Feb. 20, 1940. J. L. SPENCE, JR 2,191,292

PREFOCUS PROJECTION LAMP

Filed Dec. 10, 1938

Fig. 1.

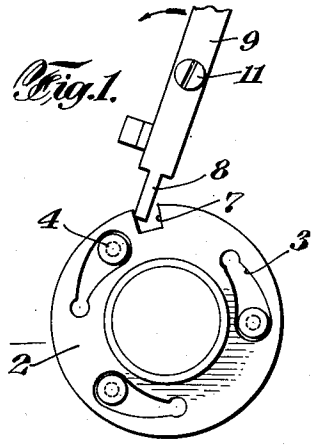


Fig. 3.

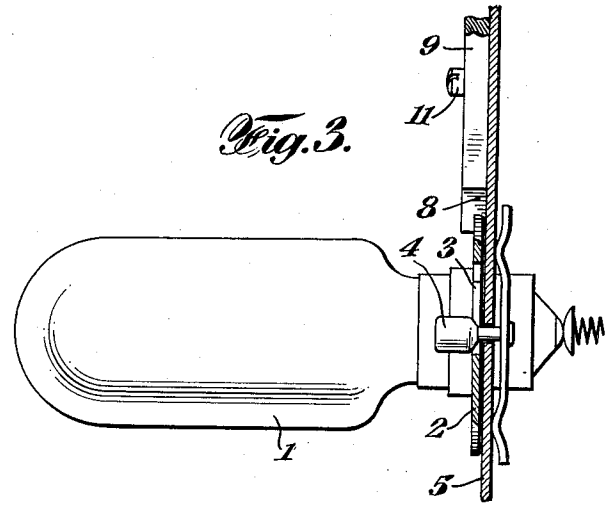
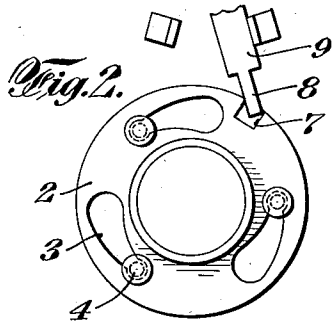


Fig. 2.



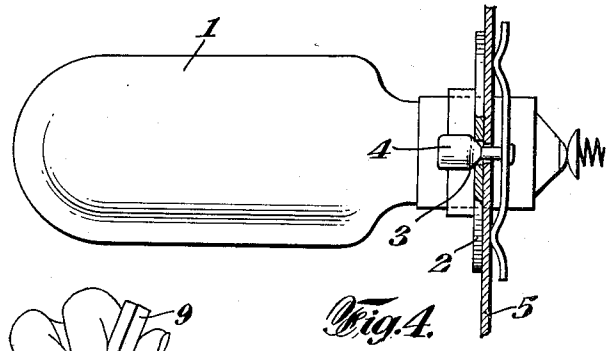
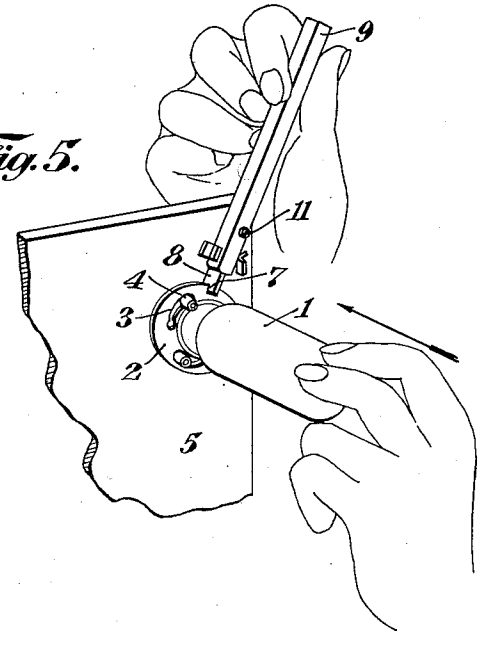


Fig. 4.

Fig. 5.



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PREFOCUS PROJECTION LAMP

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Application December 10, 1938, Serial No. 244,970

3 Claims. (Cl. 176—32)

This invention relates to projection lamps and more especially to the means for positioning the lamp correctly and with a minimum of effort.

Projection lamps are made so that the motions required in putting them into their sockets are three. First, bringing the base to a predetermined registering position with the socket. Second, pressing the lamp toward the base against a contact spring. Third, rotating the lamp to the operating position while it is under pressure.

When the lamp is small and particularly when the lamp during use must lie between other closely related parts, such as condensers and reflectors, it becomes difficult, if not impossible, to impart the final motion which is a motion of rotation under pressure. The reason is that the lamp cannot be properly gripped by the fingers.

My present invention makes possible the easy performance of this third operation by permitting one hand to apply the pressure while the other imparts the rotatory motion. The invention also makes possible the removal of the lamp in a simpler fashion than with present methods.

Other objects, novel features and advantages of this invention will become apparent from the following specification and accompanying drawing wherein Fig. 1 is a plan view showing the lamp in the position before rotation, Fig. 2 is a side elevation, partly in section, of Fig. 1, Fig. 3 is a plan view showing the lamp after rotation, Fig. 4 is a side elevation, partly in section, of Fig. 3, and Fig. 5 shows the operation with human hands.

Referring now to Figs. 1 and 2, the lamp 1 has a flange 2 which has slotted holes 3 fitted over pins 4. To bring the lamp into place, it is necessary to push lamp 1 towards socket support 5 and against the pressure of a socket spring not shown. At the same time, the lamp 1 and its flange 2 are rotated so that the narrow parts of the slots 3 engage the necks 6 of the pins 4, as shown at Figs. 3 and 4.

A notch 7 in the flange 2 receives the tongue 8 of the lever 9 pivoted at pivot 11.

Operation is as follows. One hand grasps the lamp 1 as at Fig. 5, places the slots 3 over the pins 4 and at the same time brings the notch 7 over the lever tongue 8. The lamp is pushed against socket support 5 against the spring pressure (not shown) until the flange is seated, at which time the other hand pushes the lever 9 thereby rotating the lamp until the pins 4 are locked into the narrow neck of the slots. The lamp is then correctly in place.

Removal of the lamp involves simply reversing the motion of the lever, only one hand being necessary. The lamp, because of the spring pressure, is partly ejected after it has been rotated to the position shown at Figs. 1 and 2.

Stops 10 may be provided to positively limit the motion of the lever.

The positions of notch and tongue may be reversed, without in any way departing from the spirit of the invention herein disclosed.

Having described my invention, I claim:

1. In combination, a spring-contact lamp socket, a support therefor, a lamp having a base fitting said socket under pressure and a prefocusing flange, a notch in the rim of said flange, means for imparting rotary motion to the lamp while it is under pressure which consists of a pivoted lever supported adjacent to the said socket, said lever having a tongue which fits said notch.

2. In combination, a spring-contact lamp socket, a support therefor, a lamp having a base fitting into said socket and a flange, means on said support engageable with said flange upon rotation of the lamp to retain the lamp base in the socket, and a lever pivoted to said support, the end of said lever and said flange being interconnected to effect rotation of said lamp by oscillation of said lever.

3. In combination, a spring-contact lamp socket, a support therefor, a lamp having a base fitting said socket and a flange member, said flange member and support having interengageable means rendered effective upon rotation of the lamp to retain the lamp base in the socket, and a lever member pivoted to said support, one of said members having a notch and the other of said members having a tongue fitting thereinto whereby oscillation of said lever effects rotation of said lamp.

JOHN LIVINGSTON SPENCE, JR.