

[54] **ELECTRIC FILAMENT LAMP**

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[30] **Foreign Application Priority Data**

Sept. 9, 1971 Germany..... 12394

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[51] Int. Cl..... **H01j 1/88**

[58] Field of Search..... 313/110, 274-278, 313/115, 117; 29/475; 219/80, 87, 86, 150 R, 152, 56, 58, 149, 78

[56]

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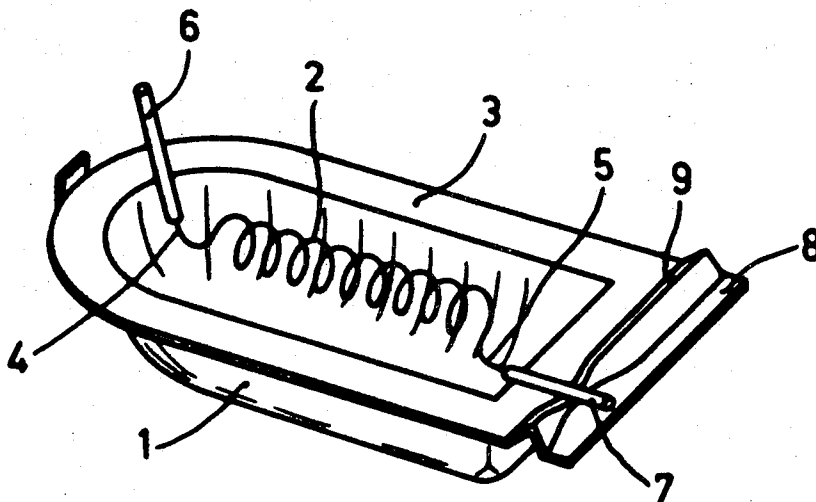
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[57]

**ABSTRACT**

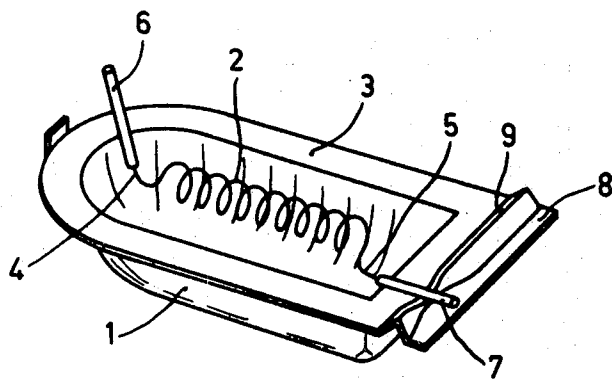
The invention relates to an electric filament lamp, in particular a halogen twin lamp for motor-cars, in which an anti-dazzle cap is incorporated which partly screens one of the filaments and to which one or more current conductors are spot-welded. In the welding place, the screening cap comprises one or several ridges which are at least partly squeezed by the spot-welding operation.

**3 Claims, 1 Drawing Figure**



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3,824,421



**ELECTRIC FILAMENT LAMP**

The invention relates to an electric filament lamp, in particular a halogen twin lamp for motor-cars, in which an anti-dazzle filament and a cap which partly screens said filament are arranged in the lamp envelope, the anti-dazzle filament being secured to a flat portion of said cap with one of its straight ends or with a rod-shaped or tubular conductor connected thereto by means of a spot-welding operation. Such a filament lamp is known.

In manufacturing this known filament lamp, the straight end of the filament or the conductor connected there to engages over a comparatively large length the flat part of the cap during the spot-welding operation. This produces a small contact resistance between the cap and the relevant end of the filament or the conductor, so that a high welding current is necessary. The detrimental result hereof is a high energy consumption and a great detrition of the welding electrodes.

It is the object of the invention to avoid this drawback. For that purpose, in manufacturing the electric filament lamp according to the invention a cap is used the flat part of which comprises at least one ridge in the place where the relevant straight end of the conductor is welded to the cap. Said ridge extends transverse to the longitudinal direction of the end of the filament or the conductor which is forced into the ridge by the spot-welding operation. By using a cap having one or several ridges a larger contact resistance is formed as a result of which a lower energy consumption and a small detrition of the welding electrodes is achieved. Experiments have furthermore demonstrated that the spot-weld in a cap having a flat part with one or several ridges is considerably stronger than in the known cap.

The ridge is preferably in the form of a pleat in the material of the flat part of the cap, said pleat having a V-shaped cross-section.

The invention will be described in greater detail with reference to a drawing, in which a cap 1 of a filament according to the invention is shown. The helically wound anti-dazzle filament 2 extends approximately level with the edge 3 of the cap 1. The straight ends 4 and 5 of the filament 2 are incorporated in metal sleeves 6 and 7, respectively. The sleeve 7 together with the straight end 5 is secured to the flat edge 8 of the cap 1 by means of a spot-welding operation. Said edge 8 comprises a ridge 9 which in this embodiment extends throughout the length of the edge 8.

The sleeve 7 with the filament end 5 incorporated therein is connected as follows: First the sleeve 7 is moved to such a position relative to the flat edge 8, that the sleeve 7 engages the raised portion of the ridge. The contact surface between the ridge 9 and the sleeve 7 is substantially punctiform. The crossing of the ridge 9 and the sleeve 7 is then arranged between the electrodes of a spot-welding device, after which the spot-welding operation is carried out. As a result of this spot-welding operation, the sleeve 7 is forced into the ridge 9. The parts of the ridge 9 present on either side of the sleeves 7 are squeezed more or less.

In this example the ridge 9 has a V-shaped cross-section, as a result of which a very small contact surface exists between the ridge 9 and the sleeve 7 prior to the spot-welding operation.

Of course, the end 5 of the filament may also be spot-welded directly to the edge 8 so without the interposition of the sleeve 7.

The ridge 9 shown in the FIGURE extends over the full length of the edge 8, only locally interrupted by the spot-welding operation. Of course, a shorter ridge which covers only the area of the welding place will do. Furthermore, the edge 8 may also be constructed with two or more ridges which preferably extend in parallel and which extend throughout the length of the edge 8 or not.

What is claimed is:

1. In an electric filament lamp, in particular a halogen twin lamp for motor-cars, in which an anti-dazzle filament and a cap which partly screens said filament are arranged in the lamp envelope, the anti-dazzle filament being secured to a flat part of said cap with one of its straight ends connected thereto by means of a spot-welding operation, the improvement comprising that the flat part of the cap includes at least one ridge extending with its raised portion to the end of the filament and extends transverse thereto with its longitudinal direction, the said end of the filament being spot-welded to said ridge, said ridge including a deformation resulting from the spot-welding operation.

2. An electric filament lamp as claimed in claim 1 wherein the ridge is in the form of a pleat in the material of the flat part of the cap, said pleat having a V-shaped cross-section.

3. An electric filament as claimed in claim 1 wherein a tubular conductor is connected to one of the ends of the filament, the conductor being spot-welded to the ridge.

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UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,824,421 Dated July 16, 1974

Inventor(s) Leffert Schuringa; Herman Albert Johannes Roefs

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

IN THE TITLE PAGE

"[30] Foreign Application Priority Data

Sept. 9, 1971 Germany.....12394"

should be

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Sept. 9, 1971.....The Netherlands ...7112394

Signed and sealed this 29th day of October 1974.

(SEAL)  
Attest:

McCOY M. GIBSON JR.  
Attesting Officer

C. MARSHALL DANN  
Commissioner of Patents

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