(No Model.)

A. WURTS.

RHEOSTAT.

No. 505,911. Patented Oct. 3, 1893.

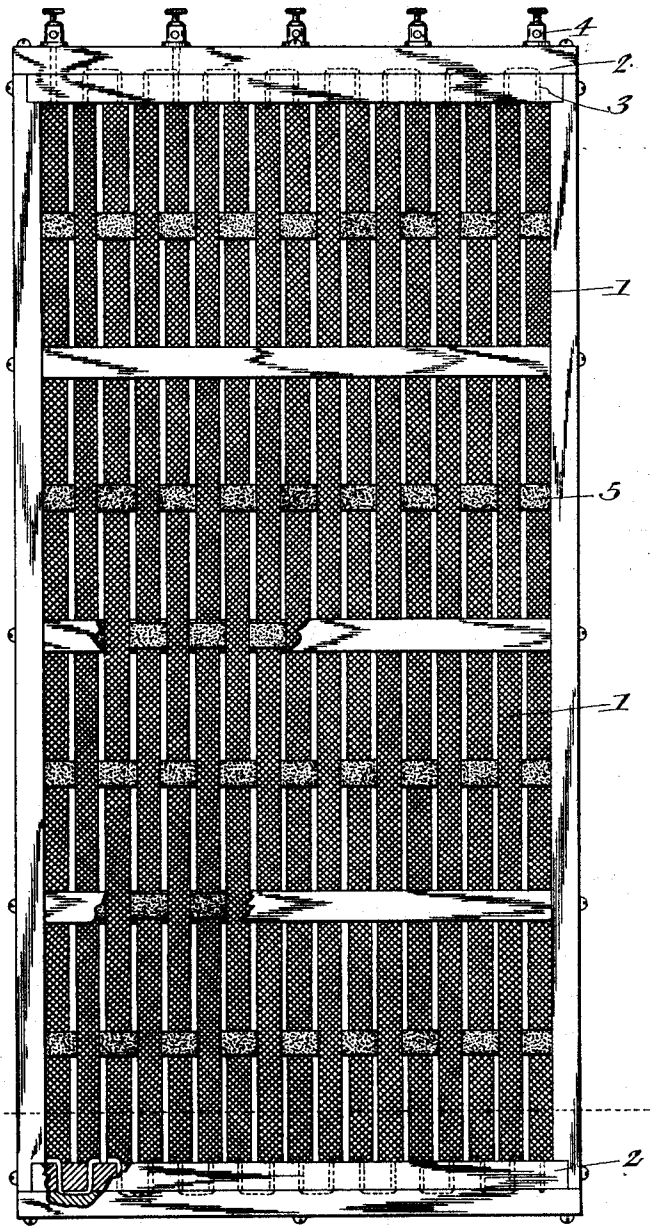

FIG. 1.

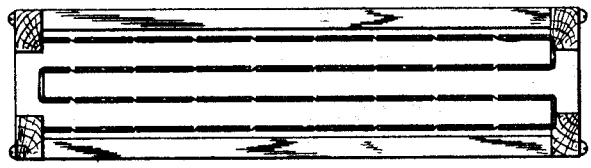

FIG. 2.

WITNESSES:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALEXANDER WURTS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, OF SAME PLACE.

RHEOSTAT.

SPECIFICATION forming part of Letters Patent No. 505,911, dated October 3, 1893.

Application filed December 22, 1892. Serial No. 456,077. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER WURTS, a citizen of the United States, residing in Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rheostats, (Case No. 524,) of which the following is a specification.

My invention has relation to an improvement in rheostats for use particularly with cars, and is best adapted to rheostats designed to be placed underneath the car.

The object of my invention is to supply a rheostat which shall combine cheapness of material and ease of construction with comparative immunity from heating. With this end, I have devised the rheostat illustrated in the accompanying drawings, wherein—

Figure 1 is a front elevation and Fig. 2 a transverse section of my rheostat.

In the construction of my rheostat, the resistances are composed of wire gauze or netting, through a greater or less length of which, the current may be made to pass, in regulating its quantity. As shown in Fig. 1, the gauze strips, 1, are fastened at their ends in a frame 2, said strips being connected in any desired or well known order, but preferably in series as shown, by means of the conductors 3. As illustrated in Fig. 2, four rows of resistance strips are shown; but obviously any desired number may be employed. The current may be taken off at any desired point, as for example, at the binding screws, 4, shown in Fig. 1. To prevent sagging and swinging of the resistance strips whereby short circuits might be produced, I prefer to employ non-conducting strips, 5, preferably of non-inflammable material, as asbestus, interwoven with said strips at intervals.

It will be seen that in my arrangement of resistance strips, the utmost facility is afforded for circulation of air for cooling purposes around the resistances themselves, and that such circulation is further promoted by the nature of the strips themselves, the meshes of the gauze or netting permitting free passage of the air. The advantages of this arrangement particularly fit my rheostat to use in electric railway cars.

It is frequently necessary and in this instance desirable to locate a rheostat underneath the car, where dirt and dust is apt to collect. The nature of my resistance strips is such that dust will not gather on them and they can very easily be cleaned.

What I claim is—

1. In a rheostat, resistance strips composed of wire gauze or netting, substantially as described.

2. In a rheostat, a frame, strips of wire gauze or netting stretched thereon, and interwoven non-conducting strips holding said gauze strips in place, substantially as described.

3. In a rheostat, a frame, a number of rows of wire gauze strips stretched thereon and electrically connected in series, and interwoven strips of non-conducting material serving to hold said gauze strips in place, substantially as described.

In testimony whereof I have hereunto subscribed my name this 20th day of December, A. D. 1892.

ALEXANDER WURTS.

Witnesses:
JAMES W. SMITH,
HAROLD S. MACKAYE.