

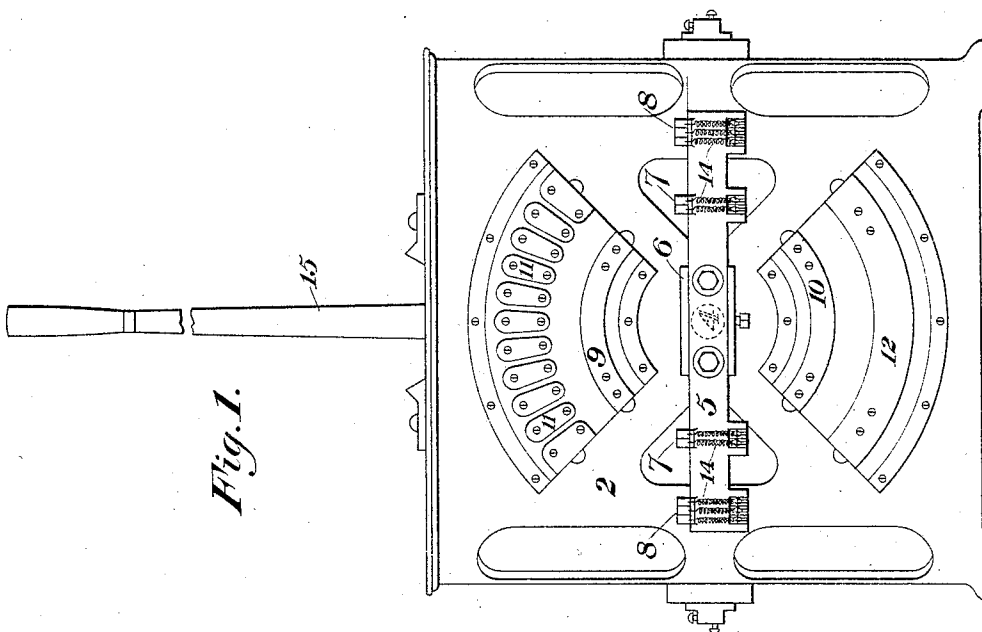
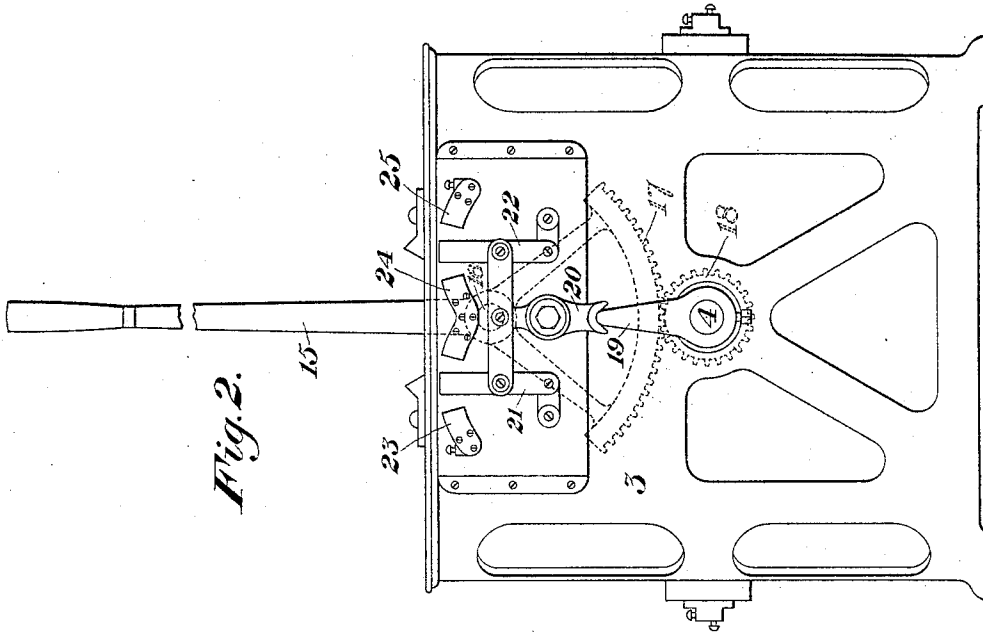
(No Model.)

2 Sheets—Sheet 1.

A. C. DINKEY.
RHEOSTAT.

No. 570.009.

Patented Oct. 27, 1896.



WITNESSES

W. B. Corwin
H. M. Corwin

INVENTOR

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his Attorneys

(No Model.)

2 Sheets—Sheet 2.

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RHEOSTAT.

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Fig. 4.

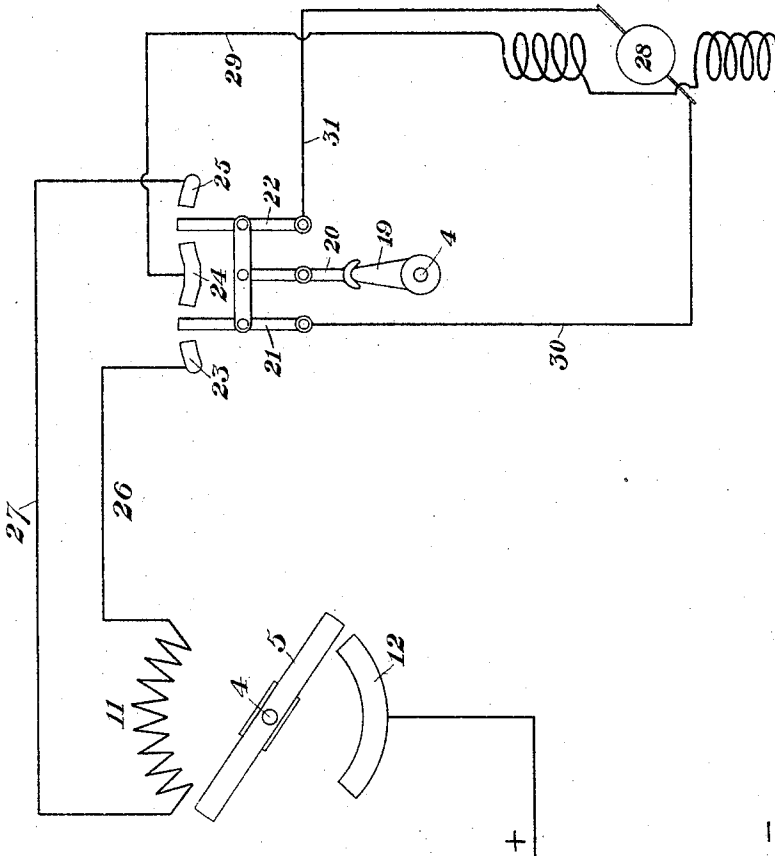
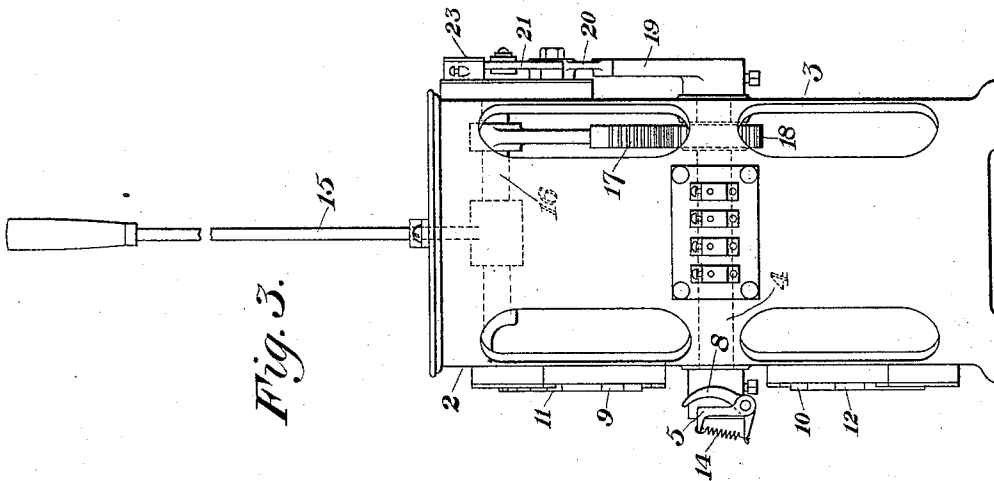


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALVA C. DINKEY, OF MUNHALL, PENNSYLVANIA.

RHEOSTAT.

SPECIFICATION forming part of Letters Patent No. 570,009, dated October 27, 1896.

Application filed March 20, 1895. Serial No. 542,483. (No model.)

To all whom it may concern:

Be it known that I, ALVA C. DINKEY, of Munhall, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rheostats, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of my improved rheostat. Fig. 2 is a rear elevation of the same. Fig. 3 is an end elevation, and Fig. 4 is a diagrammatic view, showing the method of wiring which I employ in connection with the same.

My invention relates to rheostats, and is designed to afford a device of this character in which a single set of contact-plates is used for the resistance-boxes, while the current is reversed by moving the contact-arm in opposite directions.

In the drawings, 2 and 3 represent the front and rear faces, respectively, of the rheostat-frame. Passing through these faces is the central shaft 4, to whose front end is secured the contact-arm 5, its central portion being bolted within a guide 6 at the end of the shaft, while each end portion is provided with two sets of contact-brushes 7 and 8. The brushes 7 travel over oppositely-located continuous arc-shaped contact-plates 9 and 10, while one of the brushes, 8, moves over the contact-pieces 11, connected to the resistance-boxes, and the other over the outer arc-shaped plate 12, to which the positive wire leads.

Each brush, as shown in Figs. 1 and 3, consists of a pivoted bell-crank lever, one arm of which is pressed downwardly by a spiral spring 14, and thereby held in contact with the plates upon the box when the arm is swung in either direction. The operating-lever 15 is keyed to a short shaft 16, which carries a segmental rack 17, intermeshing with a toothed wheel 18 upon the shaft 4, by means of which such shaft is rotated in either direction.

To the rear end of the shaft 4 is secured the lever 19, which terminates in a tooth engaging the toothed lever-arm 20 of a double-point switch having two arms 21 and 22, which engage with two of the three contact-plates 23, 24, and 25.

The system of wiring is illustrated in Fig. 4, wires 26 and 27 leading from either end of the contact-plates to the plates 23 and 25, respectively. The central plate 24 is connected through the fields of the motor 28 by a wire 29, while the arms 21 and 22 are connected to the opposite brushes of the motor by wires 30 and 31.

The plate 12 covers the same length of arc as the contact-plates of the resistance-boxes, and when the arm is moved to the right or clockwise from the position of Fig. 4 its ends engage the resistance contact-plates and the continuous plate 12 at the same time, while the arms 21 and 22 of the switch contact with plates 23 and 24, respectively. The plate 25 is then entirely cut off and the current passes through the contact-plate 12, arm 5, the resistance-boxes and wires 26 and 30, through the motor, wire 31, arm 22, plate 24, and wire 29, through the fields and back to the dynamo. When the arm is swung in the opposite direction, contact is made with the right contact-plate and the switch is moved in the opposite direction, arms 21 and 22 contacting with plates 24 and 25, respectively. The plate 23 is then cut out and the current flows through the resistances, wire 27, and plate 25, through the motor in the opposite direction, and through wire 30 to plate 24, and thence back through the fields by wire 29.

The advantages of my invention will be apparent to those skilled in the art, since the usual continuous circular series of contacts on both sides of the box are done away with, and the same results accomplished by the opposite segmental or arc-shaped plates on one side of the box.

The mechanism is simple and cheap and the apparatus is not liable to get out of order.

I claim—

1. A rheostat having a single set of resistances provided with a single set of contact-plates, and a separate arc-shaped contact-plate, an arm arranged to move over said plates in either direction, and means for reversing the current through the resistance when the direction of movement of said arm is reversed, substantially as described.

2. A rheostat having a single set of resistances provided with a single set of contact-plates and a separate arc-shaped contact-

plate, an arm arranged to move over said plates in either direction, and a double-throw switch arranged to reverse the current through the resistance whenever the direction
5 of movement of the arm is reversed, substantially as described.

3. A rheostat having a series of resistance-coils, the opposite ends of which are connected to two separated contact-plates of a
10 double-point switch, said switch having a third plate connected to the return-wire and provided with two swinging arms connected to the motor; substantially as described.

4. A rheostat having a single series of re-
15 sistance contact-plates, an opposite arc or seg-

mental-shaped continuous contact-plate, an arm arranged to contact with said plates, wires leading from opposite ends of the resistances to two separated plates of a double-
20 point switch, a third plate in said switch connected to the return-wire, and two arms arranged to contact with the switch-plates and connected to the armature; substantially as
described.

In testimony whereof I have hereunto set
25 my hand.

ALVA C. DINKEY.

Witnesses:

W. B. CORWIN,
H. M. CORWIN.