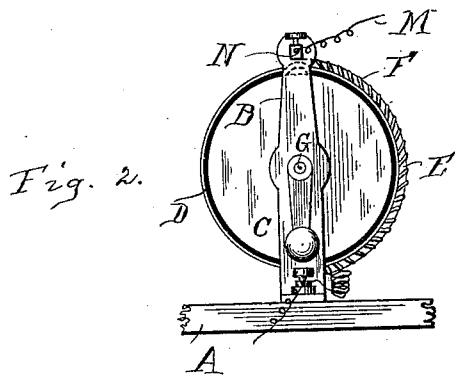
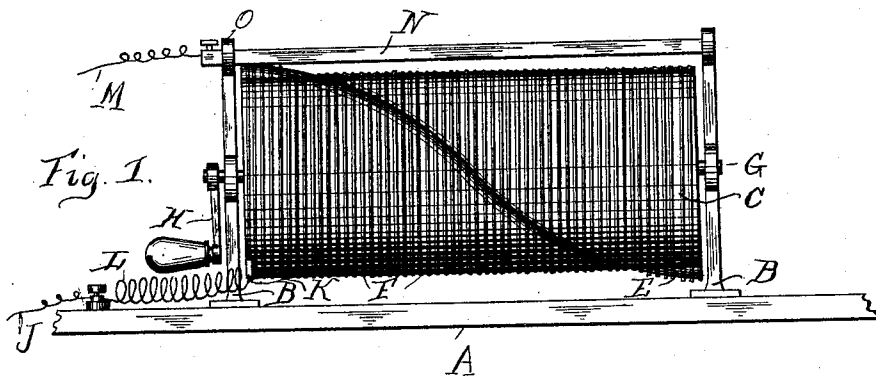


(No Model.)

W. O. MEISSNER.
RHEOSTAT.

No. 544,047.

Patented Aug. 6, 1895.



Witnesses

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RHEOSTAT.

SPECIFICATION forming part of Letters Patent No. 544,047, dated August 6, 1895.

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To all whom it may concern:

Be it known that I, WILLIAM O. MEISSNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Rheostats, of which the following is a specification.

My invention relates to rheostats or resistances of a variable character adapted for various uses, and particularly such as regulating electric lights. It is illustrated in the accompanying drawings, wherein—

Figure 1 is a side view. Fig. 2 is an end view.

Like parts are indicated by the same letters in both the figures.

A is a base or board on which the parts are preferably mounted.

B B are standards rising therefrom.

C is a cylinder covered with asbestos D and provided with the spiral rib E.

F is a spiral coil of resistance-wire wound about such cylinder on top of the asbestos and forming a continuous winding, itself being wound in a spiral form. This wire is bare, being insulated by the asbestos, and the several coils are slightly separated from each other. The asbestos is placed on top of the spiral rib E.

G is a shaft, and is journaled in the standards B B. H is a crank on said shaft, whereby it may be turned.

J is one of the conductors leading to the fixed contact-plate K upon the cylinder, and to which insulated contact-plate one end of the resistance-wire is secured. The wire J is connected to this contact-block by means of the flexible wire L. M is the other conductor, connected with the contact-bar N, which is supported in proximity to the cylinder and parallel therewith, preferably on the standards B B. It may be insulated at its ends by the insulation O. The contact-bar N is in such position that it is adapted to engage the outwardly-protruding coils of the resistance-wire which lie on the outside of the spiral rib as such spiral rib and protruding coils pass under such contact-bar.

It is plain that these several parts can be greatly altered as to size, shape, and proportion and also as to their relation to each other. I am simply showing it, as it were, diagram-

matically, and do not wish to be limited to the precise form and construction here shown.

It is evident, of course, that by slightly altering the arrangement the contact-bar could be made to move, while the cylinder with its spiral ribs would be at rest; but this would be a mere equivalent and is included in the spirit of my invention.

The use and operation of my invention are as follows: The device being set up and suitably connected by means of its connecting or terminal wires the current passes in, for example, at the fixed contact plate or piece on the cylinder. Thence it passes along the short half-turn of resistance-wire to the end of the spiral ridge, which end would be in contact with the contact-bar, and thence the current will pass on to the contact-bar and out at the other wire. If now by operating the crank the cylinder be turned it will be observed that the point of contact between the contact-bar and the turns of resistance-wire will be changed, or will travel, as it were, toward the opposite end of the cylinder, and the farther the cylinder is moved the farther will the point of engagement between the contact-bar and the bare wire above the ridge be carried along the cylinder, and if the motion be continued far enough the entire length of resistance-wire will ultimately be in circuit. By this means therefore the turning of the cylinder can be utilized to successfully cut in or out single turns or coils of the resistance-wire, so that the variation in a resistance will be made in an exceedingly uniform manner and with great regularity. With regard to the operation, of course it is immaterial whether the cylinder or contact-bar is movable, the only point being that they have motion with reference to each other.

I claim—

1. In a rheostat, the combination of a rotatable cylinder with a spiral ridge therealong and resistance wires thereabout.

2. In a rheostat, the combination of a rotatable cylinder, with a spiral ridge therealong and resistance wires thereabout, said resistance wire bare, but its successive coils separated from each other.

3. In a rheostat, the combination of a rotatable cylinder with a spiral ridge therealong and resistance wires thereabout, said resist-

ance wire bare, but insulated from said cylinder and ridge.

4. In a rheostat, the combination of a rotatable cylinder with a spiral ridge therealong and resistance wires thereabout, said resistance wire bare, but insulated from said cylinder and ridge, and its successive coils separated from each other.

5. In a rheostat, the combination of a rotatable cylinder with a spiral ridge therealong and resistance wires thereabout, and a contact bar along such cylinder, and adapted to engage the spiral ridge at successive points, as the cylinder is turned.

6. In a rheostat, the combination of a rotatable cylinder with a spiral ridge thereabout, insulation covering for ridge and cylinder, a resistance wire wound about such cylinder and ridge, its successive coils separated from

each other, a connection with one end of such resistance wire, a contact bar along such cylinder, a connection therefrom, said contact bar in such proximity to the cylinder, that the latter is rotated if the contact bar engages the resistance wire on the top of the ridge.

7. In a rheostat, the combination of a cylinder with a spiral ridge thereon and resistance wire thereabout and a contact bar along such cylinder, said bar and cylinder movable with reference to each other so that the spiral ridge is successively engaged at different points by the contact bar.

WILLIAM O. MEISSNER.

Witnesses:

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