Oct. 28, 1947. R. J. BEAGLES 2,429,592

VARIABLE RESISTANCE AND INDICATOR THEREFOR

Filed May 25, 1944

Fig. 1.

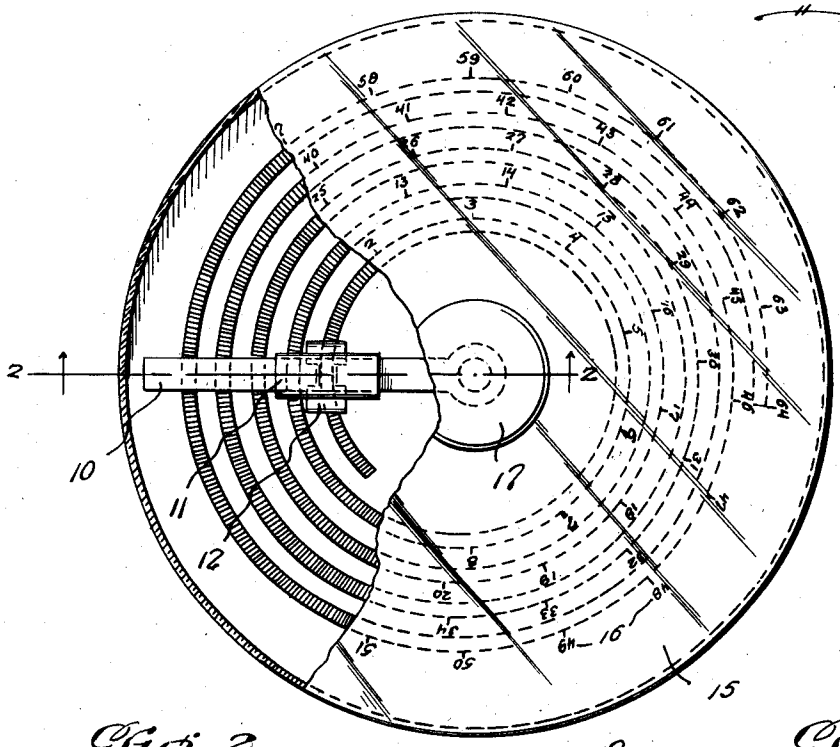


Fig. 2.

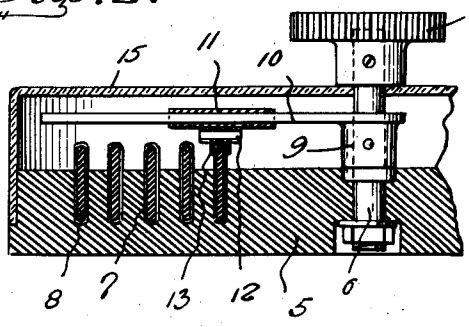


Fig. 4.

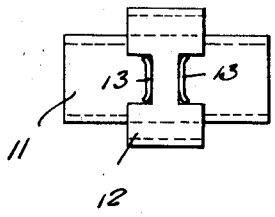
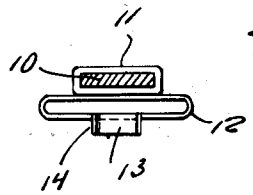


Fig. 3.



Inventor
Rufus J. Beagles,

By McMorrow and Berman
Attorneys

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UNITED STATES PATENT OFFICE

2,429,592

VARIABLE RESISTANCE AND INDICATOR THEREFOR

Rufus J. Beagles, Fort Pierce, Fla.

Application May 25, 1944, Serial No. 537,303

1 Claim. (Cl. 201—56)

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The present invention relates to a variable resistance or rheostat embodying an arm adapted for swinging movement around a spirally formed resistance element, and has for its primary object to provide a sliding contact carried by the arm and adapted to travel on the edge of the resistance element to any selected point along the length thereof and to provide indicating means by means of which the amount of resistance in the circuit can be determined.

An important object of the present invention is to provide a variable resistance of this character arranged in compact form and of simple and practical construction, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view with parts broken away and shown in section.

Figure 2 is a fragmentary sectional view taken substantially on a line 2—2 of Figure 1.

Figure 3 is a transverse sectional view through the arm and showing the sliding contact mounted thereon.

Figure 4 is a bottom enlarged plan view of the contact.

Referring now to the drawing in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates an annular base of insulation material having a shaft 6 journaled centrally therein and having its upper surface formed with a spiral groove 7 in which the convolutions are spaced apart and in which the resistance strip 8 is positioned with the upper edge of the strip projecting above the surface of the base.

Secured to the shaft 6 is a collar 9 having an arm 10 extending radially therefrom overlying the upper edges of the strip 8.

A slide 11 is freely mounted on the arm 10 to the under side of which is secured an oval-shaped contact member 12 of resilient material having a pair of downwardly struck tongues 13 at its opposite side edges disposed in wiping contact with the opposite side edges of the resistance strip 8. The front and rear ends of the tongues 13 are bent outwardly, as shown at 14, to prevent interference with the strip.

The arm 10, the slide 11 and the resistance strip 8 are enclosed within a transparent cover 15 having its edges telescoping over the side edges of the base 5, the cover being supported in an

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elevated position above the arm. The under side of the cover 15 is marked with calibrations dividing the resistance strip into a suitable number of equal spaces to designate the ohm resistance, as indicated through the position of the sliding contact on the resistance strip.

To the upper end of the shaft 6 is secured the knob 17 by means of which the shaft may be rotated and the arm 10 swung around the resistance strip.

The shaft 6, arm 10, slide 11 and contact member with its tongues 13 are formed of conductive material and circuit wires may be attached to the shaft and to the end of the outer convolution of the resistance strip to include the rheostat in the circuit.

It is believed the details of construction and the manner of operation and advantages of the device will be readily understood from the foregoing without further detailed explanation.

Having thus described the invention, what I claim is:

A variable resistance of the class described and of a type including a spiral resistance element and a manually operable arm mounted in a position overlying the resistance element for swinging movement over the element, a slide carried by the arm, a ring-shaped substantial oval spring contact member attached at its outer periphery to the under side of the slide, and downwardly struck tongues on opposite side edges of the contact in wiping engagement with opposite sides of the resistance element, said tongues extending from a portion diametrally opposite the portion attaching the contact to the slide.

RUFUS J. BEAGLES.

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