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2,461,487

HOLDER FOR THERMIONIC VALVES AND LIKE ELECTRICAL
DEVICES AND MEANS FOR SECURING THEM TO SUPPORTS
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FIG. 1.

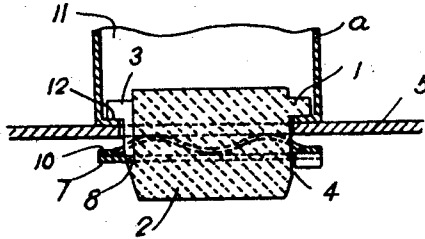


FIG. 2.

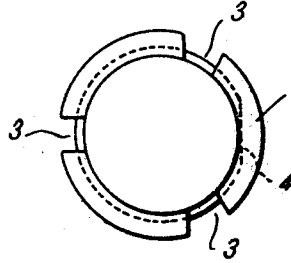


FIG. 3.

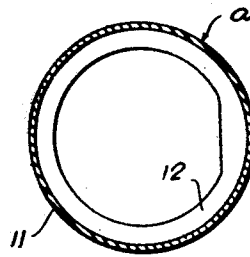


FIG. 5.

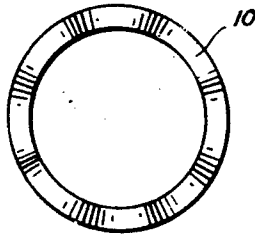


FIG. 4.

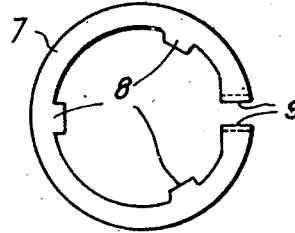


FIG. 7.



FIG. 5.

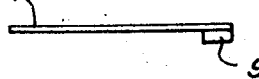
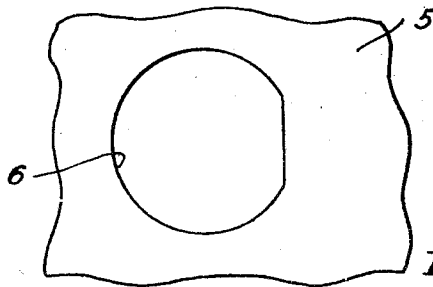


FIG. 8.



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UNITED STATES PATENT OFFICE

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HOLDER FOR THERMIONIC VALVES AND
LIKE ELECTRICAL DEVICES AND MEANS
FOR SECURING IT TO SUPPORTSGeorge Wagstaff, Long-Eaton, England, assignor
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bridge, Mass.Application February 28, 1945, Serial No. 580,252
In Great Britain March 20, 1944

3 Claims. (Cl. 173-339)

1

This invention relates to holders for thermionic valves, plugs and like electrical devices and more particularly to moulded holders of ceramic or like material of the kind having a flange or the like adapted to rest on one face of the support and a part adapted to project through an aperture in the support.

According to the present invention a holder of the kind referred to has the projecting part formed with one or more recesses or slots adapted to receive teeth or lugs or a locking member which is fitted over or round the projecting part, to secure the holder to the support.

The locking member may comprise a split ring of sheet metal having one or more lugs extending inwardly of the inner periphery of the ring. The ring may have integral means, such as spring feet, for resiliently engaging the face of the apertured support to hold the parts against rattling or shaking loose. Alternatively a separate resilient ring or washer may be provided between the locking member and the support. The locking member may comprise a continuous unsplit ring if desired but an advantage of a split ring is that it is readily removed by opening the ring by a suitable tool. The locking member is fitted over the projecting part of the holder until the lugs or teeth snap into the recesses in the projecting part.

To enable the invention to be fully understood it will now be described with reference to the accompanying drawings, in which:

Fig. 1 is a sectional view of the holder assembled on a support,

Fig. 2 is a plan view of the holder,

Fig. 3 is a plan view of the screen cap member,

Figs. 4 and 5 are plan and side views of a locking ring,

Figs. 6 and 7 are plan and side views of a resilient washer, and

Fig. 8 is a plan view of the apertured support on which the holder is mounted.

As shown in the accompanying drawings, the holder comprises a moulding of ceramic or like material having a flange 1 and body 2 formed with recesses 3. The body would normally have a series of apertures housing pin-receiving contacts but these are omitted for the sake of clarity. The body 2 has a flattened side 4 whereby the body is substantially U-shape in cross-section. The holder is assembled with the support 5 by inserting the body through a D-shaped aperture 6, the body being thereby automatically assembled in correct position, on account of the

2

shape of the body and aperture. The flange 1 rests on the upper face of the panel 5 and the lower end of the body 2 projects through the aperture.

The holder is secured by a locking member comprising a split metal ring 7 having integral lugs or teeth 8 and bent portions 9. The ring is forced over the projecting part of the body 2 to snap the lugs 8 into the recesses 3. To remove the holder, a suitable tool is applied to force the portions 9 apart to open the ring and disengage the lugs 8 from the recesses 3. Any desired number of lugs 8 and recesses 3 may be provided.

A resilient spring metal washer 10 is interposed between the locking ring 7 and the underface of the panel 5 to hold the parts firmly in contact and prevent rattling.

The recesses 3 preferably comprise slots extending through the flange 1 and opening into the upper face of the holder as shown in Figs. 1 and 2. This arrangement simplifies the moulding of the holder and reduces costs.

The flange 1 of the holder is also adapted to secure the lower half of a metal screening can *a* in position. As shown in Fig. 3, the can part *a* comprises a cylindrical wall 11 having an inwardly extending flange 12 at one end defining a D-shaped aperture. The can part is assembled over the body 2, prior to the insertion of the holder in the aperture 6, and the flange 12 is clamped between the flange 1 of the holder and the adjacent face of the panel 5.

The assembled can part *a* may be provided with projecting bosses or slots (not shown) adapted for making a bayonet joint connection with the other half of the screening can.

The can *a* may be permanently secured to the holder by providing inwardly projecting detents (not shown) in the wall 11, adjacent to the flange 1, after the holder has been assembled in the can.

It will be understood that the body 2 may have any irregular cross-section shape that will ensure that it can be inserted in a correspondingly shaped aperture in the panel 5 in only one predetermined position. The aperture defined by the flange of the can *a* will obviously be varied, to correspond with the cross-section of the body

I claim:

1. In combination with an electrical socket body for thermionic valves and like electrical devices which socket body is provided at one end with a flanged rim and a plurality of circum-

3

ferentially spaced peripherally opening recesses extending below said rim and terminating short of an opposite end of said body; a holder for securing said body in an apertured support comprising a radially expandable split resilient-annulus adapted to be expanded and slipped over an end of the socket body and provided with inwardly extending radial projections adapted to extend into the peripheral recesses in said body, and a sinusoidal ring adapted to surround said body and be supported by said annulus between it and a support on which said socket is mounted.

2. In combination with an electrical socket body for thermionic valves and like electrical devices which socket body is provided at one end with a flanged rim and a plurality of circumferentially spaced peripherally opening recesses extending below said rim terminating short of an opposite end of said body, a holder for securing said body to an apertured support comprising a radially expandable gapped resilient ribbon-like annulus adapted to be expanded and slipped over said socket body and provided with inwardly extending radial porjections adapted to be positioned in said peripheral radial recesses of said socket, said annulus providing a relatively broad flat bearing surface, and a sinusoidal spring ring supported by said bearing surface and disposed between it and a support in which said socket is mounted.

3. In combination with an electrical socket body for thermionic valves and like electrical devices which socket body is provided at one end with a flanged rim and a plurality of circum-

4

ferentially spaced peripherally opening radial recesses extending below said rim terminating short of an opposite end of said body, a holder for securing said body to an apertured support comprising a radially expandable gapped resilient ribbon-like annulus adapted to be expanded and slipped over said socket body and provided with inwardly extending resilient projections adapted to extend into said peripheral radial recesses of said socket, depending angular extensions on the terminal ends of said gapped annulus providing means for expanding said annulus over said socket body, said annulus providing a relatively broad flat bearing surface, and a sinusoidal spring ring supported by said bearing surface and disposed between it and a support in which said socket is mounted.

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