No. 878,635. PATENTED FEB. 11, 1908.

J. A. JOCOY.

BROODER.

APPLICATION FILED JUNE 7, 1906.

Fig. 1.

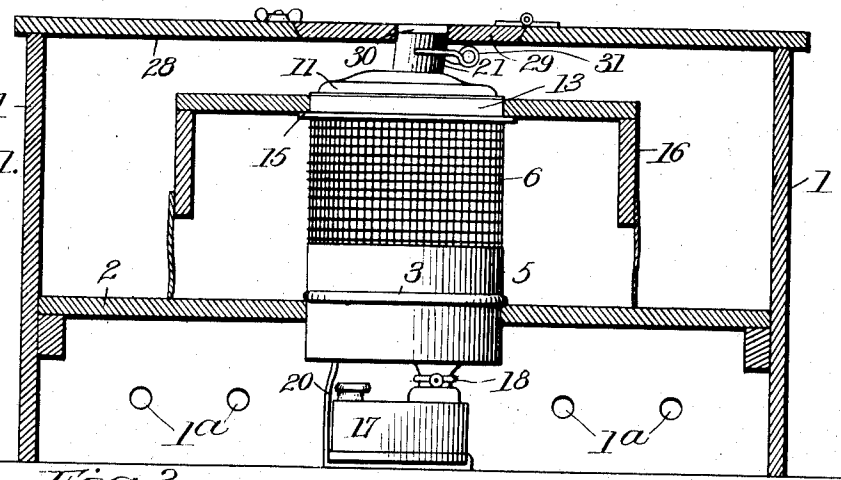


Fig. 2.

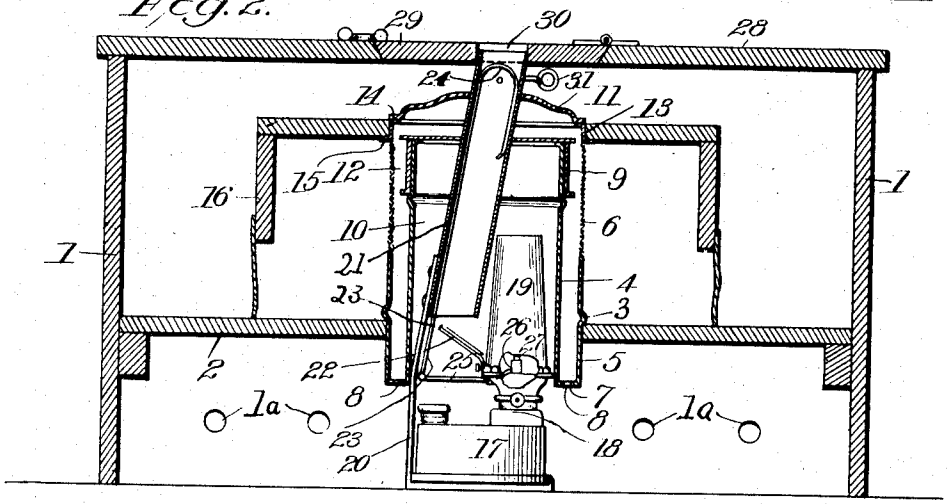
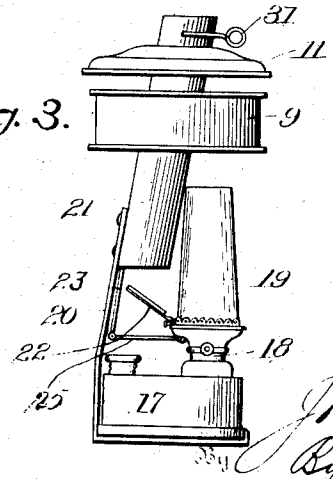


Fig. 3.



Witnesses

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JOHN ALONZO JOCOY, OF WAKEFIELD, RHODE ISLAND.

BROODER.

No. 878,635. Specification of Letters Patent. Patented Feb. 11, 1908.

Application filed June 7, 1906. Serial No. 320,617.

To all whom it may concern:

Be it known that I, JOHN ALONZO JOCOY, a citizen of the United States, residing at Wakefield, in the county of Washington and State of Rhode Island, have invented certain new and useful Improvements in Brooders, of which the following is a specification.

This invention relates to brooder heaters.

It has for an object to arrange the lamp thereof so that a perfect combustion takes place, whereby the brooder may be heated in the coldest of weather.

Another object is to provide means by which the condition of the flame may be viewed and may be regulated from the outside of the brooder without disturbing the brooder or its heater.

Another object is to provide a construction by which the lamp may be removed from the heating drum out of the top of the brooder without disturbing the heating drum.

A still further object is to construct the heater so that it gives the proper heat and ventilation at any season of the year, thus giving the chicks conditions required by nature.

Other objects will appear in the following description and will be more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a vertical sectional view of the brooder showing the heater in elevation. Fig. 2 is a vertical section of the brooder showing the heater in section. Fig. 3 is a side elevation of all parts of the heater except the heating drum.

Referring more particularly to the drawings 1 indicates the side walls of the brooder, and 2 the floor of the brooder slightly elevated above the lower edges of the side walls, which are provided with openings 1^a below the floor of the brooder. The said floor is provided with a central circular opening in which is fitted the heating drum, the heating drum being provided with an annular bead or flange 3 which engages the bottom around the opening and supports the drum within the opening.

The heating drum is formed of an inner shell 4; an outer shell comprising a closed lower portion 5 and a reticulated upper portion 6; an annular portion 7 connecting the inner and the outer shells at their lower edges and provided with air openings 8; a removable closure 9 for the chamber 10 formed by the inner shell; and a removable closure 11 for the chamber 12 formed between the inner and the outer shells. Surrounding the upper edge of the outer shell is a ring 13 formed at its top with an inwardly turned flange 14 upon which the closure 11 rests, and formed at its lower edge with an outwardly turned annular flange 15 which acts to support the hover 16.

A lamp body 17 is placed below the chamber 10 upon the arm 20. This body carries a burner 18 which projects into the chamber 10 and has mounted thereon a chimney 19. A flue 21 projects through closures 9 and 11, being secured to both closures 9 and 11 and likewise to the arm 20. The lower end of flue 21 is below the upper end of the chimney 19, and at a point approximately level with the floor 2, the products from the lamp thus being caused to take a downward course to enter flue 21 before passing from the chamber 10. This brings the heat line on a level with the brooder floor so that the inner shell 4 of the drum is heated as far down as the floor level and thus the chamber 12 below the reticulated portion 6 is also charged with hot air, which is carried out with the incoming fresh air that enters through the openings 8. To the top of flue 21 is secured a handle 31 by which the entire lamp may be lifted and removed.

Arranged in the horizontal plane of the flame of the burner 18, below the flue 21, and at an angle of about 45° to the flame, is a mirror or other reflector 22, by which one, looking in the upper end of the flue 21, may ascertain the condition of the flame.

To regulate the flame from the outside of the brooder, I mount a rod 23 within flue 21, and form said rod at its upper end with a curved portion 24 which may be engaged by a finger of a person. The lower end of the rod is hinged to a lever 25 pivoted in the burner body, and the lever is secured to a collar 26 surrounding the wick tube 27 of the burner. It is apparent that when the rod 23 is raised, the collar 26 will be lowered and the flame raised, and vice versa.

The top 28 of the brooder is provided with an opening directly above the heater, the opening being provided with a closure 29 having an opening 30, into which the upper end of the flue 21 projects.

From the description above given, it will be seen that the arm 20 connects the chimney 19, the burner 18, the lamp body 17 and the flue 21, so that when the door 29 is opened the entire heat generator may be

lifted and removed through the opening in the top of the brooder by grasping the handle 31, the lamp body 17 being of such diameter as to permit it to pass through the heating drum. It will also be seen that the hover, which is supported by the heating drum, may be lifted from its support 15 and removed without disturbing any of the other parts; and that then the heating drum may be removed without disturbing the lamp and its attached parts. Thus it will be seen that the parts constituting the brooder may be separated without breaking or injuring any of the elements of the different parts, thereby permitting repairs to be made with convenience and without discommoding the chicks.

The operation of the parts will be apparent from the foregoing description, but may be summarized as follows:—Air passes to the burner through openings 1ª and the products from the burner pass through the chimney 19, thence downwardly into the flue 21 through the lower end thereof. This circuitous path of the products causes the heating of the inner shell of the heating drum. The heating of the inner shell of the drum causes a circulation in the drum, air being drawn through openings 8 and discharged into the hover space through the open upper part 6 of the drum.

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

1. The combination with a heating drum, of a burner including a wick tube, a collar surrounding said wick tube, a flue arranged at one side of the burner, a lever connected to the collar, a rod mounted within the flue and connected at its lower end to said lever with its upper end extending to a point where it may be grasped from the outside of the drum, and a reflector carried by the burner and disposed in line with said flue whereby the condition of the flame of the burner may be determined by looking through the flue.

2. The combination with a heating drum, of a lamp burner including a wick tube, a chimney for the burner, a collar surrounding said wick tube, a flue arranged at one side of the burner, the lower end of the flue projecting below the top of the chimney, a lever connected to said collar, and a rod mounted within the flue and connected at its lower end to the lever with its upper end extending to a point where it may be grasped from the outside of the drum.

3. The combination with a heating drum, of a lamp burner including a wick tube, a chimney for the burner, a flue extending into the drum and with its lower end below the top of said chimney and extending at its upper end through the drum, and means projecting into the flue whereby the flame of the burner may be regulated.

4. The combination with a heating drum and a lamp body having a burner, of a chimney for the burner, a flue extending into the heating drum and arranged at one side of the chimney above the drum, a detachable closure for the drum connected to said flue, a support for the lamp body extended at the upper end and connected to said flue, whereby the closure, flue and lamp are suspended from the drum.

5. The combination with a heating drum and the lamp body having a burner, of a chimney for the burner, a collar surrounding the wick tube of the burner, a flue extending from the heating drum and arranged at one side of the chimney, said flue terminating below the top of the chimney, a lever connected to said collar, a rod mounted within the flue and connected at its lower end to the lever and having its upper end extending to a point where it may be grasped from the outside of the drum, a support for the lamp body, and an arm connecting the flue and the support.

6. The combination with a heating drum including inner and outer walls to provide inner and outer air heating chambers, the outer wall of the outer chamber being partly reticulated and the bottom end of the outer chamber being perforated, a lamp body having a burner projecting into the inner chamber of the drum, a chimney for the burner, a flue projecting into the inner chamber upon an incline and terminating below the top of the chimney, and means whereby the condition of the flame of the burner may be determined by looking through said flue.

7. The combination with a heating drum including inner and outer walls to provide inner and outer air heating chambers, the outer wall of the outer chamber being partly reticulated and the lower end of the outer chamber being perforated, a lamp body having a burner projecting into the inner chamber of the drum, a chimney for the burner, a flue projecting into the inner chamber upon an incline and terminating below the top of the chimney, means whereby the condition of the flame of the burner may be determined by looking through said flue, and means projecting into the flue for operation to regulate the flame of the burner.

8. In an apparatus of the class described, a casing comprising sides, a top and a floor and an intermediate hover member, said floor, top and hover member having vertically alined openings, a door providing a movable closure for the opening in the top, a drum comprising an outer shell and an inner shell spaced apart, a flue extending into said drum, closures respectively for said outer and inner shells and connected to said flue, a lamp including a burner and chimney, and an arm supporting said lamp and connected to said flue, whereby said lamp and flue are

suspended from the drum shells and removable through the openings in said top and hover.

9. The combination with a heating drum, of a lamp burner, a collar surrounding the wick tube of the burner, a flue arranged to one side of the burner, a lever connected to the collar, and a rod mounted within the flue and connected at its lower end to the lever and having its upper end extending to a point where it may be grasped from the outside of the drum.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN ALONZO JOCOY.

Witnesses:
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