

(No Model.)

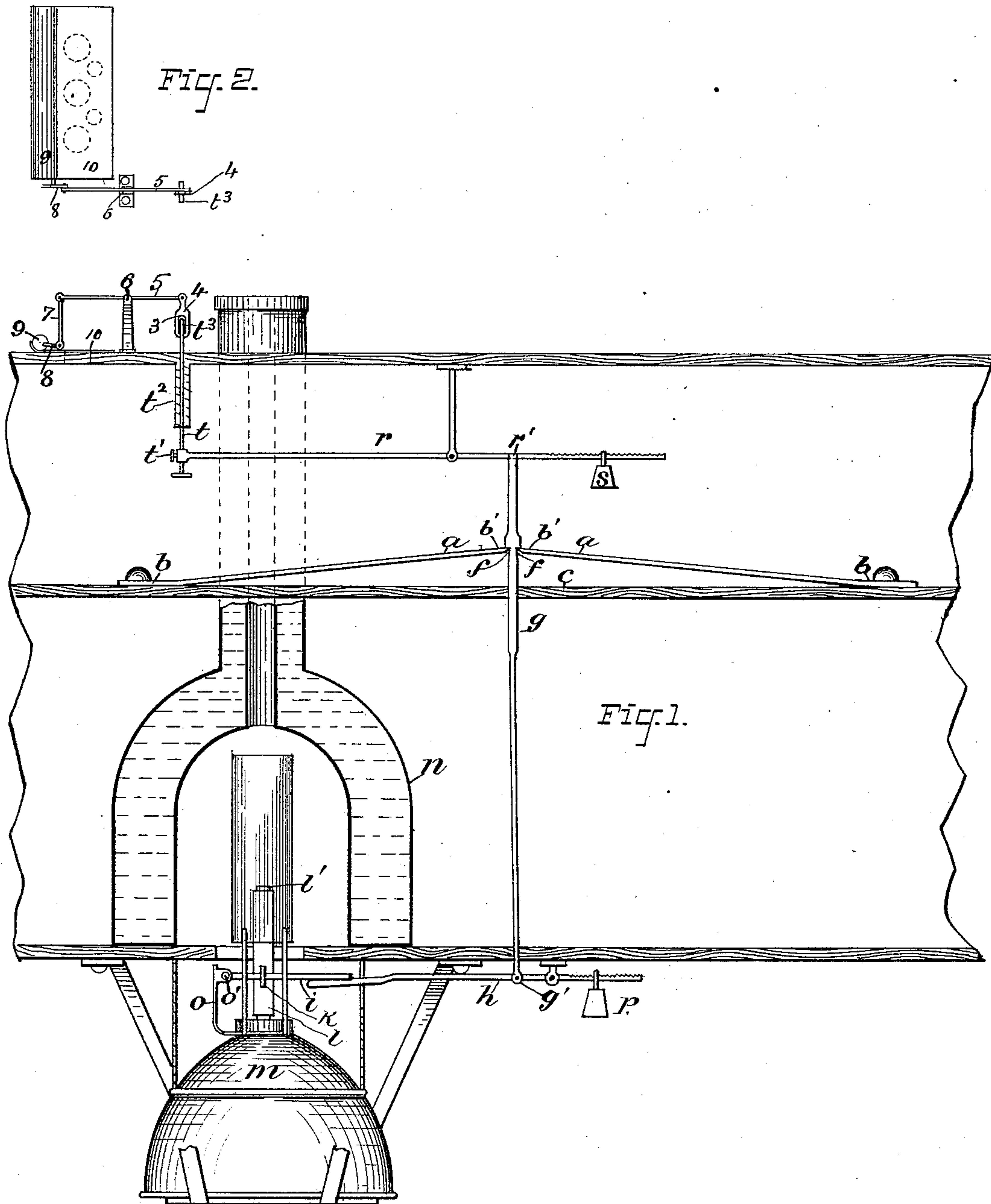
2 Sheets—Sheet 1.

J. C. LOSEE.

THERMOSTAT FOR INCUBATORS.

No. 336,125.

Patented Feb. 16, 1886.



ATTEST:

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J. A. Hurdle

INVENTOR:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

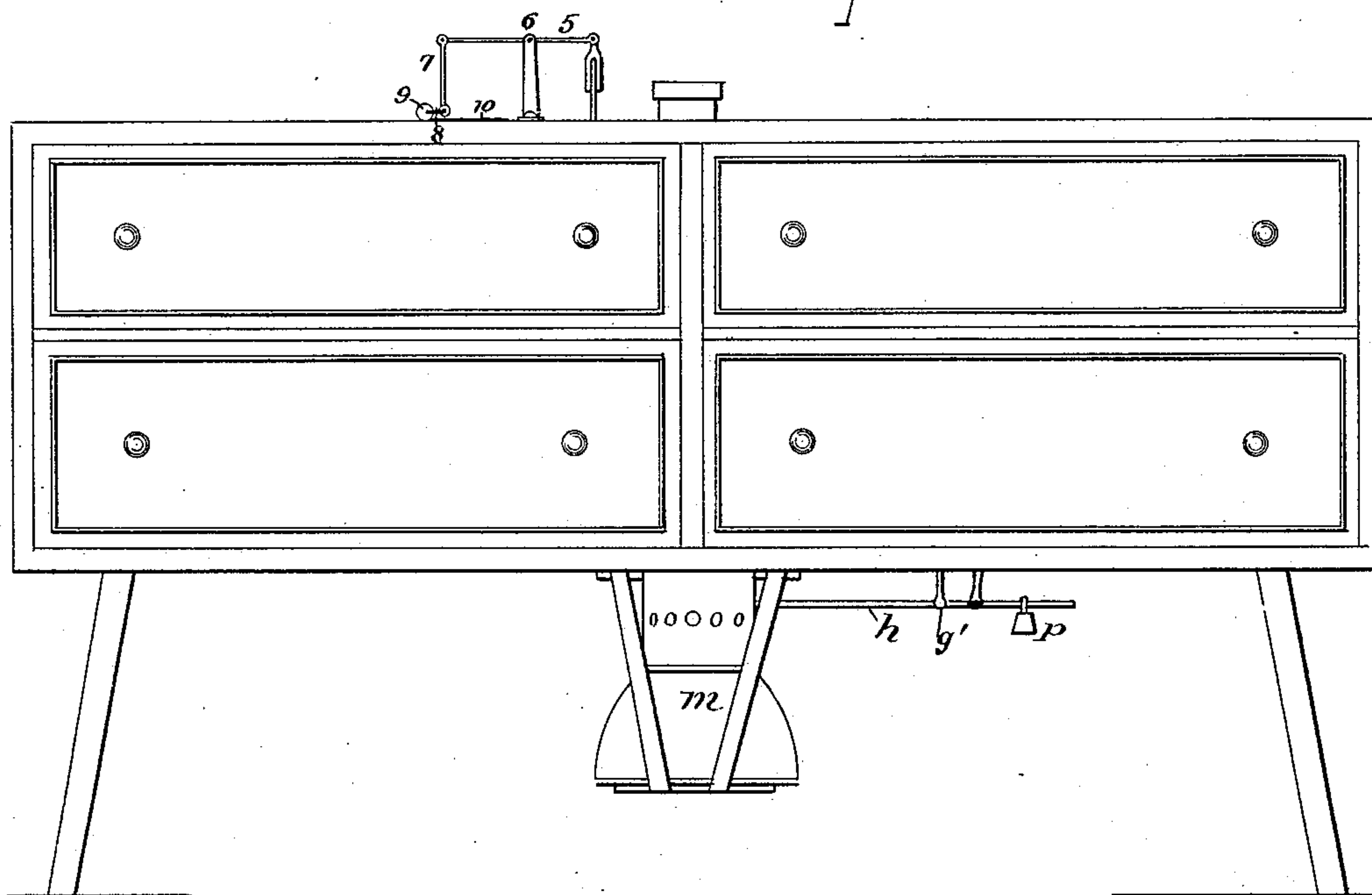


Fig. 3.

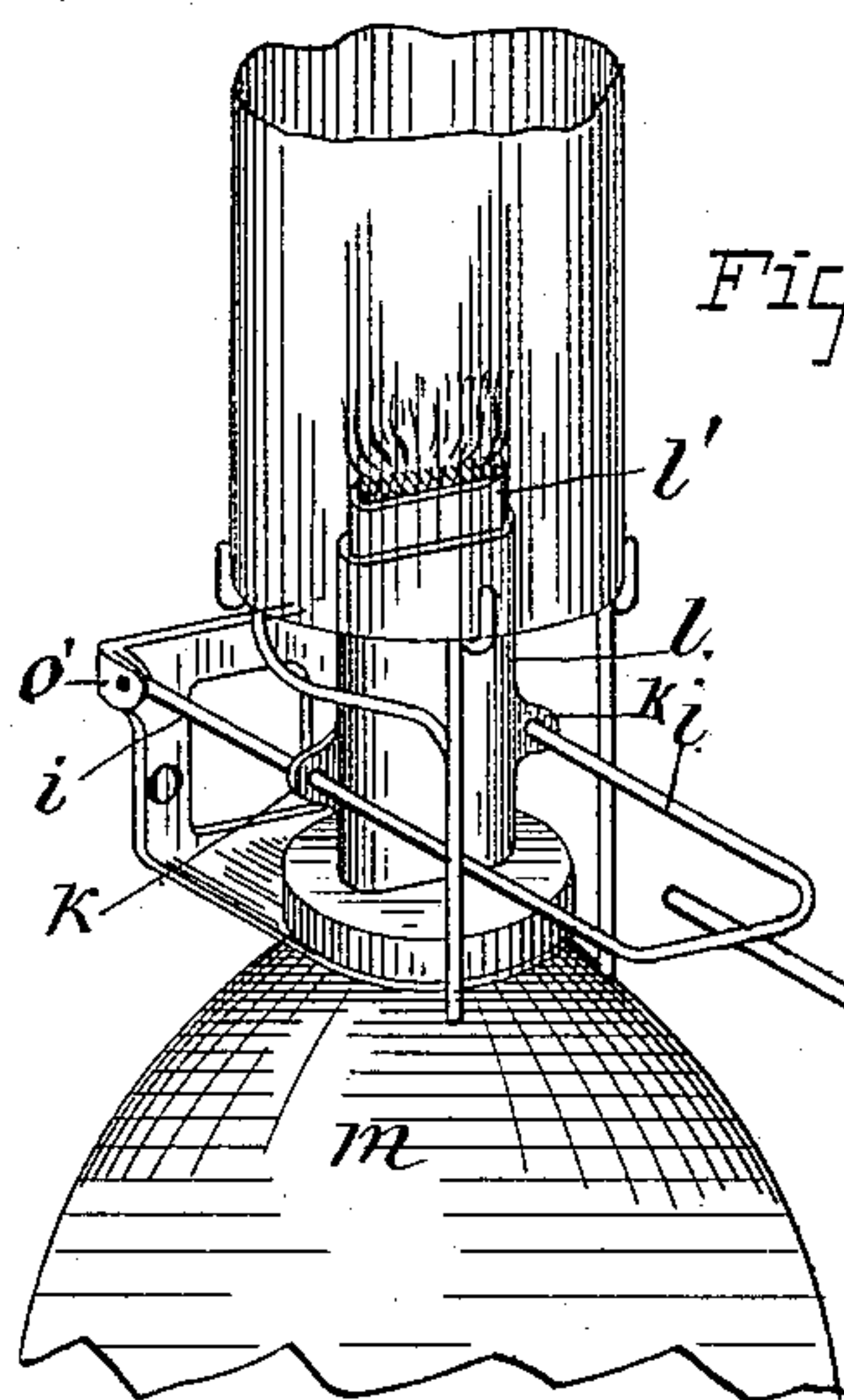
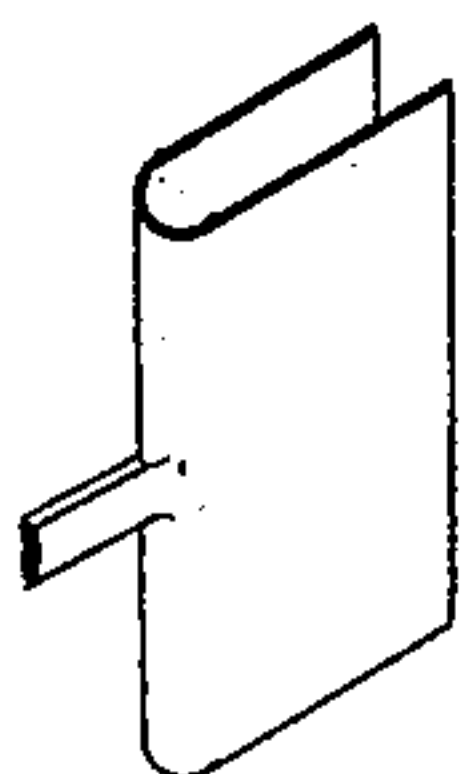


Fig. 5.



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UNITED STATES PATENT OFFICE.

JACOB C. LOSEE, OF SUMMIT, NEW JERSEY.

THERMOSTAT FOR INCUBATORS.

SPECIFICATION forming part of Letters Patent No. 336,125, dated February 16, 1886.

Application filed April 30, 1885. Serial No. 163,953. (No model.)

To all whom it may concern:

Be it known that I, JACOB C. LOSEE, a citizen of the United States, and a resident of Summit, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Thermostats for Incubators, of which the following is a specification.

My invention relates to a device forming a thermostat arranged within an incubator and connected with the mechanism of the heating-generator in such a manner as will enable the same by thermostatic principle to operate and govern the temperature therein automatically.

It also relates to mechanism connected with the hereinbefore-mentioned device, whereby a ventilator may be operated when the heat shall have arisen beyond the desired degree, thus keeping a uniform temperature within the incubator.

The first part of my invention consists of two metallic strips, coils, rings, or lobes, each having one of their ends or portions properly secured to one of the floors of an incubator. In this case these strips arise from their fixed ends, whereby they together form an obtuse angle. The ends forming the vortex are slightly beveled, so that they may play freely within a depression made on a vertical rod, thereby suspending it from the free ends of the metallic strips mentioned above. The lower end of this vertical rod is connected with a horizontal rod, one end of which forms a yoke or fork passing through ears secured to or integral with a sliding tube surrounding a wick-tube of an oil-reservoir placed beneath a boiler within the incubator. The extreme ends of this rod or prongs, after passing through the ears of the sliding tube, are hinged or otherwise secured to uprights secured to the oil-reservoir proper, or any device connected therewith. The remaining end of this horizontal rod is provided with a balance-weight, of which a full and clear description will be given hereinafter.

The second part of my invention consists of a horizontal rod suspended above the hereinbefore-mentioned vertical rod in such a manner as to rest on the end thereof. One end of this horizontal rod is connected with a ventilator-rod in such a manner as will enable it to be adjusted thereon. The upper end of the ventilator-rod is bent over, so as to form a right angle; or it may be in the form of a hook, which

enters a slot or link secured to the end of a horizontal arm adapted to swing on a fulcrum made on the upper end of an upright. The other end of this horizontal arm is connected with a small vertical link, rod, or chain with its lower end connected with an arm fixed to a flat or cylindrical strip of any suitable material provided with a sheet of mica, paper, or any metallic, fibrous, or mineral substance adapted to cover or uncover perforations in accordance with the operation of the device, whereby a uniformity of heat may be maintained.

The third part of my invention consists of a thermostat connected with suitable mechanism arranged within an apartment, and adjusted so as to regulate the temperature therein by increasing or diminishing ventilation thereto.

In the drawings, Figure 1 represents a section of a part of an incubator in which are shown the principal features of my invention. Fig. 2 represents a plan view of that portion of the ventilator arranged on the exterior of the incubator. Fig. 3 represents a perspective view of a portion of the main horizontal rod, showing the yoke thereof and the manner in which it is connected with the sliding tube surrounding the wick-tube of the oil-reservoir. Fig. 4 is an elevation of the exterior of the incubator complete. Fig. 5 represents a modified form of sliding tube.

The same letters refer to the same or similar parts throughout the drawings, in which *a* represents the two metallic strips forming the thermostat. *b* are the ends fixed to the floor *c*. *b'* are their free ends, beveled so as to engage with the notches or depressions *f*, made on the vertical rod *g*, whereby it is suspended. The lower end, *g'*, is secured to the main horizontal rod *h*, one end of which terminates in or rests beneath a fork or yoke shape, *i*. The prongs thereof pass through the ears *k* of the sliding tube *l*, surrounding the wick-tube *l'* of the oil-reservoir *m*, which is secured to the incubator beneath the lower floor thereof, so that the flame may come beneath the boiler *n*. The extreme ends of the prongs of the main horizontal rod *h* are hinged or otherwise secured to the upright *o*, secured to the body of the oil-reservoir. The other end of this rod *h* is provided with a balance-weight, *p*, adapted to preserve its equilibrium when in its normal

position. Suspended above the thermostat is a horizontal rod, *r*, the portion *r'* thereof resting on or otherwise connected with the end of the vertical rod *g*. To the right of this rod is represented a balance-weight, *s*. The other end of this rod *r* is connected with the ventilator-rod *t* in such a manner as to enable it to be adjusted by the set-screw *t'*. This ventilator-rod passes up and through the sleeve *t''*, and terminates in a hook or angle, *t'''*, which enters the opening 3 of the link 4, which is suspended from one end of the horizontal arm 5, swinging on the fulcrum 6. The other end of this arm 5 is connected with a vertical rod, link, or chain, 7, the lower end of which is properly secured to an arm, 8, fixed to a flat or cylindrical strip, 9, having a sheet of mica, 10, secured thereto, adapted to cover the perforation in the top of the incubator when in its normal condition.

The working mechanism connected with the oil-reservoir is covered by a tubular sheath, the object of which is to prevent an unnecessary draft from striking the flame. It will be obvious that when the boiler begins to radiate the heat, and generating more than necessary, it will cause the metallic strips *a* to expand, thereby raising the vertical rod *g*, and carrying with it the main lever *h*, which, swinging, as it does, from the hinges *o'* of the uprights *o*, will lift the sliding tube *l*, causing it to ascend above the wick and smother the flame, thus reducing the temperature to the predetermined degree. Should the heat continue on, the rod *g* will ascend further, when it will operate the mechanism connected with the ventilator, whereby the heat will be allowed to escape, thus giving double security to the device for maintaining a predetermined temperature within the incubator automatically.

I am aware that various devices have been made for regulating the temperature within the chambers of an incubator. I therefore do not claim, broadly, the thermostatic principle as applied to incubators.

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

1. In combination with an incubator, two strips of metal secured to the floor within the incubator, one end of each engaging with the rod connected with the device adapted to smother the flame from the oil-reservoir when operated, substantially as shown and described.

2. In an incubator, the combination, substantially as shown and described, consisting of the metallic strips *a*, vertical rod *g*, main horizontal rod *h*, fork or prongs *i*, ears *k*, the sliding tube *l*, wick-tube *l'* of the oil-reservoir *m*, uprights *o*, hinges *o'*, balance-weight *p*, and boiler *n*, the whole forming a complete device for regulating the temperature within the incubator.

3. The heat-regulating device of an incubator, consisting of the suspended lever *r*, the vertical rod *g*, supporting or connected with said lever *r*, the balance-weight *s*, adjustable ventilator-rod *t*, sleeve *t''*, hook *t'''*, link 4, horizontal arm 5, fulcrum 6, link 7, arm 8, strip 9, and sheet of mica 10, substantially as shown and described.

Signed at New York, in the county of New York and State of New York, this 28th day of April, A. D. 1885.

JACOB C. LOSEE.

Witnesses:

THOS. KILVERT,
D. MCINNES.