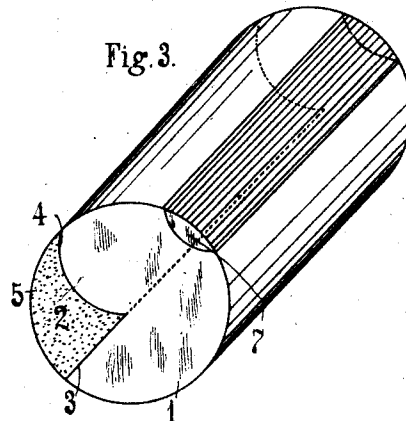


Fig. 3.



Witnesses:

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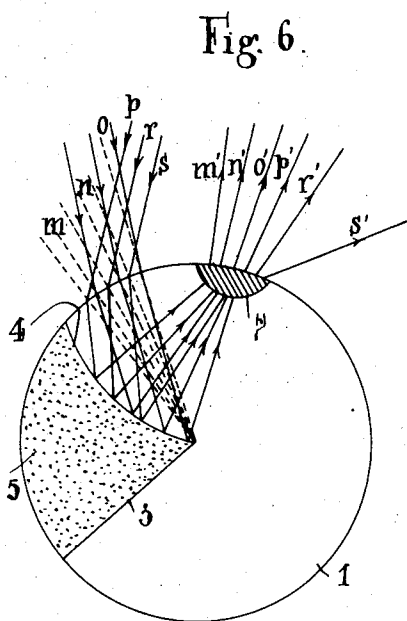
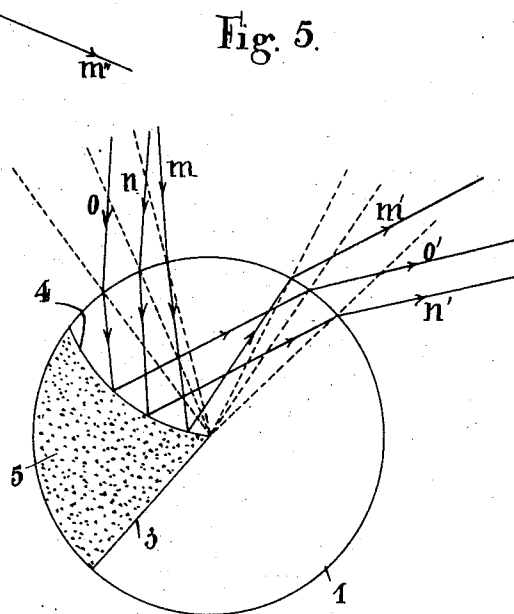
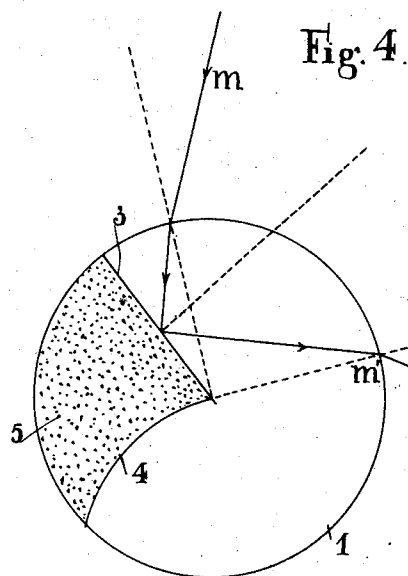
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD JOHN DOBBINS, OF LONDON, ENGLAND.

LIGHT-DISTRIBUTER FOR WINDOWS AND THE LIKE.

No. 893,060.

Specification of Letters Patent.

Patented July 14, 1908.

Application filed April 4, 1907. Serial No. 366,395.

To all whom it may concern:

Be it known that I, EDWARD JOHN DOBBINS, engineer, a citizen of the United States of America, and residing at London, England, have invented new and useful Improvements in Light-Distributers for Windows and the Like; and I do hereby declare the following to be a full, clear, and exact description of the same.

My present invention relates to light-distributers for windows and the like, the object being to provide glass rods of cylindrical shape, having longitudinal angular grooves with flat or curved walls and filled with light reflecting, refracting or opaque material, so as to secure a total reflecting prismatic glass effect although the glass rods have a cylindrical form.

In the accompanying drawings, I have shown several forms of construction of my invention, and in these drawings: Figure 1 is a perspective view of a glass-rod, with a longitudinal groove. Fig. 2 shows a form of construction wherein one wall of the groove is provided with lens-like projections. Fig. 3 shows a glass-rod with a longitudinal prismatic groove and a fluid containing chamber. Figs. 4, 5 and 6 are diagrammatic views illustrating the action of cylinders constructed in accordance with my invention showing the path of light in several positions in which they may be advantageously placed.

Referring to Fig. 1, 1 represents an ordinary glass-rod of cylindrical form, provided with a longitudinal groove 2, the walls 3, 4 of which are either flat or curved. Said groove is filled with light reflecting, refracting or opaque material 5 such for example as selinite or mica and the walls 3, and 4 may be silvered to assist reflection, so that the rod 1 has an outer cylindrical configuration. The groove 2 serves to secure a total reflecting prismatic glass effect by means of a glass-rod of circular cross-section.

When the curved surface 4 is inclined towards the incident light, the rays are deflected by inner reflection. The flat surface 3 acts likewise by reflection, if the groove 2 is filled with light-reflecting material. When said groove is filled with light-refracting material, the incident light is distributed by refraction.

As shown in Fig. 2, the surface 4 may be provided with lens-like projections 6, in or-

der to deflect also the light coming from a plane which is perpendicular to the axis of the rod.

In the form shown in Fig. 6, I have arranged in the focus of the curved face 4 a longitudinal chamber 7, which is filled with suitable gas, liquid, or solid material of any desired color, sulfate of quinine, alcoholic solution of chloraphil or asculin being examples of materials which may be advantageously employed. In this modified glass-rod, the incident light striking the curved face 4, is focused in said chamber 7 which diffuses colored light in every possible direction, no matter at which angle the glass-rod is adjusted.

It will be noted that when the flat surface 3 (Fig. 4) is turned up towards the sky, a ray of light m entering from the top passes into the rod 1 until it reaches said surface 3, where by total reflection it is thrown out of the glass again and into the room in the direction m', m'' .

When the surface 4, (Fig. 5) is turned upwards, the rays m, n, o , are reflected in the various ways m', n', o' .

When the form of rod shown in Fig. 3 is used the light rays m, n, o, p, r, s (Fig. 6) are focused from the surface 4 into the chamber 7, which throws illuminating rays m', n', o', p', r', s' in every direction into the room.

It is obvious that many changes may be made in the arrangement of the different parts of my invention, without departing from the scope thereof.

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

1. An invention of the character described, comprising cylindrical glass rods, each provided with a longitudinal angular groove having one flat and one curved side.

2. An invention of the character described, comprising cylindrical glass rods, each provided with a longitudinal angular groove having one flat and one curved side and a suitable material adapted to modify the path of rays of light impinging thereon, contained in said groove.

3. An invention of the character described, comprising cylindrical glass rods, each provided with a longitudinal angular groove having a curved side coated with light reflecting material and a longitudinal fluid-

containing chamber disposed at the focus of the said curved side, substantially as described.

4. An invention of the character described, 5 comprising cylindrical glass rods each provided with a longitudinal angular groove, a suitable light refracting material contained within and filling said groove and a longitudinal fluid-containing chamber adapted to 10 receive rays of light refracted from said material.

5. An invention of the character described, comprising cylindrical glass rods each provided with a longitudinal angular groove 15 having a curved side and a suitable light refracting material contained within and filling said groove and a fluid containing chamber disposed at the focus of the curved side.

6. An invention of the character described, 20 comprising cylindrical glass rods each provided with a longitudinal angular groove,

having a curved side, suitable light refracting material contained in and filling said groove, a fluid-containing chamber disposed within said rod and at the focus of said 25 curved side, the outer surface of said material and said chamber conforming in shape to that of the rod, whereby the whole has, in cross section, a circular outline.

7. An invention of the character described, 30 comprising cylindrical glass rods each provided with a longitudinal angular groove having one flat and one curved side, said curved side being provided with lens-like 35 projections extending transversely thereof.

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

EDWARD JOHN DOBBINS.

Witnesses:

H. D. JAMESON,
F. L. RAND.