

No. 640,407.

R. P. & J. D. OSGOOD.

Patented Jan. 2, 1900.

THERMOSTAT.

(Application filed June 5, 1899.)

(No Model.)

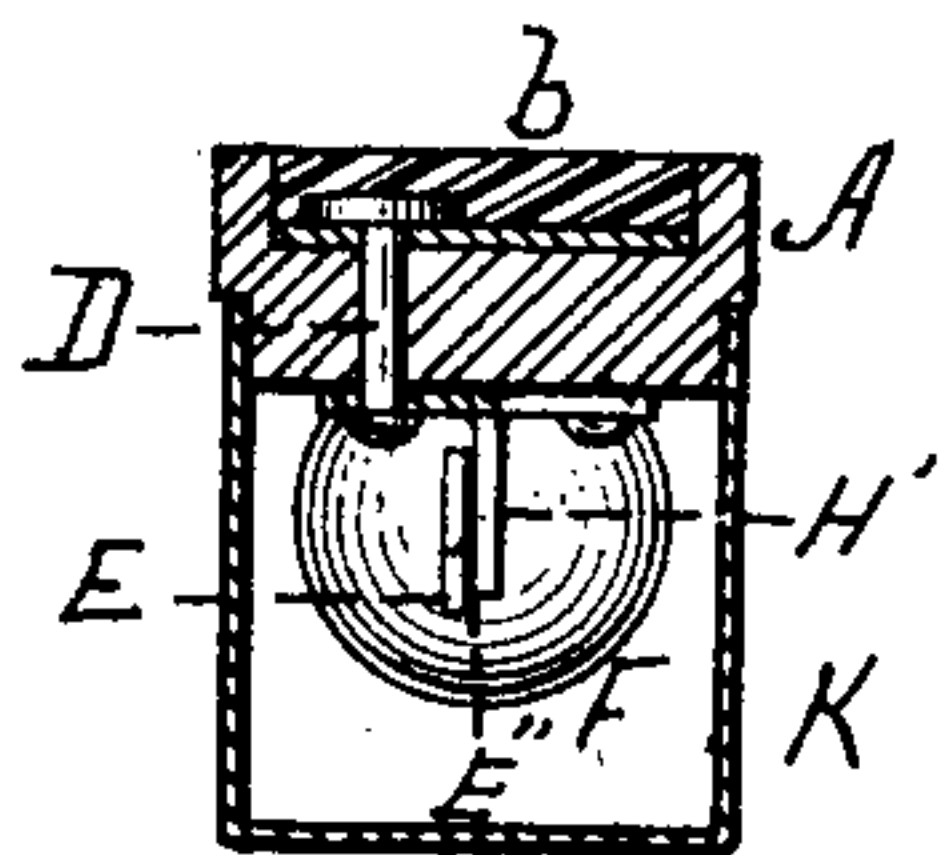
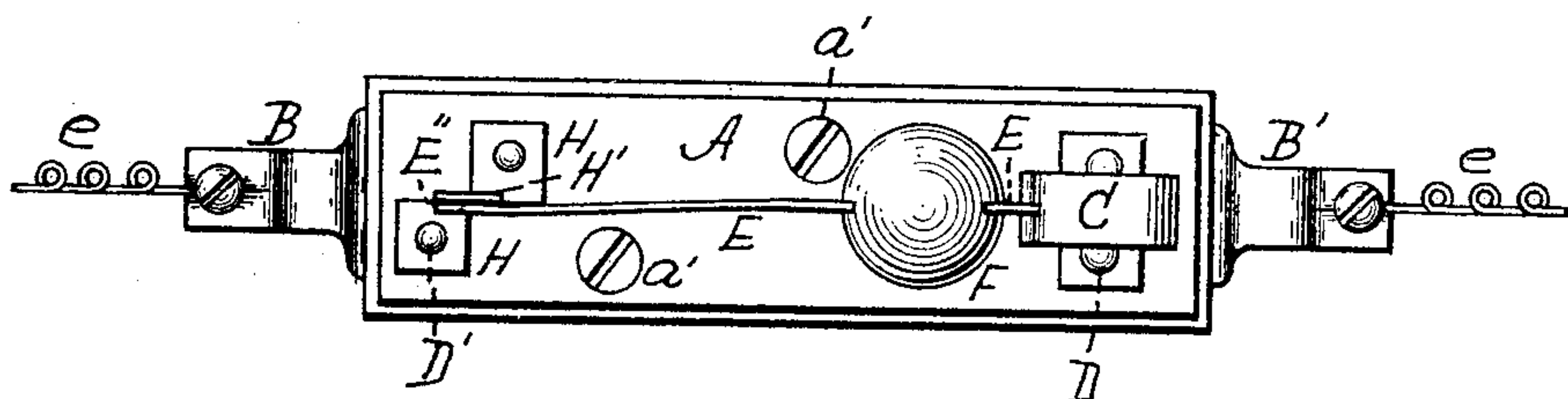
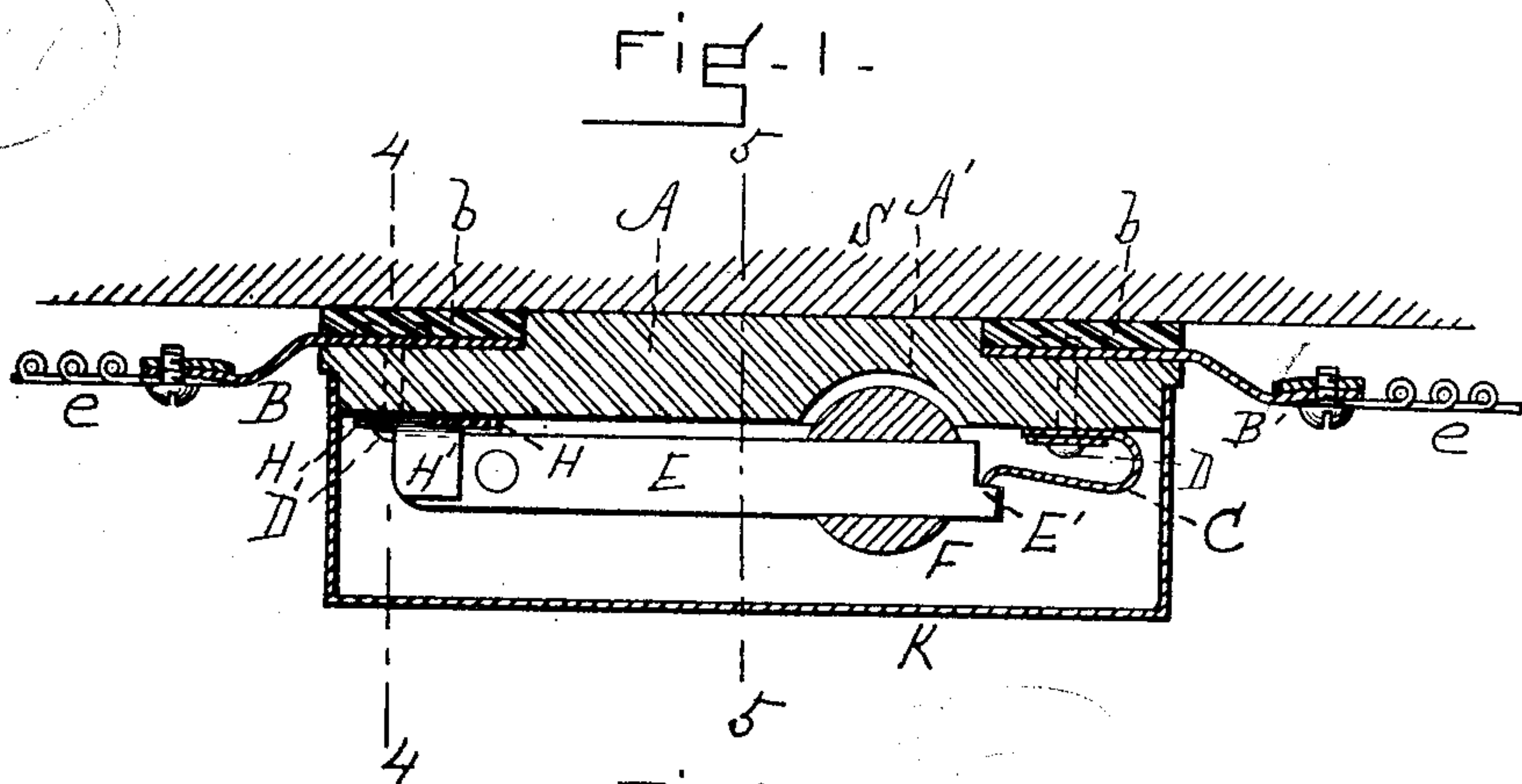
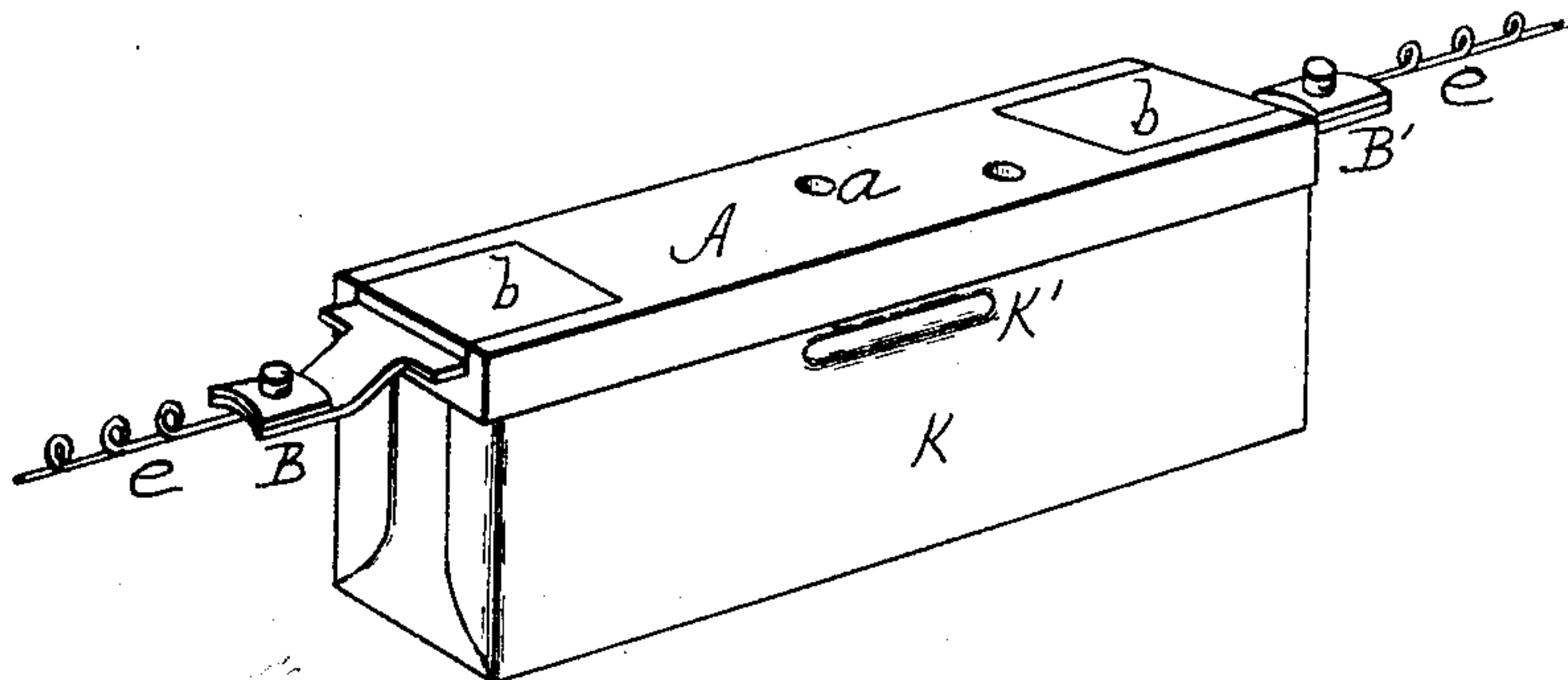


Fig. 4.

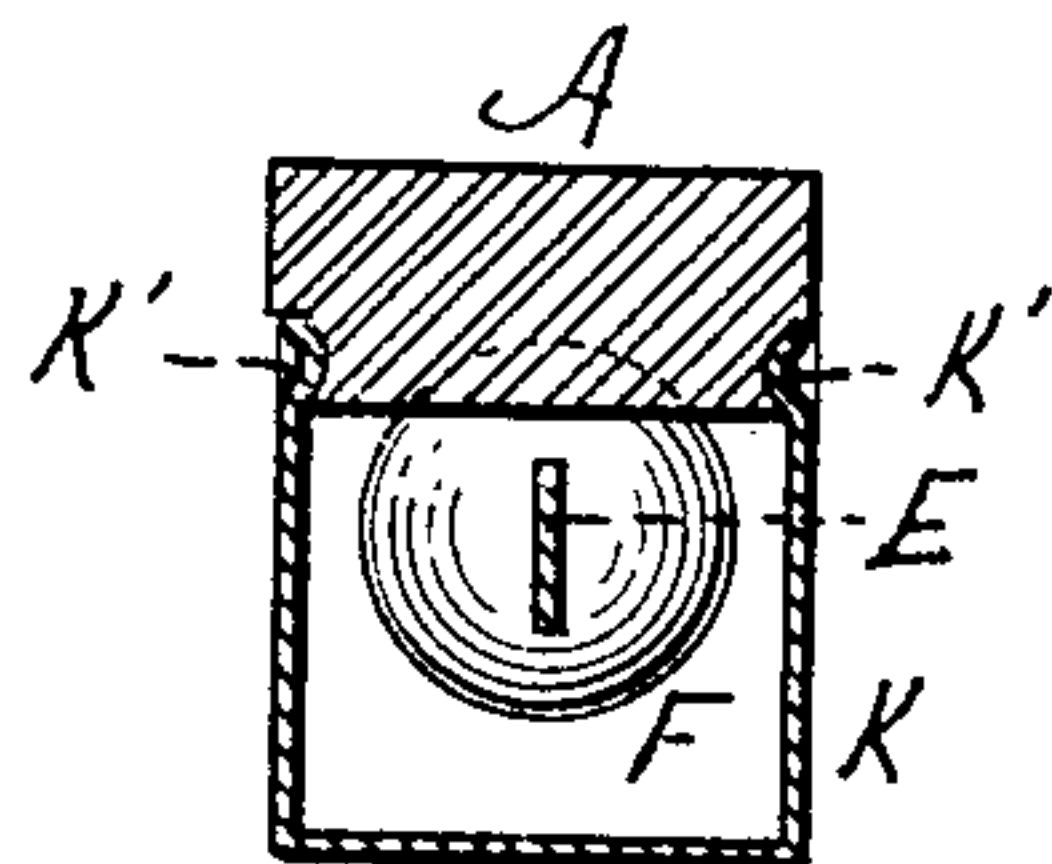


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

RICHARD P. OSGOOD AND JOHN D. OSGOOD, OF METHUEN, MASSACHUSETTS.

THERMOSTAT.

SPECIFICATION forming part of Letters Patent No. 640,407, dated January 2, 1900.

Application filed June 5, 1899. Serial No. 719,370. (No model.)

To all whom it may concern:

Be it known that we, RICHARD P. OSGOOD and JOHN D. OSGOOD, citizens of the United States, residing in Methuen, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Thermostats, of which the following is a specification.

This invention relates to that class of thermostats in which a closed electrical circuit is opened by the dropping by gravity of a weighted arm which is released by the melting of a fusible solder; and the invention consists in the novel construction and arrangement of parts hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of our thermostat suitably incased and adapted to be supported from the ceiling of a room. Fig. 2 is a central longitudinal vertical section of the same. Fig. 3 is a plan of the under side with the case removed. Fig. 4 is a cross vertical section taken on line 4, Fig. 2. Fig. 5 is a cross vertical section taken on line 5, Fig. 2.

Similar letters of reference indicate corresponding parts.

A represents a non-conductive plate or bed adapted to be screwed to a ceiling S through the holes *a* by means of screws *a'*.

B B' are the electrodes, protected by insulation *b* and connecting with the electric wires *e*.

C is a metallic spring secured to the under side of the plate A by means of a metallic bolt or screw D, which extends up through the plate A and makes contact with the electrode B'.

E is a horizontally-arranged metallic arm or bar supporting a weight F and provided at one end with a ledge or step E', on which the free end of the spring C normally bears. The opposite end of the bar E is united by fusible solder E'' with the downwardly-extending portion H' of a plate consisting of two wings H, secured to the under surface of the plate or bed A. This plate H is connected by a metallic screw D' with the electrode B. The bed A is recessed on its under side at

A' to accommodate the weight F. A case K incloses the above-named parts and is secured to the side edges of the plate or bed A by means of the inwardly-bent portions K', which press into corresponding grooves in the edge of the bed.

In the different figures of the drawings the parts are in their normal positions, the circuit being closed and completed through the post or screw D', plate H H', solder E'', bar E, spring C, and post or screw D. When the temperature rises sufficiently to melt the solder E'', the bar E is released and the weight F accelerates its fall, thus breaking the circuit.

It will be noticed that in this contrivance the bar does not draw away laterally from the portion H' of the plate, but drops on a plane which is parallel with the plate H'. Hence it drops easily and quickly, the softened solder constituting a sort of hinge, so that it swings down, the weight F striking the floor of the case first.

The spring C serves not only for an electrical connection, but also to absorb vibration.

It is found in practice that it is advisable to have the case air-tight, although this is not absolutely essential to the operation of the device.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a thermostat of the character described, the bed or supporting-surface A; the vertical flat plate H' extending downward from and sustained by said bed; the weighted bar E normally united to said plate H' by fusible solder and with its thus-united portion set vertically and on a plane parallel with the plate H'; a metallic spring supported from the bed and in contact with the opposite end of the bar E; and electrical connections connecting the said spring and said plate H' with the wires of an electrical circuit, substantially as described.

2. In a thermostat of the character described, the bed or supporting-surface A; the plate H secured to said bed and provided with the downwardly-extending vertical flat por-

tion H'; the weighted bar E having the vertical flat portion of one end united to said plate H' by fusible solder, the other end of said bar being provided with a step or ledge E'; the
5 spring C supported at one end by the bed and with its other end resting on said step; and electrical connections connecting the

said spring C and plate H with the wires of an electrical circuit, substantially as set forth.

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Witnesses:

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