

July 14, 1931.

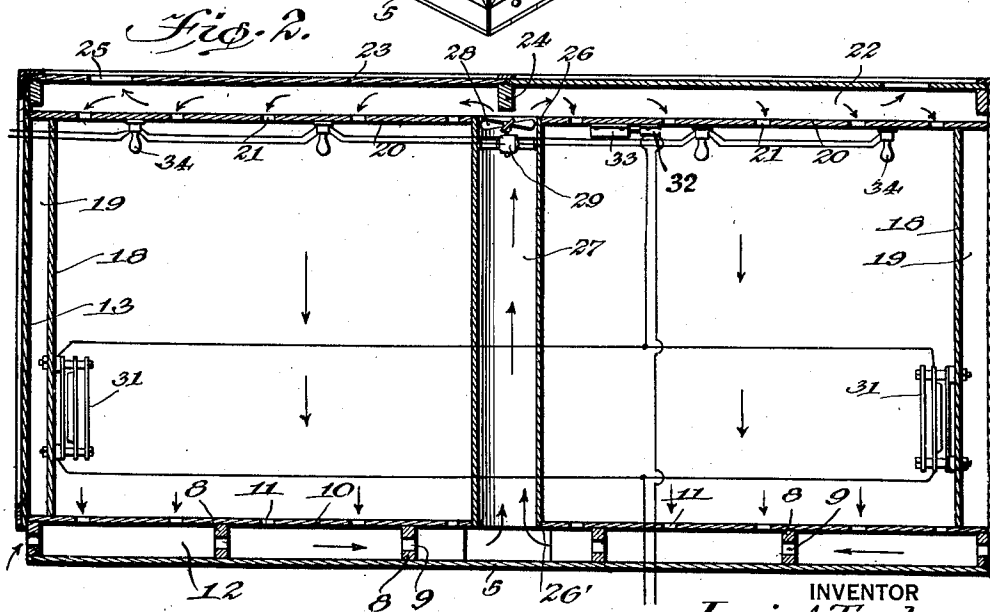
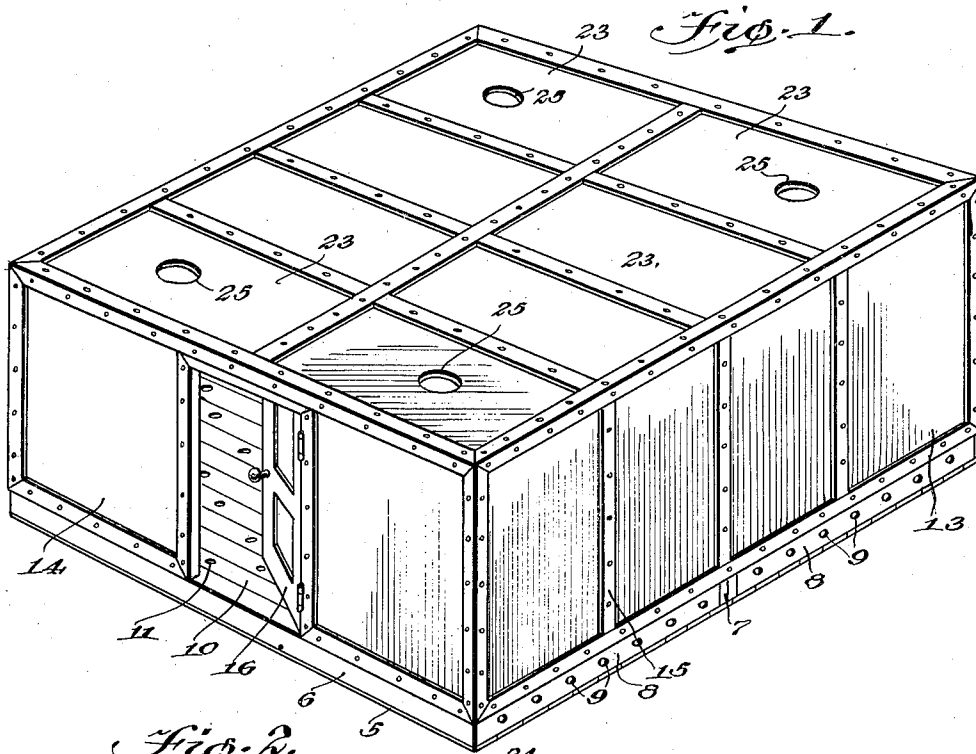
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1,814,979

COMBINATION CHICK STORAGE, BROODER, AND INCUBATOR

Filed April 18, 1929

4 Sheets-Sheet 1



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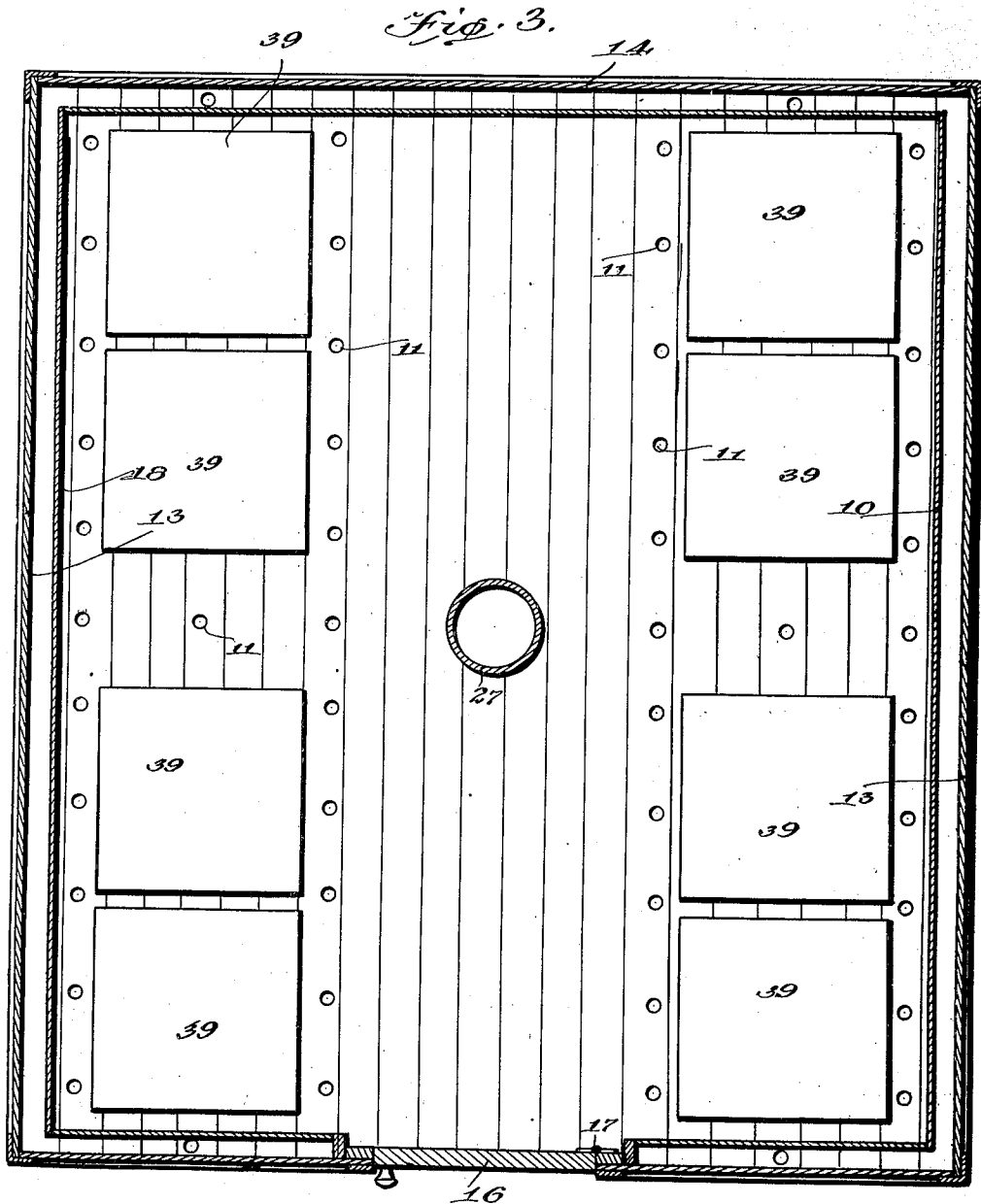
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4 Sheets-Sheet 2



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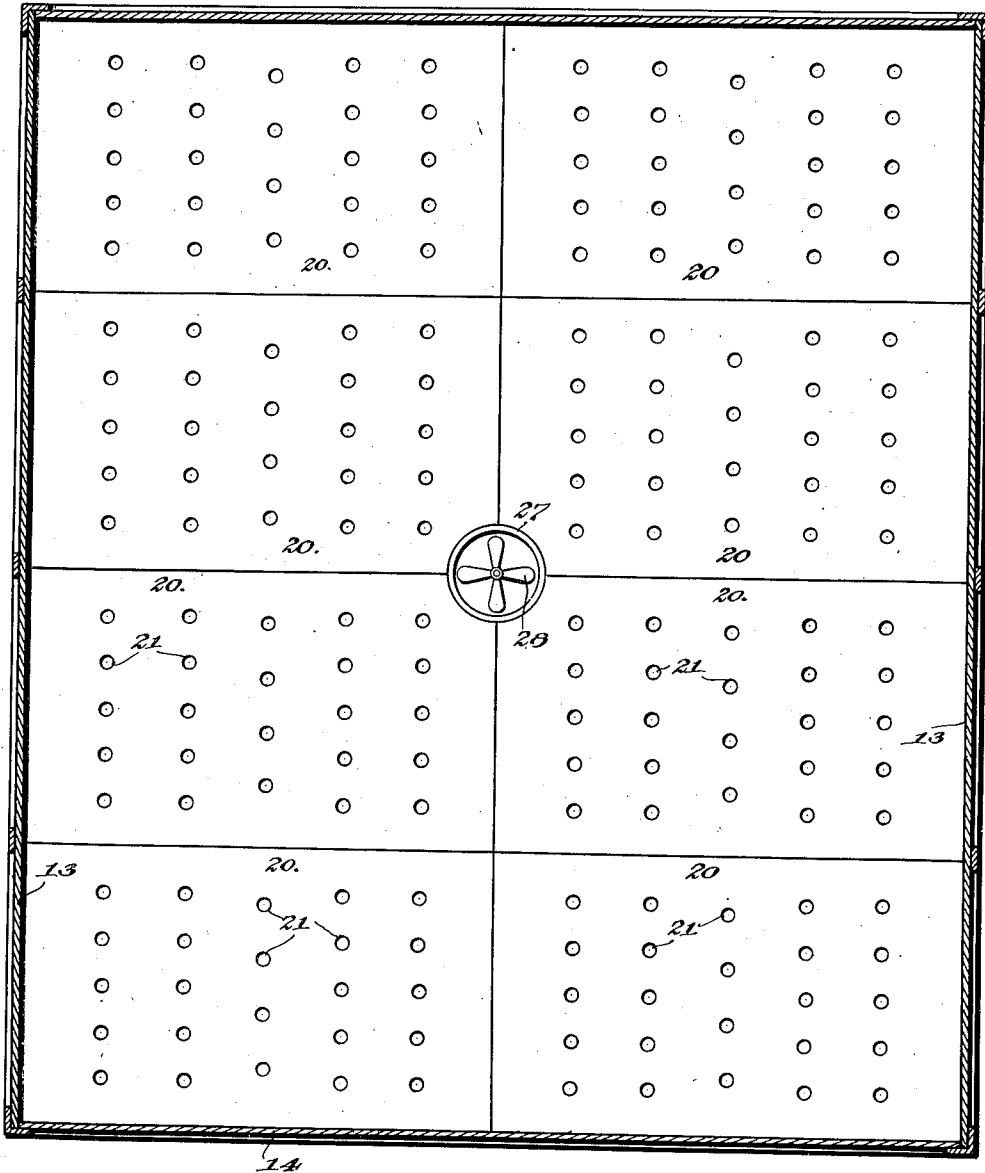
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Fig. 4.



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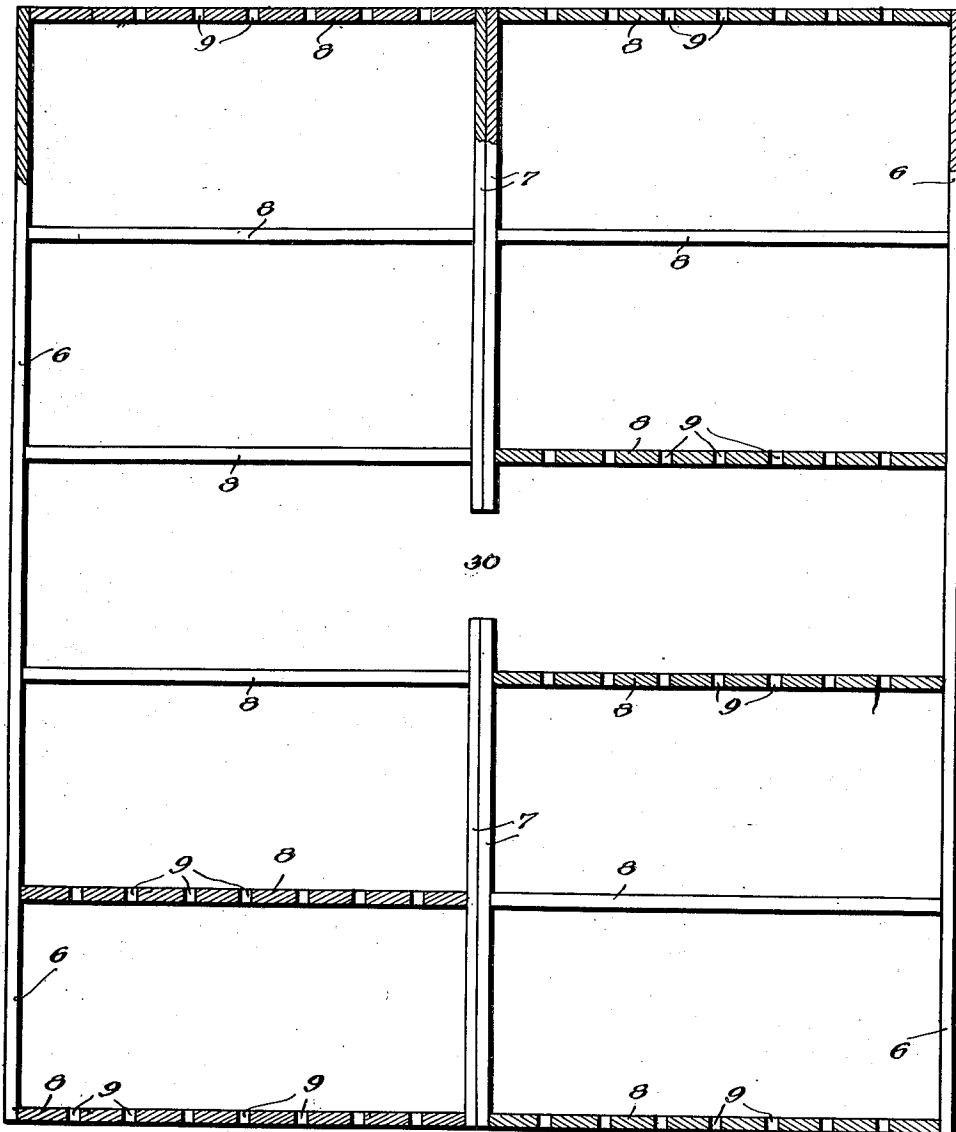


Fig. 5.

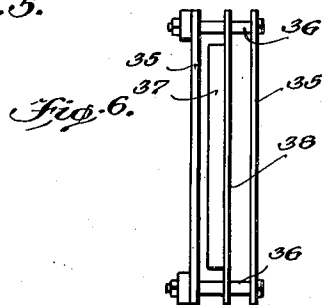


Fig. 6.

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UNITED STATES PATENT OFFICE

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COMBINATION CHICK STORAGE, BROODER AND INCUBATOR

Application filed April 18, 1929. Serial No. 356,066.

My invention relates to improvements in brooders and incubators and has for its object to provide means which will insure a constant circulation of fresh air in the brooder and means for maintaining the air at an even temperature.

A further object of the invention is to provide a brooder of the above-mentioned character which is simple and durable in construction, reliable and efficient in use, and inexpensive to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a perspective view of my improved brooder,

Fig. 2 is a cross sectional view of the same,

Fig. 3 is a horizontal sectional view looking down on the floor,

Fig. 4 is a horizontal sectional view looking down on the inner top wall,

Fig. 5 is a top plan view of the floor joists, and,

Fig. 6 is an enlarged end view of the heater.

In the drawings, wherein for the purpose of illustration, I have shown a preferred embodiment of my invention, the numeral 5, denotes the base board having side beams 6 along its longitudinal edges and a central beam 7, along its longitudinal center. Floor joists 8 are disposed between the side beams 6 and central beam 7, at spaced intervals throughout the length thereof, each joist having a series of spaced transverse openings 9 therethrough. The floor boards 10 are laid across the upper edges of the joists and throughout the area of the floor a series of openings 11 are provided, which communicate with the open spaces 12 between the joists.

The floor is surrounded by vertical side and end walls 13 and 14, preferably constructed of wall board, the sections of which are held together by facing strips 15. One end wall is provided with a door 16, hingedly mounted on the wall as at 17, permitting access to the

interior of the brooder. Disposed in spaced relation to the side and end walls is an inner wall 18, providing a dead air space 19, between the walls. Mounted on top of the inner wall is an inner ceiling 20 having a series of spaced openings 21 therethrough, establishing communication between the interior of the brooder and the space 22, between the inner ceiling 20 and the outer ceiling 23, supported on the upper edges of the outer walls 13 and 14 and suitably braced by cross beams 24. The outer ceiling is provided with a plurality of relative large openings 25.

The inner ceiling 20 and floor 10 are provided with central aligned openings 26 and 26' to receive the ends of the vertical tube 27, which establishes communication between the space 12 and the space 22. Mounted in the upper end of the tube is a fan 28, rotatably mounted in the bracket 29, adapted to accelerate the circulation of air through the brooder. The central beam 7, directly below the lower end of the tube 27 is cut-away, as at 30, so that air from the spaces 12 on both sides of the central beam may pass into the tube.

Arranged around the inner walls of the brooder at suitable intervals are a series of electric heaters 31, which are in circuit with the relay switch 32, controlled by the thermostat 33, whereby the heaters will be automatically controlled depending on the temperature of the air in the brooder. A series of electric lights 34 are suspended from the ceiling, which may be controlled by suitable switches.

The heaters consist of spaced metal shields 35 held together by bolts 36, the heating unit 37 being mounted on the insulation block 38 supported by the bolts 36, between the shields, as more clearly shown in Fig. 6.

The numeral 39 designates a plurality of chick racks or egg trays mounted in the brooder which may be readily removed therefrom through the door. The construction of the racks or trays are of the conventional type.

In use, the fresh air enters the brooder through the openings 9 of the joists 8 at the ends of the brooder, passing through the

- openings of the other joists towards the center of the floor, where it enters the lower end of the tube 27, passing upwardly through the tube into the space 22, between the inner and outer ceilings. Some of the air in the space 22 passes out through the openings 25 in the outer ceiling and some passes down through the openings 21 in the inner ceiling, into the interior of the brooder and then through the openings 11 in the floor 10 into the spaces 12, where it is again re-circulated through the brooder. The flow of air is indicated by the arrows in Fig. 2. Thus, it is seen that I have provided a system of ventilation for brooders which will insure a constant supply of fresh air and in which the air will be maintained at a more even temperature.
- It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that certain changes in the shape, size and arrangement of the parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.
- Having thus described my invention, I claim:—
1. A device of the character described comprising a box-like housing having openings through its top, a floor having a plurality of openings therethrough, joists supporting said floor and providing an air space therebeneath, said joists having a series of spaced openings for admitting air therethrough, a ceiling spaced from the top of the housing having openings therethrough, and means establishing communication between the space above the ceiling and the space below the floor to provide circulation of the air from the lower to the upper space.
 2. A device of the character described comprising a box-like housing having openings through its top, a floor having a plurality of openings therethrough, joists supporting said floor and providing an air space therebeneath, said joists having a series of spaced openings for admitting air therethrough, a ceiling spaced from the top of the housing having openings therethrough, a conduit extending between the floor and ceiling establishing communication between the space above the ceiling and the space below the floor to provide circulation of the air from lower to the upper space, and a fan rotatably mounted in said conduit to increase said circulation.
 3. A device of the character described comprising a box-like housing having openings through its top and spaced walls providing a dead air space, a floor having a plurality of openings therethrough, joists supporting said floor and providing an air space therebeneath, said joists having a series of spaced openings for admitting air therethrough, a ceiling spaced from the top of the housing having openings therethrough, and a conduit extending between the ceiling and floor, establishing communication between the space above the ceiling and the space below the floor to provide circulation of the air from the lower to the upper space.
- In testimony whereof I affix my signature.
- IRVIN A. TAYLOR.

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