Jan. 12, 1926. **1,569,493**

P. M. HOTCHKIN

COVE REFLECTOR AND HOLDER THEREFOR

Filed August 29, 1921 2 Sheets-Sheet 1

Fig. 2.

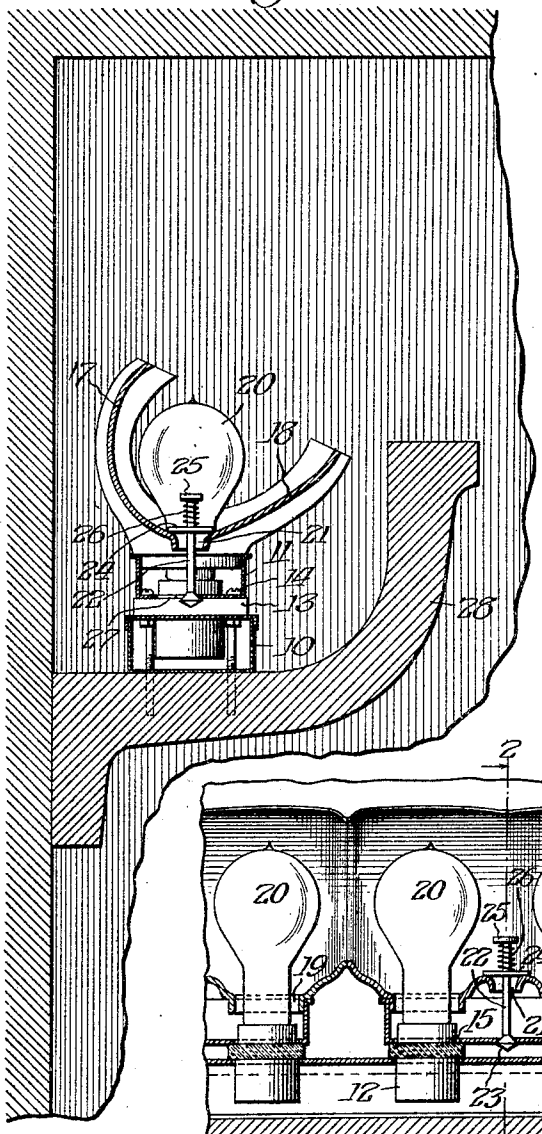
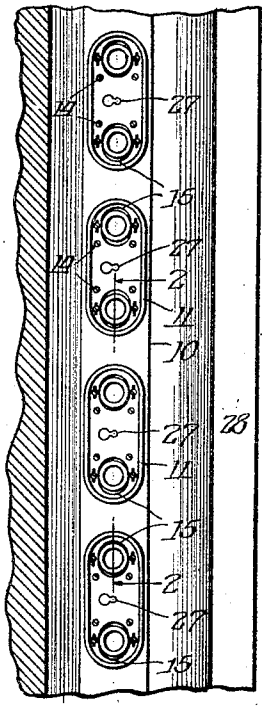


Fig. 3.



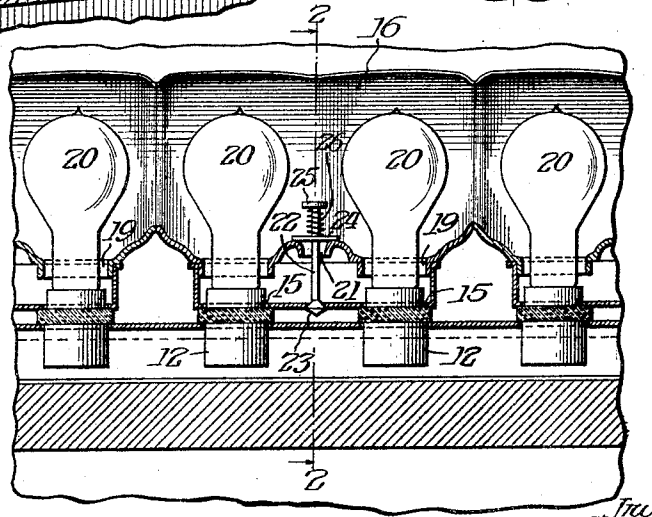


Fig. 1.

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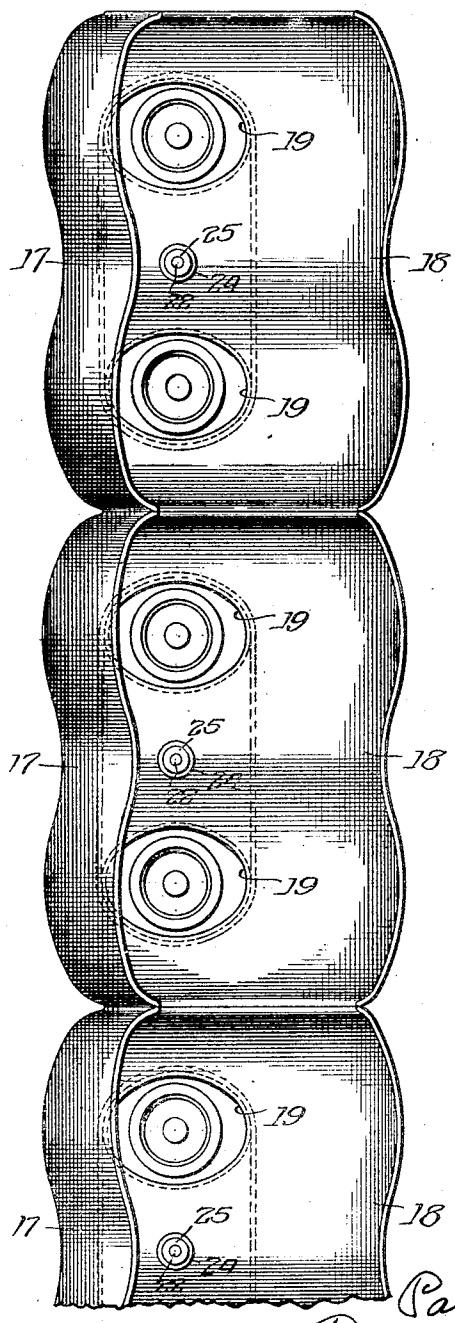

Fig. 4

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Patented Jan. 12, 1926.

1,569,493

UNITED STATES PATENT OFFICE.

PAUL M. HOTCHKIN, OF CHICAGO, ILLINOIS.

COVE REFLECTOR AND HOLDER THEREFOR.

Application filed August 29, 1921. Serial No. 496,214.

To all whom it may concern:

Be it known that I, PAUL M. HOTCHKIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cove Reflectors and Holders Therefor, of which the following is a specification.

The present invention relates to electric lighting fixtures, and more particularly is concerned with fixtures for illuminating from concealed sources, such as coves, cornices and similar locations.

The main and primary object of the invention is to provide a lighting fixture of the type mentioned the construction of which is such as to permit ready assembly of the parts thereof so that installation of the several units may be accomplished with facility and ease. When so installed the invention provides for uniform reflection and distribution of the light, and the units are held in assembled relation without liability of displacement. When however it is desired to separate the units, this may also be done with facility and ease, provision being made for freeing the respective units when such becomes necessary either because of damage to the unit, or for inspection purposes.

A further object of the invention is the provision of a lighting fixture the parts of which are so organized and related as to afford a high degree of flexibility in the installation of the units, thus enabling combining of the latter to suit varying requirements of illumination, and providing a fixture readily adaptable to the peculiar demands imposed by indirect lighting.

With these and other objects and advantages in view which will appear as the nature of the improvements is better understood, the invention consists substantially in the novel construction, combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and finally pointed out in the appended claims.

A practical embodiment of the invention is presented in the disclosure herein, but this is not to be taken in a limiting or restrictive sense, it being intended to delineate to the art an appropriation of the concept and its application in practical form to the purposes for which the invention is contemplated.

In the drawings—

Fig. 1 is a longitudinal sectional view of a lighting fixture constructed in accordance with the present invention and illustrated in applied position:

Fig. 2 is a transverse sectional view on line 2—2, Fig. 1;

Fig. 3 is a top plan view of the fixture with the reflectors removed; and

Fig. 4 is also a top plan view, on an enlarged scale, illustrating a series of units in associated relation.

Referring now in detail to the accompanying drawings, the numeral 10 designates a wiring box which may be of any approved construction. This contains the usual conductors for feeding current to the illuminating elements, the conductors being omitted in order to show more clearly the other structural features.

Arranged in superimposed relation with respect to the box 10 are the units of the herein described fixture. These units are so related that any number of the same may be associated with respect to each other to give the required intensity of illumination, and when so associated the units provide substantially a continuous reflector which affords uniform reflection and distribution of the light emanating from the illuminating elements. To the accomplishment of this end each unit includes an elongated holder 11, preferably formed of metal, and thereby enabling the same readily to be stamped into shape, which holder is of dishlike construction and elongated to the desired extent for accommodating the requisite number of illuminating elements. As illustrated in the drawings, two sockets 12 are associated with each holder. The said sockets 12 may be of any aproved construction but preferably of that type having an attaching flange 13 whereby to permit the sockets to be connected to the holder 11. This is effected by screws or bolts 14 which pass through the bottom of the holder 11 and the flange 13 of the sockets 12, it being understood the holder 11 is provided with openings 15 for receiving the upper portions of the sockets. It will be further understood that the sockets 13 are formed of insulating material, such as the usual por-

celain. Mounted upon each of the holders 11 is a reflector 16. This reflector is of trough-like formation, the same including a substantially vertically disposed back 17 and an upwardly and forwardly inclined bottom 18. The reflector 16 has in its bottom portion a plurality of flanged openings 19 for accommodating the illuminating elements 20, which may be any desired type of electric lamp. The necks of the lamps 20 are received by the openings 19 and are fitted in the sockets 12 in the usual way.

Arranged at the central portion of the reflector 16 is an opening 21 in which is fitted a locking stud 22. This stud includes an elongated shank having a conical head 23 at its lower end, said shank carrying a perforated disk 24 and having at its upper end a button 25. Interposed between the disk 24 and the button 25 is a coil spring 26, which is designed to be compressed by the locking stud 22 when the head 23 is in engagement with the holder 11, whereby to hold the reflector 16 in position on said holder. This is effected by the engagement of the head 23 with a keyhole slot 27 formed at the mid-portion of the holder 11 for convenient passage of the locking stud 22 therein. The enlarged end of the keyhole slot 27 is of sufficient diameter to permit the head 23 easily to pass therethrough, and said head is of greater diameter than the smaller end of the keyhole slot so that when brought into engagement with this smaller end a locking engagement results between the stud 22 and the holder 11. When this engagement takes place the spring 26 is compressed sufficiently to hold the head 23 in the smaller end of the slot 27, and thereby effectually retain the reflector 16 on the holder 11. In this connection it will be observed that the flanges about the openings 19 extend into the holder 11 and lateral and longitudinal movement of the reflector 16 on the holder is thereby prevented.

The numeral 28 designates a cornice or the like which provides a space in which the lighting fixture above described is fitted so that the source of illumination of the space thereby lighted may be concealed. It is within this space that the wiring box 10 is disposed. When installation thus is made a sufficient number of the holders 11 are fitted to the wiring box 10 for the adequate illumination of the space, and they are spaced with respect to each other, as clearly appears in Figs. 1, 3 and 4, so that in the assembly of the reflectors 16 thereon the ends of each reflector will abut against the ends of the adjacent reflectors. Thus the combined reflectors provide substantially a continuous reflector for filling the space in which the fixtures are concealed, and cooperate with each other to provide uniform reflection and distribution of the light into the space to be illuminated. It will be seen from Fig. 2 that the rear walls 17 thereof will reflect in a forward direction the light rays which impinge thereon from the illuminating elements 20, while the forwardly inclined portions 18 will cause an upward reflection of the light rays against the surface of the space, which surface in turn, will deflect these rays forwardly and downwardly in accordance with the angle of impingement of the rays thereon. In assembling the several units, each of which is constituted by one of the holders 11, the sockets associated therewith, and the reflector 16 mounted on the holder, the reflector 16 is pressed into the holder 11 and the locking stud 22 engaged with the keyhole slot 27, whereupon the lamps may be applied to their respective sockets. The contacting of the several reflectors with each other affords a continuous reflecting surface throughout the length of the assembly and gives the required intensity of the distribution of the light for the particular space in which the fixture is installed.

I claim:

1. A lighting fixture of the class described, comprising a wiring element, a holder mounted thereon, a reflector detachably received by said holder, and a locking stud carried by the reflector and detachably engaged with said holder for retaining the latter on said holder.

2. A lighting fixture of the class described, comprising a wiring element, a holder mounted thereon, and provided with a plurality of sockets, a reflector mounted on said holder and provided with openings in registry with said sockets for permitting application of illuminating elements to said sockets, and a locking stud associated with the reflector and having detachable engagement with said holder to retain the reflector detachably on the holder.

3. A lighting fixture of the class described, comprising a wiring element, a holder mounted thereon, and provided with a plurality of sockets, a reflector mounted on said holder and provided with openings in registry with said sockets for permitting application of illuminating elements to said sockets, and a spring controlled locking stud associated with the reflector and having detachable engagement with said holder to retain the reflector detachably on the holder.

4. A lighting fixture of the class described, comprising a wiring element, a holder mounted thereon, a reflector associated with said holder, sockets carried by said holder, said reflector being provided with openings in registry with said sockets to permit the application of illuminating elements to said sockets, said reflector also being provided with an opening between the openings for receiving the illuminating ele-

ments, and a spring controlled locking device arranged in said intermediate opening and having detachable engagement with the holder for retaining the reflector on the holder.

5. A lighting fixture of the class described, comprising a wiring element, a holder mounted thereon, sockets arranged in said holder, a reflector mounted on said holder and provided with openings in registry with said sockets for application of illuminating elements to said sockets, a centrally disposed locking stud carried by said reflector and provided at its lower end with an engaging head, said holder being provided with a keyhole slot for receiving said engaging head, whereby to permit detachable engagement of the locking stud with the holder, a disk surrounding said locking stud, a button carried by said stud, and a spring interposed between said disk and said button adapted to be compressed when the locking stud is engaged with the holder, whereby to retain the reflector on said holder.

6. A lighting fixture of the class described, comprising a wiring element, a plurality of units supported by said wiring element and each including a holder and a reflector, said holders being fixedly connected to the wiring element and located relatively to each other to permit the respective reflectors to be fitted thereto and to lie in abutting relation with each other, whereby to provide a continuous reflector throughout the assembled units, the reflectors being removably mounted on said holders, and means carried by the reflectors for retaining the reflectors in detachable engagement with said holders.

7. A lighting fixture of the class described, comprising a wiring element, a plurality of units supported by said wiring element and each including a holder and a reflector, said holders being fixedly connected to the wiring element and located relatively to each other to permit the respective reflectors to be fitted thereto and to lie in abutting relation with each other, whereby to provide a continuous reflector throughout the assembled units, the reflectors being removably mounted on said holders, and spring controlled locking devices associated with the reflectors and co-operating with the respective holes for detachably engaging the reflectors with said holders.

8. A lighting fixture of the class described, comprising a wiring element, a plurality of units supported by said wiring element and each including a holder and an open-ended trough-like reflector, said holders being fixedly connected to the wiring element and located relatively to each other to permit the respective reflectors to be fitted thereto and to lie in abutting relation with each other, whereby to provide a continuous reflector throughout the assembled units, the reflectors being removably mounted on said holders, and means for retaining the reflectors in detachable engagement with said holders.

9. A lighting fixture of the class described, comprising a wiring element, a plurality of units arranged on said element and supported thereby, each of said units including an elongated holder and a reflector, said holders being fixedly connected to the wiring element and located relatively to each other to permit the respective reflectors to be fitted thereto and to lie in abutting relation with each other, whereby to provide a continuous reflector throughout the assembled units, each of said reflectors being seated in its holder and removable therefrom, sockets mounted on said wiring element for receiving illuminating units, said reflectors being provided with openings adapted to register with said sockets and to receive the illuminating units mounted in the sockets, and a spring-controlled fastening device carried by each of said reflectors and detachably engaging the holder with which the reflector is associated for retaining the reflector in detachable engagement with its holder.

10. A lighting fixture of the class described, comprising a wiring element, a plurality of units arranged on said element and supported thereby, each of said units including an elongated holder and a reflector, said holders being fixedly connected to the wiring element and located relatively to each other to permit the respective reflectors to be fitted thereto and to lie in abutting relation with each other, whereby to provide a continuous reflector throughout the assembled units, each of said units being seated in its holder and removable therefrom, sockets mounted on said wiring element for receiving illuminating units, said reflectors being provided with openings adapted to register with said sockets and to receive the illuminating units mounted in the sockets, said reflectors also having depending flanges surrounding the openings thereof adapted to fit within the holders for positioning the reflectors thereon, and spring-controlled fastening devices carried by said reflectors and detachably engaging the holders for retaining the reflectors in detachable engagement with the holders.

In testimony whereof I have hereunto signed my name.

PAUL M. HOTCHKIN.

Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,569,493, granted January 12, 1926, upon the application of Paul M. Hotchkin, of Chicago, Illinois, for an improvement in "Cove Reflectors and Holders Therefor," an error appears in the printed specification requiring correction as follows: Page 3, line 53, claim 7, for the word "holes" read *holders;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 9th day of March, A. D. 1926.

[SEAL.]

M. J. MOORE,
Acting Commissioner of Patents.