

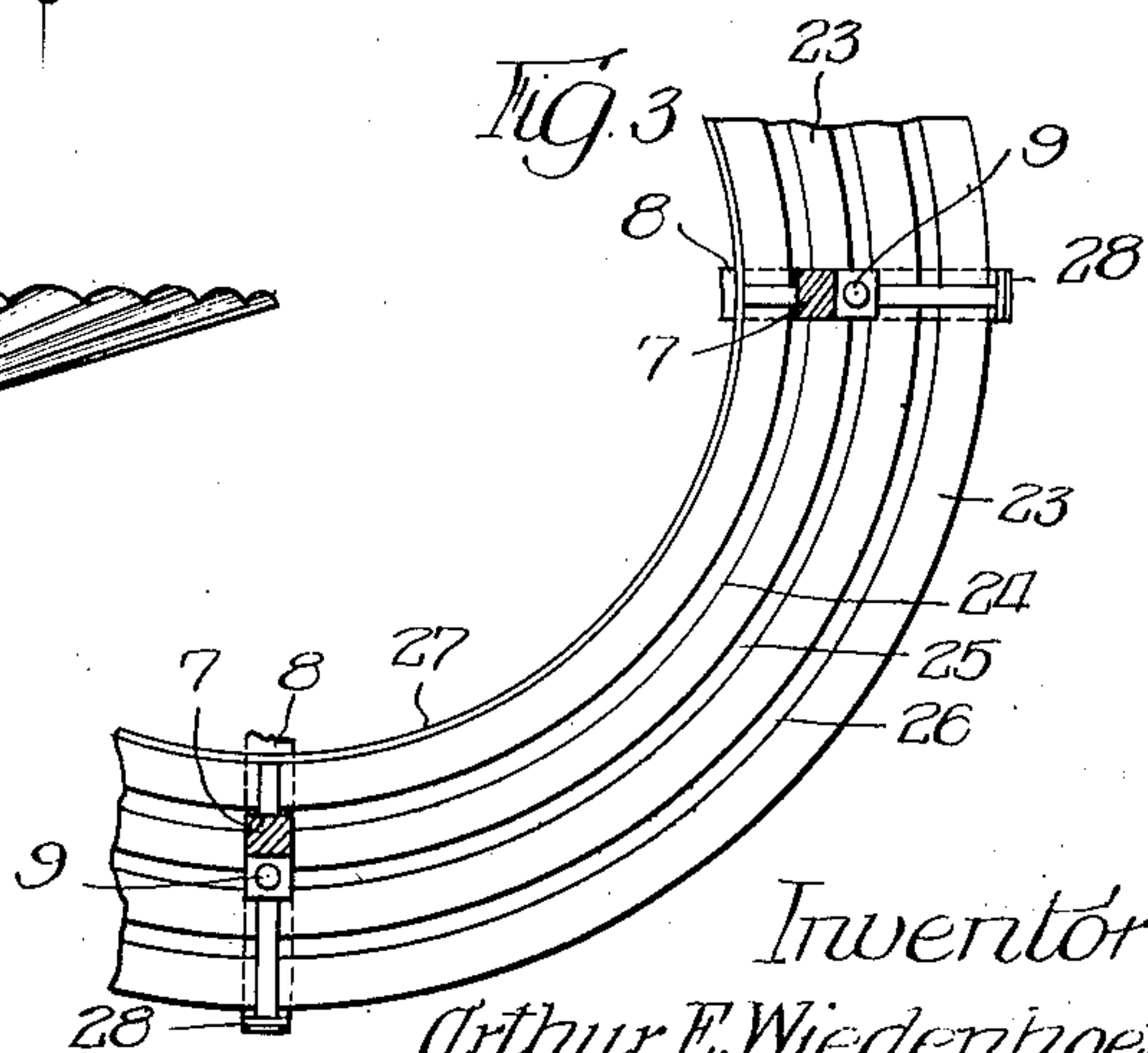
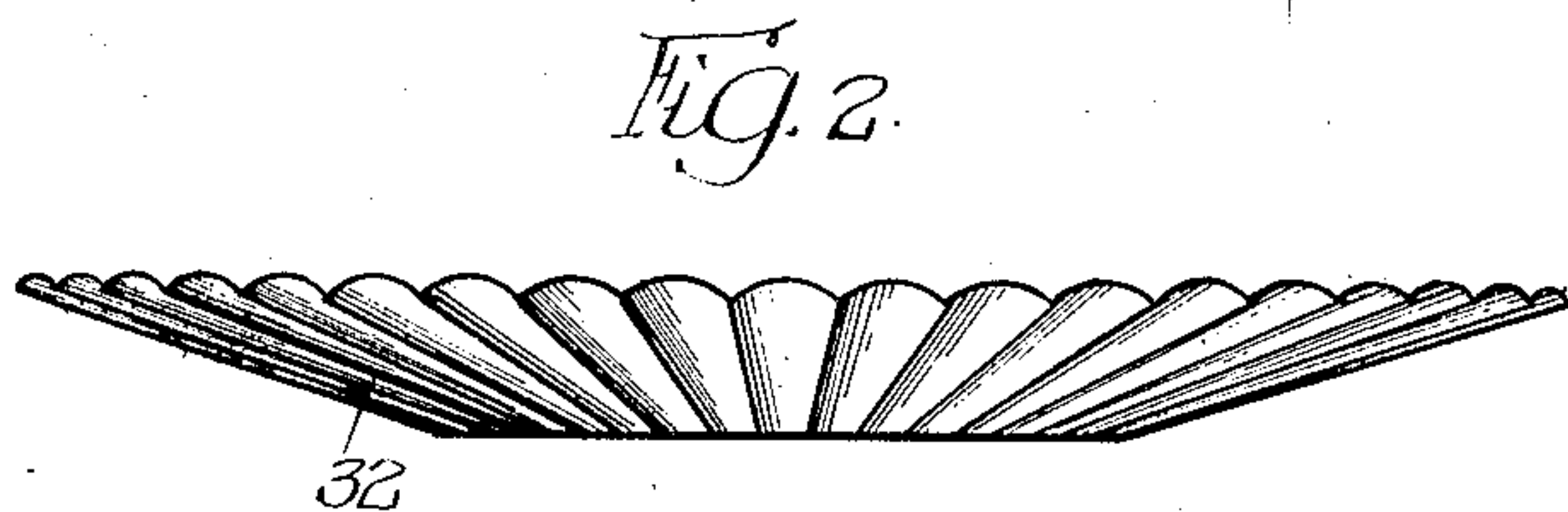
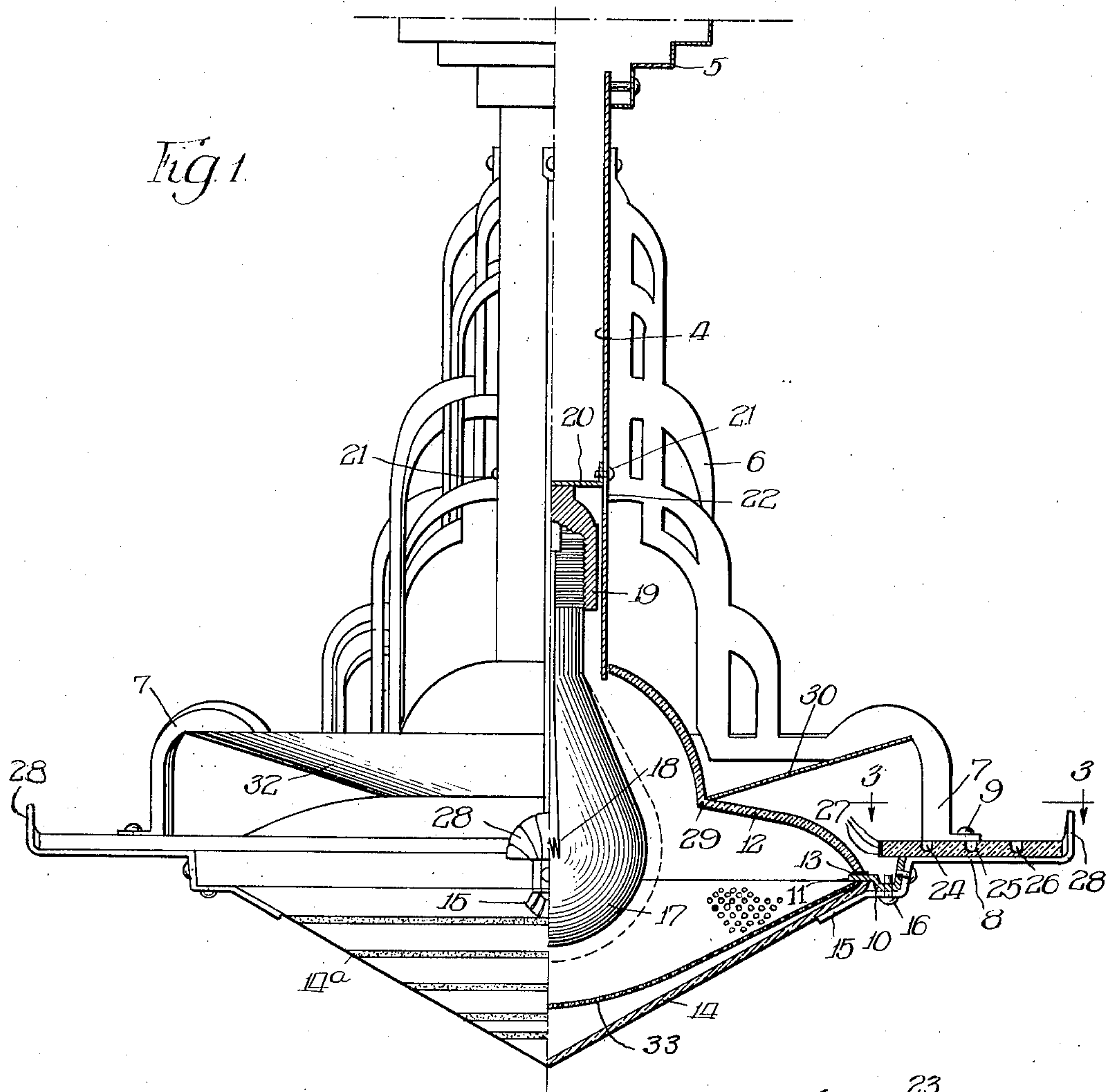
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LIGHTING FIXTURE

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## UNITED STATES PATENT OFFICE

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## LIGHTING FIXTURE

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7 Claims. (Cl. 240—78)

This invention relates in general to a lighting fixture for electric lamps and has more particular reference to a direct-indirect lighting fixture in which the lamp is partially enclosed by circular reflectors.

One of the principal objects of the invention is the provision in which objectionable rings or shadows are eliminated both above and below the fixture.

A further object of the invention is in the provision of a simple ornamental fixture in which the lamp itself is practically concealed from direct view and the light is reflected and diffused by a reflector ring which extends radially from the light filament as an axis.

A still further object of the invention is in the provision of a simple lighting fixture with a decorative rim structure also in a radial line, including the lighting element.

Other objects of the invention will appear hereinafter, the preferred construction being illustrated in the accompanying drawing.

In the drawing, Fig. 1 is a view partly in section and partly in elevation of a lighting fixture in accordance with this invention;

Fig. 2 illustrates a reflector ring modification; and

Fig. 3 is a plan section as taken upon a line 3—3 of Fig. 1.

One of the objections to any lighting fixture is the formation of objectionable shadows or variable rings of darkness and light, usually caused by improper location of the shadows and reflectors as well as the supporting arms and parts. This is particularly true of a direct-indirect lighting fixture in which part of the illumination is obtained by reflection from the ceiling of a room, for the reason that such shadows or light rings are more apparent and more clearly seen upon the ceiling.

The present invention overcomes these objections by providing an upper reflector which extends at an angle upwardly from the lamp but with its surface in line or radially from the lighting element of the lamp, which requires that either the lamp or the reflector be made adjustable in the fixture, and by providing thin supporting arms which extend in a plane, including the light element, so that they produce no shadows. The lower reflector or diffuser is preferably of glass or a similar transparent material, either frosted or plain, supported only by a narrow ring of material which produces no objectionable shadow when the lamp is lighted.

Referring now more particularly to the drawing, a fixture supporting shell 4 is supported in any desired or suitable manner from the ceiling or other reflecting or supporting means and if placed against the ceiling it is commonly provided

with a canopy 5 of suitable design and construction.

Secured to the supporting shell 4 and extending radially therefrom, are a number of supporting arms 6, usually three or four for each fixture. These arms are more or less decorative and are thin so that they will cast no shadow. The outer and lower end of each arm comprises a projection 7 to which a support 8 is secured, as by means of a screw 9, and secured to these supports 8 at their inner ends is a ring 10 usually of metal with an inwardly extending flange or rim 11 constituting a support for a clear glass globe 12 which is seated upon one or more washers 13 on top of the rim 11.

Extending downwardly from the rim 11 is a diffusing globe or reflector 14 which may be of clear or frosted glass, or clear with frosted marks or designs 14<sup>a</sup> therein, or the globe may be frosted and the designs may be of clear glass. This globe is held upwardly against the rim 11 by arms 15 attached to the rim by means of screws 16 so that the globe and reflector 12 and 14 provide an enclosed space at the lower end of the supporting shell 4 for an electric lamp 17 preferably of the type having a small or concentrating lighting filament 18 which may be accurately located in the fixture.

A suitable means for positioning the lamp in the fixture comprises a lamp socket or holder 19 secured to the plate 20 and adjustable in the shell 4 by one or more screws 21 at the outside of the shell, movable in inverted slots 22.

The supports 8 are also adapted to carry a horizontal glass ring preferably composed of sections 23 which extend entirely around the fixture. These sections may be decorated by painting, cutting, frosting, or other well known means, each section lying in a plane extending through the lamp filament 18 so that the rays therefrom will pass into the inner edge of the section. By providing a design consisting of portions 24, 25 and 26 of graduated depth in the glass section, these parts will show a decorative effect which may be increased by variously coloring or frosting the designs and also a colored effect may be produced by colors 27 at the inner edge of the rim corresponding to the decorations 24, 25, and 26 which are at different depths in the glass sections 23. In order to additionally hold the glass sections in place and to cover their joints, the end of each arm is in the form of a rosette or decoration 28 which also extends on the under side of the arm 8 and is continued in the arm 15.

The globe or reflector 12 fits within and under the supporting arms 6 and preferably has an angular intermediate portion 29 adapted to receive and support a metal reflector 30 which inclines upwardly therefrom, preferably extending close against the under side of the projecting



ends 7 of the supporting arms 6 so that when viewed from the side or below the fixture the outer end 7 of the arm appears (as shown more clearly at the left side of Fig. 1) to come out of the reflector 30. This reflector 30 is inclined at such an angle that if continued it will pass through the lighting unit 18 of the lamp so that the reflector 30 produces no shadow upon the wall and is itself illuminated on both sides, thereby throwing no shadow upon the ceiling and no shadow below the fixture.

Instead of having an inclined reflector 30 of plain or flat metal as shown in Fig. 1, a slightly different decorative effect is produced by having a fluted reflector 32 as shown in Fig. 2. In either case, however, the inclination of the reflector is such that if continued at the center it will pass through the illuminating element of the lamp.

It is obvious that the arms 6 may be of any suitable design, without departing from the spirit of this invention, the material feature being that they are thin, extend radially, and provide sufficient space for receiving a reflector 30 below them which may be inclined radially from the lamp filament. These reflectors may be secured directly to the arms by suitable fastening screws, for example, and more than one reflector may be positioned within the arms at different angular elevations. If a fluted reflector 32 is used in connection with a globe 12 it is easy to clean the upper surface of the globe and reflector by blowing out the dust at the inner edge of the reflector through the openings provided by the flutes, the plain edge fitting more closely against the globe than the fluted one.

To reduce or modify the direct illumination a reticular screen or reflector 33 is interposed between the lamp and lower globe 14 preferably supported at its periphery by and elsewhere out of contact with the globe.

The effect of this entire fixture is of a glowing shadowless lighting unit in which practically none of the light from the lamp is lost, it being both a direct and an indirect lighting unit with the supporting and reflecting parts so disposed and located that no objectionable light rings are produced either above or below the fixture. Furthermore, the additional decorative effect produced by the horizontal ring at the outer edge of the fixture is both pleasing and highly decorative, depending upon the amount of decoration either by color or otherwise that is given to the ring sections 23.

I claim:

1. A lighting fixture comprising a central support, a lamp carried thereby, thin vertical radial arms extending outwardly from the support, a transparent decorative reflector surrounding the lamp and carried at the lower ends of the arms substantially in the plane of the lighting element of the lamp, a conical dished reflector extending upwardly about and above the lamp and below the arms but intersecting the lamp filament if produced to obviate an outer shadow, and means comprising a transparent shade for supporting the inclined reflector by engaging the inner edge thereof.

2. In a lighting fixture, a central support, thin vertical decorative arms extending radially, downwardly, and outwardly from the support, an electric lamp carried by the support having a concentrated lighting filament, a decorative marginal reflector ring carried by the arms and extending in a plane which includes the lighting

element of the lamp to illuminate it through the inner edge thereof, a conical metal reflector extending upwardly and radially from the lamp filament as a center closely adjacent the downwardly extending ends of the supporting arms so that the arms appear to rise out of the interior of the reflector, and means for supporting the reflector in this position.

3. In a lighting fixture, a central support, vertical arms radiating therefrom having extending and depending extremities, a supporting ring carried by the arms, a lamp carried by the support, a decorative bowl supported by the ring below the lamp, a transparent shade carried by the ring and surrounding the lamp below the arms and substantially enclosing it about the lower end of the central support, and an upwardly extending conical reflector carried by the transparent shade and extending radially from the lighting element of the lamp as a center to produce an upper shadowless reflector.

4. In a lighting fixture, a supporting shell, thin vertical radial arms extending outwardly and downwardly therefrom, supporting means including a ring and radial members at the lower ends of the arms, a sectional decorative reflector extending radially in the plane of the lamp filament to receive illumination at the inner edge thereof and carried by the members at the ends of the arms, a globe below the lamp, and a transparent shade above and surrounding the lamp, means for supporting the globe and shade from the said ring, and a conical reflector supported by the shade with its upper edge closely adjacent the lower edge of the supporting arms so that the arms appear to extend out of the shell when viewed from the side of the fixture.

5. In a lighting fixture in accordance with claim 1, comprising a support, and a lamp carried by the support having a concentrated lighting filament; the thin conical reflector which extends axially from the lighting filament as an element having its surface fluted radially and producing no shadow.

6. In a lighting fixture, a supporting shell, a lamp carried thereby, thin decorative arms extending laterally from the shell, a supporting ring carried at the lower ends of the arms, a transparent globe seated upon the ring and extending upwardly about the lamp to fit about the shell and having an angular recess intermediate its inner and outer edges, and a conical reflector of thin material seated and supported in the angular portion of the globe and extending radially upward from the lighting filament of the lamp as an axis to eliminate shadows the reflector extending upwardly above a portion of the arms so that the extremities appear to rise upwardly and outwardly therefrom.

7. A lighting fixture comprising a hollow support, a lamp having a compact lighting filament and adjustably mounted in the support and extending below the lower end thereof, a thin reflector extending outwardly and upwardly from the lighting element, a decorative transparent plate extending around the lamp in the plane of the lighting filament to receive edgewise illumination therefrom, and thin arms extending radially from the support and over the outer rim of the thin reflector and having means for supporting the decorative plate in the plane of the lamp filament.