

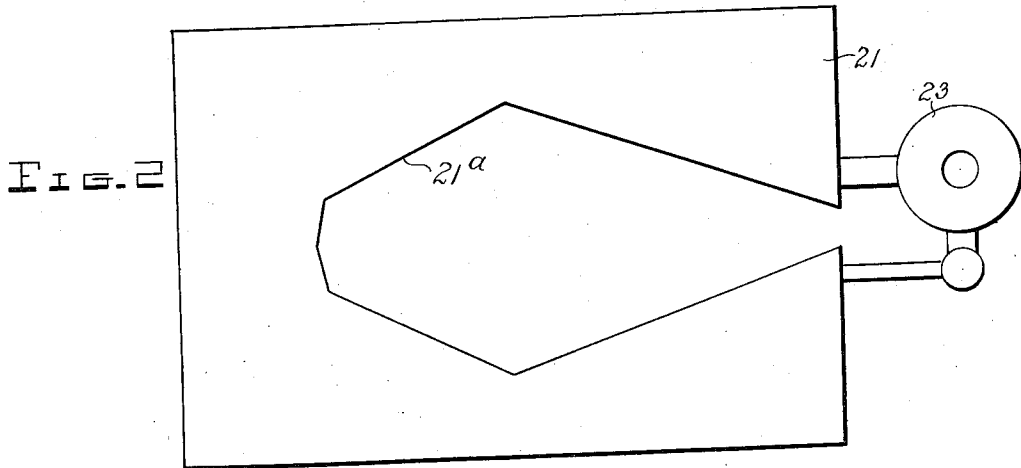
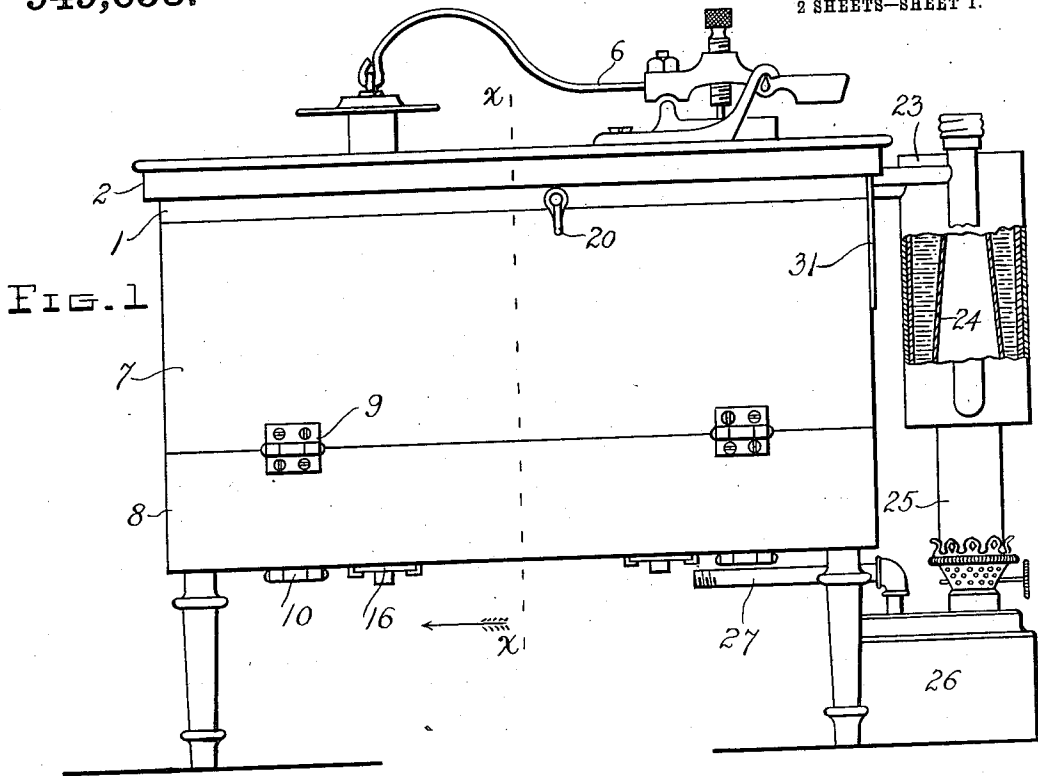
J. H. KLINKE.
INCUBATOR.

APPLICATION FILED JAN. 21, 1908.

Patented Feb. 15, 1910.

2 SHEETS—SHEET 1.

949,653.



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FIG. 3

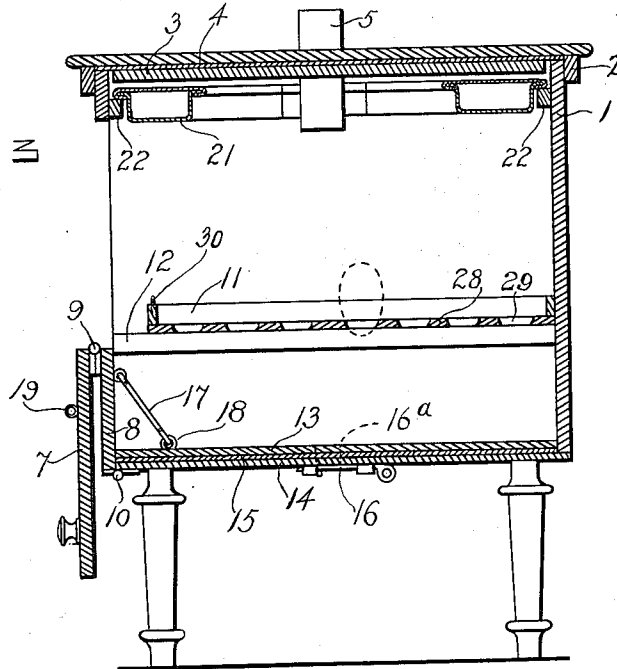


FIG. 5

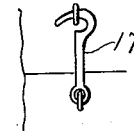
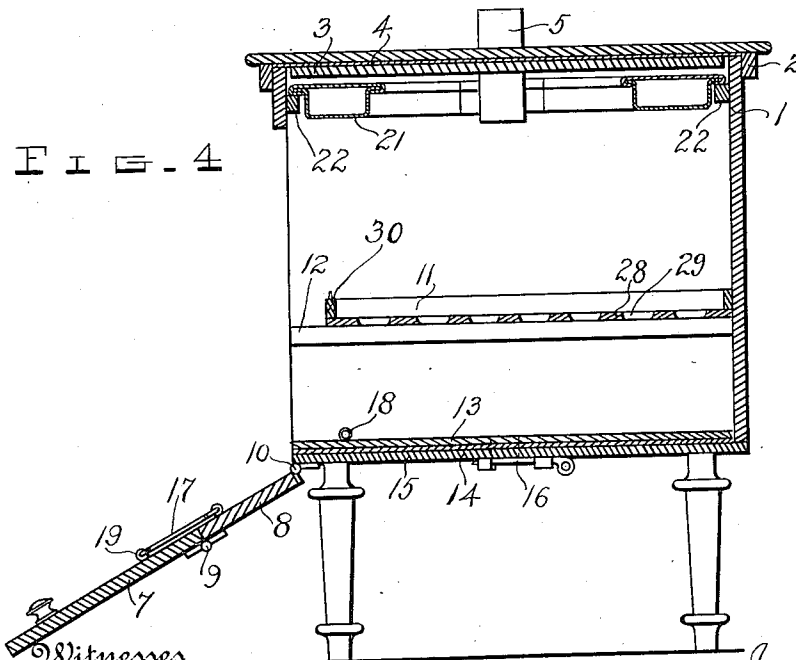


FIG. 4



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UNITED STATES PATENT OFFICE.

JOSEPH H. KLINKE, OF BRIGHTON, ILLINOIS.

INCUBATOR.

949,653.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed January 21, 1908. Serial No. 411,937.

To all whom it may concern:

Be it known that I, JOSEPH H. KLINKE, citizen of the United States, residing at Brighton, in the county of Macoupin and State of Illinois, have invented certain new and useful Improvements in Incubators, of which the following is a specification.

My invention relates to incubators, and has for its object the production of a device for hatching chickens having special construction and arrangement of parts, whereby it is believed that the hatching operation may be more conveniently and economically carried out, with less consumption of fuel, and with better control of the heat, also with superior distribution of the heat, than in such devices now on the market with which I am familiar.

The special construction and arrangement constituting this invention is set forth in the accompanying drawings, of which—

Figure 1 represents a side view of the whole. Fig. 2 is a top plan view of the hot water heating tank. Fig. 3 is a cross-section on line *x—x* of Fig. 1 showing the upper division of the front door open, and the lower division closed. Fig. 4 is also a cross-section on line *x—x* of Fig. 1 showing the two divisions of the front door secured together and in their open position. Fig. 5 represents one of the hooks employed to secure and connect the divisions of the front door.

Like numerals are used to designate like parts throughout the specification and drawings.

The casing 1 has a removable top 2, which has an inner board 3, and between the top and the board 3 is arranged a sheet of asbestos or the like 4, to retain heat. Hot air escapes from the casing by way of the pipe 5 through the top 2, and the outlet is governed by any chosen damper or cover and operating mechanism 6.

The front of the casing has an opening closed by a door comprising two divisions. The uppermost and larger division is marked 7 and the lower division is referred to by the numeral 8. The two divisions are pivotally connected by hinges 9, and the lower division is in like manner secured to casing 1 by hinges 10.

The egg tray is marked 11. It slides in and out upon guiding supports 12, and, there will be noted an interval between the front edge of the tray and the front of the casing. In other words, the tray is not quite so wide

as the interior of the casing. That portion of the interior containing the egg tray is closed by the upper division 7 of the front door. Below the egg tray is the hover or chamber wherein the newly hatched chicks are suitably protected against sudden exposure to varying temperature. The bottom of the casing consists of the inner board 13, the sheet of asbestos 14, and the outer board 15. It is my practice to provide a slide damper 16, or more than one, that governs apertures 16^a through the bottom of the casing to admit fresh air in quantities desired under varying conditions.

When the lower division of the front door occupies the position illustrated in Fig. 3, it is secured by the engagement of the hooks 17 with the eyes 18 in the floor of the hover. When, however, it is desired to open the entire front and have the two divisions of the front door act as one, the hooks 17 are caused to engage the eyes 19, as illustrated in Fig. 4. The front door is secured in its closed position by the button 20 shown in Fig. 1.

The form of the hot water tank 21 is best shown in Fig. 2, as the kite-shaped opening 21^a therein is an important feature of my invention, experience having shown the particular shape of the opening to have an important bearing upon the desired distribution of heat from the tank, whereby even temperature throughout is attained without delay and constantly maintained. The opening 21^a is narrower at the ends and wider between the ends, thereby locating the greater bodies of hot water at the corners of the egg chamber, thus creating a greater volume of heat at the corners. The tank is supported upon the cleats 22. Connected with the tank is the heater 23, having the tapering interior 24 directly heated by the products of combustion arising through the chimney 25 from lamp 26. I have provided the body or bowl of the lamp with a pipe 27, which is used whenever it is desired to connect the lamp with a source of oil.

The egg tray 11, has its bottom 28 provided with holes 29 to hold the eggs in the position indicated, and the tray is arranged to slide in and out on the supporting rails 12 as described. In Figs. 3 and 4 it will be noted that the front 30 of the tray is located a little distance back of the end of the rail 12 leaving a space by way of which the

lower chamber is ventilated. It will be observed also that the tray slides out above the lower part 8 of the front door when that part is closed, and it is not necessary
5 to lower the division 8 of the door and thus open the lower chamber in front and perhaps cool it too suddenly or too much.

It is desirable as a protection against the heat from the heater 23 to attach a metal
10 plate 31 to the outside of the casing adjacent to the heater as shown.

In operating my invention, the egg tray may be easily reached by letting down the division 7 of the front door, during which
15 time the chamber below the tray, closed by the division 8 of the front door, is kept closed and no material change in its temperature takes place.

Having now described my invention, and
20 explained the mode of its operation, what I claim is—

1. In an incubator, the combination with the casing having a front opening, of a front door arranged to close the said opening and comprising two divisions pivotally
25 secured to each other, the lower division being also pivotally secured to the casing, means for securing the said upper division in its closed position, and detachable engaging devices comprising a member connected with the said casing and a like member
30 connected with the upper division of said front door, said devices comprising also a movable member connected with the lower division of said front door and adapted to be engaged with either of the two said like members whereby the said lower division
35 may be held closed or said upper and lower divisions secured together and movable as one, substantially as described.

2. In an incubator, the combination with the casing having a front opening, of a front door arranged to close the said opening and comprising two divisions pivotally secured
45 to each other, the lower division being also pivotally secured to the casing, an egg tray

having less width than the interior of the said casing, the said tray being removable and arranged to slide in and out above the upper edge of the said lower division of the
50 front door, means for securing the said upper division in its closed position, and detachable engaging devices comprising a member connected with the said casing and a like member connected with the upper
55 division of said front door, said devices comprising also a movable member connected with the lower division of said front door and adapted to be engaged with either of the two said like members whereby the said
60 lower division may be held closed or said upper and lower divisions secured together and movable as one, substantially as described.

3. In an incubator, the combination with
65 the casing having a front opening, of a front door arranged to close the said opening and comprising two divisions pivotally secured to each other, the lower division being also pivotally secured to the casing, an egg tray,
70 the said tray being removable and arranged to slide in and out above the upper edge of the said lower division of the front door, means for securing the said upper division in its closed position, and detachable engaging
75 devices comprising a member connected with the said casing and a like member connected with the upper division of said front door, said devices comprising also a movable member connected with the lower
80 division of said front door and adapted to be engaged with either of the two said like members whereby the said lower division may be held closed or said upper and lower divisions secured together and movable as
85 one, substantially as described.

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

JOSEPH H. KLINKE.

Witnesses:

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ARNOLD A. BOTT.