F. W. MAGIN.

RESISTANCE BOX.

APPLICATION FILED AUG. 14, 1914.

1,176,231. Patented Mar. 21, 1916.

Fig. 1.

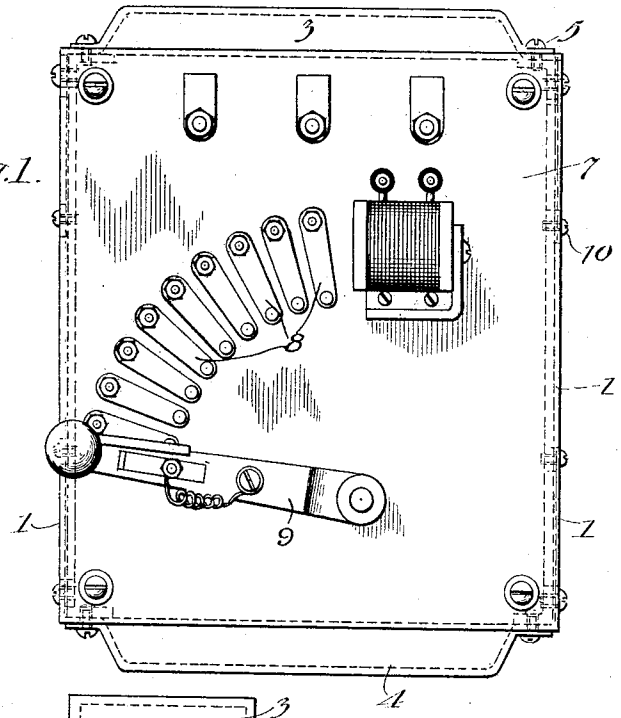


Fig. 2.

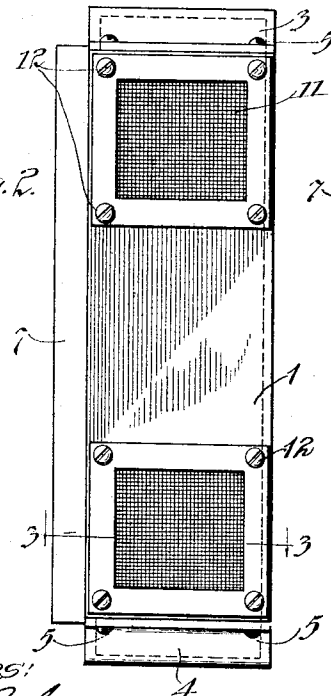
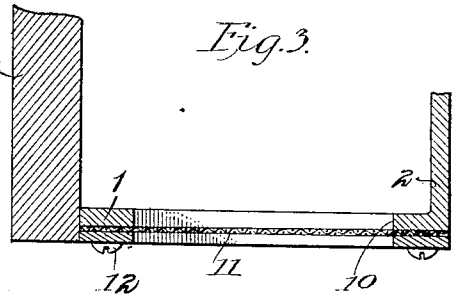


Fig. 3.



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UNITED STATES PATENT OFFICE.

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RESISTANCE-BOX.

1,176,231. Specification of Letters Patent. Patented Mar. 21, 1916.

Application filed August 14, 1914. Serial No. 856,744.

To all whom it may concern:

Be it known that I, FRANCIS W. MAGIN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Improvement in Resistance-Boxes, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to resistance boxes and more particularly to the provision of a resistance box in which resistance elements are mounted within an inclosure in combination with suitable provision for permitting the escape of gases caused by a rupture of said resistance elements, while at the same time preventing the flame from leaving the inclosure.

In the preferred form of my invention I have an inclosure provided with suitable openings, and then have these openings covered by a suitable screen, which screen prevents the flame and molten parts of the resistance elements from leaving the inclosure upon rupture of a resistance element, but permits of escape of gases, thus to relieve the pressure.

In the preferred form of the invention I have two screen covered openings, one at the top and the other at the bottom of the closure.

I will explain one form which my invention may take more in detail by referring to the accompanying drawing, in which—

Figure 1 is a front view of a resistance box constructed in accordance with my invention; Fig. 2 is a side view of the box omitting the circuit controlling devices, and Fig. 3 is a fragmentary sectional view on line 3—3 of Fig. 2.

My improved resistance box comprises the side walls 1, 1, preferably formed integral with the rear wall 2. Upper and lower resistance supporting cross-pieces 3 and 4 are mounted in place by means of the screws 5 and carry between them resistance elements as well understood and as shown for instance in Patent No. 1,029,539. A front plate 7 closes the entire structure and carries the contacts 8 and switch arm 9 as well understood. The structure thus is closed on six sides with the exception of openings 10 provided in the two side walls 1, 1, both at the top and bottom. These openings are covered by a wire mesh or screen 11 held in place by the screws 12. I find, after a series of tests, that this screen permits gases to leave the inclosure whenever any of the resistance elements are melted or ruptured, but prevents the molten articles or the flame from leaving the inclosure at such times. By reason of this structure I obtain a very much more simplified structure and may omit all of the auxiliary structures and provisions heretofore made in boxes of this type to permit of the escape of the gases without the accompanying escape of flame and molten metal. The structure thus outlined can also be accommodated in smaller space.

From what has been described the nature of my invention will be readily apparent to those skilled in the art, and it will also be readily apparent that my improved structure is of equal value in connection with fuse carrying inclosures or others where similar conditions exist. For instance, in drum controllers or similar apparatus, arcs are caused upon circuit rupture which if permitted to escape beyond the inclosure may prove dangerous. My improved structure of course will be found equally applicable to all of such structures.

Having however thus described one form which my invention may take more particularly as arranged for a resistance box, what I claim as new and desire to secure by Letters Patent is:

A resistance box comprising a rectangular inclosure having openings in the sides both at the top and bottom, said openings having unobstructed communication with the outer air, and wire screens of fine mesh provided over said openings to permit egress of gas from said inclosure but to prevent egress of molten metal.

In witness whereof, I hereunto subscribe my name this 26th day of February A. D., 1914.

FRANCIS W. MAGIN.

Witnesses:
L. M. ROACHE,
HAZEL ANN JONES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."