(No Model.)

J. A. MOSHER.

RHEOSTAT.

No. 457,090. Patented Aug. 4, 1891.

Fig. 1.

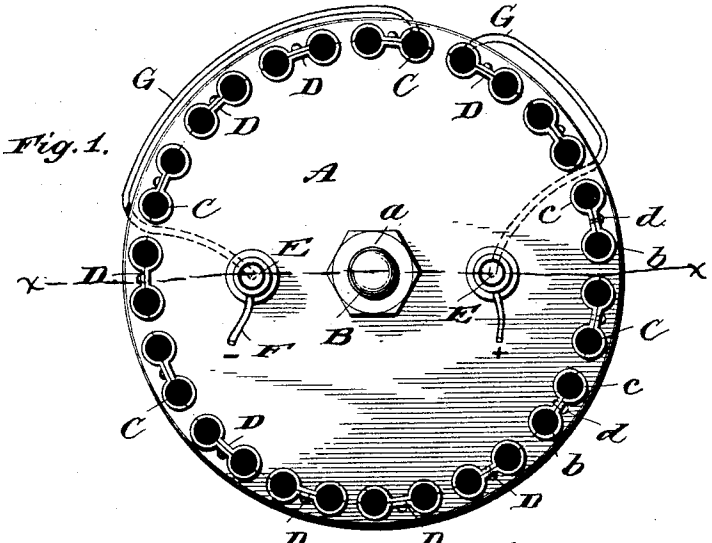
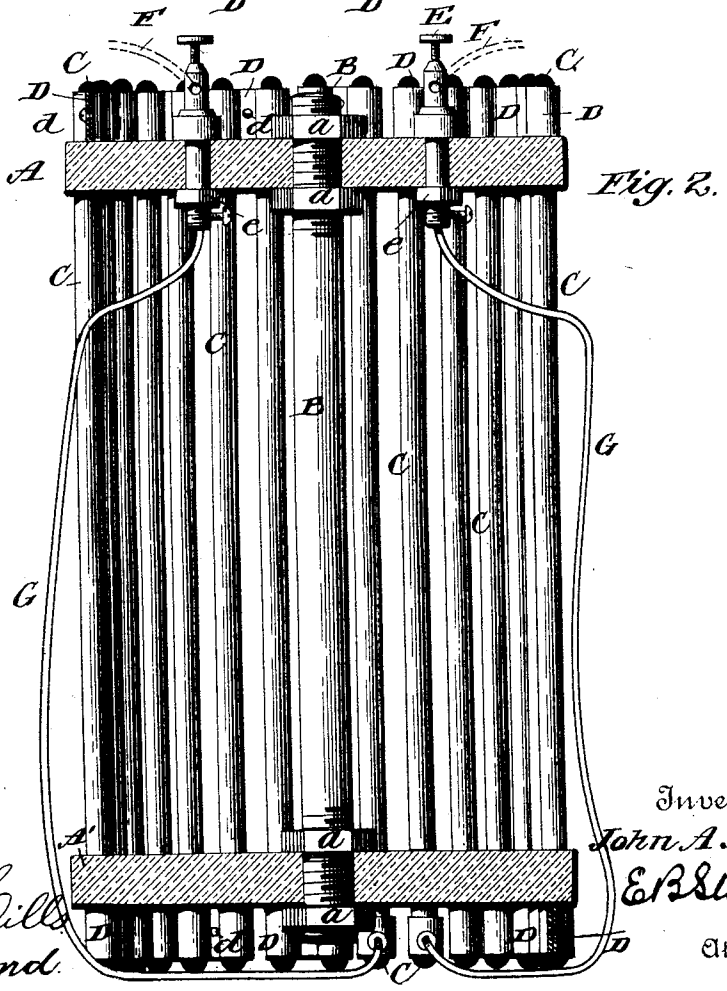


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. MOSHER, OF ABILENE, KANSAS, ASSIGNOR TO THE MOSHER ARC LAMP COMPANY, OF SAME PLACE.

RHEOSTAT.

SPECIFICATION forming part of Letters Patent No. 457,090, dated August 4, 1891.

Application filed November 5, 1890. Serial No. 370,378. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MOSHER, a citizen of the United States, residing at Abilene, in the county of Dickinson, State of Kansas, have invented certain new and useful Improvements in Rheostats, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in rheostats; and it has for its object, among others, to provide a simple, cheap, and effective rheostat to be used in connection with any apparatus on a constant-potential circuit or under any circumstances where a good and reliable rheostat is required. I so clamp the carbon rods which furnish the resistance that the current will find a continuous passage through all of said rods. The two pieces forming each clamp are adjustably secured together to permit of the proper tension being given to insure good contact. The binding-posts are connected to the terminals of the carbon-rod circuit, and the upper ends are prepared for connection with the main-line terminals or such other terminals or apparatus as they may be used in connection with.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a top plan of a rheostat constructed in accordance with my invention. Fig. 2 is a vertical section thereof through the line *x x* of Fig. 1.

Like letters of reference indicate like parts where they occur in both views.

Referring now to the details of the drawings by letter, A designates a disk or plate of some non-combustible non-conducting material, such as porcelain, and provided with as many holes around the periphery as necessary for the purpose required, in this instance there being thirty shown; but it will be readily understood that this number may be varied according to the size and amount of resistance desired. A′ is a corresponding disk of like material provided with corresponding holes. These disks or plates are provided with openings preferably centrally arranged therein to receive the spacing bolt or rod B, the ends of which are screw-threaded and engaged with the said openings, as shown best in Fig. 2, and are provided with nuts *a* upon each end and upon each side of each disk, so that the distance between the two disks or plates may be regulated to allow the carbon rods to project beyond the said disks a sufficient distance to receive the clamps by which they are secured together in a manner soon to be described.

C are the carbon rods passed through the holes around the periphery of the disks, with their ends projected a short distance beyond the outer faces of the disks, as seen in Fig. 2. The projecting ends of these rods are clamped together in pairs alternating at the upper and lower ends—that is, the two rods of a pair are connected together, say, at the top by a clamp, and at the lower end the one rod of this pair is connected to one of the rods of the adjoining pair, so that the current will find a continuous passage through all of the carbons. In Fig. 1 I have shown the clamps at the upper end. Each clamp consists of two parts of sheet-brass or other suitable metal pressed or otherwise formed into shape to embrace two carbons. The two pieces or parts *b* and *c* of the clamp are secured together between each two carbons by a screw *d*, which passes through the contiguous parts of the clamp, as seen best in Fig. 1, the said screw serving also as a means of regulating the tension of the clamps on the carbons to secure good contact.

The clamps D, instead of being formed each of two pieces, might be formed of a single piece split at one end and made of bendable material.

E are the binding-posts fitted in holes in the upper disk or plate and provided with nuts *e*, as seen in Fig. 2. The upper ends of these binding-posts are connected by wires F with the main-line terminals or such other terminals or apparatus as they may be used in connection with. The lower ends of the binding-posts are connected by wires G with the terminals of the carbon-rod circuit, as seen in both views, and by reason of the manner of

clamping the carbons the current has a continuous passage through all of the carbons.

By the construction shown and described I form a rheostat-frame in which the disks may be readily separated or drawn together to provide for expansion or contraction of the parts and thus prevent breakage. The manipulation of the jam-nuts controls the adjustment.

What I claim as new is—

1. The combination, with the disks provided around their peripheries with a plurality of holes, of the carbon rods passed through said holes, the central separating-bolt, the nuts near each end thereof upon opposite sides of said disks, and the clamps each in two parts adjustably held together and around the carbon rods and alternately connecting them in pairs, as set forth.

2. The combination, with the non-combustible non-conducting disks and the central separating-bolt passed through the disks and screw-threaded at each end and provided with nuts, of the carbon rods passed through openings in the disks, the adjustable clamps embracing the ends of the carbon rods and connecting them alternately in pairs, the binding-posts secured in the disks, and the connections between the lower ends of the binding-posts and the terminals of the carbon-rod circuit, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. MOSHER.

Witnesses:
R. W. MINFORD,
MAUD JUNKEN.