(No Model.)

H. R. DAVIS.

HEAT REGULATOR FOR INCUBATORS.

No. 525,490. Patented Sept. 4, 1894.

Fig. 1.

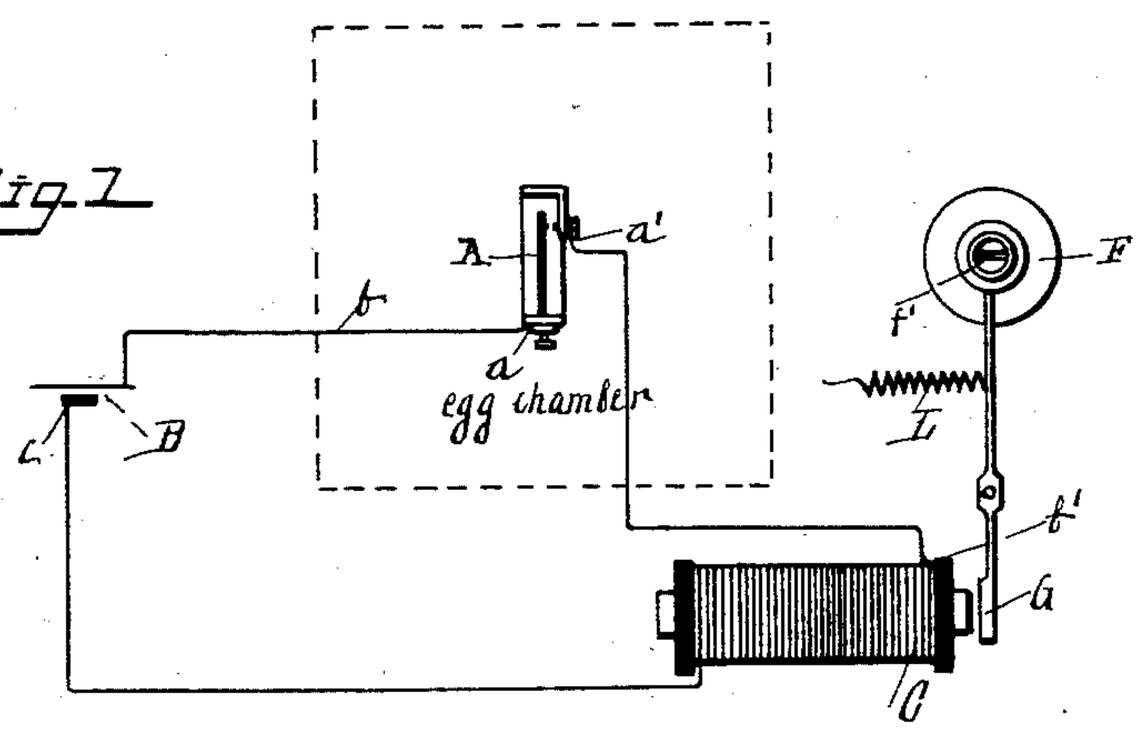


Fig. 2.

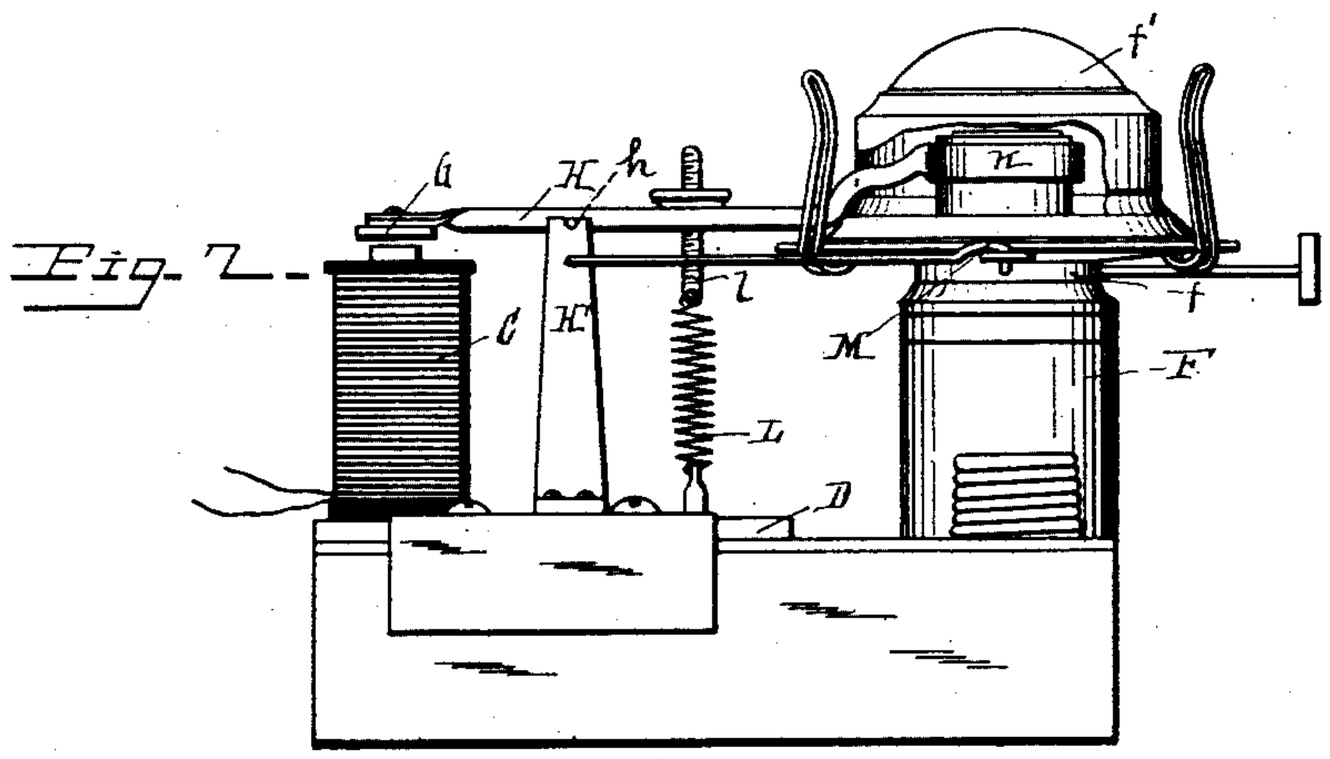
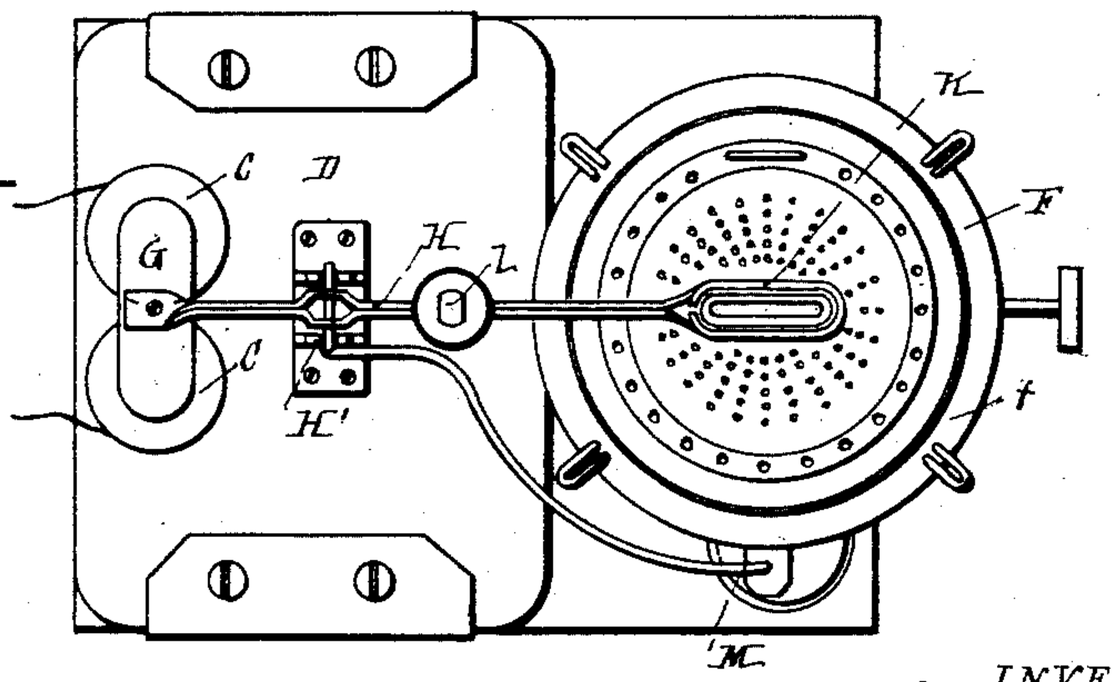


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

HUBER R. DAVIS, OF CARDINGTON, OHIO.

HEAT-REGULATOR FOR INCUBATORS.

SPECIFICATION forming part of Letters Patent No. 525,490, dated September 4, 1894.

Application filed August 31, 1893. Serial No. 484,460. (No model.)

To all whom it may concern:

Be it known that I, HUBER R. DAVIS, a citizen of the United States, and a resident of Cardington, in the county of Morrow and State of Ohio, have invented certain new and useful Improvements in Heat-Regulators for Incubators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a diagrammatic view of the invention. Fig. 2 is an elevation of same and Fig. 3 is a top plan view.

This invention has relation to certain new and useful improvements in heat regulators for incubators, and it consists in the novel construction and combination of parts, all as hereinafter described and pointed out in the claim.

The object of the invention is to provide a simple and effective device of the character above named, which may be applied to any form of incubator which employs an ordinary lamp to supply the heat, and which may be relied upon to regulate the temperature to any desired degree.

Referring to the accompanying drawings, the letter A designates a thermostat which may be of any well known form suitable for the purpose, and which is designed to be placed in the egg chamber of an incubator in the ordinary manner. One terminal *a* of said thermostat is electrically connected, as by a wire *b*, with one pole of a battery B, which preferably consists of a single gravity cell. The other terminal *a'* of the thermostat is similarly connected, as at *b'*, with one pole of an electro-magnet C, whose other pole is electrically connected as at *c*, with the other pole of the battery. The electro-magnet C is supported upon a suitable base D in convenient relation to the lamp F of the incubator. This lamp F is designed to be of any well known form suited to the purpose, and having preferably a screw-cap *f* for convenience in filling. The cap *f'* should be hinged in the ordinary manner for convenience in trimming, and the burner should be readily removable from the base or oil reservoir to provide for the renewal of the wick.

G is an armature controlled by the electro-magnet C, and carried by an arm of a lever H, which is fulcrumed at *h* upon a standard H' usually supported upon the base D of the magnet. The other arm of said lever carries a damper K which fits loosely over the wick tube, and is arranged, when the opposite arm of the lever is depressed by the attraction of the magnet upon the armature G, to rise upon said tube and partially cut off the flame. The armature is normally held away from the magnet by means of a spring L connected at one end to the opposite arm of the armature lever, and at the other end to the base D. The connection between the spring and lever is usually effected by means of a screw *l*, in order that the tension of the spring may be properly adjusted.

The thermostat is set to make contact and complete the circuit when the temperature in the egg chamber rises above that which it is desired to maintain. Upon the circuit being completed the magnet is at once energized, the armature is attracted against the tension of the spring L, and the damper is moved to partially cut off the flame. When the temperature has once more fallen to the proper point, contact is broken by the thermostat, and the spring retracts the armature, and lowers the damper. It will be observed that the wick may be raised or lowered, and trimmed without in any way interfering with the attachment. To insure the burner being held in proper place, a hook M is provided, said hook being pivoted to the standard H', and engaging the rim or flange of the burner. To renew the wick it is simply necessary to disengage this hook, and detach the spring L from the armature lever, and turn back the cap. The armature, lever, and damper may then be removed, and the burner unscrewed. To permit said lever to be removed, its pivot is supported in open bearings in the standard.

I am aware that it is not new to operate a heat-regulating device for incubators and other devices by means of electro-magnets and a rocking armature lever controlled by said magnets, and I do not seek to claim such an arrangement broadly.

Having thus described my invention, what

I believe to be new, and desire to secure by Letters Patent, is—

In a heat-regulator for incubators, the combination with a normally open electric circuit, a thermostat for closing said circuit, and electro-magnets in said circuit, of a lamp, a pivoted lever carrying on one arm a damper adapted to slide on the wick tube of said lamp, and on the other arm an armature controlled by said magnets, and a pivoted hook adapted to engage the burner of the said lamp and retain it in proper relation to the said damper, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HUBER R. DAVIS.

Witnesses:
JNO. C. UNDERWOOD,
WILLIS BASH.