G. H. DORGELOH & E. PONS.

RESISTANCE UNIT.

APPLICATION FILED OCT. 25, 1915.

1,209,568. Patented Dec. 19, 1916.

Fig. 1.

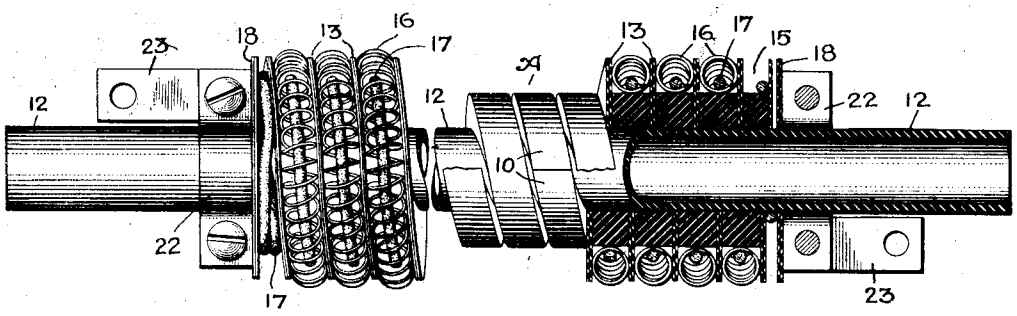


Fig. 2.

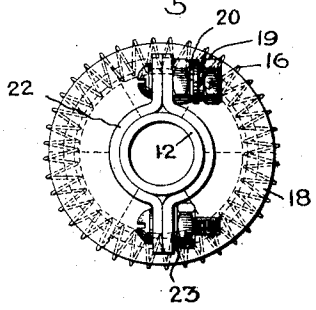


Fig. 4.

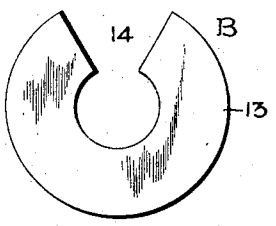


Fig. 5.

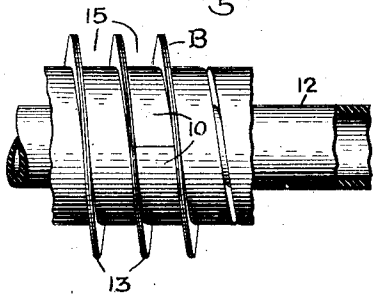


Fig. 6.

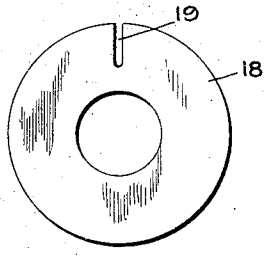
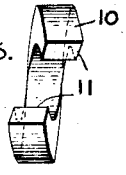


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE H. DORGELOH AND EUGENE PONS, OF SCHENECTADY, NEW YORK, ASSIGNORS TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

RESISTANCE UNIT.

1,209,568. Specification of Letters Patent. Patented Dec. 19, 1916.

Application filed October 25, 1915. Serial No. 57,720.

To all whom it may concern:

Be it known that we, GEORGE H. DORGELOH and EUGENE PONS, citizens of the United States, both residing at Schenectady, in the county of Schenectady, State of New York, have invented certain new and useful Improvements in Resistance Units, of which the following is a specification.

Our invention has reference to resistance units, and has for its object the provision of a device of this character which is simple, compact, and flexible, and which may be readily assembled and disassembled.

In constructing a resistance unit in accordance with our invention, we provide a spiral base on which the resistance element is wound, with a septum of insulating material between the turns of the spiral base to form a spacer for the resistance element.

For a fuller understanding of our invention, reference may be had to the accompanying drawing, in which—

Figure 1 is a side elevation, partially broken away and partially in section, of a resistance unit embodying our invention; Fig. 2 is an end elevation thereof; Fig. 3 is a side elevation of one of the sections of the spiral insulating base; Fig. 4 is a side elevation of one of the sections of the insulating septum; Fig. 5 is a side view of a portion of the insulating base with the insulating septum between the spiral portions thereof; and Fig. 6 is a side elevation of one of the insulating annuli located at the end of the unit.

Referring, now, to the drawings, A is a spiral base of insulating material, such as asbestos compound or the like, formed of any number of sections 10. These sections are preferably formed with a part cut away at 11 so as to form less than one turn of the spiral. This insulating base is preferably, though not necessarily, mounted on a rigid member 12, which is here illustrated as a tube of insulating material, such as mica. A septum B of insulating material, such as mica, is received between the spiral turns of the insulating base. This septum is also preferably formed of sections 13, each of which has a sector cut away, as at 14. This septum forms, with the base A, a spiral groove 15 within which the resistance element 16 is received, the septum thus constituting a spacer for the resistance element. Preferably, the resistance element is in the form of a compound helical resistance member through which an insulating cord 17 of a material such as asbestos may be threaded to hold the same in position. An insulating disk or annulus 18 is located at either end of the resistance unit and is preferably provided with slots 19 through which the ends 20 of the resistance element extend. These ends are connected to terminals comprising a split clamping ring 22 within which a connecting terminal 23 is received.

In assembling, one of the terminals is clamped to the member 12, and the ring 18 slipped over the tube 12 and brought into engagement with the terminal. The sections 10 of the insulating base and the sections 13 of the insulating septum are then alternately slipped over the tube 12, the sections 13 of the septum being threaded into the spaces formed between the successive turns of the insulating base. Preferably, the insulating septum is formed of a double layer of insulating material, with overlapping joints. It will be apparent that a resistance unit of this character may be conveniently made up in any lengths desired.

In accordance with the provisions of the patent statutes, we have described the principle of operation of our invention, together with the apparatus which we now consider to represent the best embodiment thereof; but we desire to have it understood that the apparatus shown is only illustrative and that the invention can be carried out by other means.

What we claim as new and desire to secure by Letters Patent of the United States, is:—

1. In a resistance unit, a spiral base of insulating material and a septum of insulating material received between the turns of the base to form a spacer for the resistance element.

2. A resistance unit comprising a spiral base of insulating material, a resistance element wound spirally thereon, and a septum of insulating material between the turns of the base and forming a spacer for the turns of the resistance element.

3. A resistance unit comprising a spiral base of insulating material, a rigid member extending through said base, and a septum of insulating material between the turns of the base support and forming a spacer for the resistance element.

4. A resistance unit comprising a spiral base of insulating material formed in sections, and a septum of insulating material between the turns of the spiral support also formed in sections and forming a spacer for the resistance element.

5. A resistance unit comprising a spiral base of insulating material formed in sections, and a septum of insulating material formed from insulating annuli with sectors cut away, and received between the turns of the base support.

6. A resistance unit comprising a spiral base of insulating material, a compound helical resistance element wound thereon, a rigid member extending through said base, and a septum of insulating material received between the turns of the base support to form a spacer for the resistance element.

7. A resistance unit comprising a spiral base of insulating material formed in sections, a septum of insulating material between the turns of the base, insulating disks at the end of the resistance element formed with slots through which the ends of the resistance element pass, and terminals for said resistance element.

8. A resistance unit comprising a spiral base of insulating material, a compound helical resistance element wound on said base, a septum of insulating material received between the turns of said base to form a spacer for the resistance element, and an insulating cord threaded through the resistance unit to hold the same in position.

In witness whereof we have hereunto set our hands this 21st day of October, 1915.

GEORGE H. DORGELOH.
EUGENE PONS.