Jan. 6, 1925. 1,522,204

J. A. O'NEIL

INTERMEDIATE LAMP HOLDER

Filed Aug. 7, 1922

Fig.1.

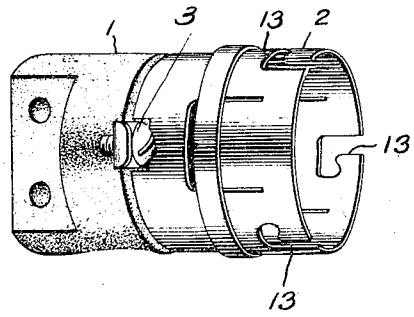


Fig.2.

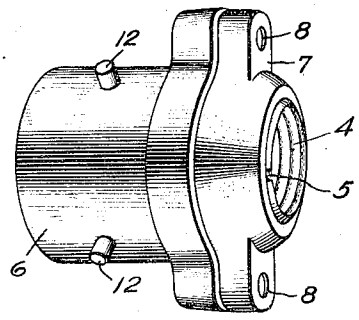


Fig.3.

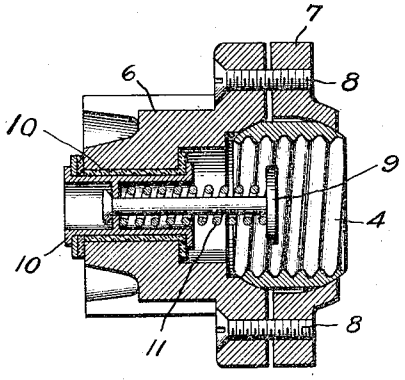
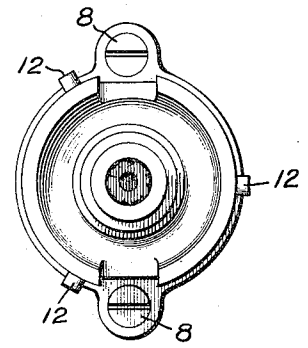


Fig.4.



Inventor
James A. O'Neil
by Albert G. Davis
His Attorney

Patented Jan. 6, 1925. 1,522,204

UNITED STATES PATENT OFFICE.

JAMES A. O'NEIL, OF LYNN, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

INTERMEDIATE LAMP HOLDER.

Application filed August 7, 1922. Serial No. 580,110.

To all whom it may concern:

Be it known that I, JAMES A. O'NEIL, a citizen of the United States, residing at Lynn, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Intermediate Lamp Holders, of which the following is a specification.

The present invention relates to incandescent lamp holders for use on locomotive headlights and similar projecting devices requiring accurate positioning of the source of illumination relative to the focus of the reflector or lens.

As is well known, practically no two lamps are alike in the matter of the position of the filament relative to the base; in some lamps the variation is in the axial distance of the filament from the end of the base and in others the filament is off center or to one side of the lamp axis a greater or less distance. Heretofore many devices have been proposed and used whereby the lamp may be adjusted radially and axially to bring its filament into proper relation to the focus of the projecting means with which it operates. However, they have not been found entirely satisfactory in practice for the reason that the engineer or other user is not ordinarily possessed of the skill or patience to make the required accurate adjustments.

The object of my invention is to provide an intermediate lamp holder to which the lamp may be attached and accurately adjusted by an expert with the aid of a lamp setter or other apparatus entirely independent of the projector, and when needed for use the intermediate holder with its attached lamp may be connected to the projector socket in the usual manner of connecting a lamp to its socket without further adjustment or attention on the part of the installer.

One embodiment of the invention is shown in the accompanying drawing in which Fig. 1 is a perspective view of the socket adapted to be permanently installed in the projector; Fig. 2 is a perspective view of the intermediate lamp holder; Fig. 3 is an axial section thereof, and Fig. 4 is a rear end elevation.

The socket is of well known construction consisting of a porcelain base 1, bayonet shell contact 2 and binding posts 3 to shell and center contacts. The socket is ordinarily permanently fastened to the projector shell (not shown) with its axis coinciding with the focal axis.

The intermediate lamp holder comprises a screw shell contact 4 adapted to receive the threaded base of an ordinary incandescent lamp (not shown), and cut through one side wall at 5 to render it compressible, while its outer surface is made spherical for ball and socket adjustment relative to the body 6 of the holder and the clamping plate 7 adapted to be drawn toward the body part 6 by set screws 8 to clamp the screw shell contact in adjusted position relative to the body part and also to spring the contact shell into gripping relation on the lamp base. The center contact is in the form of a headed plunger 9 guided in a bushing 10 encased in sheet insulation 10′ secured concentrically in the body part 6 and normally forced outward by a helical spring 11 thrusting against the inner side of its head and a part of the bushing 10. The rear end of the body part 6 is made cylindrical to fit within the bayonet shell contact 2 of the socket and has radial studs 12 adapted to enter and interlock with the bayonet slots 13 of the socket contact shell.

When a lamp is connected to the intermediate holder by the expert trimmer, it is screwed into the screw shell contact 4 until the filament is at exactly the desired level, the center contact 9 receding correspondingly against the reaction of its spring 11, the lamp is then moved radially until the filament is accurately positioned relative to the axis of the holder, the screws 8 are then turned home to rigidly clamp the lamp in its adjusted position.

Lamps thus secured in adjusted position in the intermediate holders are supplied to the locomotive engineers or firemen or other users and installed as needed by merely inserting the rear end of the intermediate holders in the socket in the usual and well known manner of connecting a lamp to a socket, and at the same time accuracy of position of the lamp filament to the focalizing means is assured.

While I have shown and described the best embodiment of the invention known to me, I do not desire to be restricted thereto.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. An intermediate lamp holder having provisions at one end for mechanically and

electrically engaging a lamp socket, and provisions at the other end for mechanically and electrically engaging an incandescent lamp and permitting radial and axial adjustment of the lamp therein.

2. An intermediate lamp holder having provisions at one end for mechanically and electrically engaging a lamp socket, provisions at the other end for mechanically and electrically engaging an incandescent lamp and permitting radial and axial adjustment of the lamp therein, and means for clamping the lamp in adjusted position.

3. An intermediate lamp holder having a body part provided with means for connection to a lamp socket, a ring adapted to receive the base of a lamp and mounted for universal adjustment on said body part, and means for fixing said ring and the lamp carried thereby in adjusted position.

4. An intermediate lamp holder having a body part provided with means for connection to a lamp socket, a split ring adapted to receive the base of a lamp and mounted for universal adjustment on said body part, and a clamping plate surrounding said ring and operating to compress it upon the base of the lamp and to fix it in adjusted position.

5. An intermediate lamp holder having a body part provided at one end with means for connection to a lamp socket and at the other end with a ring seat, a clamping plate secured to said body part adjacent the seat thereof, a split ring lamp contact having a spherical exterior located between said seat and said clamping plate.

6. An intermediate lamp holder having a body part provided with means for connection to a lamp socket, a universally adjustable lamp holding contact mounted upon said body part, and a spring-pressed center contact telescopically supported axially of said body part through insulation.

In witness whereof, I have hereunto set my hand this 2nd day of August, 1922.

JAMES A. O'NEIL.