June 5, 1934. E. F. GUTH 1,962,069

LIGHTING FIXTURE

Filed June 20, 1933 2 Sheets-Sheet 1

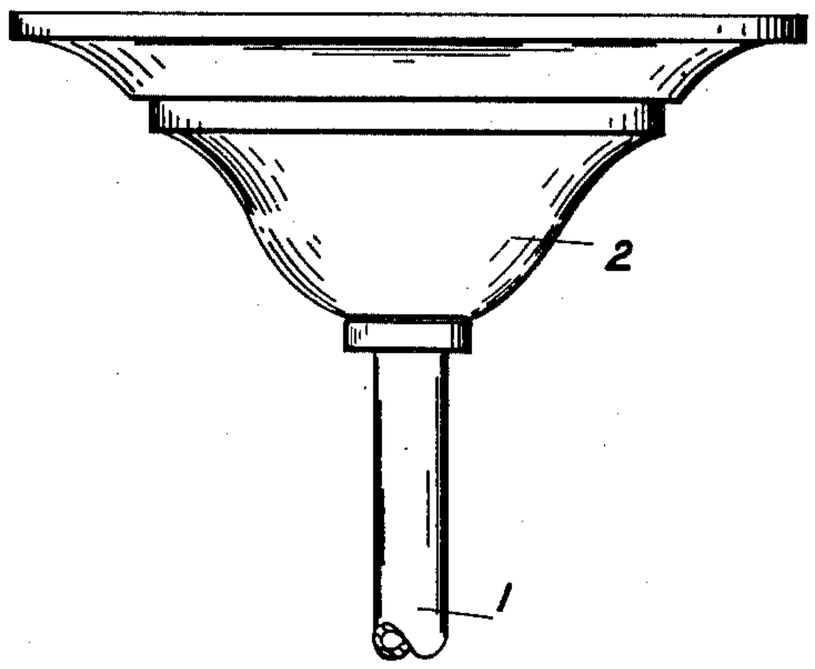

FIG. 1.

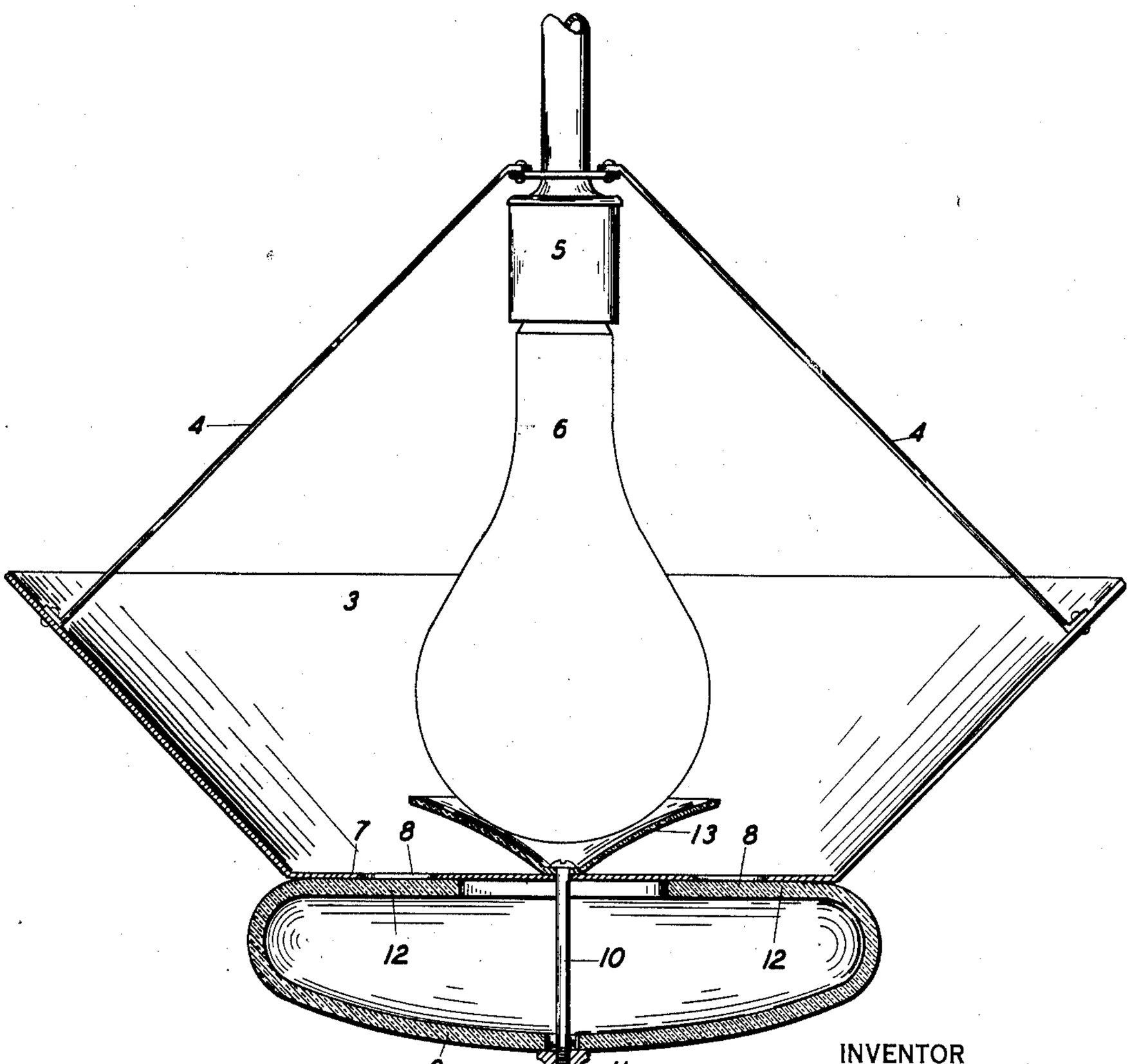

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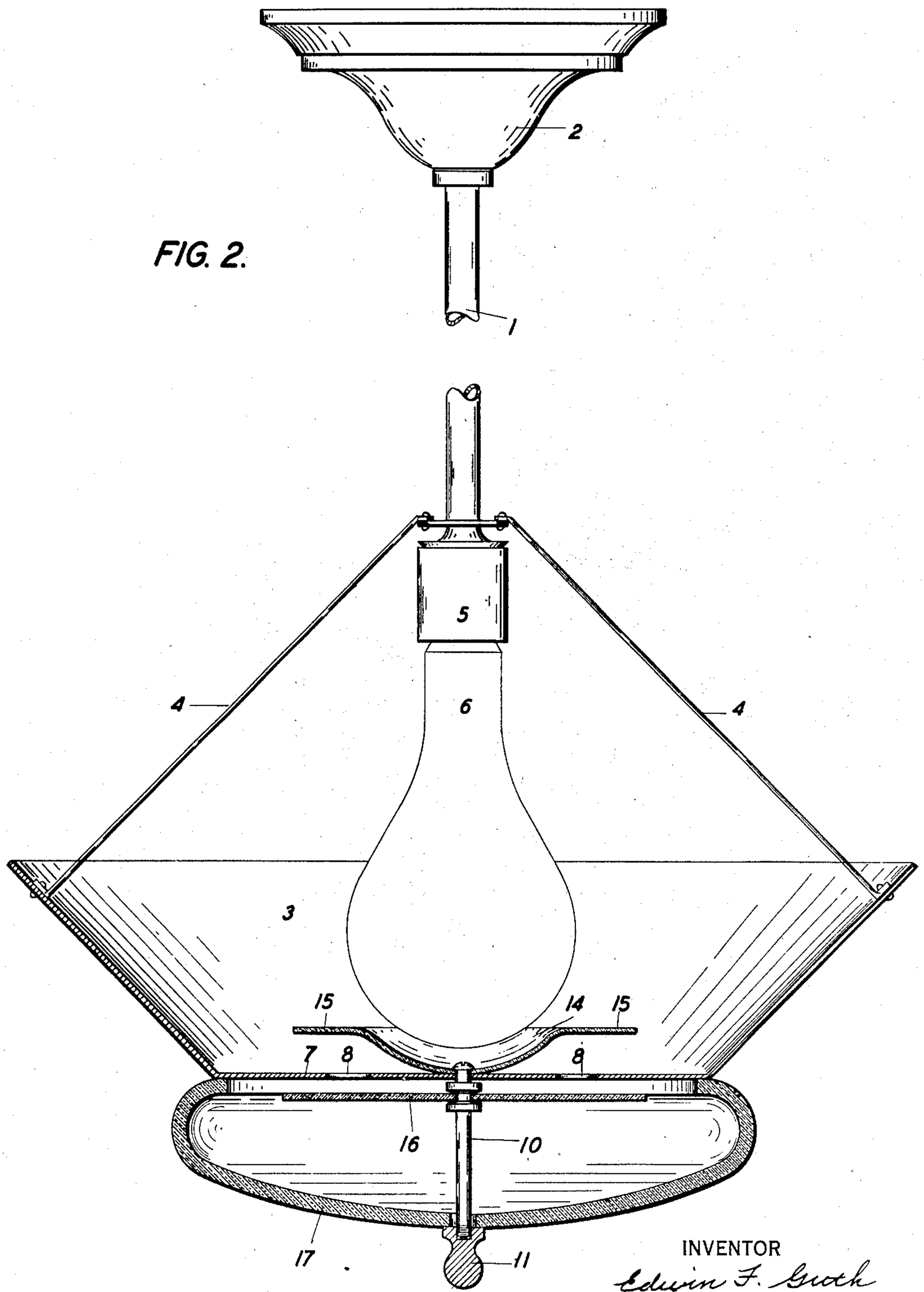
FIG. 2.



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UNITED STATES PATENT OFFICE

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LIGHTING FIXTURE

Edwin F. Guth, Webster Groves, Mo.

Application June 20, 1933, Serial No. 676,603

5 Claims. (Cl. 240—78)

My invention relates to that class of lighting fixtures which are described in my copending application, Serial No. 676,602, filed June 20, 1933.

In devices of this character the greatest difficulty of it all is to prevent glare on the surface of the translucent bowl mounted below the opaque reflector or if one is successful in overcoming the glare, still the translucent bowl may have a spotty appearance due to the direct rays of light coming through the translucent material.

In my present invention I provide a supplemental reflector which effectually and absolutely prevents any possibility of any of the direct rays of light reaching the translucent bowl and as a consequence I am able to secure an even diffusion of light over the entire surface of the translucent bowl thus overcoming the objections made to a total indirect fixture by reason of the odd appearance produced by it, I am able to avoid this appearance and produce a highly artistic and efficient form of lighting fixture.

My means of accomplishing the foregoing objects may be more readily understood by having reference to the accompanying drawings, which are hereunto annexed and made a part hereof, in which

Fig. 1 is a side view partly in section showing my improved construction; and

Fig. 2 is a similar view showing a modified form of construction.

Similar reference numerals refer to similar parts throughout the entire description.

As shown in the drawings, in Fig. 1, my fixture is mounted on a standard stem 1, which depends from a canopy 2, which encloses the outlet or junction box (not shown). The reflector 3, which is preferably formed of opaque material, with its inner surface coated with porcelain enamel or some other highly efficient form of reflecting surface, is suspended from the stem by means of rods 4 or in any other suitable or convenient manner. A socket 5 is mounted on the lower end of the stem and carries the lamp 6. The bottom 7 of the reflector is provided with a number of perforations 8 to permit the escape of light rays to illuminate a translucent bowl. This bowl 9 is secured in position by means of bolt 10 having a nut 11 threaded upon its lower end. The bowl 9 is provided with an inwardly extending lip 12 which extends inwardly a sufficient distance to entirely close the perforations 8 formed in the bottom 7 of the reflector 3. The side walls of the reflector flare upwardly and outwardly so as to distribute the light flux over a large surface of the ceiling.

Inside of the reflector and above its bottom 7, and at the center thereof I mount an inverted conoidal supplemental reflector 13, the inner surface of which may be silvered or in some cases may be formed of very dense opal glass so as to be to all intents and purposes opaque and yet permit sufficient light to filter through the openings 8 in the bottom of the reflector and thence to softly illuminate the translucent bowl 9.

It will be perfectly apparent that in some cases it will be possible to use the lighter form of translucent material which still will be sufficiently dense so as to diffuse the direct rays of light impinging upon it from the filament of the lamp and yet not sufficiently strong to cause a spotty appearance upon the lower portion of the translucent bowl 9.

It will be apparent from an inspection of the drawings, Fig. 1, that I have produced a highly efficient form of indirect reflector or lighting fixture of this type and yet have obtained a uniformly illuminated translucent bowl which will totally destroy the hollow appearance of the room produced by indirect lighting and I have accomplished this result without any material sacrifice of efficiency.

In Fig. 2 I have shown a modified form of construction in which the supplemental reflector is found with a central concave portion 14 which is provided with an outwardly extending substantially flat peripheral flange 15. In this form of construction I have the translucent bowl abut the bottom of the reflector adjacent the point of union between the bottom and the flaring sides and I mount a plate of translucent material 16 below and spaced from the bottom 7 of the reflector so that the light coming through the perforations 8 can pass through the reflector plate 16 and also beyond its edge but as all of these rays will be reflected and redirected, they will be so softened that by the time they reach the inner surface of the translucent bowl 17 they will not produce any spotted effects at all, although in some cases it might be found desirable to omit the plate 16 where the supplemental reflector is formed of translucent material.

It will be obvious that the supplemental reflector can be made of very dense translucent material, such as opal glass, or it may be made of a lighter form of translucent glass or may, if desired, be made entirely opaque as long as it performs the function of shielding the open-

ings in the bottom of the reflector from the direct rays of light.

Having described my invention what I regard as new and desire to secure by Letters Patent is:

1. The combination in a lighting fixture, a light source, an opaque main reflector having a closed bottom and upwardly and outwardly extending side walls, there being a plurality of perforations in said bottom, a translucent bowl, the edge of which extends inwardly to cover said perforations, a supplemental reflector which shields the perforations from the direct rays of light mounted below the light source and means to secure said bowl against the bottom of said main reflector and below said perforations.

2. The combination in a lighting fixture, of a light source, an opaque main reflector having a closed bottom and upwardly and outwardly extending side walls, there being a plurality of perforations in said bottom, a translucent bowl, the edge of which extends inwardly to cover said perforations, an inverted conoidal supplementary reflector which shields the perforations from the direct light rays mounted below the light source, and means to secure said bowl against the bottom of said main reflector and below said perforations.

3. The combination of a lighting fixture, of an opaque reflector having a closed bottom and upwardly and outwardly extending side walls, there being a plurality of perforations in said bottom, a translucent bowl, the edge of which extends inwardly and engaging the bottom of the reflector, a plate of translucent material smaller in diameter than said bowl below said perforations but spaced therefrom, a supplemental reflector mounted on and above the bottom of the main reflector, and means to hold said supplemental reflector, said plate and said bowl in assembled relation.

4. The combination of a lighting fixture, of a light scource, an opaque main reflector having a closed bottom and upwardly and outwardly extending side walls, there being a plurality of perforations in said bottom, a translucent bowl, the edge of which extends inwardly and engaging the bottom of the reflector, a concave translucent supplementary reflector having a substantially flat peripheral flange extending outwardly from the upper edge thereof, said supplementary reflector being mounted below the light source and shielding the perforations from the direct light rays allowing diffused light to pass through the perforations, and means to secure said bowl against the bottom of said main reflector and below said perforations.

5. The combination with an opaque reflector having a closed flat bottom and sides, said sides flaring upwardly and outwardly, there being a plurality of perforations in the bottom of said reflector near the periphery thereof, translucent means including a bowl portion and partial covering means therefore, supporting, means securing said translucent means to and in contact with the flat bottom of the reflector; said covering means being in the plane of the upper edge of the bowl portion and covering the perforations in the bottom of the reflector, and a supplemental reflector below the lamp bulb and shielding the perforations from the direct rays of light.

EDWIN F. GUTH.