

(No Model.)

C. A. TUCKER.

ELECTRIC TEMPERATURE REGULATOR.

No. 302,215.

Patented July 15, 1884.

Fig. 1

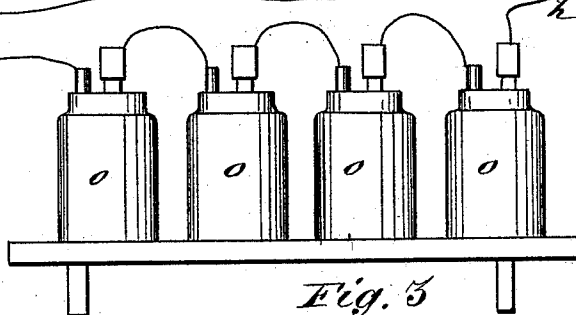
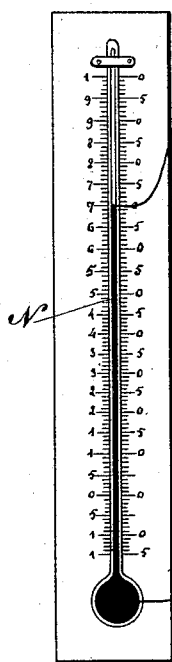
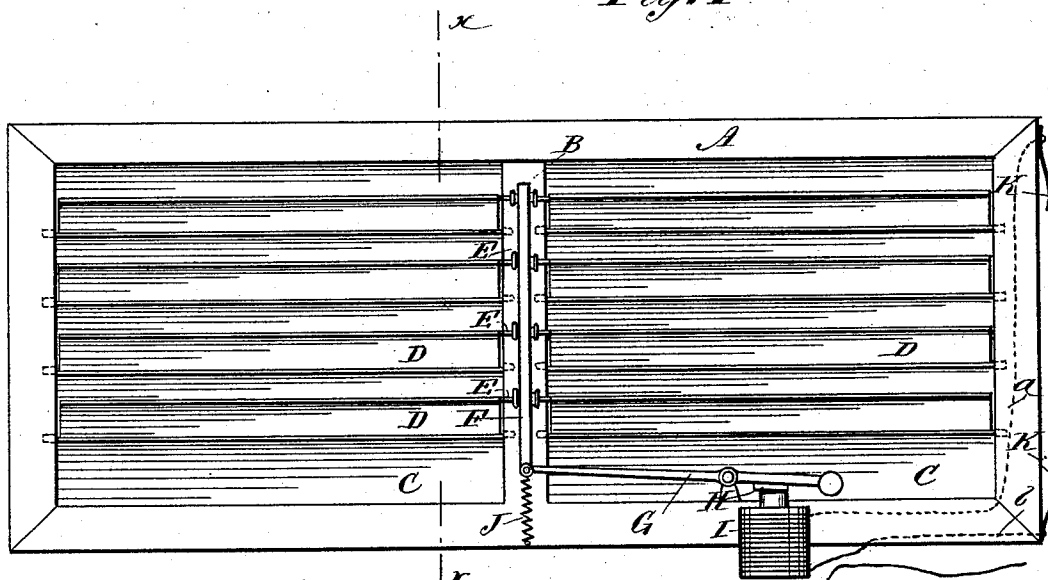


Fig. 5

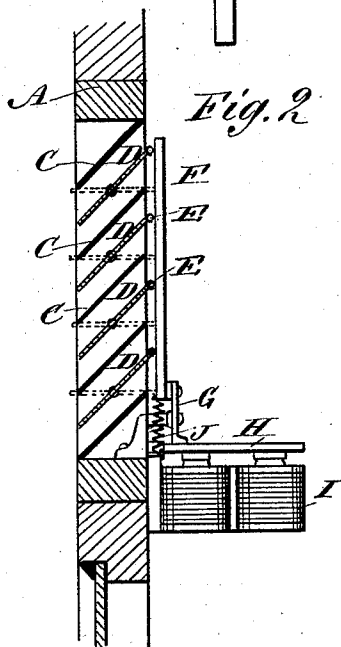
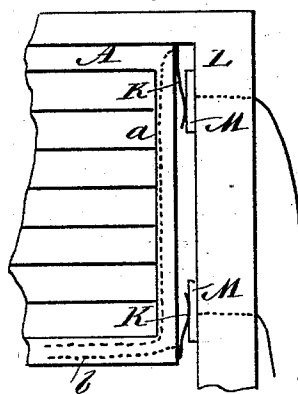


Fig. 2



WITNESSES:

C. Neveu
L. Sedgwick

INVENTOR:

C. A. Tucker

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES A. TUCKER, OF ISLIP, NEW YORK.

ELECTRIC TEMPERATURE-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 302,215, dated July 15, 1884.

Application filed March 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. TUCKER, of Islip, in the county of Suffolk and State of New York, have invented a new and Improved Electric Temperature-Regulator, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for regulating temperature by means of electricity.

The invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of my improved temperature-regulator. Fig. 2 is a cross-sectional elevation of the same on the line *x x*, Fig. 1. Fig. 3 is a face view of the end of the regulator and part of the window-frame.

A frame, A, of such length that it can fit in between the standards of the window-frame, is provided with a central standard, B, and to the end standards and the said central standard of the said frame downwardly and outwardly inclined slats C are secured, midway between which slats C slats D are pivoted, which slats D can be swung in a horizontal position to close the openings between the slats C, or can be swung in a position parallel with the slats C. The inner or adjoining ends of the slats D are connected at their inner edges by wires E, which several wires E are pivoted in one upright rod, F, on the inside of the frame. The lower end of the rod F is pivoted to one end of a lever, G, on the opposite side of the pivot of which an armature, H, is fastened, which is located above an electro-magnet, I, held on the bottom of the inside of the frame. A spring, J, draws the rod F downward. Two spring-strips, K, are secured on one end of the frame A at the top and bottom, and are connected by wires *a b* with the opposite ends of the magnet I. On the inner surface of one of the standards L of the window-frame two metal plates, M, are secured,

of which one is connected by a wire, *d*, with a thermometer, N, the wire *d* being fused into the thermometer-tube at the maximum degree of heat desired in the room. The bulb of the mercury-tube is connected by a wire, *g*, with a battery, O, which is connected by a wire, *h*, with the other plate M on the window-frame.

If the frame A is placed in the window-frame either above or below the sash, accordingly as the plates M are arranged in the window-frame, the spring-strips K come in contact with the plates M, thus connecting the two terminals of the electro-magnet with the thermometer-tube.

If the temperature rises in the room, the mercury rises in the thermometer-tube and closes the circuit, whereby the magnet I becomes excited and attracts the armature H. Thereby the long end of the lever G is thrown upward and moves the rod F upward, which swings the slats D into position parallel with and midway between the slats C, thus permitting the cold air to pass into the room and the warm air to pass off. As soon as the temperature falls the circuit is broken, the armature H is released from the magnet, and the spring J draws the rod F downward, thereby swinging the slats D against the edges of the slats C—that is, in horizontal positions—so that they close the openings between the slats C.

The above-described frame can also be held in light openings or in openings in the wall provided to receive these frames.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the frame A, of the downwardly and outwardly inclined fixed slats C, the pivoted slats D between them, bar F, connecting the slats D, the spring J, connected with the bar F, the pivoted lever G, carrying an armature, H, and connected with the bar F, the electro-magnet I, the thermometer N, the battery O, wires connecting the magnet with the thermometer and the battery, and a wire connecting the thermometer with the battery, substantially as herein shown and described.

2. The combination, with a frame having pivoted slats, of a lever and an electric magnet for shifting the pivoted slats, spring-pieces secured on the end of the frame, and
5 connected with the terminals of the electromagnet plates secured in the window-casing, of which plates one is connected with a battery and the other with a thermometer, the thermometer and battery being connected by a wire, substantially as herein shown and described. 10

CHAS. A. TUCKER.

Witnesses:

OSCAR F. GUNZ,
C. SEDGWICK.