

March 7, 1944.

W. P. WAGNER

2,343,598

LAMP

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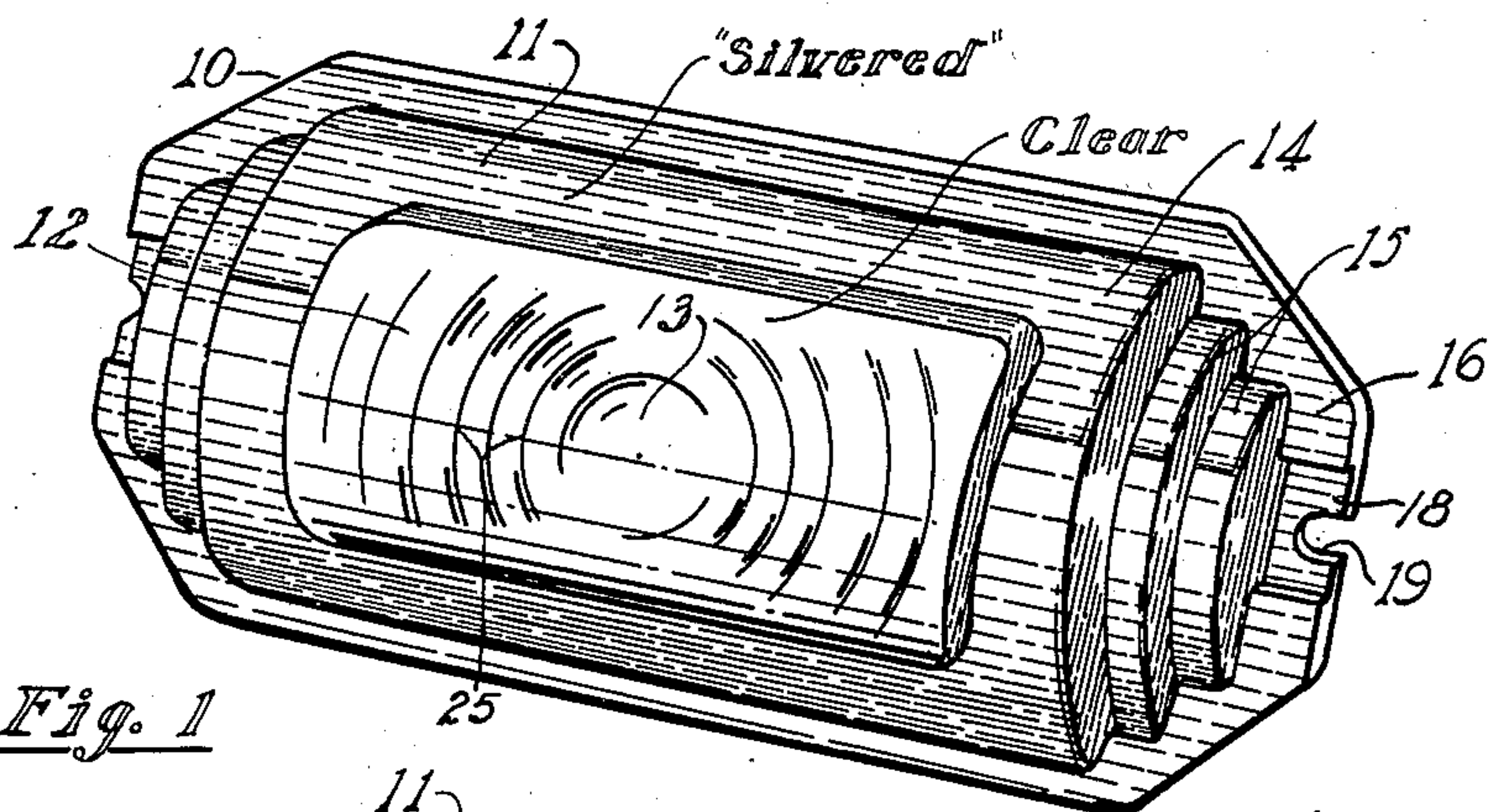


Fig. 1

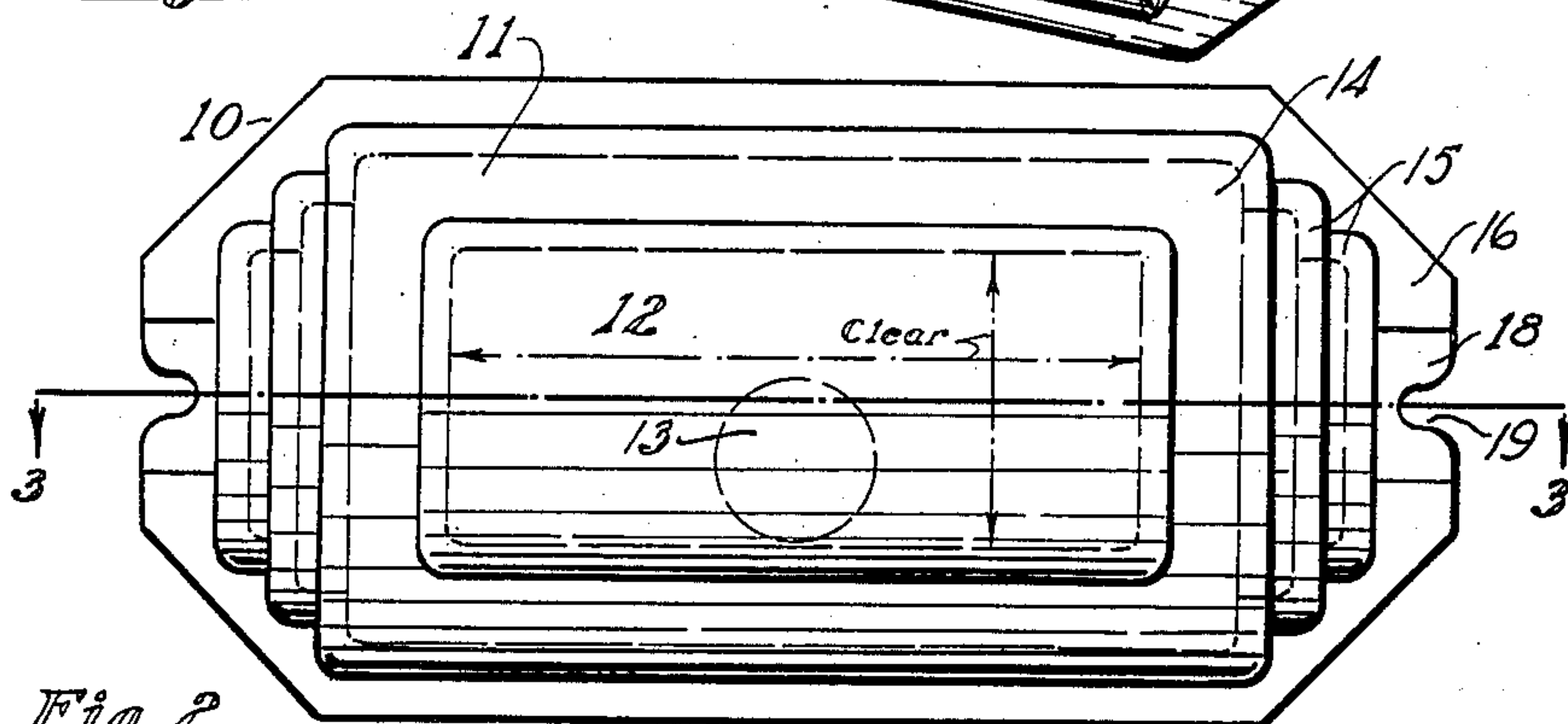


Fig. 2

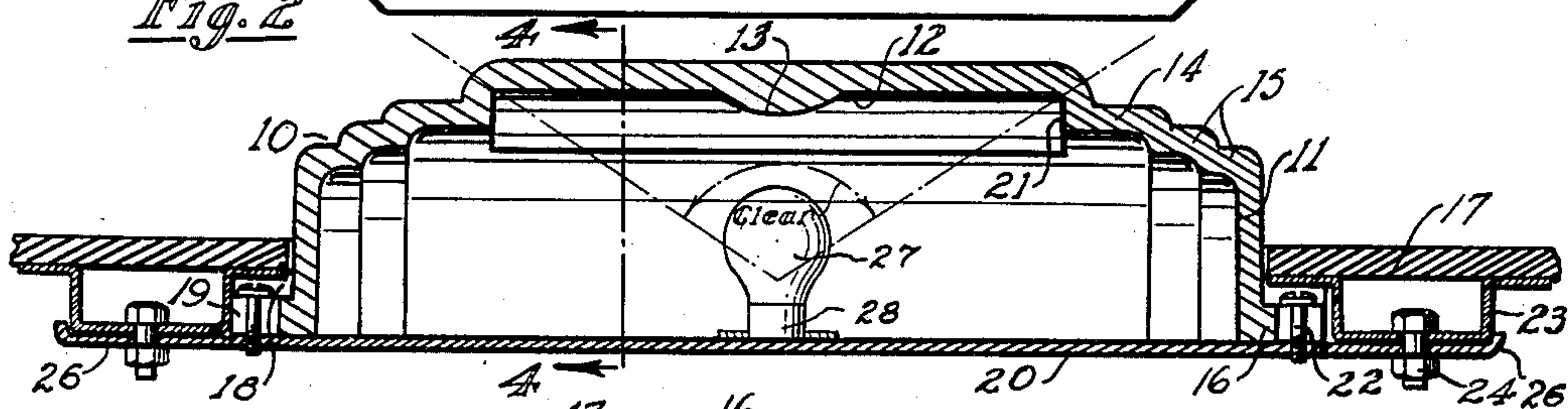


Fig. 3

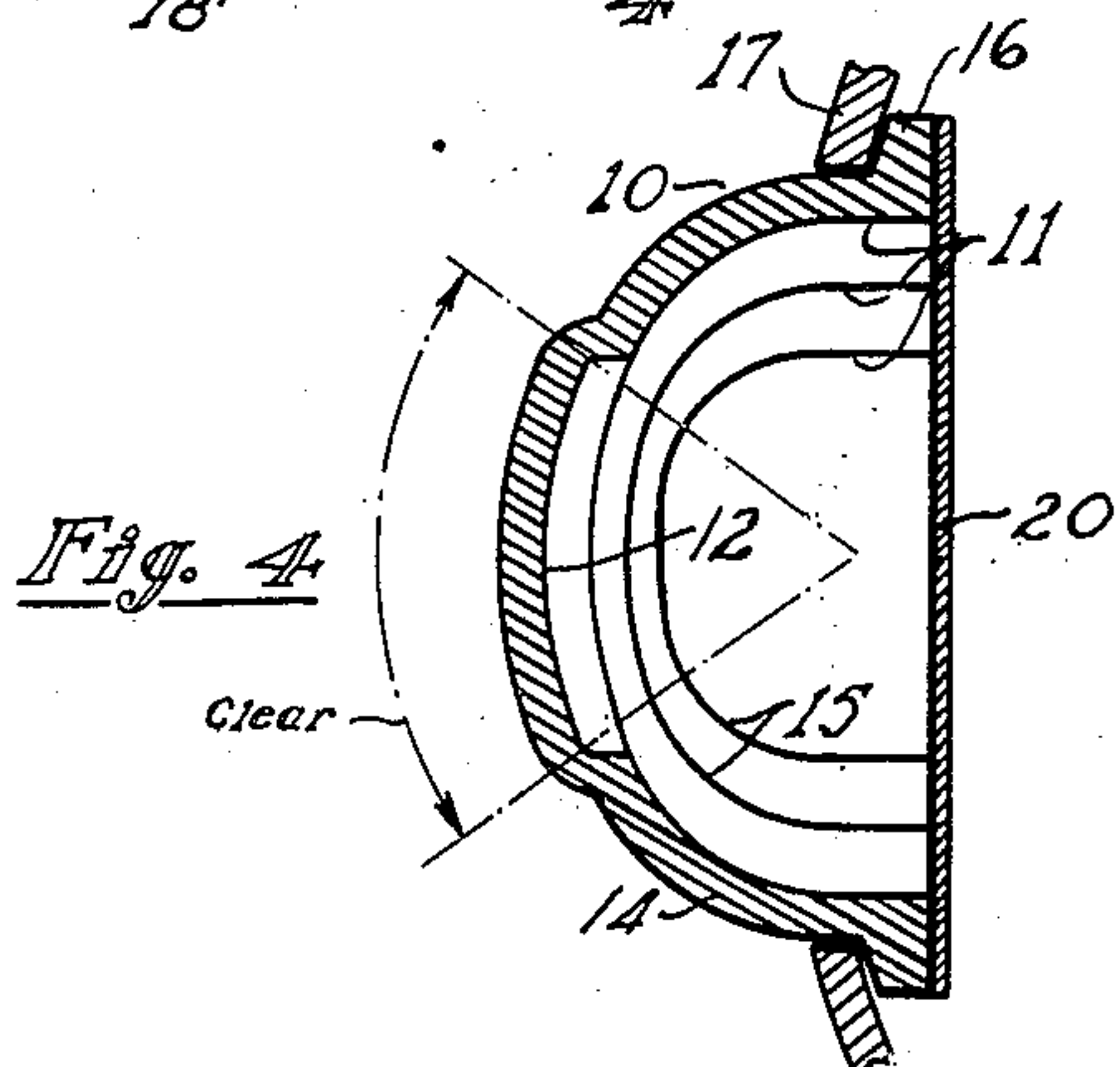


Fig. 4

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LAMP

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3 Claims. (Cl. 240—7.1)

This invention relates to illuminating devices; and, more particularly, to a light unit of transparent material including in one structure a light transmitting portion and an opaque framing portion or bezel.

An object of this invention is to obtain a lamp constructed with a unitary, transparent body, and so treating the interior thereof to obtain the effect of a transparent lens supported by a metallic or other opaque body or bezel.

One advantage of this invention over the conventional construction of a transparent lens set in a metallic shell is the economy of material. The conventional structure, such as is used in automobiles for rear lights, parking light, etc., generally requires chrome plating or the like to harmonize with the remainder of the vehicle. This treatment is not only expensive, but the materials therefor, whether of nickel, copper or chromium, are no longer freely available for such use. It is therefore necessary to husband these metals and it is one of the purposes of this invention to obtain a suitable light fixture that has the appearance, to all intents, of the previous construction without using such metals in its fabrication.

A further object of this invention is to obtain a unitary structure embodying a lens and the lens body which may be readily assembled and applied.

With these and other objects in view, the invention consists in the arrangement, construction and combination of the various parts of the improved device, as described in the specification, claimed in the claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a lamp embodying the invention.

Figure 2 is a plan view of the lamp.

Figure 3 is a longitudinal sectional elevation taken on the line 3—3 of Figure 2 showing the method of attachment of the lamp to an automobile body.

Figure 4 is a transverse sectional elevation taken on the line 4—4 of Figure 3.

Referring to the accompanying drawing, a lamp 10 is illustrated which may be used as a parking light in a motor vehicle. Its counterpart, so far as superficial appearance goes, may be found in almost every present-day motor vehicle. However, instead of being constructed, as heretofore, with a metallic shell and a lens inset, it is here formed from a single piece of glass or other transparent material, inner portions of which are

silvered to give an external metallic effect while leaving the lens portion thereof clear.

Figure 1 thus discloses an embodiment in which the lamp 10 has the silvered or opaque body portions 11 and the clear or lens portions 12. In this figure, the silvered extent, which corresponds to the metallic body of the conventional lamp, is indicated by dash lines.

Considering the construction in detail, as best shown in Figure 3, the lamp shell 10 is molded in one piece from glass or transparent plastic. The lens portion 12, which may have any desired optical characteristics, is shown to have a bull's-eye 13 and a number of echelon lenses 25. In the design shown, the body of the lens is substantially semicylindrical through the center portion 14, and as a decorative feature has certain smaller complementary bodies at each end, such as 15. A flange 16 curves around the entire body, as shown in Figure 2, and when the light is installed in a motor vehicle, the face of this flange 16 rests against the inner surface of the body sheet 17 of the vehicle, as shown in Figure 3. The flange, at each end, has a recess 18 which is slotted as at 19 to accommodate fastening means 22 by which the base plate 20 can be secured to the lamp and the entire structure may be secured at the proper place in the vehicle. This may be done by spot welding stirrups 23 to the body 17 adjacent each end of the lamp and providing extensions 26 on the plate 20 which may be secured thereto by bolts 24. The socket 28 secured to the plate 20 receives the bulb 27.

As stated previously, the entire lamp is molded from a suitable transparent material. This may be glass, as in the present instance, or any one of the numerous plastics. The transparent portion, as represented by the lens in the finished article, needs no further processing. The remainder of the body, such as is indicated as silvered in Figure 1, is treated to give it the metallic appearance desired. This is done by silvering the inner surface of the fixture throughout its entire extent, except in the area noted on the drawing as being clear. While the phrase "silvering" is used, it will be understood that this is meant as the word is used in connection with mirrors or similar objects in which any one of a number of different coating preparations or methods may be used to secure the desired mirror-like effect. Actually, of course, silver itself is rarely used, but the phrase will be well-known to those skilled in the art. The deposition of this slight metallic coating creates the external impression of a metallic sub-

stance and, after application, the glass portion so treated will on cursory examination appear to be metal and the illusion is that normally obtained from lamps constructed of actual metal stampings suitably plated and polished.

Inasmuch as no particular reflecting surface is desired in the interior, the inner surface of the silvering material is protected by a further layer of suitable paint or other substance which will prevent it from being damaged by handling or by the absorption of moisture. The application of these two coatings in the interior of the fixture gives the desired metallic effect and insures that it will be permanent and not subject to damage.

For structural reasons, it is necessary that the transparent material used be relatively thick. In the present instance, for an object of the size shown, the thickness of the glass used is about one-eighth of an inch. When glass of this size is used, and even more noticeably in the case of certain plastics, it is found that the lamp has a tendency to reflect some of the light internally and an "edge-lighting" effect is obtained. This is undesirable in the present instance because it destroys the illusion sought—namely, that of the clear lens and opaque body. A lens which has this "edge-lighting" will not appear neat and concise when lighted. It has been found, however, that to avoid this a suitable offset must be provided between the opaque body 11 of the lamp, which is coated internally, and the clear lens. This is best illustrated in Figure 3 in which the lens portion 12 is defined by the dot-and-dash line. It will be understood that the entire remainder of the inner surface of the fixture is silvered and rendered opaque. To prevent the internal transmission of light, the clear lens has been considerably offset from the body proper so that the inner surface of the lens is disposed at least even with or above the outer surface of the silvered portion. Further, the silvering is carried up the lens offset 21 on each side. When this is done, the effective continuity of the glass structure is broken insofar as the tendency to "edge-light" is concerned and it will be found that the light will be confined to the desired clear portion and will not be transmitted elsewhere throughout the body of the lamp.

A lamp fixture has thus been devised which, while of unitary structure and employing only a very minimum of metallic substances, gives the impression of a conventional lamp having a metallic body and a lens separable therefrom. This lamp is more economical to manufacture with the present shortage of materials and uses those which are more readily available.

In practice, the lamp 10, together with the attached base plate 20, including the conventional socket, wiring and bulb—none of which are shown on the drawing—will be furnished as a single unit for assembly with the motor vehicle. The meth-

od and means of assembling it have been explained with reference to Figure 3.

Some changes may be made in the arrangement, construction and combination of the various parts of the improved device without departing from the spirit of the invention, and it is the intention to cover by the claims such changes as may be reasonably included within the scope thereof.

I claim as my invention:

1. In a lamp structure, a panel support, a lamp assembly comprising, a lamp, an integral shell of transparent material, an opaque coating applied to portions of the interior of said shell, other portions thereof remaining uncoated and being transparent, said uncoated portion constituting a lens structure, said coated portions serving as a bezel and body therefor, an integral flange on said shell, a substantially flat closure engaging said flange on one side thereof and secured thereto, said panel being cut away to receive said shell which extends therethrough, the other side of said flange engaging said panel to maintain the assembly in place, said coating extending over such portions of the interior as to prevent internal reflection of light emitted from said lamp through said body portion.

2. In an article of the type described, an integral shell of transparent material comprising, a lens portion, and a body portion, said lens portion being offset from said body and joined thereto by walls extending substantially normal to said body, a coating having a metallic effect applied to the inner surface of said body and of said extending walls, to render them opaque and to give an external metallic impression throughout such visible extent, said lens portion being uncoated and remaining clear and transparent for the transmission of light therethrough, the inner surface of said lens being disposed above the adjacent outer surface of said body to prevent edge lighting through said structure.

3. In an article of the class described, an integral shell of transparent material comprising a lens portion, a body portion and an intermediate wall portion between said lens and body portions, said wall portion extending substantially normal to said body and lens portions, a thin coating having a metallic effect applied to the inner surface of said body and wall to render them opaque and to give an external metallic impression throughout the visible extent thereof, said lens portion being uncoated and remaining clear and transparent, said extending wall being of sufficient height to offset said lens substantially from the adjacent body, said opaqued wall portion establishing an area of demarcation between said lens and said body to prevent edge lighting effects in said body.

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