(No Model.)

G. W. HAGEY.

INCUBATOR.

No. 564,175. Patented July 14, 1896.

Fig. 1

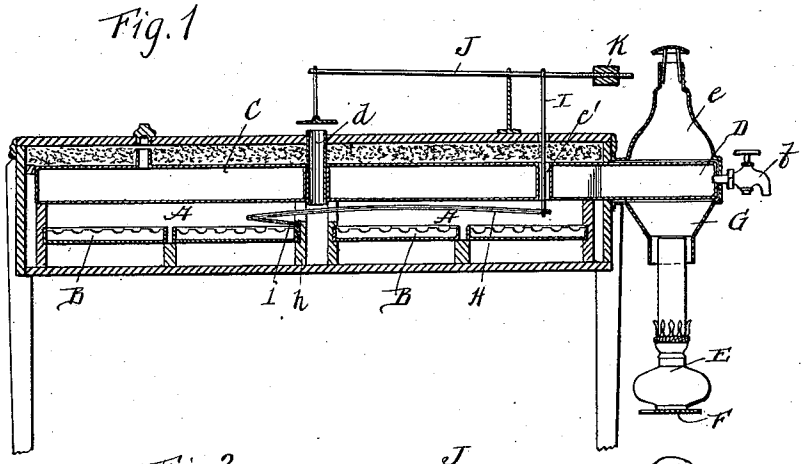


Fig. 2.

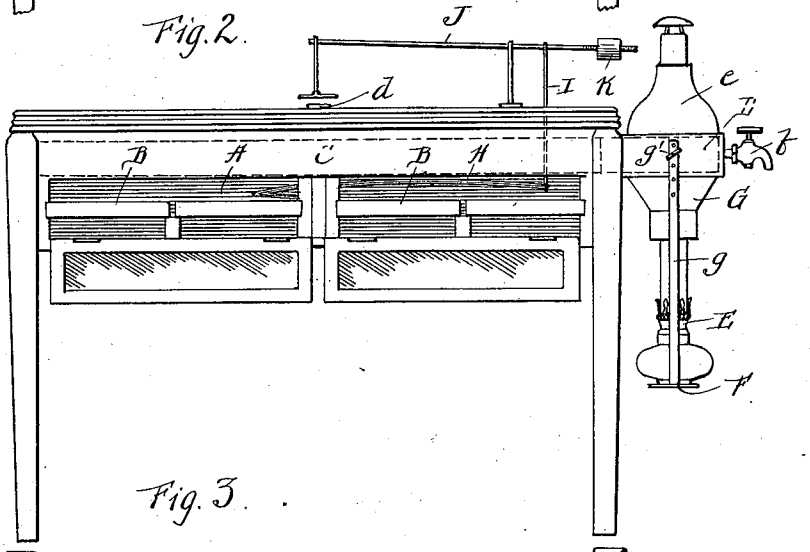


Fig. 3.

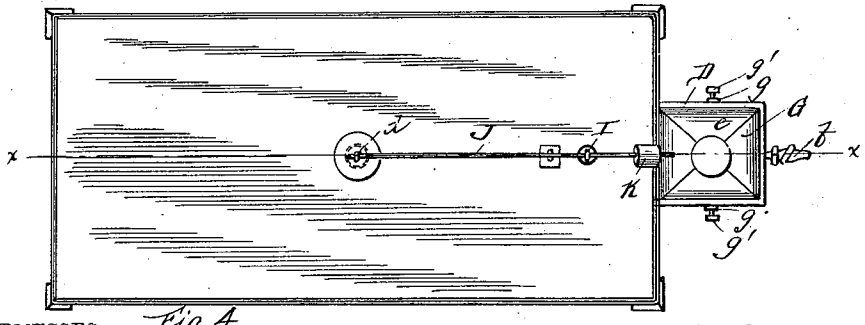
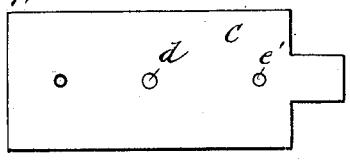


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE W. HAGEY, OF MARTINSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JACOB B. CLAPPER, OF SAME PLACE.

INCUBATOR.

SPECIFICATION forming part of Letters Patent No. 564,175, dated July 14, 1896.

Application filed September 29, 1894. Serial No. 524,478. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HAGEY, a citizen of the United States, and a resident of Martinsburg, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in 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 representation of a section on line *x x*, Fig. 3. Fig. 2 is a side elevation of invention. Fig. 3 is a plan view of same. Fig. 4 is a detail of tank.

This invention has relation to certain new and useful improvements in incubators, the object being to provide an incubator of simple and efficient character, having means whereby it may be economically heated and the temperature automatically kept at the proper point; and the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim.

Referring to the accompanying drawings, the letter A designates the egg-chamber of the incubator, B the egg-trays in the lower portion thereof, and C the water and heating tank, which is supported above the egg-trays. Said tank is usually in the form of a shallow rectangular receptacle, closed on all sides, and of such size that its vertical walls are in close, though not tight, relation to the corresponding walls of the chamber A. The space between the upper wall of the tank and the top of the chamber A has a filling *a* of sawdust, paper, or other suitable material which is a poor conductor of heat, such filling preventing loss of heat and assisting in the maintenance of an even temperature in the chamber. At one end said tank has a central extension D, which projects through one end wall of the incubator-casing.

E designates the tank-heater, which is supported on a bracket F underneath the said extension D.

G is a hood which surrounds the lamp-chimney and the tank extension, said hood having partially-globular upper and lower portions and an intermediate portion corresponding in form to the tank extension which it receives, but sufficiently larger than said extension to leave a surrounding air-space. This hood, it will be observed, largely prevents loss of heat, whereby the water in the tank may be heated with a smaller flame. It also serves to carry off the fumes and soot from the lamp through the dome *e*.

The arm *g* of the bracket F is adjustably fixed to the hood, as indicated at *g'*, whereby the lamp may be supported at different heights. By reason of this adjustment of the lamp, the heat thereof may be caused to strike more or less directly against the bottom of the tank extension or to be diffused within the hood. It will be observed that said extension forms the sole support for the hood, and by means of the hood for the lamp-bracket and lamp also.

b is a draw-off faucet for the tank, *c* is the filling-opening thereof, *d* is a hollow neck or tube extending up through the tank to permit the escape of hot-air when necessary, and *e* is a similiar tube through which an arm of the heat-regulator, presently to be described, extends.

H designates the heat-regulator, which consists of a thermostatic bar composed of two or more metals, such as brass and iron, of different expansibility. This device is affixed to a post *h* by a curved arm *i*, and is situated underneath the tank. Connected to the free end of said bar is a vertical arm I, which extends through the opening *e* of the tank, and is connected above the casing with the short arm of a weighted valve-lever J, whose valve normally closes an opening in the top of the case which registers with the opening *d*. By adjusting the weight K of this lever, the operation of the valve at the desired temperature is provided for.

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

The herein-described incubator, comprising essentially a casing having an egg-chamber therein, a flat rectangular water-tank supported in the upper portion of the said chamber, said tank being of substantially the

same length and width as the chamber, and having extending vertically therethrough two hollow necks or tubes, and at one end a central rectangular extension which projects through the end of the casing, the latter having above said tank a chamber filled with material of non-heat-conducting properties and an opening in its upper wall into said chamber above one of said hollow necks or tubes, a thermostatically-controlled valve which controls the said opening, a hood having a central rectangular portion which receives therein the tank extension, a lower portion fitted to receive a lamp-chimney therein, and an upper cowl portion, and a lamp-supporting bracket adjustably secured to said hood, substantially as specified.

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

GEORGE W. HAGEY.

Witnesses:
SAML. B. LYSINGER,
CHARLES BROWN.