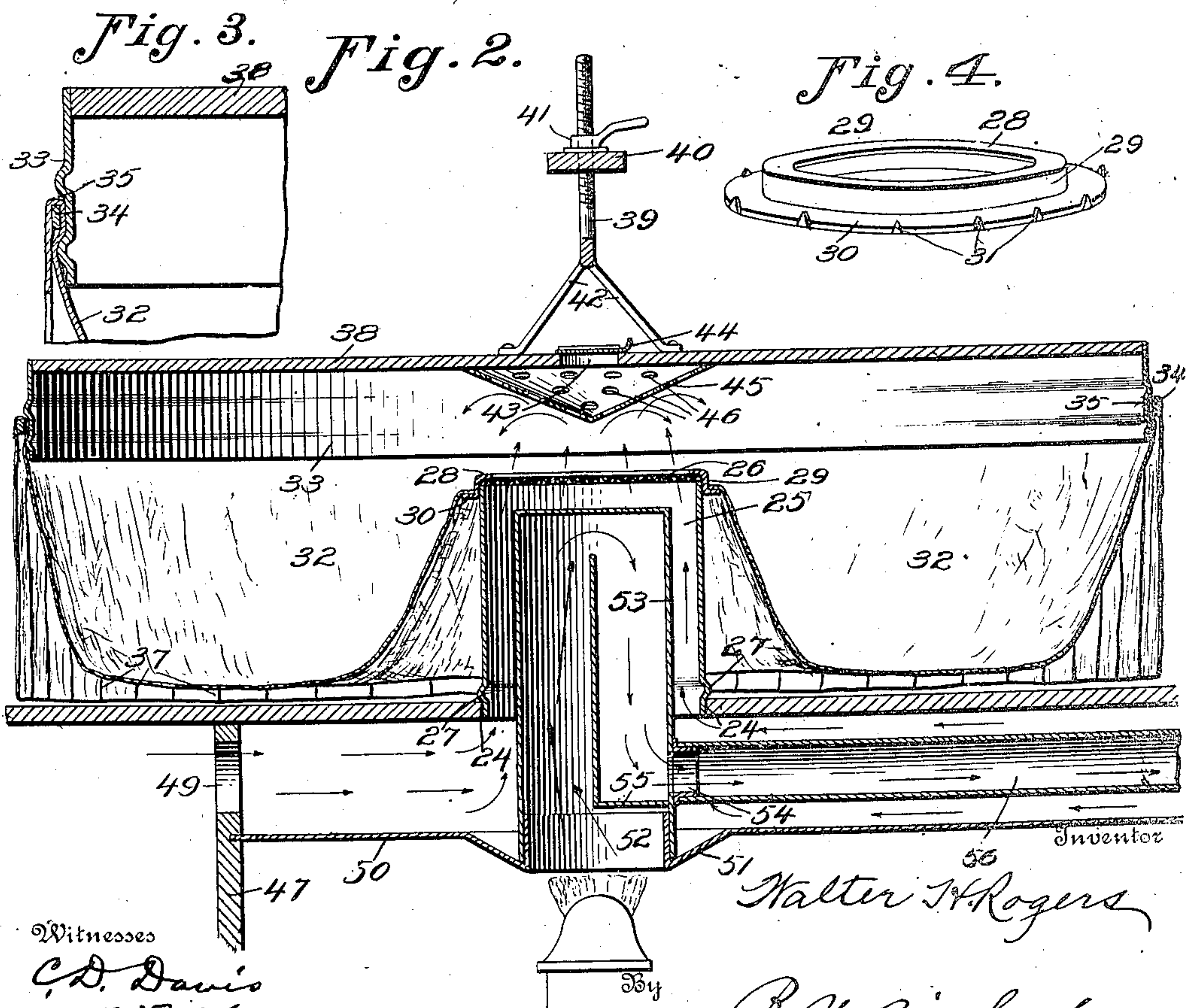
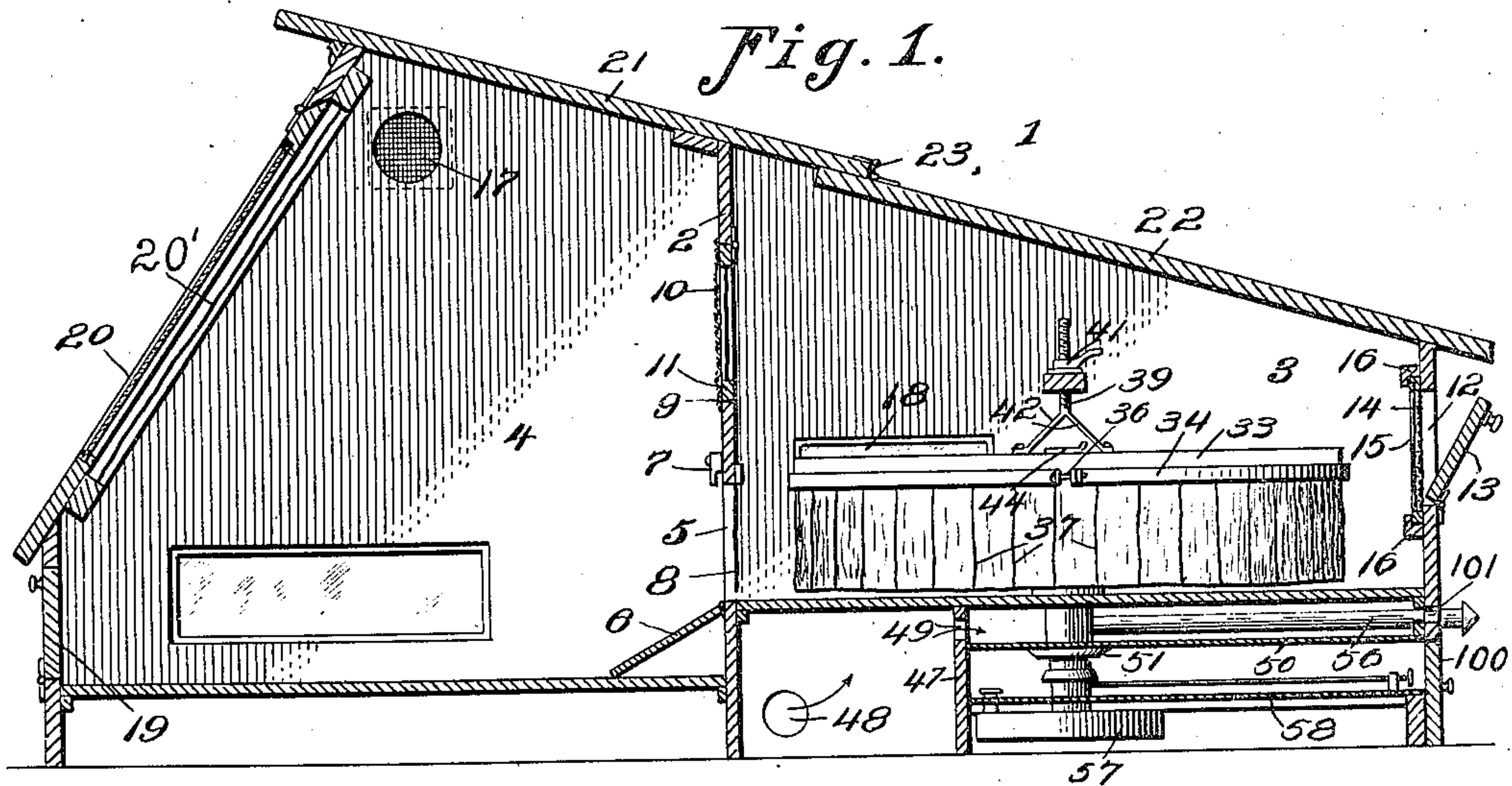


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PATENTED MAR. 12, 1907.

W. H. ROGERS.
BROODER.

APPLICATION FILED MAY 17, 1906.



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BROODER.

No. 846,865.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER H. ROGERS, a citizen of the United States of America, residing at Lebanon, in the county of Wilson and State of Tennessee, have invented certain new and useful Improvements in Brooders, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use the same.

This invention has for its object the provision of a brooder which will permit thorough ventilation without undue exposure to the chickens and which will be so constructed that it may be quickly disassembled to permit cleaning.

It also has for its object the provision of means for accurately adjusting the hoverer to the growth of the chickens.

With these objects in view the invention consists in certain novel features of the apparatus illustrated in the accompanying drawings, as will be hereinafter first fully described and then particularly pointed out in the claims.

In the drawings, Figure 1 is a vertical section through a brooder embodying my improvements, the hoverer being shown in side elevation. Fig. 2 is a vertical section of the hoverer and the heating-chamber. Fig. 3 is an enlarged detail view showing the manner of supporting the outer part of the hoverer-blanket, and Fig. 4 is a similar view showing the manner of supporting the central part of the blanket.

The casing or housing 1 is divided by a longitudinal partition 2 into the brooder-chamber 3 and the exercising and feeding chamber 4. The floor of the brooder-chamber is somewhat higher than the floor of the exercising-chamber, so as to provide room for the heating apparatus, and the partition is provided with a door or opening 5 to form a communication between the two chambers. The opening 5 may be closed by a trap or door 6, hinged at its lower edge to the partition and held in its raised position by a button 7 on the partition above the opening. When the door is lowered, as shown in the drawings, it constitutes a runway over which the chickens may pass from one to the other chamber. A cloth curtain 8 is hung in the opening or doorway to prevent cold air playing directly on the chickens. Above the opening 5 the partition is provided with an opening 9, covered by a screen 10 and in

which is fitted a swinging frame 11, said frame being covered with muslin or other fabric.

In the front of the brooder-chamber is an opening 12, having an outwardly-swinging door 13 fitted thereto. This opening is covered within the chamber by a screen 14 and a cloth-covered frame 15, slidably mounted in guides 16 on the inner side of the wall. In the side wall of the exercising-chamber, near the top thereof, is an opening 17, covered by a screen, and in the walls of both chambers are glazed openings 18. The exercising-chamber is also provided with a small door 19, through which the chickens may be permitted to pass into the open air, and also with a large door or skylight 20, through which the condition of the chickens may be observed and through which they may be removed when desired. A removable screen 20' is preferably fitted below this door 20 in order to provide for the thorough ventilation of the chamber. The roof is in two parts 21 22, connected by a double-acting hinge 23, so that either chamber may be uncovered without uncovering the other, or the roof may be entirely removed, as may be desired.

Either member of the roof, it will be readily understood, may be folded over onto the other member and the roof may be held against slipping by any convenient means, the illustration of which is unnecessary.

The floor of the brooder-chamber is provided with an opening 24 at its center, in which is supported a drum 25, having an open screen-covered upper end 26. The drum is not secured to the floor, but rests upon the same by means of an annular bead 27, formed in the drum just above its lower end, as clearly shown in Fig. 2. The drum is thus firmly supported in the proper position, and at the same time it may be readily lifted and removed when necessary for the purpose of cleaning or making repairs. Resting upon the screen 26 at the upper end of this drum is a ring 28, having a depending portion or rim 29 and an outstanding horizontal flange 30, with small hooks or teeth 31 at intervals along the edge of the said flange. A blanket 32 is engaged over these hooks or teeth and is supported by the same and the flange and depends therefrom to near the floor, the outer edge of the blanket being turned up and held by and between a depending annular rim 33 of the hover-board

and a clamping-ring 34. The rim 33 is crimped, so as to provide an annular groove 35, and the blanket is carried up over the said groove and is secured therein by the ring 5 which is of a size to fit snugly in the groove and is drawn tightly thereinto over the blanket by a bolt or similar connection 36, as will be readily understood. The free edge portion of the blanket depends from the ring 10 and is slitted, as indicated at 37, to permit ready ingress and egress of the young chickens.

The hover-board 38, which carries the rim 33, is adjustably supported within the 15 brooder-chamber by a threaded rod 39, which passes up through a beam or bar 40, extending between the walls of the chamber, and is held in the said bar by a nut 41, mounted on the rod above the bar. The lower end 20 of the rod is formed into a spider 42, the lower extremities of which are secured to the hover-board whereby the board is supported. At the center of the hover-board is an opening 43, which may be covered by a slide or 25 damper 44, and on the under side of the board is a deflector 45, arranged concentrically with the opening 43 and directly over the drum 25. This deflector is of an inverted conical form and is provided with a 30 number of openings or perforations 46, through which the heat may be permitted to pass when so desired. It will be readily understood that this deflector serves to turn the heat from its direct upward course and 35 cause it to be spread against the blanket; but if the damper 44 be opened the draft will carry the heat through the deflector and the opening 43 into the brooder-chamber above the hover-board.

40 Below the floor of the brooder-chamber is a vertical partition 47, dividing the space below the floor into a heating-chamber and a fresh-air chamber, the fresh-air chamber being provided with an opening or air-inlet 48 45 in its wall and the partition having an opening 49 in its upper portion for the passage of the fresh air into the heating-chamber. Supported by the vertical partition 47 and the opposite side wall of the brooder is a horizontal 50 partition 50, provided below the heating-drum 25 with a depressed portion 51 and an upstanding flange or collar 52, forming a seat or cup to receive and support the lower end of a drum 53, which rises concentrically within 55 the drum 25 and has a closed upper end. This drum 53 is constructed with a nipple 54 on one side and with an internal partition 55, which extends inward from said side to the center of the drum and then rises therein, 60 terminating short of the top of the drum, as clearly shown in Fig. 2. Fitted on the nipple 54 is the inner end of a fume flue or pipe 56, which extends therefrom to and through the wall of the brooder to carry the fumes 65 from the heater or lamp to the outer air. The

lamp or heater 57 is fitted in and supported by a horizontal partition 58, which extends between the bowl and the burner of the lamp, so as to protect the bowl from the heat, and thereby prevent waste of the oil and possible 70 explosions.

The partition or support 58 constitutes a removable platform, which may be withdrawn to remove the lamp for cleaning or 75 filling, and the wick-raiser of the lamp is extended to near the end of the said support, so as to be easily reached through a door 100 in the casing or housing in order to adjust the flame, it being understood that the lamp is lighted and the flame turned very 80 low before placing the lamp in position. The air to support combustion may be admitted by leaving the door to the lamp-chamber slightly ajar. Fresh air may be 85 admitted to the air-flue above the partition 50 through openings 101 in the side of the housing above the plane of said partition, and this air will be heated through contact with the flue 56 on its passage to the drum 25.

The parts being arranged as described, the 90 lamp is lighted and placed in position and the heat therefrom will rise through the ring or collar 52 and pass into the drum 53, passing up therein and over the top of the partition 55 and then down to the flue 56, through 95 which it will escape into the outer air. The hot air from the lamp will heat the drum 53 and the flue 56 in its passage through the same, so that the air adjacent thereto will be raised in temperature, and this heated air 100 will pass upward through the drum 25 and escape through the top of the same. As it passes from the drum 25 the heated air will strike the deflector 45 and will be thereby thrown outward and downward against the 105 blanket which depends nearly to the floor of the brooder-chamber and will consequently apply the heat to the backs of the chickens in the most efficient manner. When the blanket gets too hot, the damper 110 44 is opened and the hot air will then be permitted to pass upward into the brooder-chamber and raise the temperature of the same, so that the chickens may pass out from under the blanket and obtain needed 115 exercise without being chilled. The fumes from the lamp cannot pass into the brooder-chamber, and as a constant supply of air is admitted to the fresh-air flue the heated air passing into the hoverer will be uncontaminated. 120 As the chickens grow larger the nut 41 may be manipulated to raise the hoverer and furnish ample space below the blanket for the chickens. At the same time the outer edge of the blanket may be adjusted 125 between the rim 33 and the ring 34, so that there will always be a curtain extending down to the floor and surrounding the chickens to keep them warm. By opening the door 13 fresh air may be admitted di- 130

rectly to the brooder-chamber and the foul air therein be permitted to escape, so as to effect a thorough ventilation of the same should the air therein reach too high a temperature. In warm weather the frame 15 and screen 14 may be removed and the chickens can then roost in the opening, so as to obtain the benefit of the air without undue exposure. The open frame 10 and the opening 17 further provide for the complete ventilation of the brooder. It will be readily seen that the hoverer can be lifted out through the top of the brooder-chamber after removing the roof and that the drums 25 and 53 may be likewise lifted from their places, while the flue 56 may be withdrawn through the side of the brooder. The parts may thus be disassembled in a few minutes to permit cleaning or repairs.

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

1. The combination of the brooder, a support therein, a rod adjustably mounted in said support, a hoverer secured to the lower end of said rod, a damper in the hoverer, a deflector below the said damper, and a heating-drum below the said deflector.

2. The combination of the brooder, a support therein, a hoverer carried by said support, a damper in the top of the hoverer, a deflector below the said damper provided with perforations, and a heating-drum below the said deflector.

3. The combination with the brooder-chamber, of a hoverer adjustably supported therein and having a depending rim, and a blanket adjustably supported on said rim.

4. The combination of the heating-drum having an open upper end, a hover-board 40 above the said drum, and a blanket having its central portion held by said drum and its outer portion adjustably supported by the hover-board.

5. The combination of the hover-board, a 45 heating-drum arranged centrally below the same and having an open top, a rim depending from the edge of the hover-board and having an annular groove, a blanket having its central portion supported by the drum 50 and its outer portion doubled in the annular groove in the rim, and a clamping-ring within the bight of the blanket and fitting in the groove of the rim.

6. The combination of the floor, a parti- 55 tion below the same having an upstanding collar, a drum having its lower end removably fitted over said collar, and a flue leading from the side of the drum between the floor and the partition to the outer air. 60

7. The combination of the floor, a vertical partition below the same having an opening in its upper portion, a horizontal partition supported by said vertical partition below said opening, a drum removably supported 65 on said horizontal partition, and a flue leading from the side of the drum between the floor and horizontal partition to the outer air.

In testimony whereof I have signed this specification in the presence of two subscrib- 70 ing witnesses.

WALTER H. ROGERS.

Witnesses:

B. D. WILLIAMS,
J. A. ROGERS.