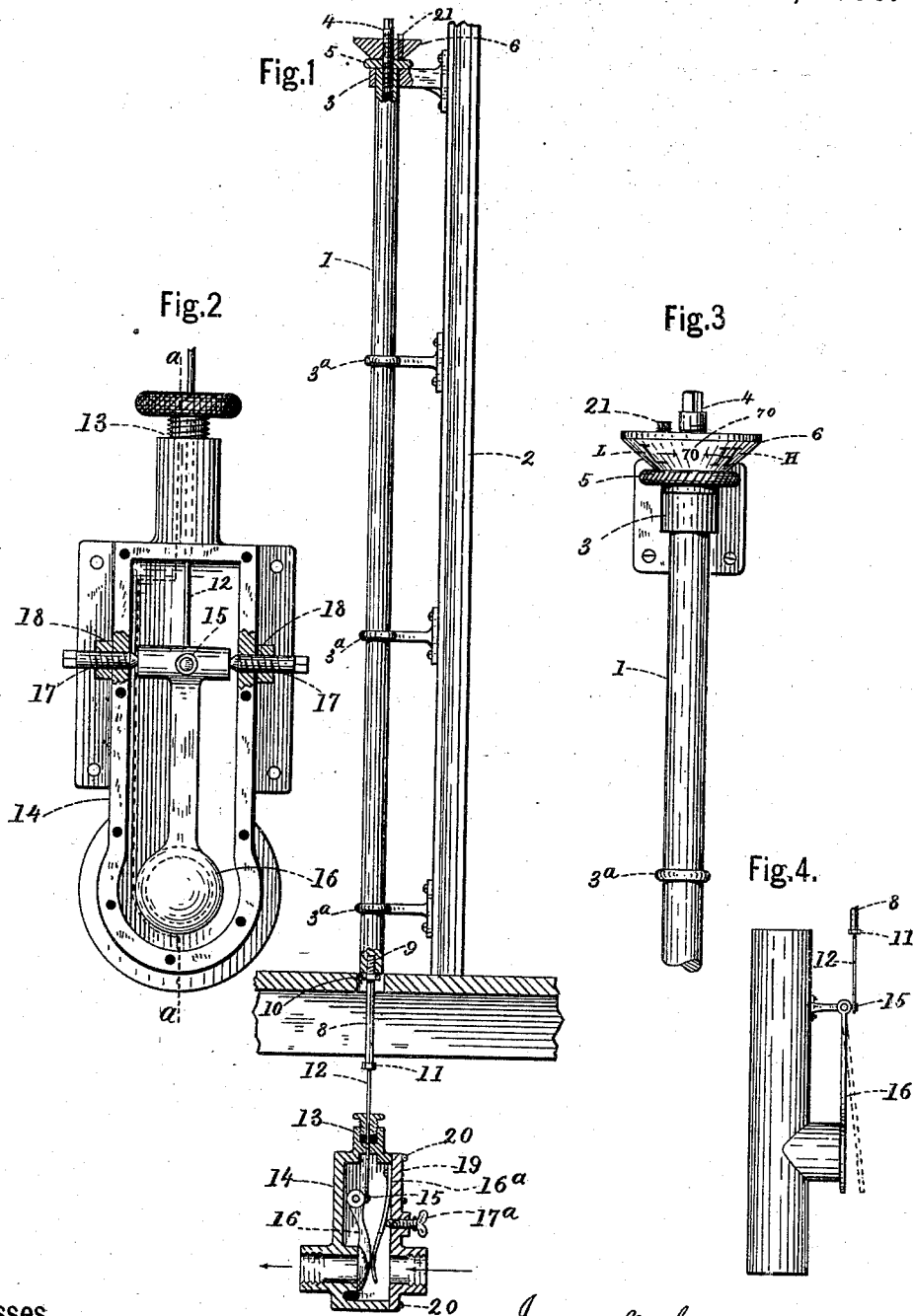


(No. Model.)

I. M. SEAMANS.
THERMOSTAT.

No. 489,991.

Patented Jan. 17, 1893.



Witnesses.

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UNITED STATES PATENT OFFICE.

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THERMOSTAT.

SPECIFICATION forming part of Letters Patent No. 489,991, dated January 17, 1893.

Application filed December 3, 1891. Serial No. 413,951. (No model.)

To all whom it may concern:

Be it known that I, IRVING M. SEAMANS, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Thermostats, of which the following is a specification.

My invention relates, to certain improvements in devices for regulating the temperature of buildings, rooms, or for other like purposes, and will be fully and clearly hereinafter described and claimed reference being had to the accompanying drawings, in which:—

Figure 1 is a side elevation, the upper and lower ends of the expanding and contracting rod having a small portion in section to show the inner construction, a central vertical section being also shown through the valve case in or about line *a a* in Fig. 2. Fig. 2 is a front elevation of the valve case, the side cover of the case being omitted and a small portion being broken away to show the pivotal centers upon which the valve swings. Fig. 3 is an enlarged side elevation of the upper portion of the device. Fig. 4 is a side elevation of a joint of furnace pipe showing how the device may be adapted to operate a furnace damper.

In carrying out my invention I employ a solid rod of hard rubber, 1, it should be about seven feet long, more or less, and is secured in a vertical position to the wall, or casing, 2, of a door, or other suitable place in a room by means of the supporting brackets 3 and 3^a, the top bracket, 3, being designed to hold it rigidly at that point when adjusted. It is adjusted to the desired point by means of the set screw 4, which screws in or out of the upper end of the rod, 1, the milled thumb nut, 5, and the index head, 6. The lower portion of the rod, 1, is held by small brackets, 3^a, or common screw eyes would answer, they are constructed so that the rod can move in them while expanding or contracting. The index head, 6, is provided with index mark, 70, and the letters H and L, which signify high or low temperature. At the lower end of the rod, 1, is secured a short rod, 8, by means of the screw portion, 9, and the jam-nut, 10. This rod, 8, passes down through the floor and to its lower end is secured in

the same way by a screw portion and a jam nut, 11, a still smaller rod, 12. The rod 12 passes through a stuffing box 13, in the valve case, 14, and is provided with a perforation at its lower end and secured by a pin or screw 15, to the pivoted valve, 16. This valve, 16, is secured so as to turn easily on two pointed adjusting screws, 17, which are kept rigidly in place by two jam-nuts 18, (see Fig. 2,) the valve 16, when free is kept shut by a spring 16^a, this spring is made adjustable by the set screw, 17^a. The valve case is provided with a cover, 19, shown in Fig. 1, secured thereto by screws, 20.

The index head, 6, when adjusted to the proper point is rigidly held at that point and also the thumb nut, 5, by means of a set screw, 21, which passes down through the index head and fastens against the thumb nut.

From the above description, it will be seen that when the temperature of the room falls below a given point, the rod, 1, contracts and opens the valve, 16, so (when gas is the heating agent) as to allow it to pass through, and when the heat increases sufficiently the rod will expand and allow the spring 16^a, to close the valve and shut off the flow of gas or regulate the damper of a coal fire substantially as shown in Fig. 4.

In practice I have found that a rod of hard rubber is more sensitive to variations of temperature than anything I know of, while brass or iron would be of no use whatever in the above construction, I find that hard rubber operates well at all the variations of a low temperature.

I claim as my invention.

1. In a thermostat, the combination with a bracket or support, of a rod of suitable material, as hard rubber, suspended from said bracket, the lower end of which rod is connected with a regulator, a screw bolt in the end of the rod the end of which projects above the bracket, a thumb nut upon the bolt above the bracket, an index head above the nut and a set screw through the head, the lower end of which engages with the nut and locks the parts in the desired position, substantially as set forth.

2. In a thermostat, the combination, with the valve case provided with a removable cover,

and a perforation in the top, a valve pivotally secured within the case, an adjustable spring within the case with its free end bearing against the valve, a set screw for adjusting
5 said spring, and a rod through the opening in the top of the case, the lower end of which is rigidly secured to the valve, and a suitable regulator rod secured to the upper end thereof, substantially as set forth.

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