

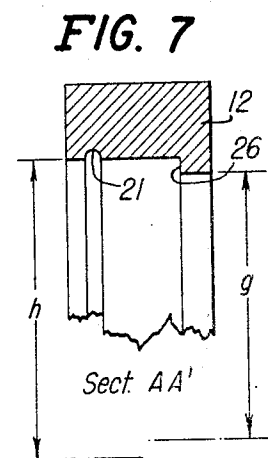
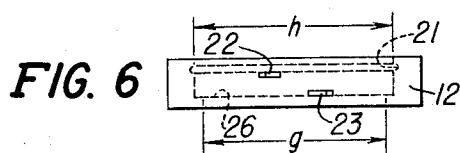
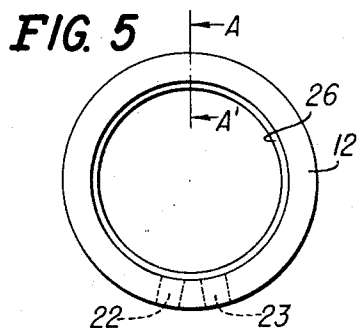
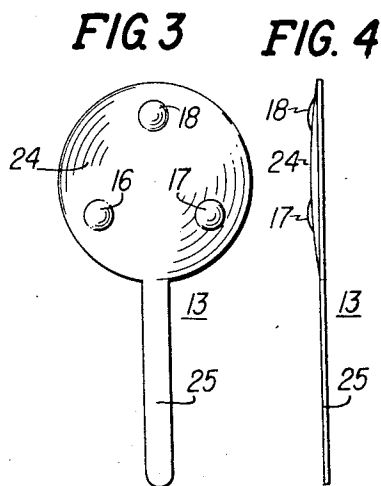
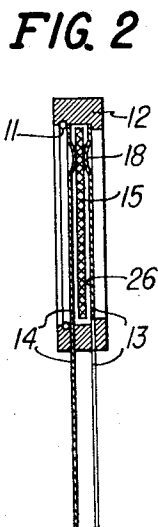
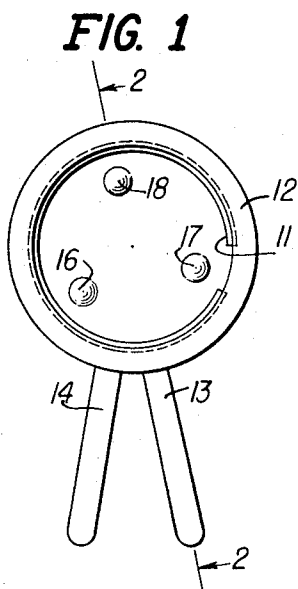
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SILICON CARBIDE RESISTOR MOUNTING

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SILICON CARBIDE RESISTOR MOUNTING

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1 Claim. (Cl. 201—63)

This invention relates to silicon carbon resistors and more particularly to the encapsulation of these resistors.

An object of the invention is to provide terminals and a casing for a disc shaped resistor which components can readily be assembled into a completed unit.

A further object of the invention is a pair of terminals cooperatively formed to contact and hold the resistance unit firmly in place while also performing the necessary function of providing interconnecting means.

A feature of the invention is to provide a capsule into which the parts can be placed, and further by the use of a single retaining ring in conjunction with the capsule the entire resistor assembly is held as a solid, compact unit.

The advantages of the present invention will be readily seen when reviewed with the drawings. Fig. 1 shows a front view of an assembled resistor and Fig. 2 the side view. Fig. 3 shows a front view of a terminal and Fig. 4 a side view. Fig. 5 shows the capsule in a front view and Fig. 6 a side view. Fig. 7 shows a cross section of a portion of Fig. 5 which in effect is an enlarged view of a portion of Fig. 6.

Figs. 5, 6 and 7 show the casing or capsule 12. The capsule is formed from a portion of phenolic tubing having an inner diameter "g." The tubing has its center bored out to diameter "h" and has a ring 21 scored on the inner circumference at diameter "h." Two slots 22 and 23 are formed in the tubing walls as shown in Fig. 6.

Figs. 3 and 4 shows a terminal 13 which is made of a conductive material such as brass. The terminal has a circular surface area 24 roughly equivalent to that of the silicon carbide disc 15 of Fig. 2 and the terminal has a protruding terminal leg 25. Three nodes 16, 17 and 18 are bulged in the surface area 24 of the terminal. These nodes are equi-angularly spaced on a common circumference. These nodes insure that a firm contact will be made between the disc and the terminal surface. The surface area 24 is then dished as shown in Fig. 4 to form a spring action in the terminal surface area and thus

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insure that sufficient contact pressure is achieved between the terminal and the disc.

The resistor is assembled as follows:

Terminal leg 25 is placed through slot 23 in such a manner that the concave side of surface 24 is placed against inner wall 26 (shown in Fig. 7). The convex surface 24 with its nodes 16, 17 and 18 is thereby exposed. Silicon carbide disc 15 is then inserted against the nodes and the convexity. A second terminal 14 which is identical to terminal 13 is placed with its convex surface adjacent the disc 15. The nodes of terminal 14 thereby contact disc 15. A circular retaining ring 11 having an open portion as shown in Fig. 1 and having spring properties is then compressed and slipped into the slot 21 shown in Fig. 7.

When fully assembled, the spring pressure of terminals 13 and 14 maintains disc 15 in contact with the nodes so that a firm contact is formed. Retaining ring 11 retains the entire assembly in a compact, easily assembled encapsulation.

What is claimed is:

In a silicon carbide resistor assembly, a one-piece hollow tube insulating casing, a first contactor having a circular contact surface and a terminal extending radially therefrom, said contact surface having a convex contour with three convex nodes protruding therefrom, a radial slot in said casing for positioning said terminal radially extending outward of said casing, an internal shoulder in said casing for restraining said first contactor inwardly of said casing, a silicon carbide disc having a pair of plane contact surfaces, a first of said disc surfaces contacting the nodes of said first contactor, a second contactor shaped substantially like said first contactor, a second radial slot in said casing for positioning the terminal of said second contactor to extend externally of said casing, said second contactor having nodes for contacting said other disc surface, an internal groove in said casing for resting therein a snap ring for restraining said second contactor from axial movement, said ring and casing combinedly positively holding said contacting surface within said casing.

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