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A. JANOWITZ

2,148,624

DISPLAY DEVICE

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Fig. 1.

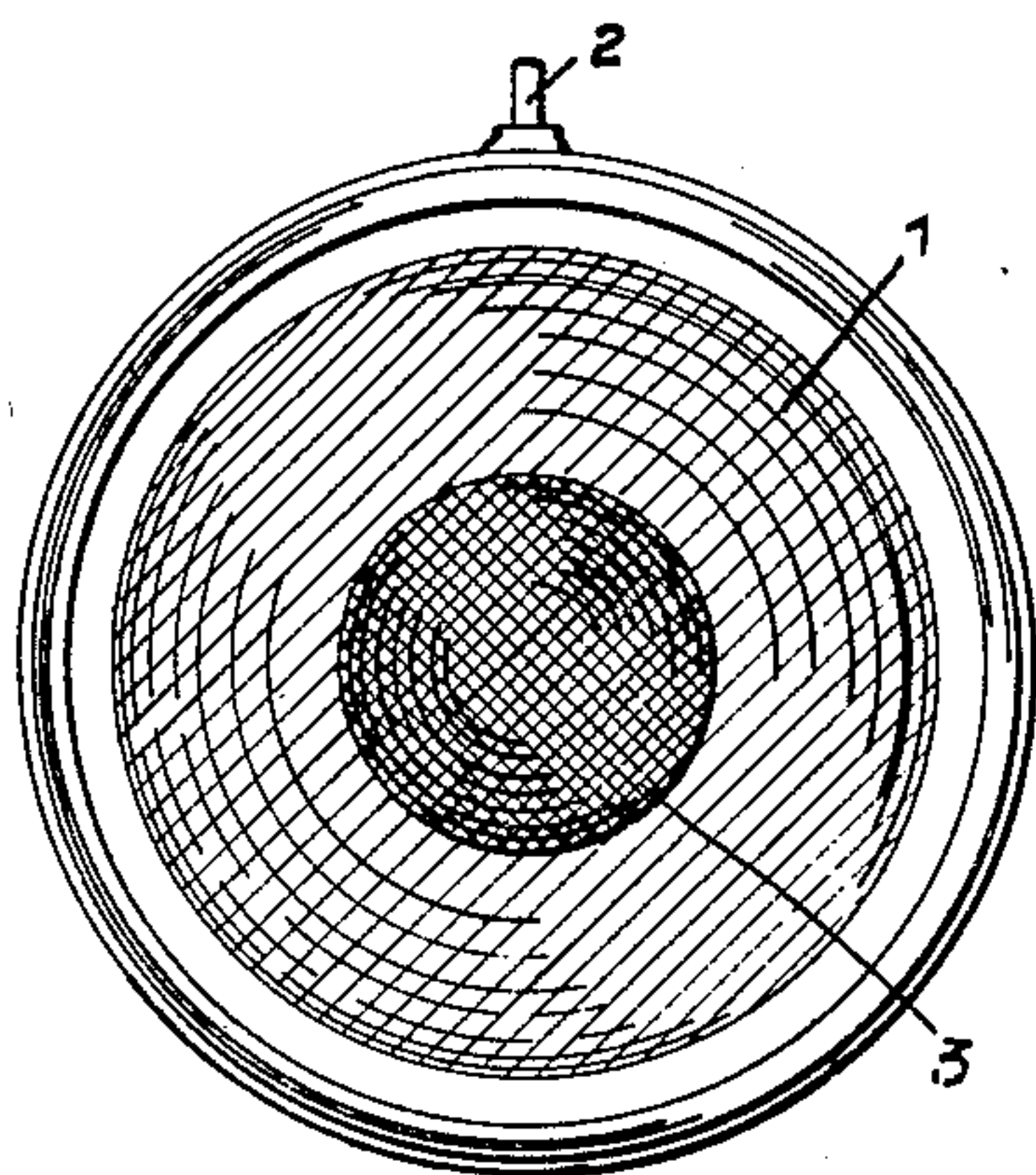


Fig. 2.

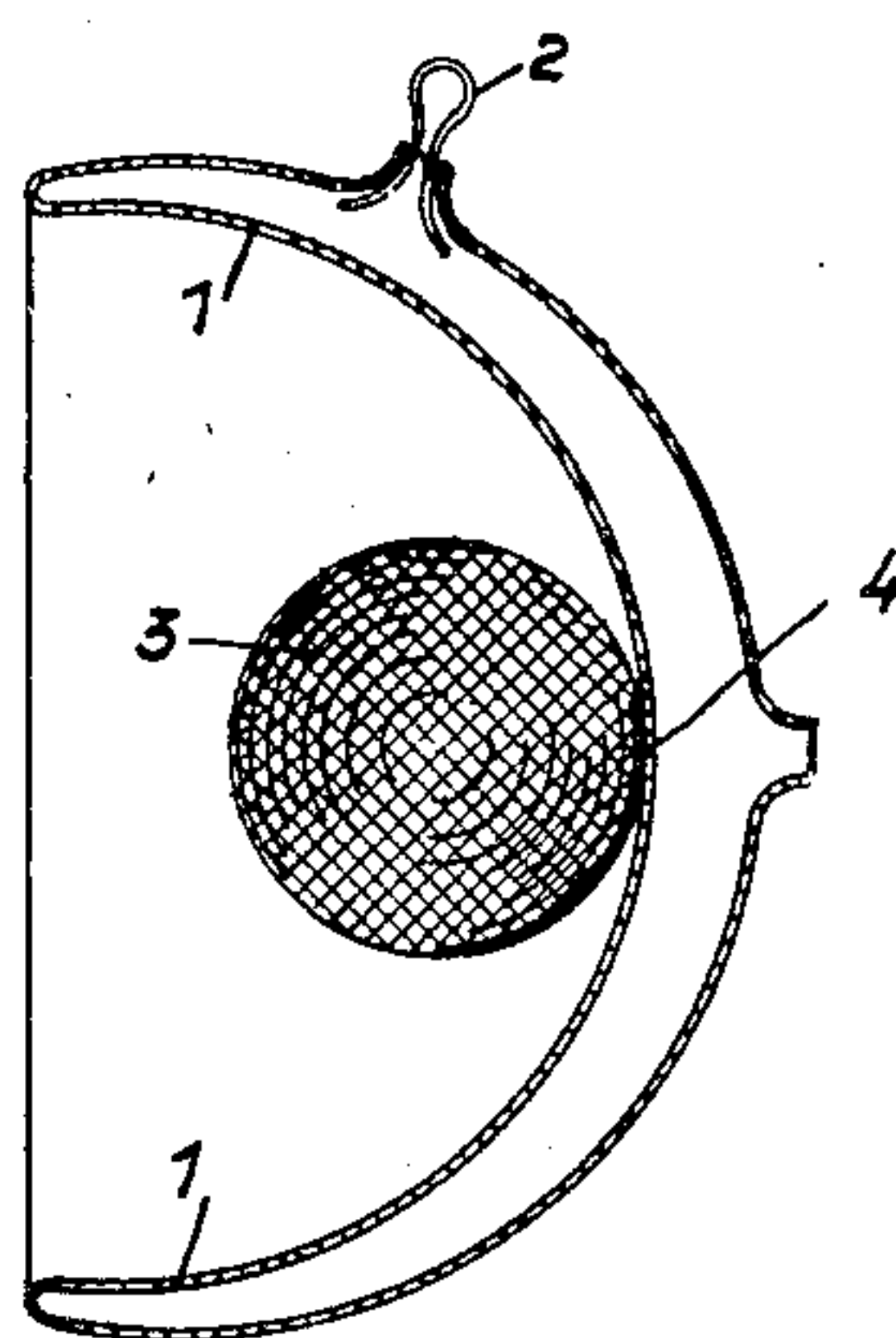


Fig. 3.

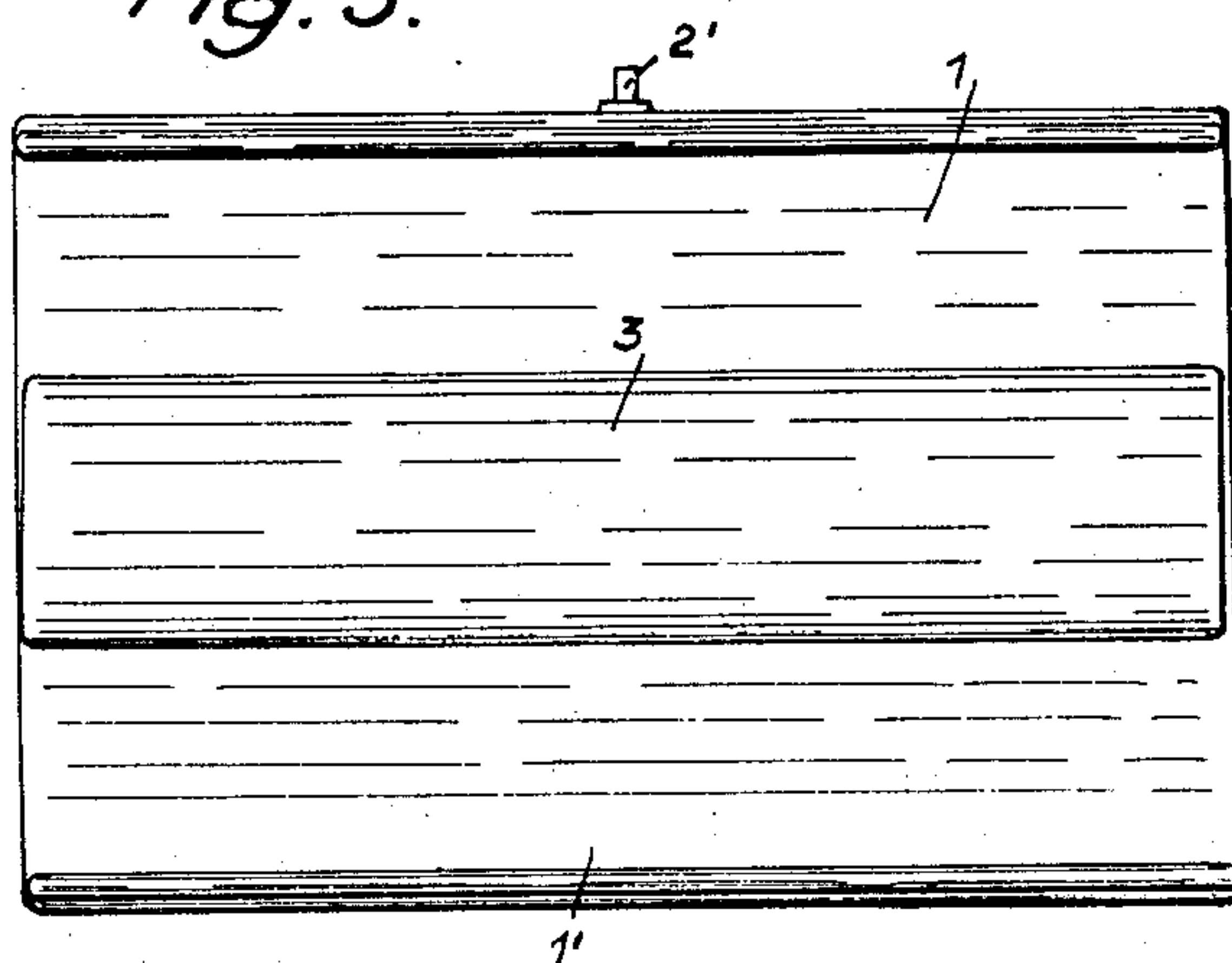
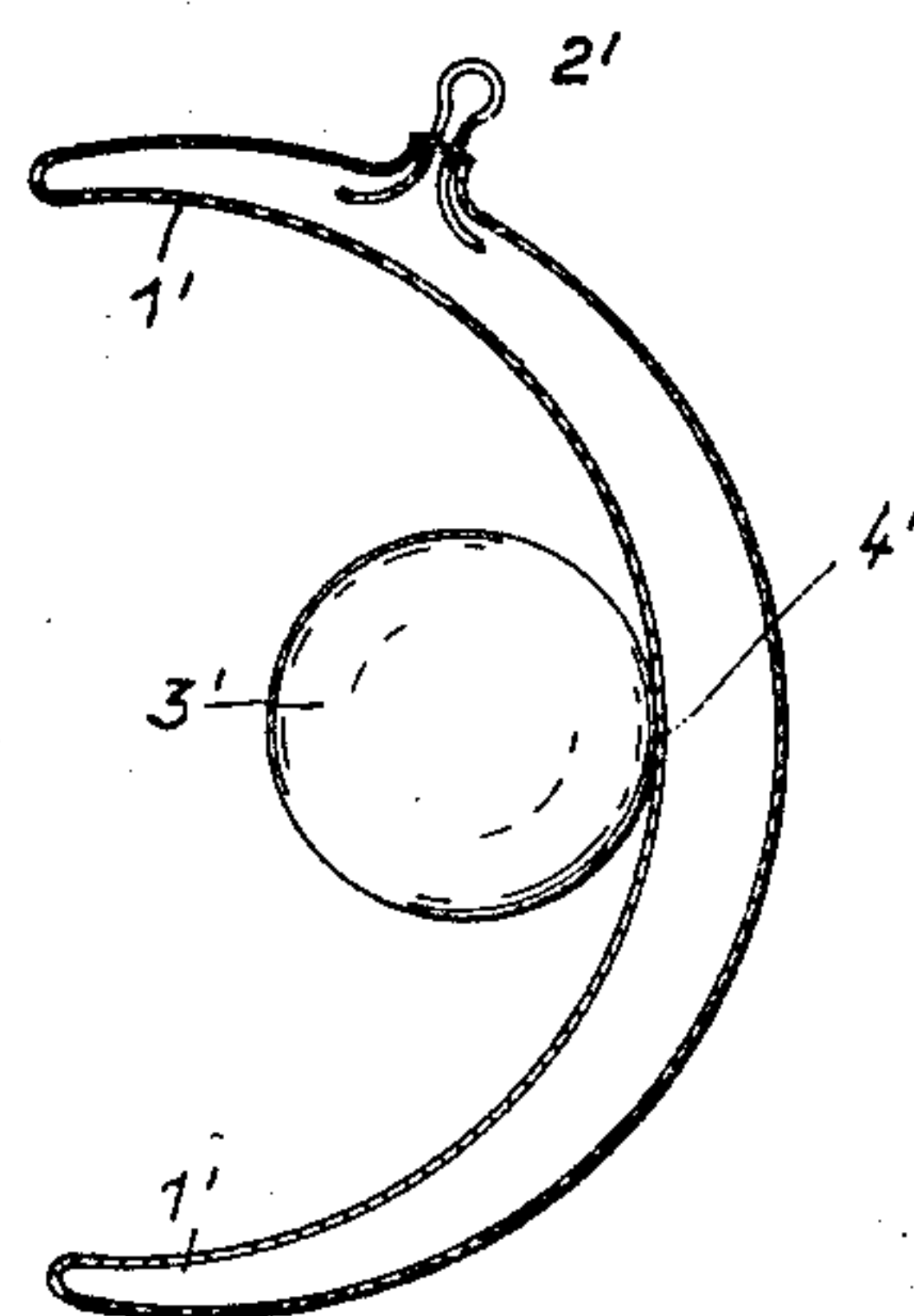


Fig. 4.



Arnold Janowitz  
Inventor:

By *Otto Munk*  
his ATT'Y.



## UNITED STATES PATENT OFFICE

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## DISPLAY DEVICE

Arnold Janowitz, Berlin, Germany

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5 Claims. (Cl. 41—10)

My invention relates to display devices, particularly for advertising purposes, which is intended to draw the attention of viewers to the device itself and its surroundings.

It is an object of my invention to provide a simple and efficient device of this kind.

It has been proposed to provide display devices comprising a concave reflecting body and a colored body illuminated by means of a supply of artificial light such as an electric bulb or a gas lamp. These devices involve the drawbacks that a supply of artificial light is required and the reflecting body is complicated in shape.

According to my invention the display device comprises a hollow reflecting body the inner surface of which is shaped as a portion, e. g., a half of a surface of rotation such as a sphere or a cylinder, and a colored body shaped as a body of rotation such as a sphere or a cylinder, said colored body touching the reflecting body at its vertex and extending at least to the focal centre of the reflecting body.

If desired, both the reflecting and the colored bodies may be made hollow and of glass. If desired, however, they may consist of metal.

A display device according to my invention does not require a supply of artificial light. Further it gives a pleasing and tasteful effect and appears to a person looking at it as a uniformly colored surface. In consequence thereof display devices according to my invention are particularly useful as backgrounds or surroundings of articles or advertisements to be displayed.

In the drawing affixed to this specification and forming part thereof some embodiments of my invention are illustrated diagrammatically by way of example.

In the drawing—

Fig. 1 is a front elevation of a display device according to my invention, comprising a reflecting body, the inner surface of which is shaped as a portion of a spherical surface, the colored body being shaped as a sphere.

Fig. 2 is a side elevation, partly in section, of the device shown in Fig. 1.

Figs. 3 and 4 are similar illustrations of a modified embodiment of my invention in which the reflecting surface and the colored body are cylindrical.

Referring now to the drawing and first to Figs. 1 and 2, 1 is a hollow body made of glass or metal, the inner surface of which is reflecting. If, for instance, the body consists of glass, a reflecting layer may be applied to the inner surface of the body 1. The inner surface of the body 1

is shaped as a portion of a spherical surface, for instance as a half or somewhat more of a sphere. In other words, the surface is a spherical one reduced by a spherical segment the height of which does not exceed the radius of the sphere. If desired, the reflecting layer may be provided on the entire surface of the body 1, although it should be understood that for the purpose of my invention a layer on the inner surface will be sufficient. 2 is a device such as a loop for hanging the device on a suitable support (not shown).

3 is a colored body shaped as a ball made of glass or metal and arranged so as to touch the inner surface of the reflecting body 1 at its vertex. The diameter of the body 3 is chosen so that the body 3 extends as far as the focus of the inner surface of the reflecting body 1 or slightly beyond the focus, that is the diameter of the ball-shaped body 3 amounts at least to  $\frac{1}{4}$  of the diameter of the spherical inner surface of the reflecting body 1. The ball 3 if it consists of glass may be secured to the body 1 by fusing. If desired, however, it may be fixed to the body 1 by suitable means (not shown) which allow the body 3 to be dismounted and replaced by another ball. The outer surface of the body 3 may be polished or matted. The color of the ball 3 may be uniform such as red or green. If desired, however, various colors may be applied to different portions of the surface of the ball 3.

In operation the device when looked upon by a viewer appears as a uniformly colored circular surface, the inner surface of the reflecting body 1 reflecting colored beams issuing from the ball 3. It should be understood that in Fig. 1 the shadings of the ball 3 and the reflecting surface of the body 1 do not truly indicate the appearance of the device because for the sake of clearness different shadings have been used for the ball 3 and the inner surface of the reflecting body 1.

Referring now to Figs. 3 and 4 the reflecting body 1' is cylindrically shaped, the inner surface of the body 1' being a half of a cylinder or somewhat more. The colored body 3' is shaped as a cylinder arranged with its axis parallel to the axis of the reflecting body 1'. The cylinder 3' touches the inner surface of the reflecting body 1' along its vertical line 4' and the diameter of the cylinder 3' amounts to at least  $\frac{1}{4}$  of the diameter of the cylindrical inner surface of the reflecting body 1' so that the focal line of this surface is situated within or on the surface of the cylinder 3'. The operation of this device is substantially the same as that of the device shown in Figs. 1 and 2 except that the device appears to a viewer



as a colored rectangular surface instead of a circular one.

Display devices according to my invention may be used, if desired, in combination with one another in order to build up various designs such as letters, numerals or the like.

I wish it to be understood that I do not wish to be limited to the exact details of construction shown and described for obvious modifications will occur to a person skilled in the art.

In the claims affixed to this specification no selection of any particular modification of the invention is intended to the exclusion of other modifications thereof and the right to subsequently make claim to any modification not covered by these claims is expressly reserved.

I claim:

1. A display device, comprising a concave reflecting surface shaped according to the surface of a solid generated by the revolution of a regular geometric figure and open on a plane parallel to and slightly outside of the axis of revolution, and an opaque colored body shaped as a solid generated by the revolution of a geometric figure

of the same shape, said colored body contacting said reflecting surface at the vertex thereof.

2. A display device, as claimed in claim 1 in which the radius of said colored body is at least one fourth of that of said reflecting surface.

3. A display device as claimed in claim 1, in which said colored body is shaped as a ball and the reflecting surface of said reflecting body as a spherical surface.

4. A display device as claimed in claim 1, in which said colored body is shaped as a cylinder and the reflecting surface of said reflecting body as a cylindrical surface.

5. A display device comprising a hollow body of glass having a concave inner surface shaped according to the surface of a solid generated by the revolution of a regular geometric figure and open on a plane parallel to and slightly outside of the axis of revolution, a reflecting layer on said inner surface, and a colored body of glass shaped as a solid generated by the revolution of a geometric figure of the same shape, said colored body being fixed to said inner surface so as to contact the latter at its vertex.

ARNOLD JANOWITZ.