Oct. 17, 1933. W. COOK ET AL 1,931,343

ILLUMINATION

Filed Sept. 13, 1932

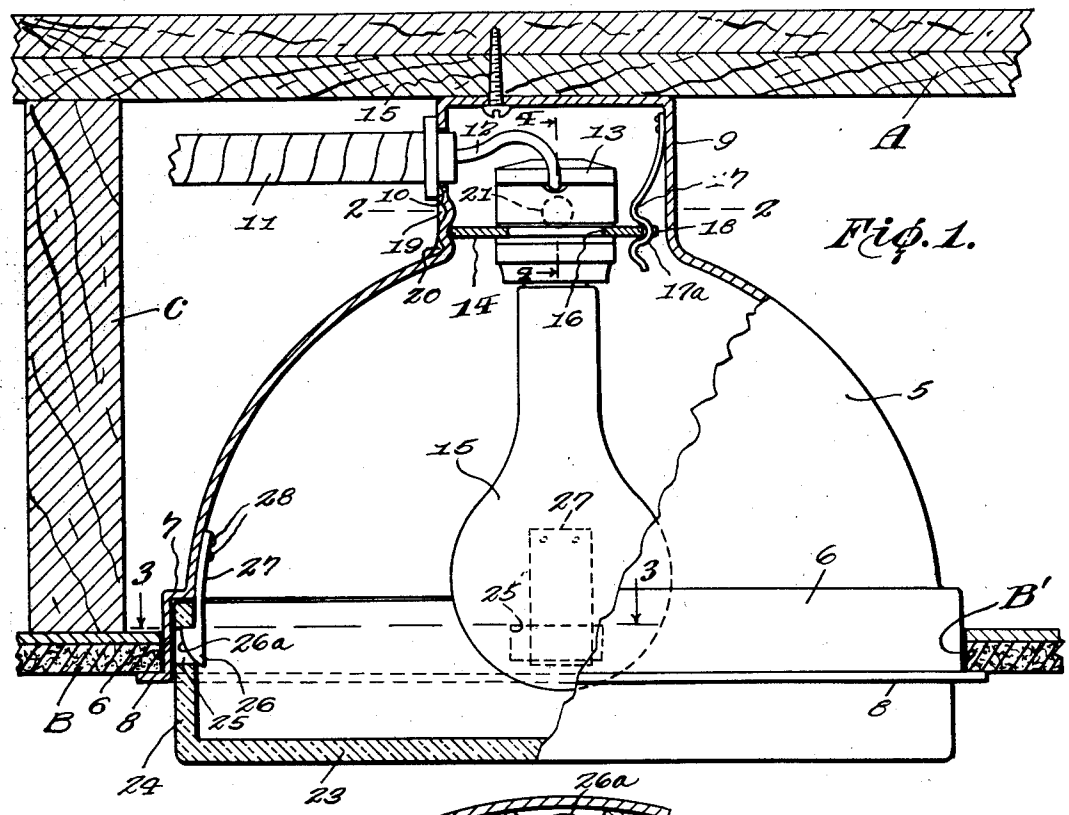


Fig. 1.

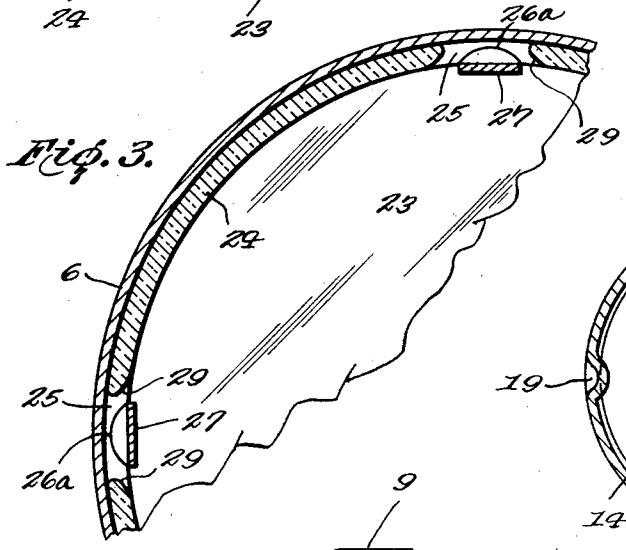


Fig. 3.

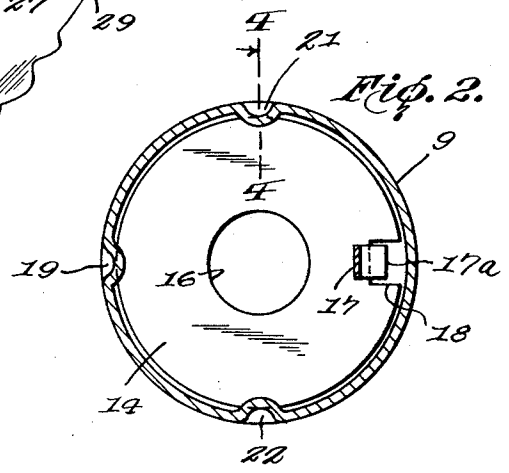


Fig. 2.

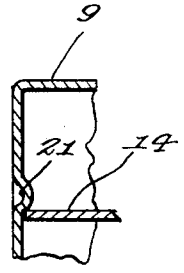


Fig. 4.

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Patented Oct. 17, 1933 1,931,343

UNITED STATES PATENT OFFICE

1,931,343

ILLUMINATION

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Application September 13, 1932
Serial No. 632,966

4 Claims. (Cl. 240—78)

This invention relates to illumination and the improvements are directed to a combination electric outlet, wire housing box combined with a shade and lens to form a unitary electric fixture.

As will presently appear it is proposed to provide a unitary structure of the above-mentioned character which is adapted to be positioned between the floor and ceiling of a room, or the like, said fixture having only a portion of its lens projecting beyond the horizontal plane of said ceiling to preclude the effect of obtrusiveness and the usual repetition of cleaning operations attending the accumulation of dust by the use of the conventional fixtures of the chandelier and other types.

One of the important objects of the invention resides in the combination of an outlet box and shade, wherein the cover plate of said box is adapted to support a receptacle supporting the usual electric light bulb and wherein said cover plate is associated with said box in a manner to permit its removal and subsequent access to the wiring in said box.

Another object is to provide means whereby a transparent medium in the form of a lens, or the like, may be quickly attached to and removed from the shade of the device without the exercise of more than ordinary skill.

Still another object is to provide an arrangement whereby said lens may be removed and other substitutions made therefor, thereby creating a multitude of decorative and coloring effects.

A still further object of the invention is to provide a shade portion having a circumferential flange adapted to overhang and protect the edges of an opening formed in the ceiling to receive said shade.

Still another object is to provide an article of the above-mentioned character which is sturdy in construction, inexpensive in manufacture and whose cost of maintenance is reduced to a minimum.

With these objects in view, together with others which will appear as the description proceeds, the invention resides in the novel formation, combination, and arrangement of parts, all as will be described more fully hereinafter, illustrated in the drawing and particularly pointed out in the claims.

In said drawing:

Figure 1 is a central vertical sectional view of the article, partly in elevation, and showing its installation between the floor and ceiling of a room.

Fig. 2 is a sectional view, slightly enlarged and taken on the line 2—2 of Fig. 1, the socket of the lamp bulb being removed.

Fig. 3 is a fragmentary sectional line taken on the line 3—3 of Fig. 1 showing the resilient keeper members inserted in certain slots in the lens.

Fig. 4 is a fragmentary sectional view taken on the lines 4—4 of either Figs. 1 and 2 to show the cover plate beneath one of the indentations in the outlet box.

Referring now more in detail to the accompanying drawing, wherein like characters of reference denote similar parts throughout the several views, let 5 indicate generally the shade or reflector portion of the article which is substantially semi-hemispherical in shape, the material adjacent the open end thereof being pressed out to define an annular vertical flange 6 and ledge 7, the peripheral edge of said flange 6 being bent outwardly to present a circumferential flange 8, as clearly shown in Fig. 1. The inner portion of said shade 5 is formed to present an outlet box 9, one side thereof being suitably apertured, as indicated at 10 for the reception of a conduit 11, containing wires 12 having their ends suitably fastened to the usual terminals in a socket 13. Upon inspection of Fig. 1 it will be noted that said socket 13 is supported by a plate 14 which also serves as a support for said socket 13, the latter carrying the usual electric bulb 15 depending toward the open end of said shade 5. From the foregoing it will be seen that the outlet box and shade or reflector, are combined to form a unitary electric fixture, and in the present embodiment of the invention it is proposed to position said fixture between the floor A and ceiling B, said floor and ceiling being arranged in spaced relation in view of the conventional use of elements in the form of joists C, and thus a suitable space is provided whereby said unitary fixture is arranged substantially within said space with the circumferential flange 8 extending beyond the sides of the opening B' in said ceiling B thereby serving as a guard for the edge of the plaster surrounding said opening B' and preventing breakage along the rim of said opening. In the present embodiment of the invention the fixture is held in position by means of fastening elements 15 passing through the top of the outlet box 9 and passing into said floor A.

The cover of said outlet box 9, which has been designated by the numeral 14, is positioned at the basal portion of said box 9, and as heretofore pointed out said cover serves as supporting means for the socket 13, said cover plate 14 being provided with an opening 16, (see Fig. 2) to receive said socket 13. Said cover 14 is removably mounted in relation to said box, thus assuring quicker installation and repairs in the event the wires 12 require renewal or attention. The means for maintaining said cover 14 in the position indicated in Fig. 1 comprises

a pluralty of indentations arranged in the sides of said box 9 and a reslient keeper member 17, normally having the bent portion 17*a* engaging an edge of the notch 18 cut into said cover 14, as shown in Fig. 2. The particular arrangement of identations positions said cover so that the same is held in the location indicated in Fig. 1, whereby its upward or downward displacement is prevented by the cooperation between said indentations and the resilient keeper member 17. In Fig. 1 it will be observed that that portion of the side wall, of box 9, adjacent the opening or aperture 10, is provided with a pair of indentations 19 and 20, arranged one above the other, while single indentations 21 and 22 are formed in the side wall of said box 9, said indentations being preferably disposed in the relation shown in Fig. 2, wherein it will be observed that said indentations 19, 21 and 22 are arranged in the same horizontal plane. In view of this arrangement, the cover plate 14, carrying said socket 13, is engaged between indentations 19 and 20, (see Fig. 1), with its diametrically opposed rim portions positioned below and contacting said identations 21 and 22, and as the resilient keeper 17 has been deflected toward the adjacent side wall of said box 9, it is only necessary to release said keeper so that its bent portion 17*a* now engages within notch 18 to maintain said cover in the position indicated.

The transparent medium or lens 23 is also removably supported by said fixture, said lens being dish-like in configuration and presenting a peripheral side wall 24, the latter being provided with slots 25 arranged at suitable intervals along said wall, for the reception of the nose portions 26 of the resilient element 27 secured to said shade 5, as indicated at 28. Upon inspection of Fig. 1 it will be noted that the inner face 26*a* of said nose portion 26 is provided with a proper curvature so that the said lens 23 may be pushed-up within the flange 6, said resilient elements 27 flexing toward the center of the shade 5 until they snap into slots 25, as shown. When it is desired to remove said lens 23 it is only necessary to oscillate the same either to the left or right, whereupon the curved faces 26*a* of said nose portions 26 encounter the rounded portions 29 of said slots 25, thus flexing said resilient elements 27 and permitting the removal of said lens. In view of this arrangement the use of screws, hinged rings, catches, or the like, to hold the lens in position, is obviated. Upon inspection of Fig. 1, it will be noted that said lens 23 projects below the ceiling B so that dark or dusky ceilings, so prevalent when conventional recessed fixtures are used, is avoided. It is also obvious that the maintenance expense of the fixture is reduced to a minimum, and that its positioning between a floor and ceiling precludes the collection of dust and obviates the constant cleaning necessary in pendantly disposed fixtures of conventional type.

It will be appreciated that the convenient removability of the glass or lens 23 permits the use of other media in the form of colored glass, or the like, to create an unlimited amount of coloring and other decorative effects. This interchangeability feature permits the use of lenses bearing any desired indicia or legends, thereby permitting the use of the fixture as a directional electric sign. As pointed out hereinbefore the positioning of the fixture between a floor and ceiling and the slight projection of the lens below the ceiling does away with dark and murky ceiling effects and further, the above idea of location permits the use of the fixture in low-studded rooms or the like. In that the flange 8 may be painted to coincide with the coloring of the ceiling and since the lens itself may closely resemble said ceiling in coloring effects, its presence becomes somewhat unobtrusive.

While the present is a disclosure of the preferred embodiment of the invention, it is to be understood that the invention is not limited thereto, as various changes in the minor details of construction, proportion and arrangement of parts may be resorted to without departing from the spirit of the invention as defined in the appended claims.

We claim:

1. A device of the character described comprising a shade, an outlet box positioned in the upper portion thereof and integral therewith, said box having its side walls provided with a plurality of indentations, a cover plate adapted to support a source of illumination, a resilient element cooperating with said plate and said indentations to removably position said plate in said box and a lens removably carried in the open end of said shade.

2. A device of the character described comprising a shade, an outlet box positioned in the upper portion thereof and integral therewith, said box having its side walls provided with a plurality of indentations, a plate adapted to support a source of illumination, a resilient element cooperating with said plate and said indentations to removably position said plate in said box, a lens mounted in the open end of said shade and resilient keeper means for removably securing said lens to said shade.

3. A device of the character described adapted to be mounted between the floor and ceiling of a room, said device comprising a shade, an outlet box positioned in the upper portion of said shade and arranged integral therewith, means for securing said box to said floor, the side wall of said box being provided with a plurality of indentations, a plate having a notch and adapted to support a source of illumination, a resilient member normally engaged in said notch and cooperating with said indentations to position said plate over said box, a lens projecting below said ceiling and having a plurality of slots and resilient keeper means adapted to be engaged in said slots to maintain said lens in position.

4. A device of the character described adapted to be positioned between the floor and ceiling of a room, said device comprising a shade having its lower portion expanded to present a vertical rim portion and a ledge, a circumferential flange extending at right angles from said vertical rim, an outlet box formed integral with the upper portion of said shade, a cover plate for said outlet box, resilient means for removably positioning said cover plate in said box, said cover plate being apertured to receive a lamp receptacle, a lens having slotted side walls and resilient keeper means carried by said shade and having nose portions adapted to be inserted in the slots of said side walls to maintain said lens in a projected position below the ceiling.

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