

April 22, 1930.

F. KESSELRING

1,755,737

LAMP SHADE

Filed June 30, 1928

2 Sheets-Sheet 1

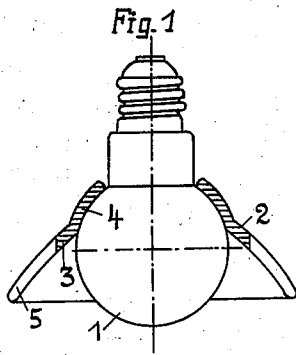


Fig. 1

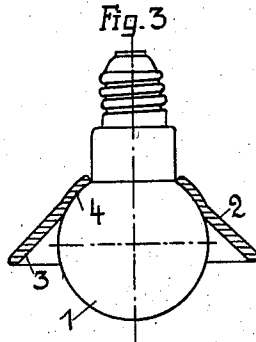


Fig. 3

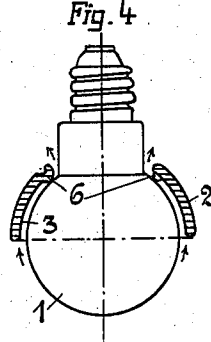


Fig. 4

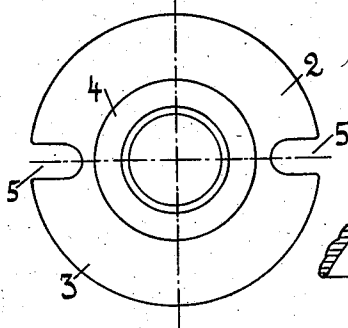


Fig. 2

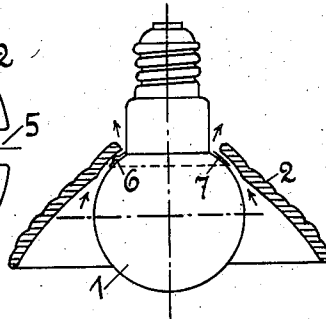


Fig. 5

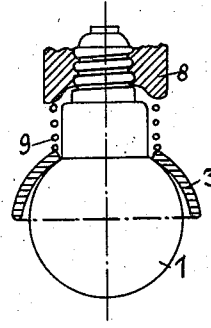


Fig. 6

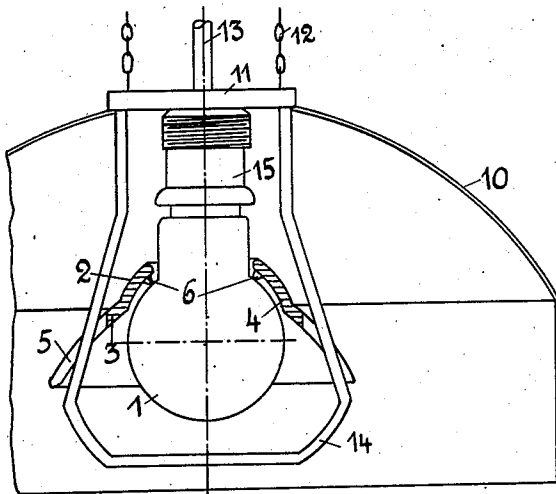


Fig. 7

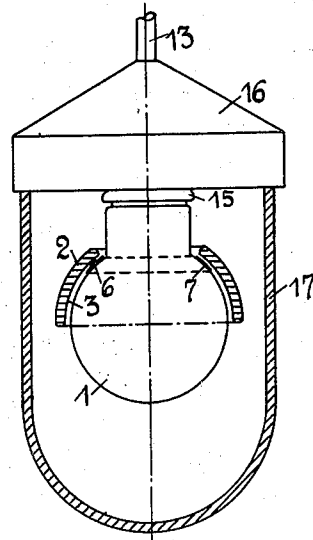


Fig. 8

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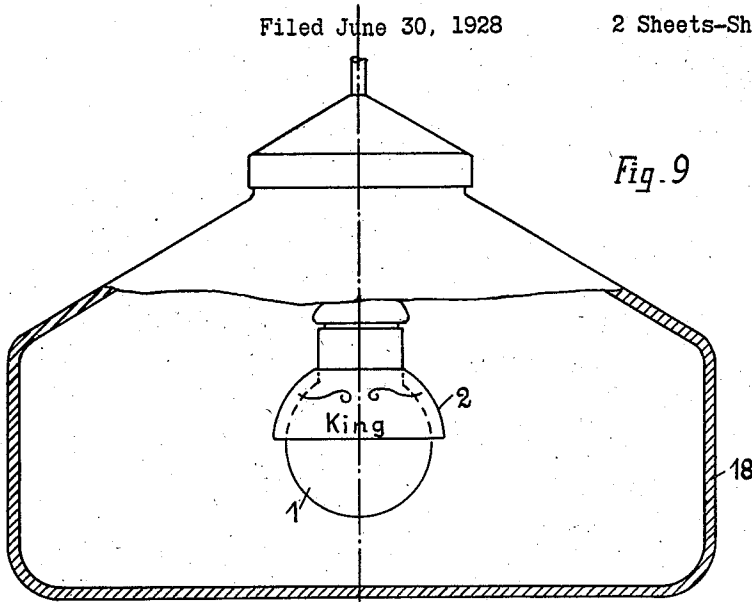


Fig. 9

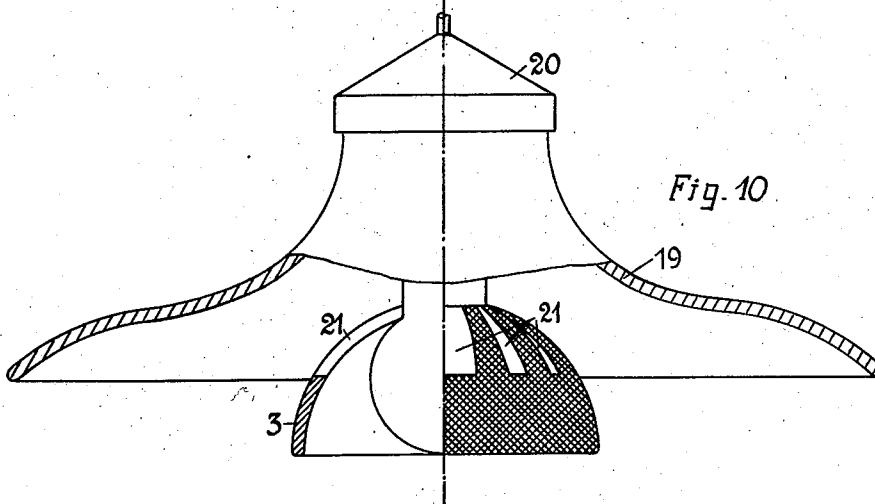


Fig. 10

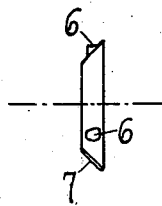


Fig. 11

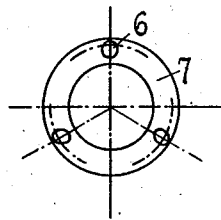


Fig. 12

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UNITED STATES PATENT OFFICE

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LAMP SHADE

Application filed June 30, 1928, Serial No. 289,473, and in Germany September 19, 1927.

This invention relates to a lamp-shade, the object of which is to improve the effect of an incandescence lamp in illuminative, as well as in decorative respects.

5 The invention consists, firstly, in placing upon the roundish or spherical belly of the incandescent lamp a shade consisting of transparent or of opaque glass or an equivalent material which, if desired, may be provided with a mirror-foil, and secondly into
10 shaping or designing and arranging said shade relatively to said belly or the bulb of the lamp that the centre of the filament which is practically also the centre of the bulb coincides at least approximately with the optical
15 centre of said shade.

I am aware of the fact that shades for lamps are known already, but these known lamp shades suffer from the following drawbacks:
20

(1), They are comparatively large and, therefore, expensive;

(2), They can be used only in lieu of another shade and do not, therefore, allow
25 of obtaining the decorative effect also intended.

These drawbacks are overcome by my present invention as shown diagrammatically and by way of example on the accompanying
30 drawings, on which Figure 1 is a side-view of a globular incandescent lamp provided with a shade designed according to this invention, the shade being shown in axial section; Figure 2 is a plan of the combined lamp and
35 shade; and Figures 3-12 show modifications, all as fully described hereinafter.

Referring to Figs. 1 and 2, 1 denotes an incandescence lamp, or its bulb respectively, and 3 and 4 denote the shade which comprises a parabolic portion 3 and a spherical
40 portion 4. The shade might be entirely parabolic, but then its diameter would be larger and more expensive. If the shade is intended for lamps with suspension bow, it is preferably provided with two recesses 5 for the
45 legs of the bow. 2 denotes the mirror foil of the shade.

The shade shown in Fig. 3 is composed of a spherical portion 4 and a conical portion
50 3. The shade may, however, be entirely conical.

The shade illustrated in Fig. 4 is solely spherical or more precisely, semi-spherical and there is left between it and the hub 1 a space through which the heated air can escape. This space is obtained in that the inner
55 diameter of the shade is larger than the diameter of the bulb, and is maintained by projections of the shade, for instance either such projections as shown in the lefthand half of Fig. 4, or such ones as shown in the
60 righthand half of this figure. The object of said space is to prevent the shade from being heated too strongly, the air passing upwards through said space serving as a cooling
65 medium for the shade.

In order to obtain a uniform illumination the shade may be provided with undulations or ribs or other projections upon its outer face, for instance of the kind shown in Fig. 5. I
70 am aware of the fact that ribs and the like for the just-mentioned purpose are already known and I do not, therefore, lay any claim thereon.

Instead of providing the shade itself with projections such as 6 (Fig. 4) or the like, a
75 separate ring 7 (Figs. 5, 8, 11, 12) having projections 6 may be inserted between the bulb and the shade as in Figs. 5 and 8. This ring is shown separately in Fig. 11 in axial
80 section and in Fig. 12 in plan.

In Fig. 6 it is assumed that the shade 3 consists of transparent colored glass. This shade is subjected to the pressure of a cylindrical spring 9 encompassing the bulb socket and being inserted between the shade and the
85 porcelain socket 8, whereby the shade is securely held in place also if the lamp is mounted in the open air and exposed to wind which, perhaps, tends to push the shade against the bulb and destroys it.
90

In Fig. 7 the shade is practically the same as in Figure 1, but it is larger so that an annular air-passage like that in Figs. 4 and 5 is formed with the aid of projections 6. The lamp is suspended from a chain 12, the
95 ends of which are attached to the top member 11 of the bow 14, the legs of which extend through the recesses 5 of the shade. 13 denotes the tube enclosing the wires (not shown), 15 denotes the lamp socket, and 10
100

the main shade of the lamp. The light is concentrated by the shade 3 and thrown down upon the middle of the table (not shown) below the lamp so that a book or some work-piece or the like laying there is intensely illuminated. The shade 3 is preferably parabolic. 2 denotes a mirror-foil on it.

In the constructional form shown in Fig. 8 the incandescent lamp is enclosed water-proof in a glass vessel 17 which is tightly connected with, and affixed to, a porcelain body 16 suspended from the tube 13 enclosing the wires (not shown). 15 denotes a portion of the socket of the lamp.

The constructional form shown in Fig. 9 differs from that shown in Fig. 8 by the other shape of the vessel in which the lamp with its shade is enclosed. That vessel consists in this case of porcelain and is, therefore, opaque; it is shown partly in side-view and partly in vertical section.

It is possible to provide also for decorative effects or for advertisements and the like by providing suitable free spaces in the mirror-foil of the shade where such foil is used. An example is given in Fig. 9, in which the two oppositely located curved lines, as well as the word "King" form spaces through which the rays of light can pass onto the inner surface of the vessel or main shade 18, upon the outer surface of which they become visible, as will be clear without a detailed explanation. The decorations or (and) advertisements become particularly distinctly visible if the shade 2 (Fig. 9) is colored at those places where there are the free spaces through which the rays pass to and onto the porcelain vessel 18.

The lamp illustrated in Fig. 10 is provided with a colored main shade 19 carried by the top member 20, and with a colored bulb shade 3 which may be transparent or opaque and has, preferably, uncolored portions 21 through which the rays coming from the filament pass directly to the inner face of the main shade 19. The colors of the shades 3 and 19 may be different. The shade 3 is shown partly in vertical section (lefthand half) and partly in front-view, or side-view respectively (righthand half). The hatched portions are the colored ones. Also the top member 20 may be colored, again in another (or third) color. This member may, for instance, be green, the shade 19 may be blue, and the shade 3 may be red; the total effect is very particular and attractive.

I claim:

In combination a shade of transparent glass with a mirror foil upon it, said shade consisting of an upper hemispherical part and of a lower parabolic part, the shade being adapted of being put with its hemispherical part on the roundish belly of an electric incandescent lamp, the centre of said hemis-

pherical and of said parabolic part coinciding practically approximately with the centre of the lighting filament of said incandescent lamp, the inner diameter of said hemispherical part being larger than the diameter of the roundish belly of the bulb and means for keeping said hemispherical part of the shade off the belly of the bulb so as to leave an air space between both parts, said air space communicating on both sides with the air space outside the shade in order to allow a cooling air current to pass upwardly between the hemispherical part of the shade and the roundish belly of the bulb.

FRITZ KESSELRING.