

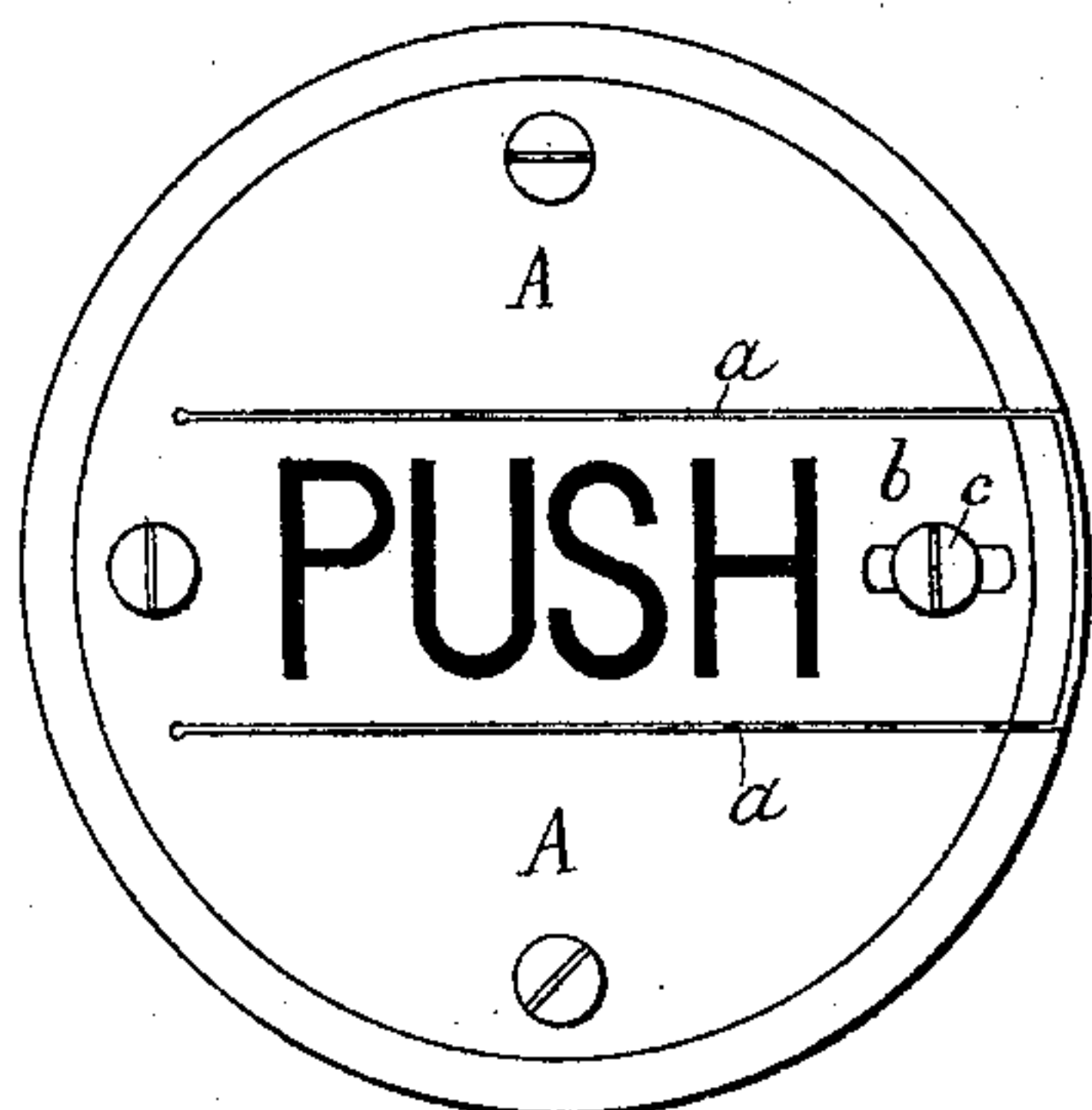
(No Model.)

W. G. DAY.
THERMOSTAT.

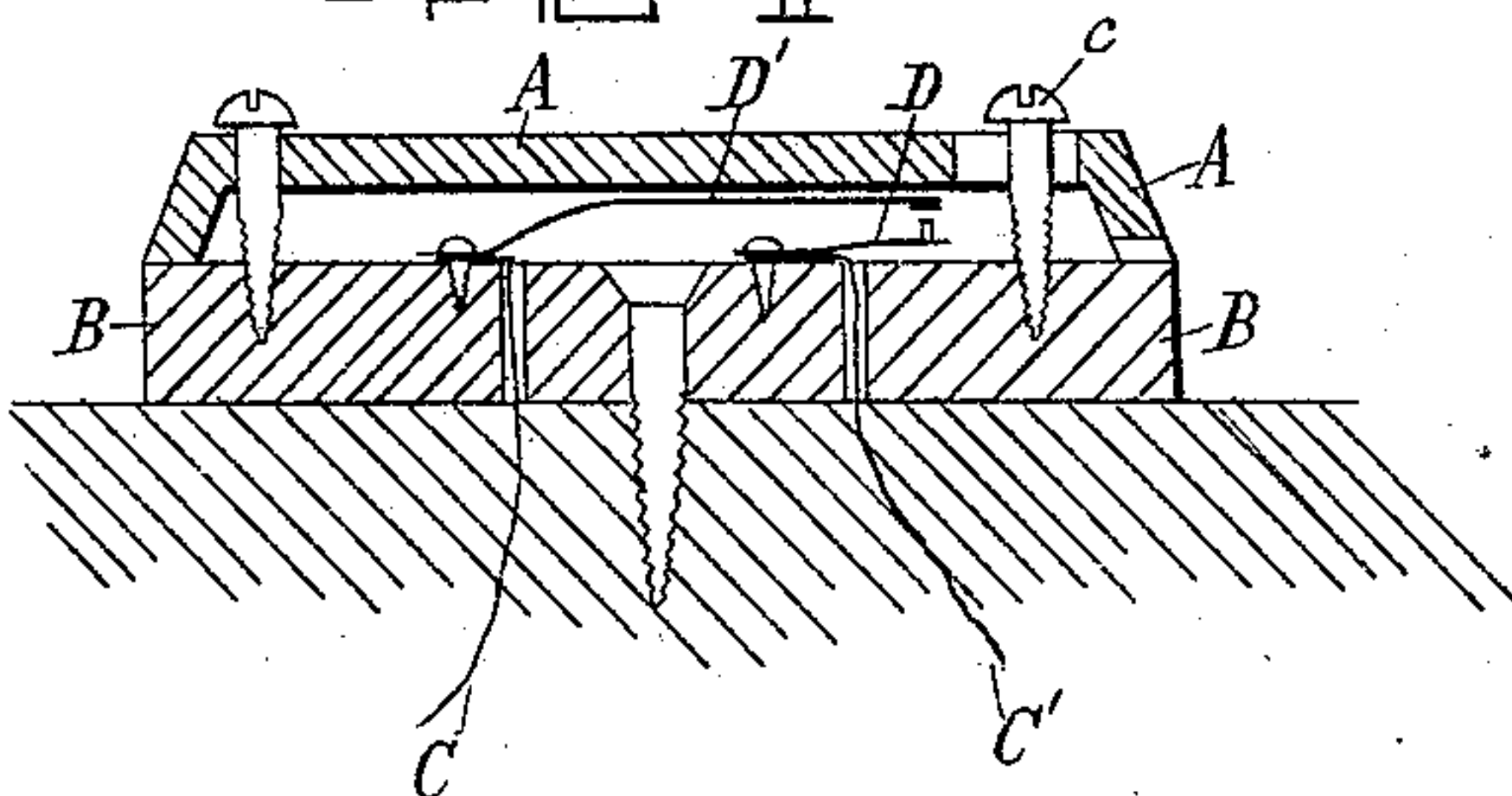
No. 277,241.

Patented May 8, 1883.

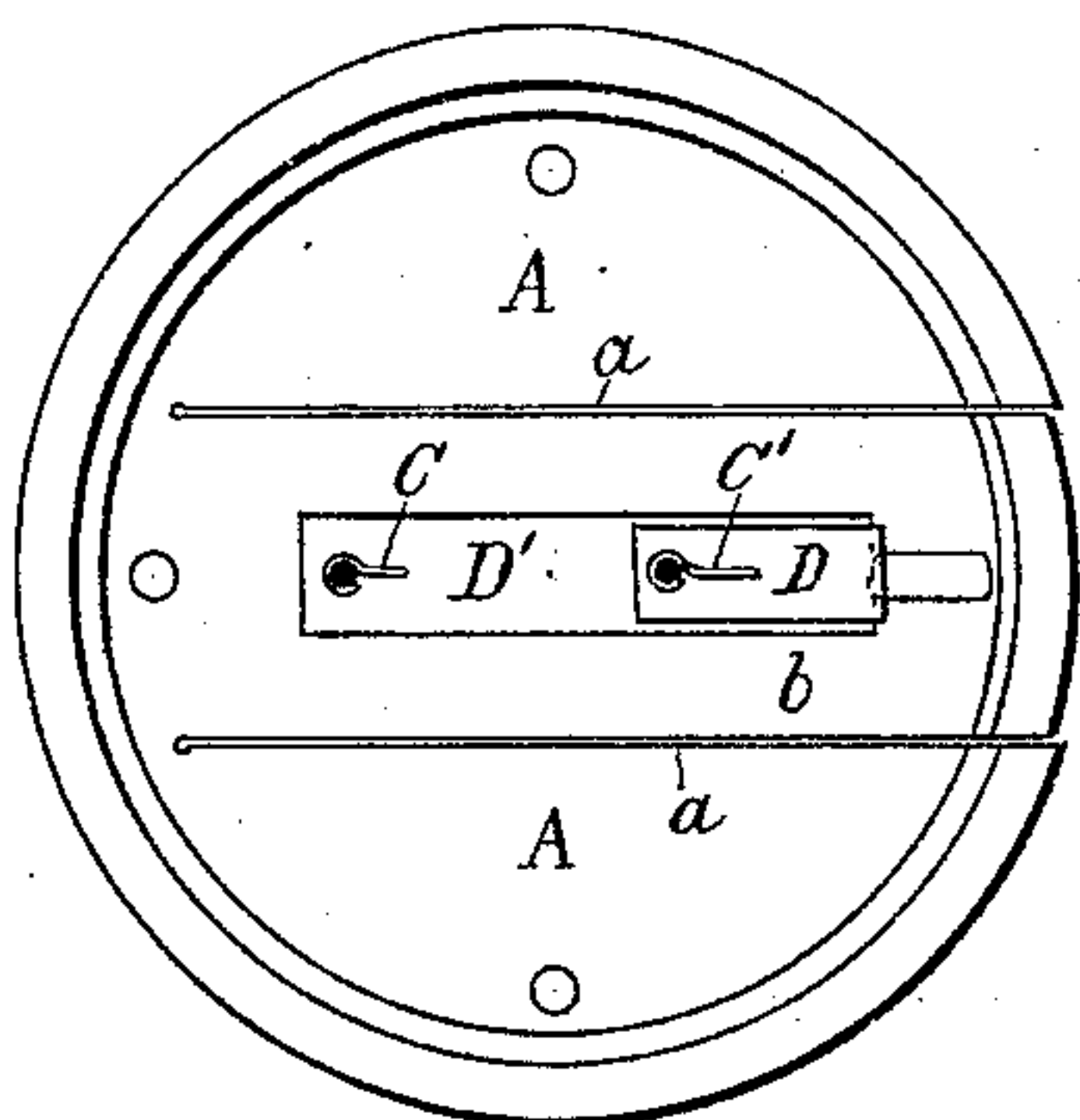
- FIG I -



- FIG II -



- FIG III -



- WITNESSES -

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- INVENTOR -

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UNITED STATES PATENT OFFICE.

WILLARD G. DAY, OF BALTIMORE, MARYLAND.

THERMOSTAT.

SPECIFICATION forming part of Letters Patent No. 277,241, dated May 8, 1883.

Application filed October 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLARD G. DAY, of the city of Baltimore and State of Maryland, have invented certain Improvements in Thermostats, of which the following is a specification.

My invention consists, first, in forming the plate, bar, or disk of a thermostat of horn, hide, or other substance which is contracted or warped by heat; and, secondly, in combining with such disk or plate signaling, registering, or controlling devices.

In the further description of the said invention which follows, reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure I is an exterior front view of the invention. Fig. II is a cross-section of the same. Fig. III is a rear or back view of the device.

Similar letters of reference indicate similar parts in all the views.

A is a plate, preferably of circular shape, and flanged downward to form a space between it and a block, B, which is secured to the wall. The disk A is constructed of horn, leather, or other substance having the properties before described—that is to say, when the outer surface of the material is suddenly heated it warps. The plate A is provided with two slots, *a*, which extend from the periphery to near the opposite side, as shown in Figs. I and III. This construction admits of the central portion of the plate, which is here shown as a strip, being moved independently of the surrounding parts; and to allow of an appreciable movement of the said central part, the flange at the free end thereof is cut away, as shown particularly in Fig. II.

C C' are positive and negative electric wires, which, when connected, complete an electric circuit, and cause the movement of signaling, recording, or indicating instruments or affect a valve or other controlling device.

D D' are strips of metal, connected in any suitable manner at their inner ends to the wires C C', and with their outer or free ends slightly

separated. The strip D' is nearly or quite in contact with the inner face of the disk A. Consequently upon the depression of the said disk, effected by the outward warping of the same or by pressure, the outer ends of the strips D D' are brought into contact and an electric circuit completed. In the inward warping of the piece *b* the middle portion thereof is somewhat depressed, and it then bears upon the strip D' and closes the circuit, as before described. As the electric arc formed in the separation of positive and negative electric wires effects the deterioration of the contact points, I protect the free ends of the metallic strips D D' by pieces of platina, which metal resists oxidation. In the drawings the strip D' has its outer end covered with platina foil, while the one D has a pin of the same material. The outward movement of the free end of the central piece, *b*, of the disk A is limited by means of a screw, *c*. This limitation of motion of the free end of the piece *b* increases the depression of the middle part of the said piece and causes the same to move the metallic strip D' more rapidly.

I do not limit myself to the employment of the electric wires and the metallic strips, as the disk may be used in connection with other signaling, registering, or controlling devices.

I claim as my invention—

1. In a thermostat, the bar, disk, or plate, formed of horn, hide, or other substance which is warped under the influence of heat, substantially as specified.

2. In a thermostat, a bar, disk, or plate adapted to be warped by the application of heat thereto, having slots extending from the periphery to near the other side to form a tongue, combined with a screw or other holding device applied to the said tongue to regulate its movement, substantially as specified.

WILLARD G. DAY.

Witnesses:

ED. J. DIGGS,

WALTER S. WILKINSON.