

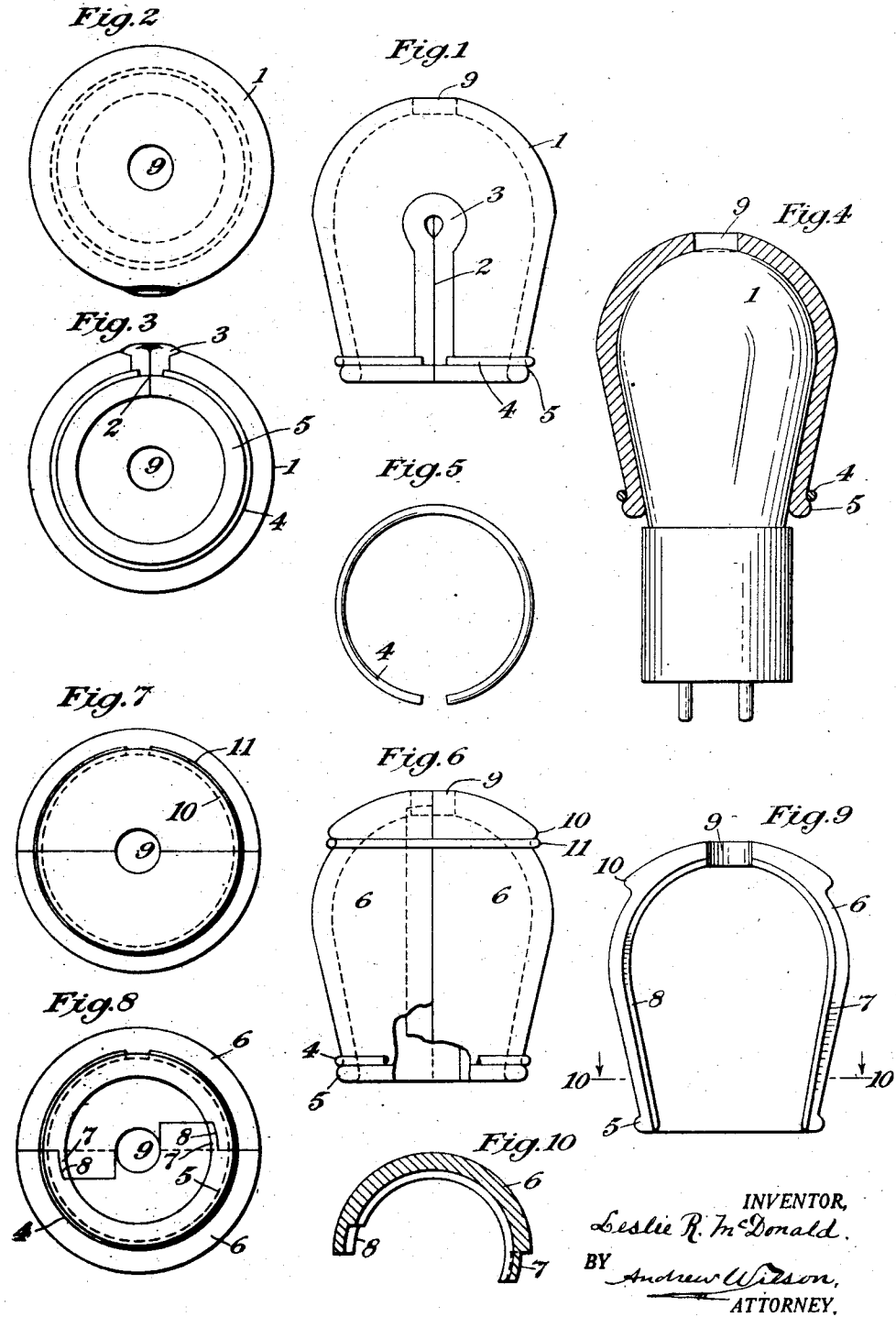
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ANTIMICROPHONIC SHIELD FOR ELECTRON TUBES

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ANTIMICROPHONIC SHIELD FOR ELECTRON TUBES.

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My invention relates to a novel attachment for electron tubes such as are used in radio lay-outs; and the object of my invention is to deaden, or restrict, the microphonic action of such tubes and the inter-action among several tubes. My invention is an improvement on the subject matter of my Patent No. 1,610,208, December 7, 1926, in which I have illustrated and described a shield preferably made of rubber or other flexible material, and adapted to be slipped into place over the tube. My present improvement is directed to means whereby the weight and rigidity of the shield can be increased, without interfering with its being properly placed around the tube. This I accomplish by making the shield in sections, which may be wholly or partially separated from each other and may then be held together and in close juxtaposition to the tube by suitable, adjustable means.

In the drawings Fig. 1 is an elevation of one form of my improved shield; Fig. 2 is a top view and Fig. 3 is a bottom view of the same; Fig. 4 is a vertical sectional view of the same showing it positioned upon a tube; Fig. 5 is a view of the holding ring; Figs. 6, 7 and 8 are, respectively, an elevation, top view and bottom view of a modification corresponding in position to Figs. 1, 2, 3 and 4; Fig. 9 is an elevation, looking at the inside of one of the sections of the modification; and Fig. 10 is a cross sectional view taken on the line 10—10 of Fig. 9, looking down.

In all the figures similar parts are designated by similar reference numerals.

The shield 1 is preferably formed of a somewhat elastic, flexible and rather heavy material, such as a combination of rubber and oxide of lead. Its interior form is such as to fit quite evenly around and against the tubes upon which it may be placed. Because of the pear shaped or bulbous form frequently found in such tubes it is necessary to have the shield formed with a contracted lower end, and, if the body of the bulb is materially expanded when compared with its neck, it is advantageous to form the shield so that its mouth may be stretched open wider than the mere elasticity of the material will readily permit.

This I accomplish by forming a slit 2 through the bottom edge and partially up the side of the bulb, the material of the bulb around the slit being reinforced or stiffened

as by a welt 3 so as to prevent tearing the bulb when the slit edges are pulled apart.

To hold the lower edge snugly in place around the tube I provide suitable means such as a cut, elastic ring 4, which may be sprung around the shield to draw the edges of the split snugly together. The shield is preferably provided with a rolled flange at its bottom, extending out slightly from the body of the shield, so as to prevent the reinforcing ring from sliding off the bottom of the shield.

In the modification shown in Figs. 6 to 10, inclusive, the shield is molded in duplicate parts 6, 6, which are provided with relatively complimentary rabbetted edges 7, 8, the rabbets being extended up over the crown of the shield to meet the central opening line adapted to receive the tip or point frequently formed on the end of a tube. The two halves fit together so as to form a continuous shield wall.

Near its crown the shield is provided with a bead 10 which forms below it a slight annular groove to receive a spring ring 11, similar to ring 4, which may be sprung into the groove to hold the crown portion of the shield together.

This modified form permits the use of still more heavy and rigid material for the body of the shield than the form shown in Figs. 1 to 4, inclusive.

I desire it to be understood that the forms illustrated are preferred and are not exclusive forms of the embodiment of my invention, for the structure may be modified in detail, as by the use of mechanical equivalents, without departing from the spirit of my invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. An anti-microphonic shield for electron tubes having a chambered interior and a relatively contracted mouth provided with normally contacting portions adapted to be temporarily separated to permit the adjustment of the shield around a tube.

2. An anti-microphonic shield for electron tubes having a chambered interior and a relatively contracted mouth provided with normally contacting portions adapted to be temporarily separated to permit the adjustment of the shield around a tube, and detachable cooperating means for holding the relatively separable portions in contact with each other.

3. An anti-microphonic shield for electron tubes having a chambered interior and a relatively contracted mouth provided with normally contacting portions adapted to be temporarily separated to permit the adjustment of the shield around a tube, in combination with cooperating shield-closing means.
4. An anti-microphonic shield for electron tubes having a chambered interior and a relatively contracted mouth having an annular recess in its exterior wall and provided with normally contacting portions adapted to be temporarily separated to permit the adjustment of the shield around a tube, in combination with an elastic, keeper ring adapted to be seated in said annular recess.
5. An anti-microphonic shield for electron tubes having a chambered interior and a relatively contracted mouth provided with normally contacting portions adapted to be temporarily separated to permit the adjustment of the shield around a tube, the shield being provided with exteriorly located, circumferential recesses, and being combined with a plurality of cooperating, elastic keeper rings detachably adjustable in said recesses.

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