

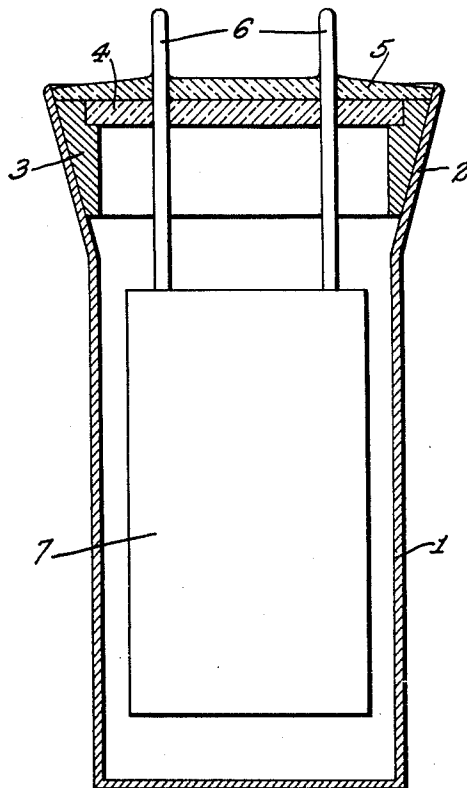
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R. SCHARFNAGEL

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ELECTRON TUBES

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INVENTOR.

RUDOLF SCHARFNAGEL

BY

E. J. Minney
Attorney

UNITED STATES PATENT OFFICE

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ELECTRON TUBE

Rudolf Scharfnagel, Stuttgart, Germany; vested
in the Alien Property Custodian

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4 Claims. (Cl. 250—27.5)

Electron tubes are known whose bulb is made of metal and have an open end provided with a ceramic cover in which the current leads are mounted. Such cover may be a conical disc arranged to bear against a conical part of the bulb. This conical part serves to support the cover and electrode system during the act of sealing the cover into the bulb.

The conical surface of the cover, however, is small compared with that of the bulb, that is, the disc is relatively thin axially of the bulb and disc in comparison with the axial length of the conical part of the bulb. Therefore, when sealing the cover into the conical part of the bulb the electrode system may happen to assume a position not coaxial with the bulb.

According to the present invention, in order to avoid this disadvantage the ceramic disc carrying the electrode system is mounted in the conical part of the bulb with the aid of a conical metal ring, having an axial length similar to that of the conical part of the bulb, as will be understood from the following description and accompanying drawing in which the single figure shows a partially diagrammatic sectional view of one example of electron tubes as provided by the invention.

1 denotes the metal bulb. Such bulbs may be made from a seamless drawn tube, from which for this purpose sections of suitable length are cut off. The tubular pieces so obtained are then at one end provided with a conical enlargement 2, having a conical inner surface. The other end thereof is closed, as by welding a disc to it. The wall of the bulb is of the same thickness throughout. Within the conical part 2 of the bulb a conical metal ring 3 is arranged so that its conical outer surface contacts with part 2. Ring 3

and a cylindrical ceramic disc 4 constitute the cover for the bulb. Disc 4 is encircled and supported by the ring 3. The leads 6 to the electrode system 7 are sealed into the disc 4 by means of a glass seal 5 by which also the parts 2, 3, 4 are sealed together.

What is claimed is:

1. In an electrical discharge device, a metallic tube closed at one end and open at its other end, said open end having an inner conical seating surface, and means for covering said open end comprising a metallic ring having a conical outer surface seating in the inner surface of said open end, a thin ceramic disc supported on said metallic ring, electrodes carried by said ceramic disc, and a continuous glass layer over the open end of the tube, sealing said disc to said ring and said ring to said tube.

2. The combination according to claim 1, in which said ring is formed with an internal annular shoulder at its outer end, for supporting said ceramic disc.

3. The combination according to claim 1, in which the inner conical seating surface is deeper than the thickness of said ring, and the glass layer over the end of the tube lies over said ring and contacts a small part of the inner conical seating surface.

4. The combination according to claim 1, in which the inner conical seating surface is deeper than the thickness of said ring, and said ring is formed with an internal annular shoulder at its outer end for supporting said ceramic disc, whereby the glass layer over the end of the tube presses said disc against said shoulder and contacts a small part of the inner conical seating surface.

RUDOLF SCHARFNAGEL.