

(No Model.)

2 Sheets—Sheet 1.

J. HARTMAN, Jr.

RHEOSTAT.

No. 371,937.

Patented Oct. 25, 1887.

FIG. 1

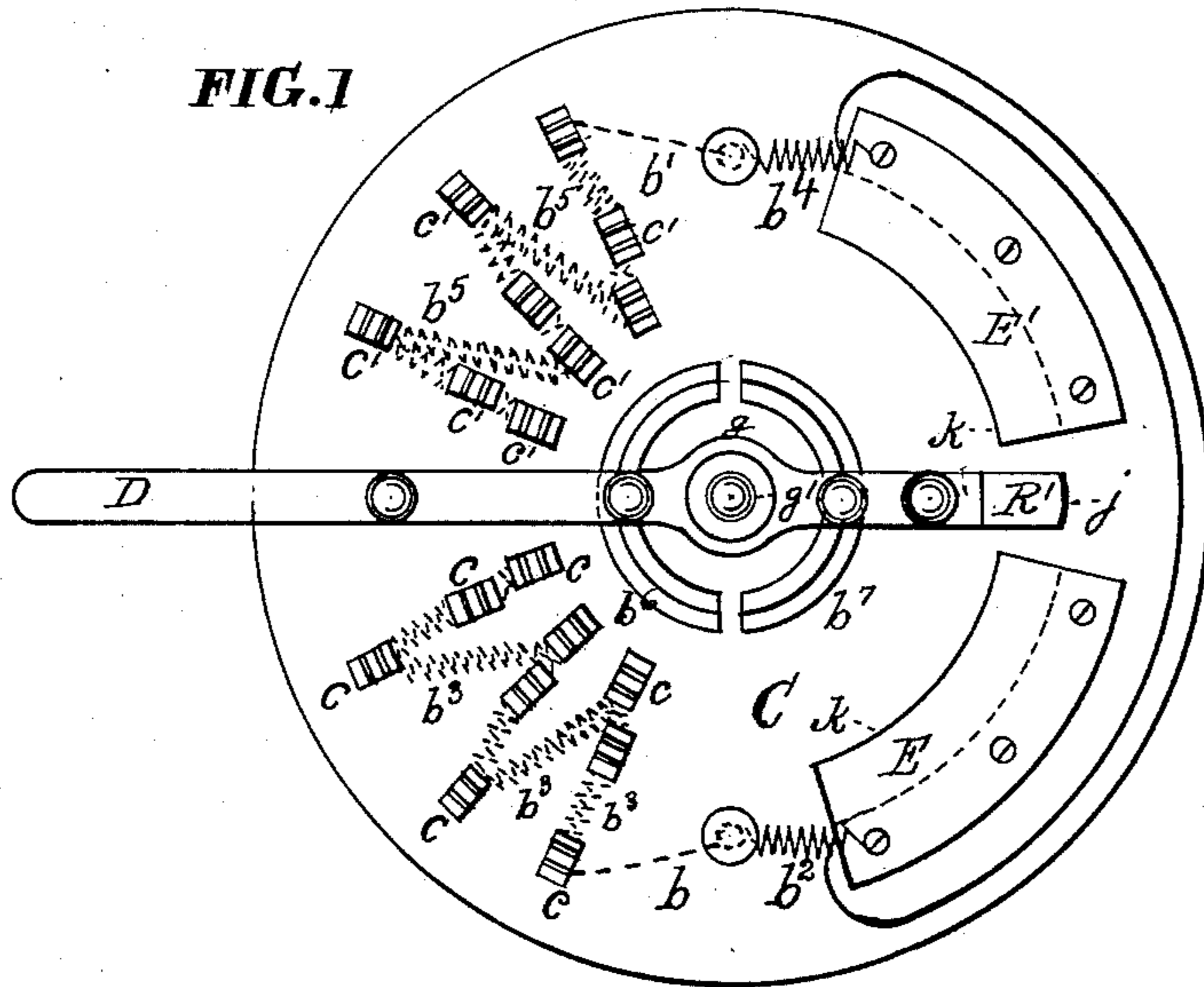
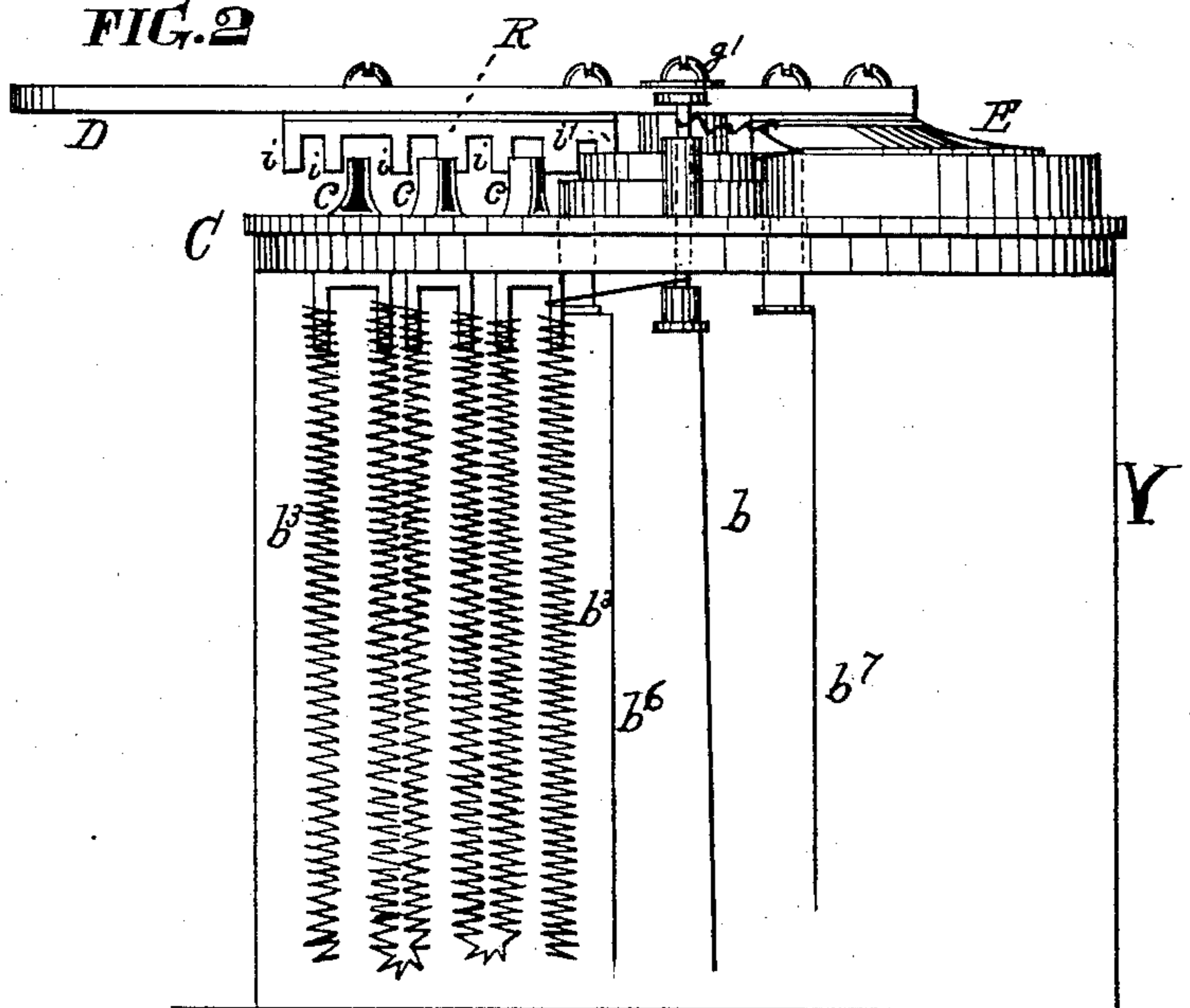


FIG. 2



Witnesses.

A. M. Hall.

C. M. Hoover.

Inventor.

John Hartman, Jr.

per Thomas J. Bewley, Att'y

(No Model.)

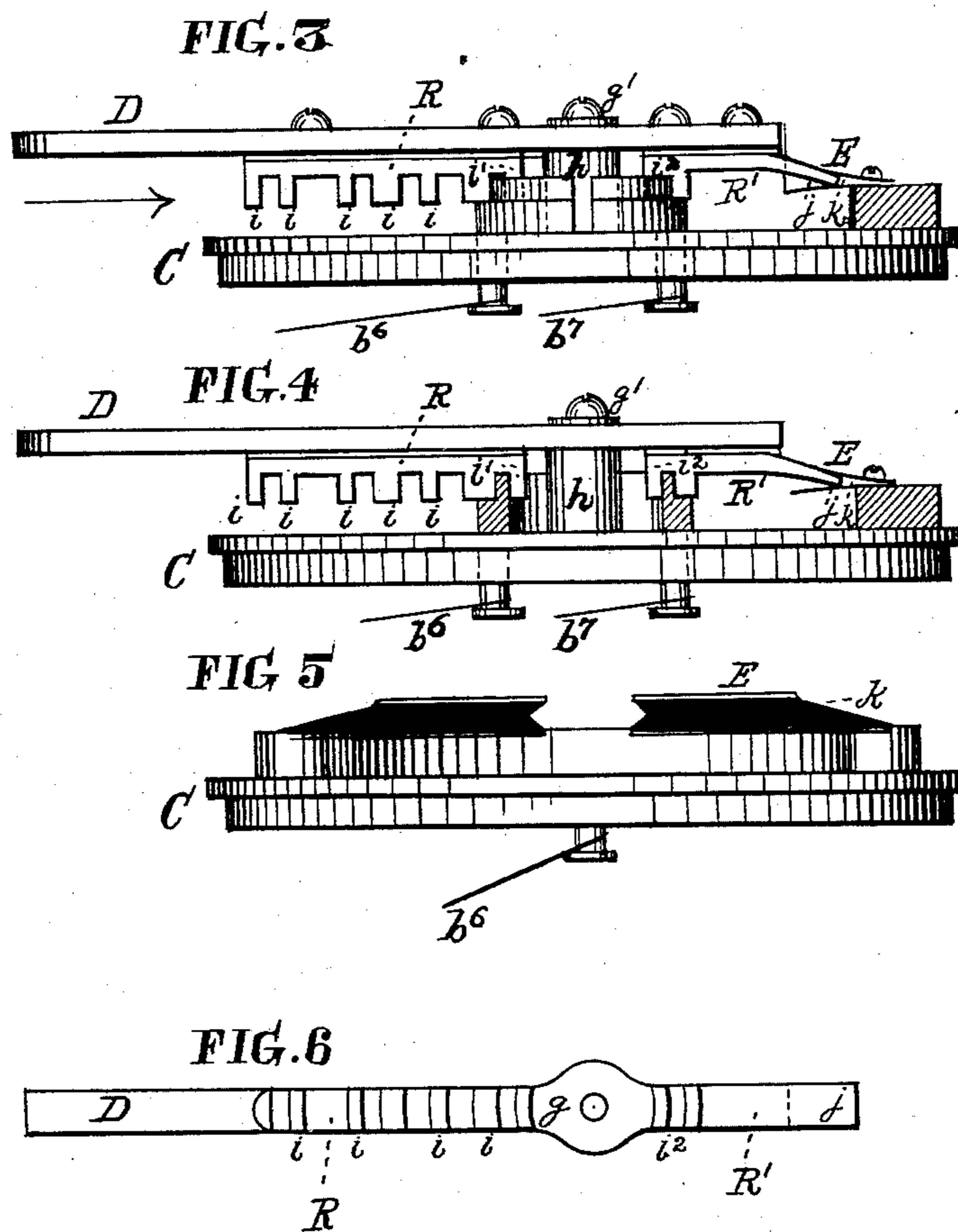
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UNITED STATES PATENT OFFICE.

JOHN HARTMAN, JR., OF PHILADELPHIA, PENNSYLVANIA.

RHEOSTAT.

SPECIFICATION forming part of Letters Patent No. 371,937, dated October 25, 1887.

Original application filed November 12, 1885, Serial No. 182,642. Divided and this application filed January 21, 1887. Serial No. 225,049. (No model.)

To all whom it may concern.

Be it known that I, JOHN HARTMAN, JR., a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rheostats, of which the following is a specification.

This application is a division of an application for Letters Patent for an improvement in cars for electric railways, filed by me November 12, 1885, Serial No. 182,642.

My invention consists in such a construction of the rheostat that by means of a lever upon its upper surface the same may be brought alternately into contact with the wires through which are passed the positive and negative currents of electricity from a dynamo, thus permitting of a change of polarity, as will be more fully understood from the following description.

In the accompanying drawings, which make a part of this specification, Figure 1 is a plan view of the rheostat. Fig. 2 is a side elevation with the inclosing case Y in section. Fig. 3, Sheet No. 2, is a side elevation of the top of the rheostat with the studs $c c'$ and plate E removed. Fig. 4 is a like view. Fig. 5 is a like view taken in the direction of the arrow, Fig. 3. Fig. 6 is a view of the under surface of the lever D.

Like letters of reference in all the figures indicate the same parts.

C is the rheostat, upon the surface of which are the ends of the wires $b b'$, that extend downward through the body or case, their lower ends being connected to the positive and negative wires that lead up from a conductor which conveys currents generated from a dynamo. The positive current is then carried, by means of the wire b^2 , connected at one end to the metallic plate E and at its other end to the coils

of wire b^3 , through one of the intermediate metallic studs, c , which have connection with the coils b^3 within the case. A similar connection with the wire b^4 , connected to the wire b' , carries the negative current to the plate E' and to the coils b^5 . Upon the same surface of the rheostat and extending through the case are the leading-in wires $b^6 b^7$.

D is the operating-lever, having pivotal motion through its hub g by means of the pin g' , passing through the stud or boss h , central upon the face of the rheostat. This lever has a series of notched lugs, i , in a plate, R, (and insulated therefrom upon its under surface,) that are in range with the studs c , over which they pass and form contact therewith for the passage of the current. This plate R is also provided with the lug i' , that forms contact with the wire b^6 . To the forward end of the lever, upon its under side, is also connected a plate, R', that has a notched lug, i^2 , that engages with the wire b^7 . This plate R' extends beyond the end of the lever in a parallel line and is caused to come into contact with the groove k in the plates E E' during the partial rotating movements of the lever.

I claim as my invention, and desire to secure by Letters Patent—

The rheostat C, having the wires b to b^7 , studs $c c'$, plates E E', having grooves k , in combination with the lever D, provided with plates R R', in which are the lugs or contact-pieces $i i' i^2$, for controlling and regulating the currents of electricity imparted to the motor, substantially in the manner herein shown and described.

JNO. HARTMAN, JR.

Witnesses:

THOMAS J. BEWLEY,
CLIFFORD E. LARZELERE.