No. 730,640. PATENTED JUNE 9, 1903.

O. H. GROSLAND.

BROODER.

APPLICATION FILED MAR. 16, 1903.

NO MODEL.

Fig. 1.

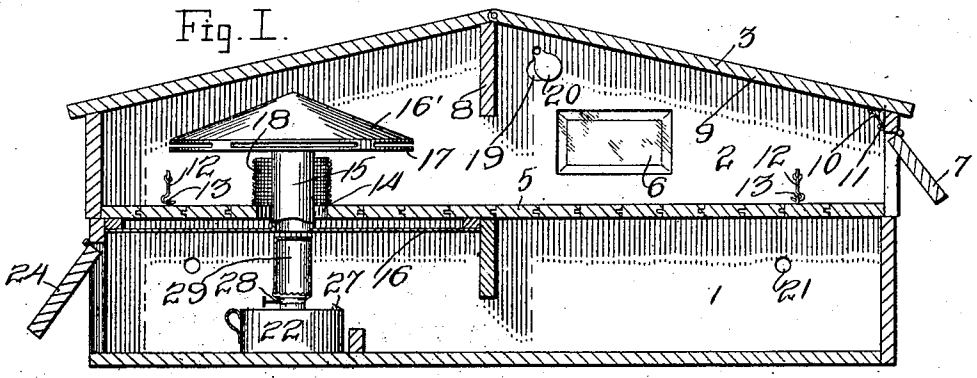


Fig. 2.

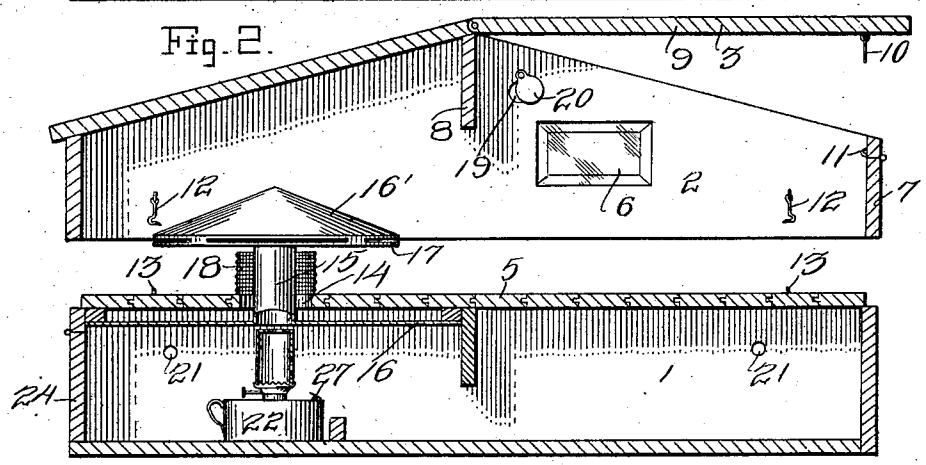


Fig. 3.

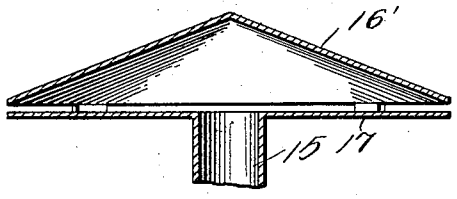
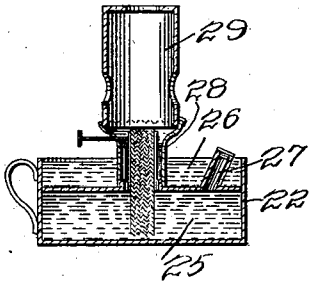


Fig. 4.



Inventor.

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Witnesses

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No. 730,640. Patented June 9, 1903.

UNITED STATES PATENT OFFICE.

OLE H. GROSLAND, OF KENSETT, IOWA; ASSIGNOR OF ONE-HALF TO OLE A. NUBSON, OF KENSETT, IOWA.

BROODER.

SPECIFICATION forming part of Letters Patent No. 730,640, dated June 9, 1903.

Application filed March 16, 1903. Serial No. 148,040. (No model.)

To all whom it may concern:

Be it known that I, OLE H. GROSLAND, a citizen of the United States, residing at Kensett, in the county of Worth and State of Iowa, have invented certain new and useful Improvements in Brooders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to brooders, and consists of the features of construction and combinations of parts hereinafter more fully described and claimed, the object in view being to provide simple and efficient means for heating the brooder-chamber, said means embodying a radiator serving also as a hover for the chicks.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of an incubator embodying my invention. Fig. 2 is a similar view showing the upper section detached from the lower section. Fig. 3 is a sectional view of the combined hover and radiator, and Fig. 4 is a sectional view of the lamp.

My improved brooder comprises in its construction lower and upper chambers 1 and 2, preferably of box form, the upper section 2 having a gable roof 3 and adapted to rest upon the upper edge of the lower section 1. The lower section 1 is provided with a top flooring or horizontal partition 5, which separates the two chambers from each other. This floor serves not only as the top roof of the lower section, but as the floor of the upper section when the two sections are connected. The upper section is provided with one or more windows 6 for lighting purposes, and one or more doors, whereby access may be had thereto for the convenient insertion and removal of the chicks. One half or section of the roof 3 is also hinged to a cross-piece 8 to form a door 9, which rests at its upper edge upon one of the end walls of the section above the door 7 and is provided with a hook 10 for engagement with an eye or keeper 11 on the section 2 for holding it closed. This hook or catch is so arranged that by swinging the door 7 open it may be disengaged, leaving the door 9 free to be elevated. The door 9 gives more convenient access to the upper compartment to enable the same to be cleaned without the necessity of removing the section 2 from the section 1. The section 2 is provided with hooks or catches 12 to engage eyes 13 on the section 1, whereby the two sections are fastened together. In the floor 5 is an opening 14, through which projects a hot-air conducting-pipe 15, carried by a metallic plate 16, secured to the section 1 beneath said floor. The upper end of this pipe supports a radiator and deflector, consisting of a cone 16′, supported by a plate 17, suitably secured upon the upper end of the pipe 15. The cone 16′ is spaced apart from the plate 17 for the escape into the chicks' chamber of the section 2 of the heated air supplied thereto through the pipe 15, and the described construction of the radiator provides a substantially umbrella-shaped cover, under which the chicks may collect to secure the desired warmth. An annular shield 18 rising from the wall 5 encircles the pipe 15 and prevents the chicks from coming in direct contact therewith or becoming caught in the wall of the opening 14. One or more ventilation-openings 19 may be formed in the wall of the section 2 to admit fresh air and allow the vitiated air to be discharged. Each of these openings will be closed by a ventilator-slide 20. In the section 1 are openings 21 for the inlet of fresh air and outlet of the fumes from a lamp 22, insertible and removable through a door 24 provided upon said section. The lamp 22 is partitioned to form an oil-chamber 25 and a superposed water-chamber 26, a tube 27, projecting from above through the chamber 26 and into the chamber 25, affording a conductor for refilling the latter-named chamber with oil. The burner-tube 28 is kept cool by the water in the chamber 26 and carries a hinged flue or chimney 29, which is disposed below the flue or pipe 15. When the lamp is lighted, it will be apparent that hot air will pass up through the pipe 15 and be supplied from the drum or radiator to the chamber of the section 2.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of the invention will be readily understood, and it

will be seen that a brooder is provided which is simple of construction, which affords convenient access to the parts, and which embodies a heater which serves also as a hover, under which the chicks may collect to secure the proper degree of warmth.

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

A brooder comprising a base-section forming a heating-chamber, a top section removably mounted upon the base-section and forming a chicks' chamber, a heater in the base-section, a hot-air flue supported by the base-section and projecting into the chicks' chamber, a combined radiator and hover supported by said flue, and consisting of a conical drum and a base-plate spaced therefrom, and a shield encircling and guarding the flue, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OLE H. GROSLAND.

Witnesses:
B. A. RINGHAM,
OLE A. NUBSON.