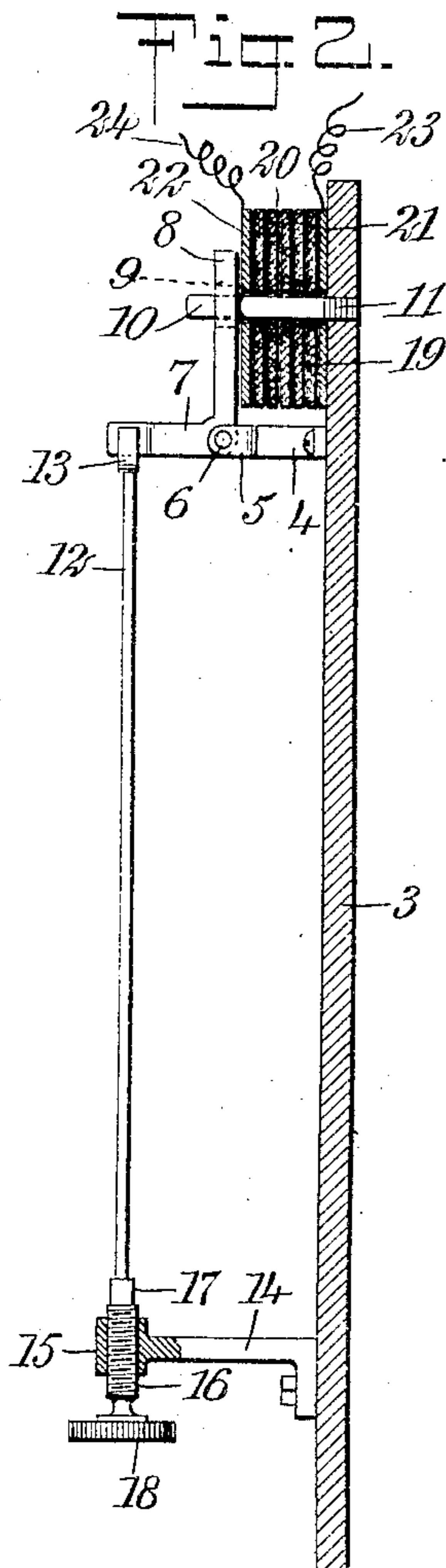
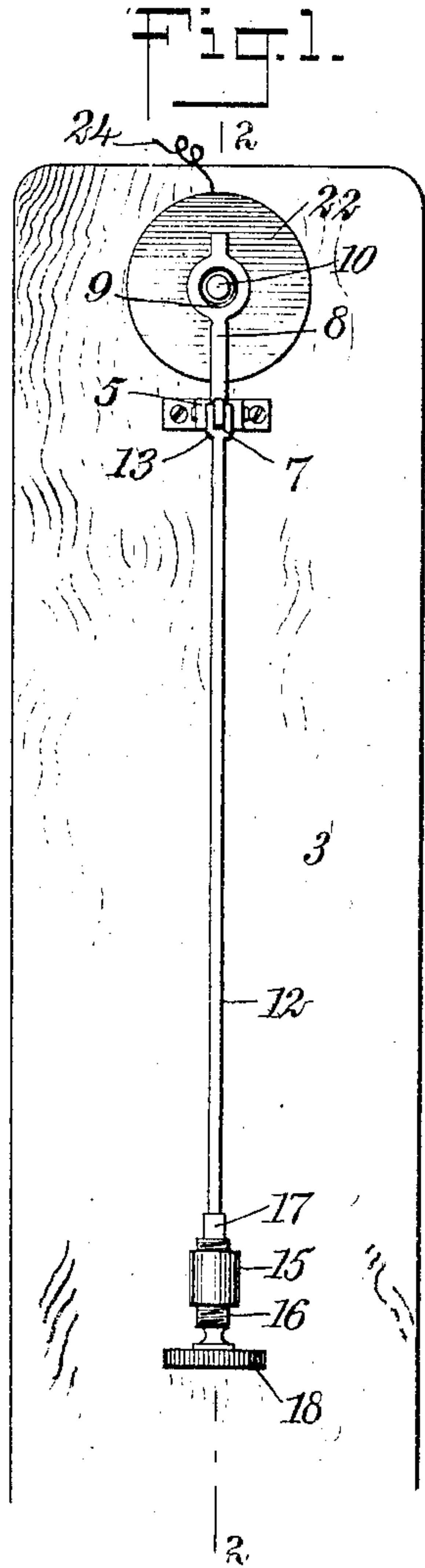


No. 865,304.

J. M. HARRISON.
THERMOSTAT.

PATENTED SEPT. 3, 1907.

APPLICATION FILED NOV. 14, 1906.



WITNESSES

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JAMES MALBON HARRISON, OF NEW YORK, N. Y.

THERMOSTAT.

No. 865,304.

Specification of Letters Patent

Patented Sept. 3, 1907.

Application filed November 14, 1906. Serial No. 343,375.

To all whom it may concern:

Be it known that I, JAMES MALBON HARRISON, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Thermostat, of which the following is a full, clear, and exact description.

My invention relates to thermostats, my more particular object being to produce a type of thermostat admitting of general service in the various arts, and adapted to produce considerable variations in heavy currents, and yet being peculiarly sensitive in heat. In other words, my special object is to enable comparatively trivial variations in heat to produce great variations in the flow of a heavy current.

I describe one form of thermostat embodying my general idea of construction, but it should be understood that I do not limit myself to this particular mechanism, as variations therefrom may be made without departing from the spirit of my invention.

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

Figure 1 is a front elevation of the device; and Fig. 2 is a central vertical section through the same.

Mounted upon a board 3 is a bracket 4 provided with a bifurcated end 5, the bracket and end together constituting a fork. A pivot 6 passes directly through the fork, and mounted upon this pivot is an elbow 7 provided with an upwardly extending portion 8 having an aperture 9 therethrough. A pin 10 is provided with a portion 11 and is screwed firmly into the portion 3 so as to project loosely through the aperture 9. The portion 3 of the elbow 7 is thus prevented from touching the pin. A rod 12 is provided with a seat 13 which supports the under side of the elbow 7. Located adjacent to the lower end of this rod is a bracket 14 which is mounted upon the board 3, the bracket terminating in the threaded bearing 15. A screw 16 passes upwardly through this threaded bearing and terminates in a cup 17 which supports the lower end of the rod 12. This screw is provided with a milled head 18 whereby it may be turned so as to slightly raise or lower the rod 12.

A number of disks 19 of carbon are provided centrally with apertures slipped loosely upon the pin 10. These

disks are normally in light contact, the lines of demarcation between them being indicated at 20.

Brass disks 21, 22, are disposed respectively adjacent to the board 3, and the upright portion 8 of the elbow. These brass disks are connected with conducting wires 23, 24, through which flows the current to be varied by thermostatic action.

My invention is used as follows: The milled head 18 being turned so as to adjust the rod 12, the portion 8 of the elbow is caused to press the disks together to an extent which may be regulated at will. The instrument being properly adjusted, thereafter works automatically. The rod 12, in expanding, squeezes the carbon disks 19 together and the current passing through the conductors 23, 24, is thus increased. When the rod 12 contracts, the reverse takes place, the current being cut down.

I find that very slight variations in heat, such for instance as are produced by the varying temperature of the human hand are sufficient to effect enormous variations in the flow of the current. This is essential for the reason that I desire my thermostat to be able to control currents of a considerable number of amperes and yet to be in turn controlled by comparatively slight heat variations.

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

1. The combination of a plurality of carbon disks provided with apertures, a pin extending through said apertures for supporting said carbon disks, and heat-controlled mechanism for forcing said carbon disks together with varying degrees of pressure.

2. A thermostat comprising a number of bodies of conducting material provided with apertures, a supporting member extending through said apertures for sustaining said bodies, and means controllable by temperature for varying the degree of pressure upon said bodies.

3. A thermostat comprising a plurality of bodies of conducting material, the electrical resistance of which is sensitive to pressure, said bodies being provided with apertures, a supporting member extending through said apertures for sustaining said bodies, temperature-controlled mechanism for varying the degree of pressure upon said bodies, and means controllable at will for adjusting said temperature-controlled mechanism relatively to said bodies.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES MALBON HARRISON.

Witnesses:

BESSIE NATKINS,
ALBERT BUTSCHER.