

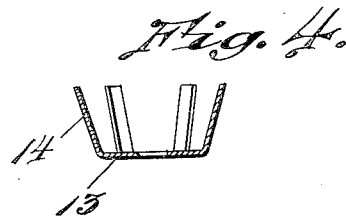
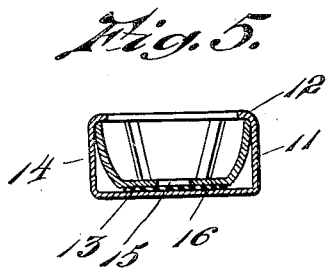
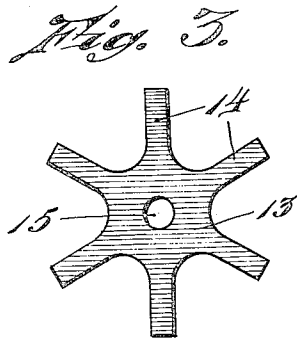
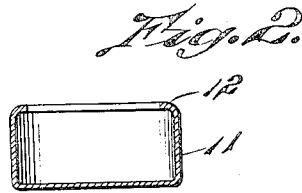
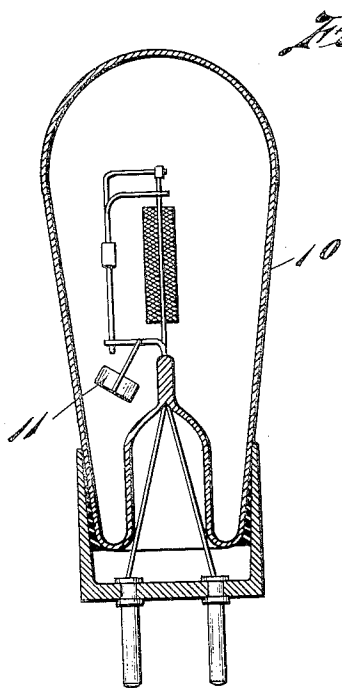
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A. B. COLBY

1,916,204

VACUUM TUBE

Filed June 19, 1929



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VACUUM TUBE

Application filed June 19, 1929. Serial No. 372,074.

The present invention relates to vacuum tubes for radio or other use, and has particular reference to improvements in installing getters therein.

5 The present method of installing or supporting a getter in such tube includes welding the getter to a small retainer cup, which is positioned within the tube.

10 One object of my invention is to position and retain the getter within the retainer cup without a welding operation.

Another object is to simplify and facilitate the assembly of the getter within the retainer cup.

15 Other objects and advantages will be readily apparent from the detailed description following, the novel features being particularly pointed out in the appended claims.

In the drawing:

20 Fig. 1 is a sectional elevation of a vacuum tube, showing the preferred positioning of the getter retaining cup.

Fig. 2 is a sectional elevation of the retainer cup.

25 Figs. 3 and 4 are respectively a plan view of the holder blank, and of the holder after being formed; and

Fig. 5 is a sectional view of the assembled cup, getter and holder.

30 The usual welding of getters to the retainer cup, in view of the ready volatilization of the getter material, which is preferably magnesium, is a somewhat difficult operation, requiring very exact temperature control and expert workmanship.

35 In order to eliminate this welding operation, I have provided a very simple mechanical device for temporarily retaining the magnesium in the cup, by inserting a keeper member into the cup in such a way as to retain the magnesium member therein until it is subsequently exploded in the tube; and the following is a detailed description of the
45 present embodiment of my invention showing one arrangement of parts by which these advantageous results may be accomplished.

Thus, considering Fig. 1, the vacuum tube 10, having the usual filament, grid, and plate, 50 has the getter-containing retainer cup 11,

preferably secured to one of the lead-in or support wires, in the position shown.

The retainer cup 11 is drawn out of sheet metal, and has its edges 12 folded over to form a retaining lip. A holder element 13, 55 blanked out of sheet metal with radial fingers 14 and a central opening 15, is formed as shown in Fig. 4, and is snapped into the cup 11 to lock the getter 16 within the cup.

When the getter is volatilized in the usual 60 manner within the vacuum tube to seal the interior wall of the tube and absorb released gases, the spaced fingers and central opening facilitate the volatilization and the spring fingers 14 serve to lock the holder within the 65 retainer cup. The cup engaging members of the holder are preferably sufficiently resilient to grip the sides of the cup when inserted therein.

While I have described one specific em- 70 bodiment of my improved getter-holding device, I may resort to such mechanical variations and changes as are within the scope of the invention as defined by the appended claims.

I claim:

1. In a vacuum tube, a retainer cup, a lip thereon, a getter therein, and a holder engaging said getter and having spring arms spaced a predetermined distance apart en- 80 gaging said cup and prevented by said lip from being withdrawn from the cup.

2. A getter retainer comprising a hollow mounting member having a bottom wall, a sheet metal spider member for holding the 85 getter material between it and said wall, and cooperating means on said members to hold them in assembled relation.

3. A getter retainer comprising a hollow mounting member having a bottom wall, a 90 sheet metal spider member for holding the getter material between it and said wall, said spider member having a plurality of arms, and cooperating means on said member to engage said arms to hold said members in 95 assembled relation.

4. A getter retainer comprising a hollow mounting member having a side wall provided with an abutment, a spider member 100 for holding the getter material between it

and said wall, said spider member having a plurality of spaced resilient arms unconnected at their ends for engaging said abutment to maintain the spider and member in assembled relation.

5 5. A getter retainer comprising a hollow cup having bottom and side walls with an infurled edge lip, a member having a body with a hole therein and resilient arms extending therefrom to engage said lip and maintain getter material between said body of the member and the bottom wall of said cup.

10 6. A getter retainer comprising a hollow cup having a bottom wall and a side wall, an abutment provided on said side wall, a member having a diameter less than a diameter between opposite portions of said side wall with outwardly flaring arms to engage said abutment and maintain getter material between it and the bottom wall of said cup.

7. A getter retainer comprising a hollow cup having a bottom wall and a side wall, an abutment provided on said side wall, a resilient member of generally sheet formation with vent openings therethrough flexed to engage said abutment and engaging getter material in the cup to force it against said bottom wall by the inherent resiliency of said member.

75 8. A getter retainer comprising a hollow cup having a bottom wall and a side wall, an abutment provided on said side wall, a resilient member normally in a single flat plane and flexed with its edge engaging said abutment and its middle engaging getter material in the cup to force the getter material against said bottom wall by the inherent resiliency of said member.

In testimony whereof I affix my signature.

85 ALLAN B. COLBY.

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