May 1, 1934. E. A. EVERETT 1,956,859

ELECTRICAL RESISTOR

Filed Dec. 22, 1930

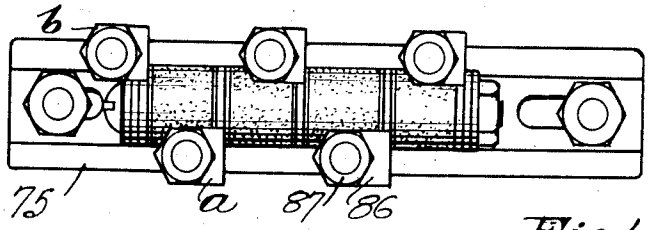


Fig. 1.

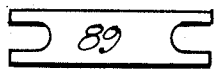


Fig. 2.

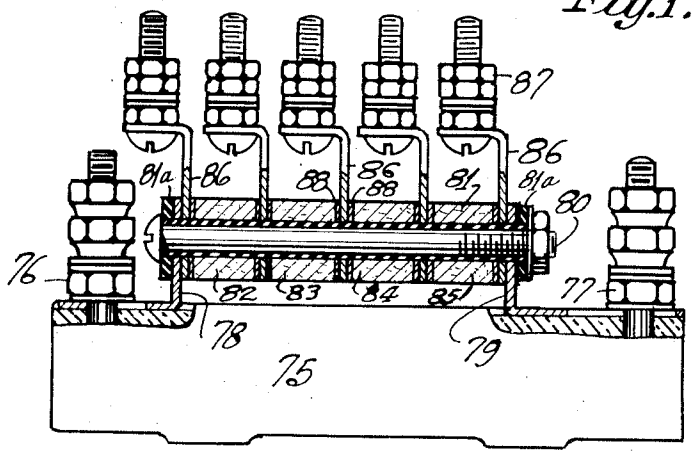


Fig. 3.

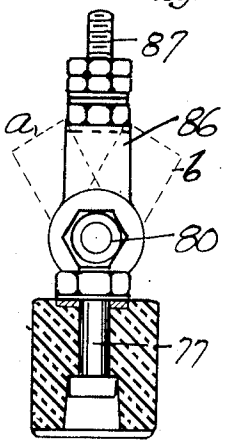


Fig. 4.

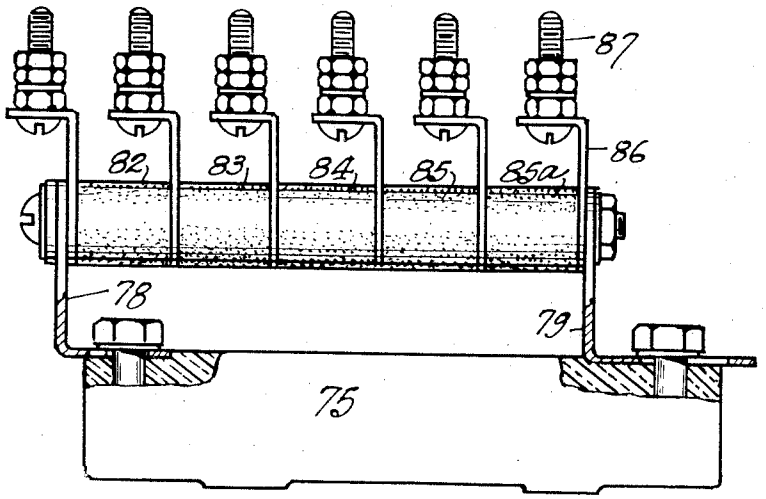


Fig. 5.

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ELECTRICAL RESISTOR

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7 Claims. (Cl. 201—63)

This invention relates to electrical resistors, that is, to a device which is connected into an electrical circuit with the object of increasing the resistance in the circuit. An object of the invention is to provide mountings for a resistant material in a variety of forms and which may be conveniently adjusted. Other objects of the invention will appear from the following specification and the accompanying drawings, in which,

Fig. 1, shows one form of this invention constructed from a plurality of resistance units in which the resistance may be varied by bringing one or more units into circuit; Fig. 2 is one form of connector strip that may be used to bridge the terminals in Fig. 1; Fig. 3 is an elevation, partly sectioned, corresponding to Fig. 1; Fig. 4 is an end elevation, partly sectioned, corresponding to Fig. 3 and Fig. 5 is a modification of the arrangement shown in Fig. 1.

The resistor illustrated in the drawings show an adjustable form of resistor that is built up from multiple units to the capacity desired. A porcelain base 75 is provided with binding posts 76 and 77 which clamp the connector strips 78 and 79 respectively. The bolt 80 is provided with an insulating sleeve 81 and with insulating collars 81*a* at each end so that it is disconnected from the circuit. On the sleeve 81 the resistor units 82, 83, 84 and 85 are mounted and are spaced by metallic washers 88 and by the upstanding connector strips 86 provided with the terminals 87. The end strips 86 are directly connected with the supporting strips 78 and 79 and the conductors may be connected to these outer terminals 87 or to the terminals 76 and 77. The resistance of this device can be varied by bridging over certain of the units or connecting them in multiple circuit and a connector strip similar to 89, Fig. 2 may be used for this purpose.

In order to facilitate these connections the connector strips 86 are rotatably mounted on sleeve 81 and may be deflected as indicated at *a* and *b* in Figs. 1 and 4. In this way the terminals that are to be connected together can be deflected in either direction, thereby avoiding jumpers passing over intervening terminals.

The construction in Fig. 5 is similar to Fig. 1 but contains an additional resistor unit 85*a* and in order to support this unit from the base 75, the conducting strip 78 is turned outwards as shown and the strips 78 and 79 are somewhat lengthened to raise the resistor element above the base and provide space for the bolt securing the strip to the base.

Resistances of this type are, for many purposes, preferred to resistances of the coil type. They are mechanically stronger and are not materially injured by lightning discharges nor fused by heavy currents.

Having thus described my invention, I claim:

1. An electrical resistor comprising a shaft, a plurality of resistor units mounted on said shaft, a terminal strip mounted on said shaft between each of said units and carrying a terminal screw, means for connecting said resistor into an electric circuit and means for freely aligning said terminal strips whereby one or more of said units may be bridged by a straight bridging piece without interfering with intermediate terminal strips.

2. An electrical resistor comprising a shaft, a sleeve of insulation on said shaft, resistor units mounted on said sleeve, a terminal strip mounted on said sleeve between each of said units and being freely rotatable thereon whereby any particular pair of terminal strips may be individually aligned, a link for connecting said strips and means for connecting said resistor into an electric circuit.

3. An electrical resistor comprising a shaft, a sleeve of insulation on said shaft, resistor units mounted of said sleeve, a terminal strip mounted on said sleeve to rotate freely thereon between each of said units and having a projecting end bent over at a right angle and provided with a binding post, a link for connecting a plurality of said binding posts and means for connecting said resistor into an electric circuit.

4. An electrical resistor comprising a shaft, resistor units mounted on said shaft, a terminal strip having a projecting end mounted on said shaft between each of said units, said terminal strips being similar in form and being freely rotatable on said shaft whereby any pair of projecting ends may be brought into alignment and located to avoid the projecting ends of the other intervening strips and a link for connecting said aligned strips.

5. An electrical resistor comprising a shaft, resistor units mounted on said shaft, a terminal strip mounted on said shaft between each of said units, each of said strips having a projecting portion with a portion of said projecting portion having a terminal screw bent parallel with said shaft, said strips being freely rotatable on said shaft whereby any pair of terminal strips may be brought into alignment and located to avoid the other terminal strips and a link secured by said terminal screws for connecting said aligned terminals.

6. An electrical resistor comprising a shaft, moulded cylindrical resistor units mounted on said shaft, washers mounted on said shaft between said units, a terminal strip for each unit mounted between said washers on said shaft and being freely rotatable on said shaft whereby any pair of terminal strips may be brought into alignment and located to avoid the other intervening strips and means for connecting said aligned strips.

7. An electric resistor unit comprising a base, a pair of L-shaped brackets clamped to said base through slotted openings in said brackets, a shaft mounted on said brackets, a plurality of resistant units mounted on said shaft between said brackets and terminal strips mounted on said shaft between said resistant units, said brackets being adjustable to the number of said resistant units on said shaft by changing the position of said L-shaped brackets on said base and by clamping said brackets through the slotted openings to said base.

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