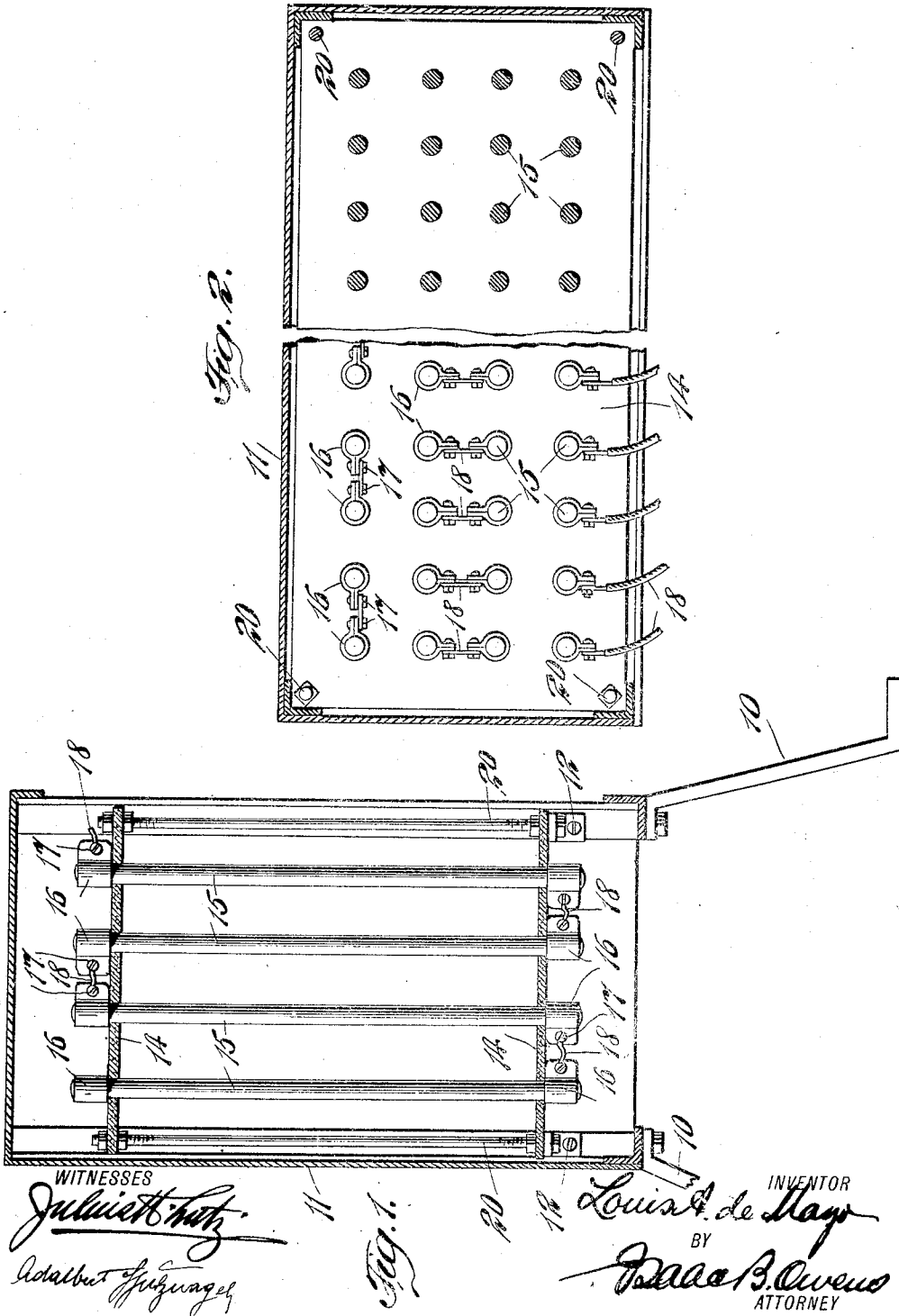


L. A. DE MAYO.
RESISTANCE BOX.

APPLICATION FILED MAR. 20, 1909.

1,002,533.

Patented Sept. 5, 1911.



WITNESSES
Julius H. ...
Adalbert ...

Fig. 1.

INVENTOR
Louis A. de Mayo
BY
Wm. S. Owens
ATTORNEY

UNITED STATES PATENT OFFICE.

LOUIS A. DE MAYO, OF NEW YORK, N. Y.

RESISTANCE-BOX.

1,002,533.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed March 20, 1909. Serial No. 484,796.

To all whom it may concern:

Be it known that I, LOUIS A. DE MAYO, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Resistance-Boxes, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 The object of my invention is to provide a resistance box possessed of all of the advantages of resistance boxes as usually constructed of coils, but which may be built much lighter and cheaper and with less complication than heretofore.

15 To this end my invention resides in certain special features of construction and arrangement of parts which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is now had to the accompanying drawings, which illustrate, as an example, one and the preferred embodiment of my invention.

25 In these drawings:—Figure 1 is a vertical section of the apparatus and Fig. 2 is a sectional plan, part of the view illustrating the upper ends of the resistance carbons and the remainder of the view showing such carbons in section.

30 The resistance box may be mounted in any desired situation, but as here shown it is provided with legs 10 by which it may be mounted on a horizontal surface. The box is also adapted, as such boxes usually are, to be used in connection with a controller, but this forming no part of my present invention, is not here illustrated. The controller may be of any desired type.

40 11 indicates the box proper, which is preferably though not necessarily open at the front and bottom, and constructed of sheet metal riveted or otherwise fastened together. Within the box, in planes parallel to each other, are located two sustaining plates 14. These plates must be of insulating material and I have found by experiment that the lightest, cheapest and best substance for this purpose is commercial asbestos board, particularly in view of the resistance units as will hereinafter appear. The supporting plates are comparatively small and formed with numerous perforations. Said plates are sustained by tie rods 20 in turn sustained by brackets 12 fastened to their lower ends and to the walls of the box proper 11.

Received within the perforation of the supporting plates are the resistance units 15, which extend from one plate to the other and project slightly beyond each. These resistance units are formed of indurated carbon, which I have found to afford a perfect material for this purpose. This material I have found to furnish an excellent resistance substance and to be possessed of the further advantages of lightness, durability and cheapness. The resistance units 15 are connected at their ends with the controller, as will be understood from the prior art and I take advantage of these connections to secure the resistance bars in place and to admit of their ready removal from the machine for replacement. 16 indicates the clips of such connections, which are formed of sheet metal bent to surround the ends of the resistance bars and clamped against them by bolts or other fastenings 17. These bolts 17 serve the further purpose of binding means for the wires 18 leading to and from the clips. Thus it will be seen that the clips, engaging the supporting plates, hold the resistance bars against movement in either direction and that by releasing the bolts 17 the clips may be removed from the resistance bars and such bars may then be readily withdrawn from position.

My invention accordingly provides for a resistance box which may be very lightly constructed and readily transported from one position to another, making it especially useful in field and marine engineering operations. The materials employed are less expensive than the resistance coils commonly used and, should one of the resistance bars become broken as frequently happens with the wire coils, the bars may be readily removed from the device and new ones placed therein at a trivial expense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. A resistance box having a casing, brackets secured to the sides thereof, a plate supported on said brackets, a second plate spaced from the first-mentioned plate, tie rods for supporting the second-mentioned plate from the first-mentioned plate, a plurality of resistance bars extending through both of said plates, a clip at each end of each bar, a plurality of members each connecting two adjacent clips, members securing said clips on said bars and said connecting mem-

ber to said clips, said last-mentioned members also serving to secure feed wires to certain of said clips.

5 2. A resistance box having superposed plates, a plurality of resistance bars extending through said plates, means for supporting said plates, two clips on each bar, a plurality of members each connecting two adjacent clips, members securing said clips on
10 said bars and said connecting member to said clips, said last-mentioned members also serving to secure feed wires to certain of said clips.

15 3. A resistance box consisting of a plurality of plates, means for supporting these

plates, a plurality of resistance bars extending between said plates, a plurality of clips on each bar, a plurality of members each connecting two adjacent clips, members removably securing said clips on said bars and
20 said connecting members to said clips, said last-mentioned members being adapted to have feed wires secured thereto.

In testimony whereof I have signed my name to this specification in the presence of
25 two subscribing witnesses.

LOUIS A. DE MAYO.

Witnesses:

ISAAC B. OWENS,

B. BIGGE.