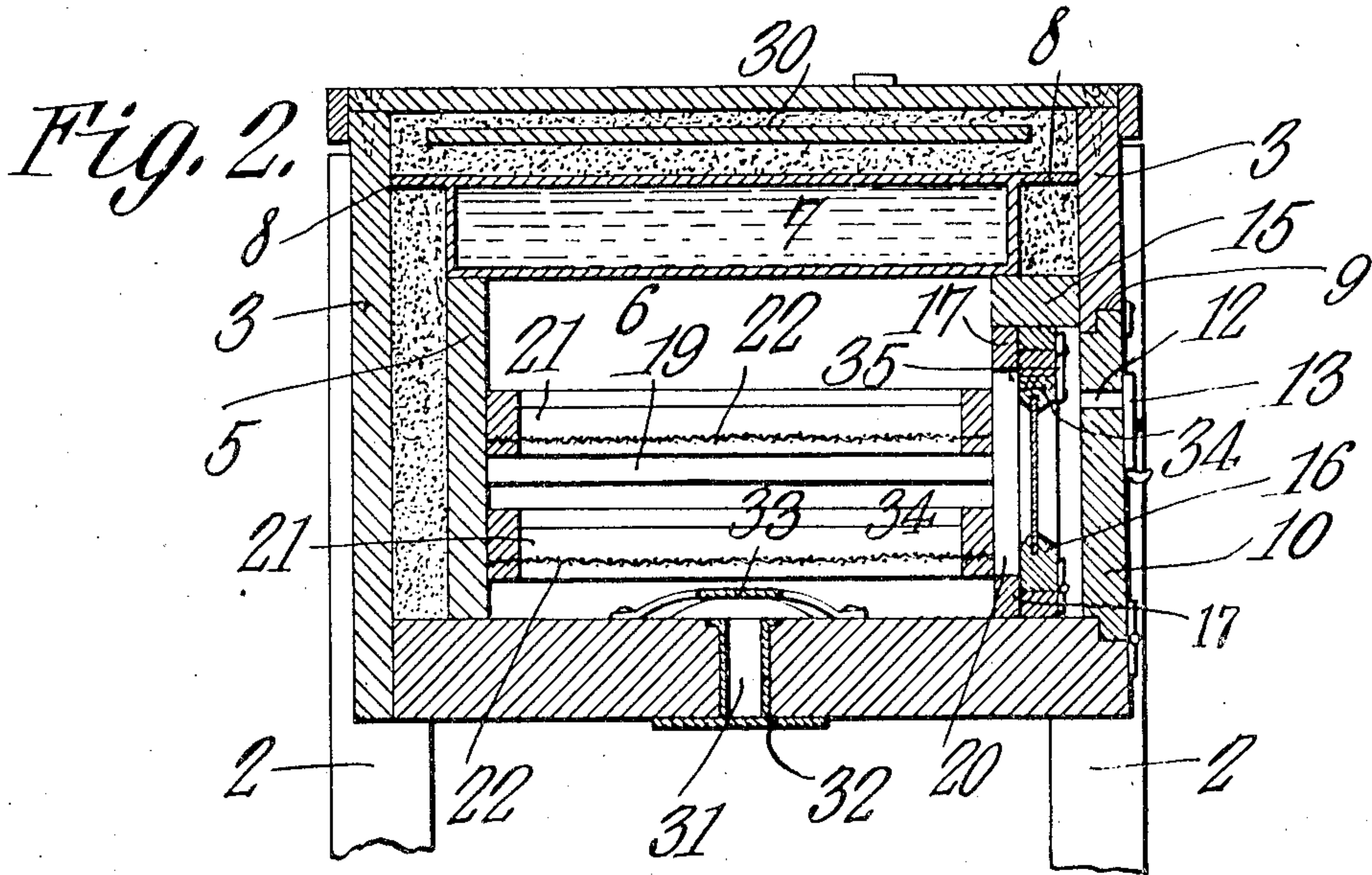
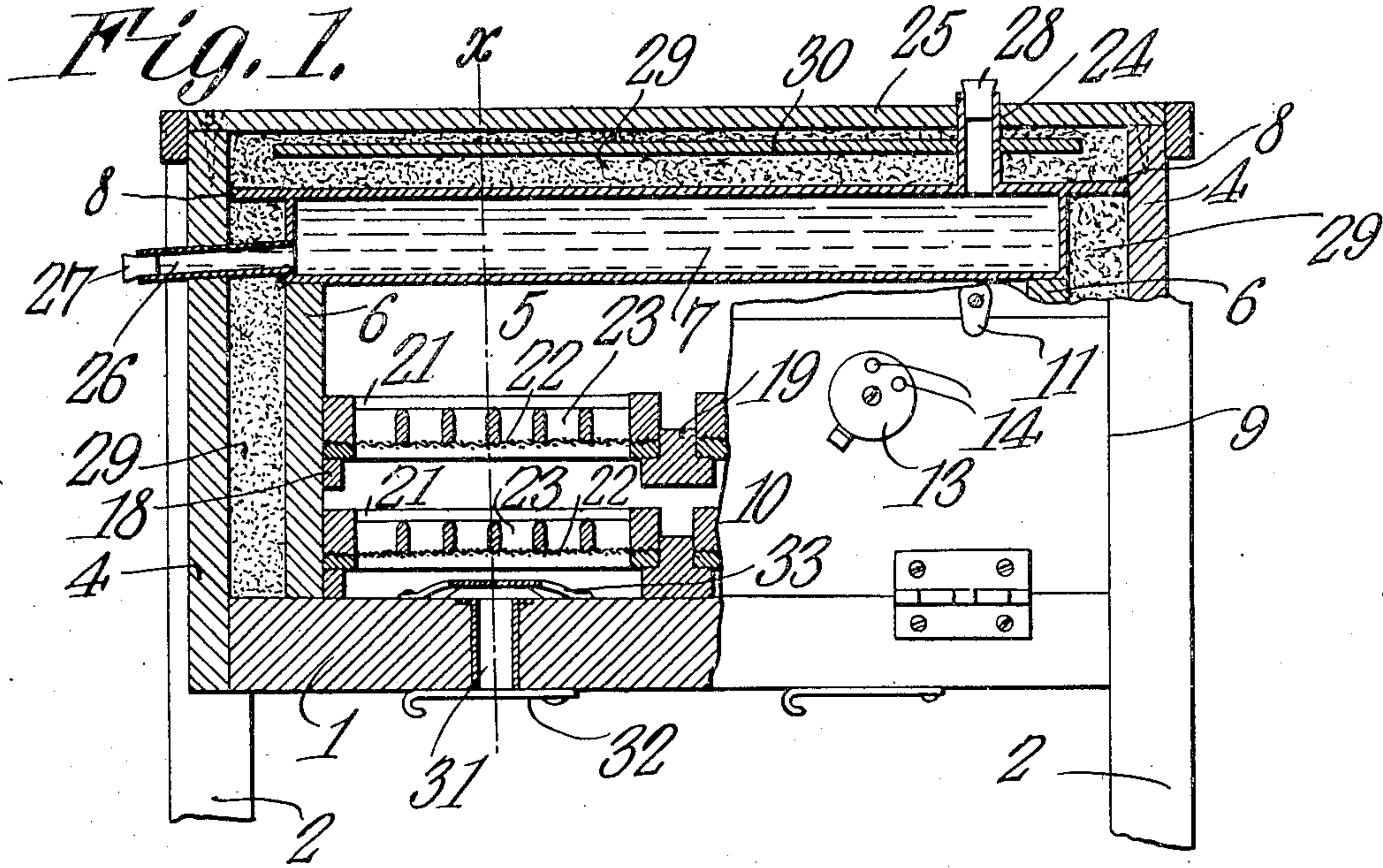


No. 869,452.

PATENTED OCT. 29, 1907.

J. W. NOTT.
INCUBATOR.

APPLICATION FILED MAR. 29, 1907.



WITNESSES:

E. J. H. H. H.
Herbert D. Lawson.

Fig. 3.

James W. Nott,

INVENTOR.

By *C. A. Snow & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES W. NOTT, OF ELGIN, NEBRASKA.

INCUBATOR.

No. 869,452.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed March 29, 1907. Serial No. 365,352.

To all whom it may concern:

Be it known that I, JAMES W. NOTT, a citizen of the United States, residing at Elgin, in the county of Antelope and State of Nebraska, have invented a new and useful Incubator, of which the following is a specification.

This invention relates to incubators and more particularly to means whereby heat of a desired temperature may be maintained within the incubator in a simple and efficient manner and without the necessity of utilizing a lamp for heating purposes.

Another object of the invention is to provide simple means for controlling the ventilation of the incubator without danger of chilling the eggs contained therein.

Heretofore considerable care has been necessary in order to produce a predetermined temperature within incubators and as lamps have been utilized for this purpose it has been found objectionable to place the incubators within residences because of the disagreeable odor produced by the lighted lamps and also because of the danger from fire. The object of the present invention is to overcome these disadvantages in a simple and efficient manner.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a longitudinal section through the incubator, a portion of the front thereof being shown in elevation; Fig. 2 is a section on line $x-x$, Fig. 1; and Fig. 3 is an elevation of a portion of the inner door and one of the closures for the apertures therein.

Referring to the figures by characters of reference, 1 is the bottom of the casing the same being supported by legs 2. The rear wall 3 and side walls 4 extend upward from the bottom 1 and arranged upon the bottom close to and parallel with the rear and side walls are inner walls 5 and 6 respectively which constitute supports for a metallic tank 7 the walls of which are spaced from the outer walls of the casing by means of arms 8 extending beyond the walls of the tank at desired intervals. The front of the casing is provided with a door opening 9 in which is fitted an outer door 10 designed to be secured in closed position by buttons 11 or in any other preferred manner. Ventilating openings 12 are formed in the door and designed to be closed by a revoluble disk 13 mounted on the door and having openings 14 disposed to register with the openings 12. A longitudinally extending strip 15 is secured to the inner face of the front of the casing and above the door opening and constitutes a front support for the tank 7. The space below this longitudinal strip 15 receives doors 16 one of which may be provided for each set of

trays within the incubator. These doors are disposed to abut against stop cleats 17 secured to the bottom 1 and strip 15 respectively and are preferably secured in closed position in any preferred manner. Supporting cleats 18 are secured upon the inner faces of the inner side walls 6 and additional supporting cleats 19 extend from front to rear of the incubator at the center thereof and are supported by an upstanding strip 20 connecting the cleats 17. These cleats 18 and 19 support egg trays of any preferred form each of which preferably consists of a rectangular frame 21 the bottom of which is formed of metal fabric as shown at 22. Strips 23 extend longitudinally within the frames 21. The parts are so proportioned that when the door 10 is opened either of the doors 16 can be swung outward through the door opening 9 and the trays of one set removed from or placed in position.

Tank 7 has an inlet tube 24 extending from the top thereof and upward through the top 25 of the casing and a drain tube 26 extends from the tank and through one wall of the casing. This tube may be closed in any preferred manner as by means of a plug 27, and a suitable closure 28 may also be provided for the tube 24. The space between the inner walls 5 and 6 and the outer walls 3 and 4 is filled with a suitable insulating material 29 of bran, mineral wool or any other substance capable of retaining heat and this insulating material extends between the walls of the casing and tank, and between the tank and the top of the casing. A reinforcing strip or plate 30 is disposed between the tank and the top of the casing and is embedded within the insulating material and this reinforce extends throughout the width and length of the tank and serves to prevent the compression of the tank when any heavy articles are placed upon the top of the incubator. This reinforce distributes said pressure throughout the extent of the tank and it is therefore possible to make the top of the incubator of comparatively thin material. The reinforce 30 also serves to assist in the retention of the heat within the incubator.

Formed within the bottom 1 below each set of trays 21 is an inlet opening 31 the lower end of which is designed to be closed by a plate 32 pivotally connected to the bottom. A deflecting plate 33 is supported above the opening 31 so that air entering said opening will not come into direct contact with the contents of the tray but will first be distributed radially from the opening. It is of course understood that the current of air within the incubator is controlled by opening or closing the openings within the door. Each of the inner doors 16 also has one or more openings 34 provided with suitable closures 35 whereby the passage of air into or from the incubator may be controlled.

Although the tank 7 has been shown disposed entirely above the compartment within the incubator it is to be understood that the same may be placed in

any desired relation thereto, the only requirement being that a portion of the surface of the tank shall be exposed within the compartment.

- When it is desired to use the incubator, hot water
5 is poured into the tank 7 through tube 24, after which said tube is closed. The packing around the tank will prevent the heat from escaping outwardly and therefore the heat can only radiate into the compartment in the incubator from the exposed surface of the tank.
10 After the tank has once been filled the incubator does not require attention of any kind until after a period of about twelve hours when a portion of the water contained therein can be withdrawn through tube 26 and an equal portion of hot water substituted therefor.
15 The heat within the incubator will thus be maintained for another period of several hours after which the partial renewal of the water can be again effected.

- It is of course to be understood that each disk 13 can be turned so as to regulate the size of the openings
20 through which air may pass into the incubator. The ventilation can thus be perfectly controlled.

What is claimed is:

1. In an incubator the combination with a casing having an inner compartment, and packing surrounding said compartment; of a tank supported within the casing and constituting the top of the compartment, spacing arms extending from the tank, packing interposed between the tank and the walls and top of the casing, and a pressure distributing device interposed between the top of the casing and tank, said tank having an inlet and an outlet. 25 30

2. In an incubator the combination with a casing having an inner compartment; of a tank constituting the top of the compartment, spacing arms extending from the tank, packing interposed between the tank and the walls and top of the casing to hold the tank against displacement, a pressure distributing device interposed between the tank and the top of the casing, an inlet tube extending through the top of the casing and opening into the tank, an outlet tube extending from the tank, and closures for said tubes. 35

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 40

JAMES W. NOTT.

Witnesses:

B. W. McKEEN,
GRACE W. NOTT.