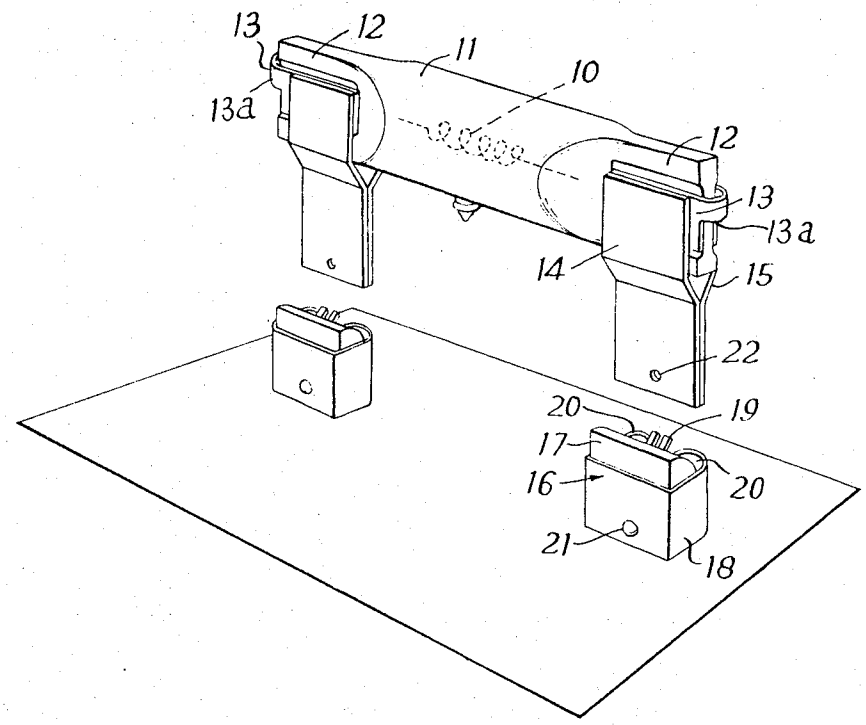
Dec. 26, 1967 J. W. STRANGE ETAL 3,360,765

MOUNTING OF TUNGSTEN-HALOGEN LAMPS

Filed May 27, 1966



United States Patent Office

3,360,765

Patented Dec. 26, 1967

3,360,765

MOUNTING OF TUNGSTEN-HALOGEN LAMPS

John W. Strange and Alex L. Halberstadt, London, England, assignors to British Lighting Industries Limited, London, England

Filed May 27, 1966, Ser. No. 553,426
4 Claims. (Cl. 339—50)

The present invention relates to the mounting of tungsten-halogen lamps. These lamps have a tungsten filament enclosed in a quartz or hard glass envelope with a filling including a halogen such as iodine, and are finding widespread use as compact light sources.

Because of the small size of the filament its positioning in relation to the optical system with which the lamp is used is of crucial importance. For example, in one application movement of the filament by .04 inch was found to alter the peak intensity of the light beam obtained by 15 to 30%. Maintenance of this degree of accuracy in the manufacture of the lamps would be extremely difficult. The quartz envelope is heated up to a plastic condition and pinched on to each of the leads carrying the filament. While little movement takes place in the direction of the pinch it is difficult to prevent any movement in a direction at right angles.

In accordance with the present invention there is provided a mounting assembly for a tungsten-halogen lamp, having at each end of the lamp a U-shaped strap embracing the press of the lamp, the filament lead being electrically connected to the strap, a blade-like contact having a forked end whose two arms are secured to the outer faces of the strap, the contact extending from the lamp in the plane of the press in a direction at right angles to that of the filament, and a socket removably receiving the contact.

With this assembly the filament can be positioned relative to the fixed sockets in a variety of ways in order to achieve exact location of the filament with respect to a reflector or other optical system. For example, the position of the blades relative to the straps may be adjusted before they are secured together by soldering or other conventional means. Alternatively, the position of each blade in its socket can be varied by changing the length of the blade or by positioning of a notch or aperture in the blade which is engaged by a detent or protuberance in the socket.

The accompanying drawing shows one example of a mounting in accordance with the invention.

The lamp is of conventional form and has a filament **10** in a quartz envelope **11** which has presses or pinches **12** at each end. Around each press **12** is a U-shaped strap **13** which is connected at **13***a* to the lead extending through the press. As is conventional this lead includes a strip of molybdenum foil to form a secure seal with the quartz.

Each of the straps **13** is embraced by a fork, the arms of which are two copper strips **14** and **15** which extend in the plane of the press **12** and at right angles to the length of the lamp. Each of the strips **14** and **15** is attached at one end to the strap **13** and at the other end to the other of the strips to form a blade-like contact for insertion in a socket **16**.

The socket **16** is formed by a block **17** of aluminum or brass and a spring clip **18** of Inconel. The block **17** has a rounded top to guide the contact formed by the strips **14** and **15** to one side of the block. Here it is guided on the other face by inclined prongs **19** projecting from the spring clip **18**. It is then gripped between the block **17** and ends **20** of the spring clip **18**. The position of the contact is determined by a brass rivet **21** passing through the block **17** and engaging in an aperture **22** in the contact. The position of this aperture **22** can be altered to compensate for differences in the position of the filament **10** with respect to the press **12** in individual lamps. Preferably however the position of the filament is adjusted by control of the position of the strips **14** and **15** relative to the straps **13** before they are soldered together.

We claim:

1. A lamp mounting assembly comprising a lamp having an envelope, a press at each end of the lamp envelope, a filament enclosed within the envelope, leads connected to the filament and extending one through each press, a separate generally U-shaped strap embracing each press and electrically connected to one of the leads, each strap having two limbs disposed on opposite sides of the press, blade-like contacts extending along the plane of the presses at right angles to the direction of the lamp filament, each contact having a forked end with two arms which are secured against the outer faces of the limbs of the corresponding strap, and contact sockets removably receiving the blade-like contacts.

2. A lamp mounting assembly as claimed in claim **1** in which each blade contact has an aperture and each socket has a detent engageable in the aperture.

3. A lamp mounting assembly as claimed in claim **1** in which each socket has a rounded block to guide one face of the contact and a spring clip to press against the other face of the contact.

4. A lamp mounting assembly as claimed in claim **1** in which the lamp is a tungsten-halogen lamp.

References Cited

UNITED STATES PATENTS

2,211,605	8/1940	Moehler	339—52 X
2,284,392	5/1942	Heiser	339—195
2,705,310	3/1955	Hodge	339—144
2,709,793	5/1955	Johansson	339—258

RICHARD E. MOORE, *Primary Examiner.*