Feb. 2, 1943. H. C. WASHBURN 2,309,720

BROODER

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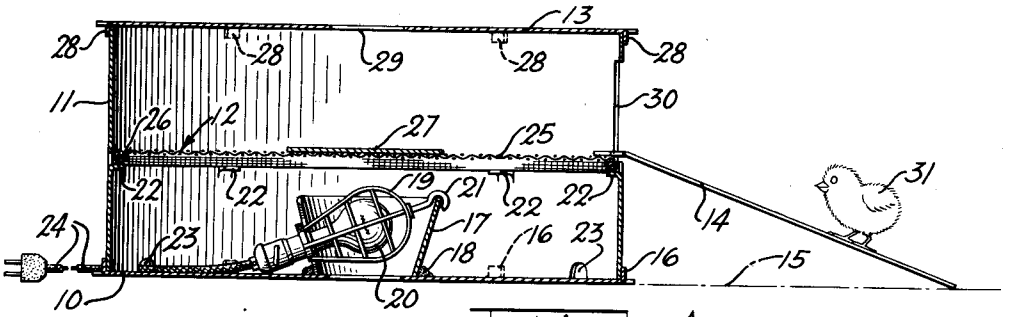


Fig. 1.

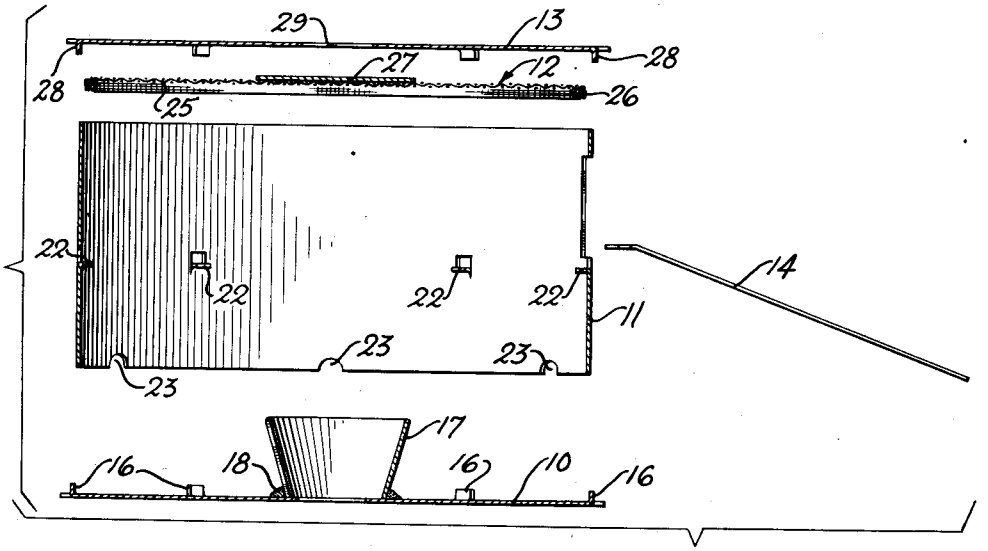


Fig. 2.

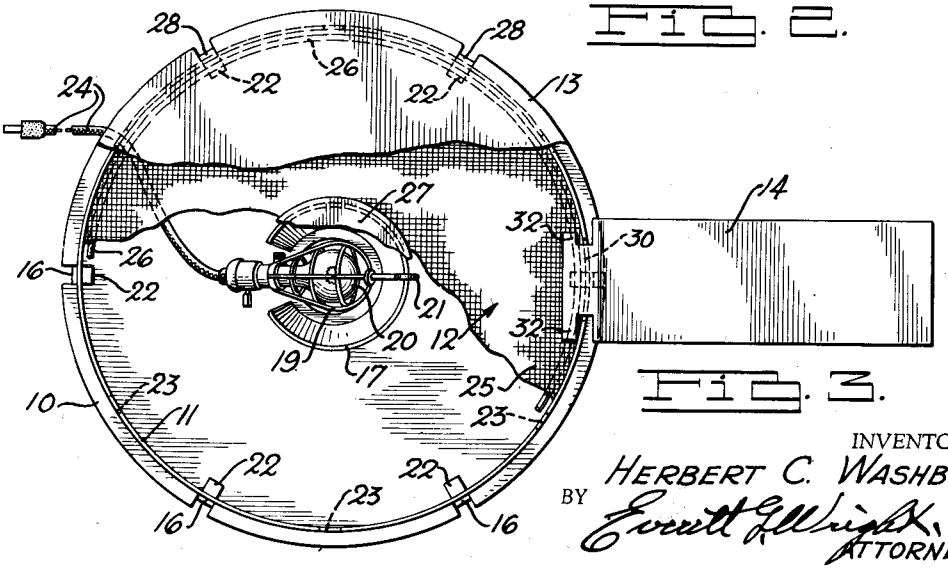


Fig. 3.

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BROODER

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3 Claims. (Cl. 119—33)

This invention relates to brooders and in particular to brooders for small chicks.

In brooders of the usual construction baby chicks huddle to the heating means or warmest portion thereof in such close proximity to each other that the smaller chicks and the ones closest to the warmest portion of the brooder become smothered with the result that ofttimes the mortality rate in a brooder exceeds fifty per cent of the brood. Also, sanitation in brooders has been found to be an element of the health and later growth of the chicks reared therein.

With the foregoing in view, one object of the invention is to provide an improved brooder wherein baby chicks will not crowd to the source of heat or to the warmest portion thereof thereby avoiding high mortality among chicks in the brood.

Another object of the invention is to provide a brooder which may be readily dismantled, cleaned and re-assembled so that thorough and complete sanitation can be maintained with a minimum of effort.

Other objects of the invention will become apparent by reference to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a cross sectional view of a brooder embodying the invention.

Fig. 2 is an exploded cross sectional view of the brooder disclosed in Fig. 1 showing its parts disassembled, the heating element preferably employed being omitted from the view.

Fig. 3 is a plan view of the brooder disclosed in Fig. 1 having portions thereof successively broken away to clearly illustrate the invention.

Referring now to the drawing wherein like numerals refer to like and corresponding parts throughout the several views, the brooder illustrative of the invention disclosed comprises a sheet metal base 10, a cylindrical wall member 11, a floor 12, a roof 13, and a ramp 14 leading from the ground level 15 up to the floor 12. The base 10 preferably is provided with a plurality of upwardly turned tabs or the like 16 spaced therearound within which the cylindrical wall member 11 sits on the said circular base 10 which serves as a means for catching droppings from the chicks. An inverted substantially frusto-conical heat reflector 17 is welded or otherwise secured at 18 to the base 10 and is of such size as to receive a trouble light 19 which serves as a heating element to maintain desirable temperature within the brooder. By changing the size of the trouble light bulb 20 more or less heat may be obtained. It is preferable that the trouble light bulb 20 be located substantially in the center of the heat reflector 17. By employing a hook 21 adjustable as to length, the trouble light 19 may be readily positioned in the heat reflector 17 so that its bulb 20 is substantially central with respect thereto.

The said cylindrical wall member 11 is preferably provided with a plurality of circumferentially spaced inwardly turned tabs or shelves 22 which support the floor 12 when telescoped within the said cylindrical wall member 11 from the top thereof. A plurality of semi-circular vents 23 are preferably provided at intervals around the bottom of the cylindrical wall member 11 adjacent the floor 12. The electric lead or cord 24 through which current is supplied to the heating element 19 extends through one of the said vents 23 as best shown in Figs. 1 and 3.

The floor member 12 is composed of a reticulated material such as a wire screen 25 which may be easily cleaned and which is stretched over and supported by an annular member or ring 26 of steel rod or the like. As before mentioned, the said floor supporting ring is supported on a plurality of inwardly turned tabs or shelves 22 preferably formed integral with the cylindrical member 11. A heat baffle or disc 27 preferably having a diameter at least equal to the diameter of the upper end of the inverted frusto-conical heat reflector 17 is welded or otherwise secured on top of the floor 12 at the center thereof.

The roof 13 is circular in shape and slightly larger in diameter than the diameter of the cylindrical wall member 11. A plurality of tabs 28 spaced around and turned down from the periphery of the roof 13 lap over the cylindrical wall member 11 for the purpose of securing the roof member 13 concentrically thereover. A suitable circular vent 29 is preferably provided in the center of the roof 13 as best shown in Figs. 1 and 2.

The cylindrical wall member 11 is preferably provided with a square aperture 30 which serves as an entrance and exit to the brooder. The ramp 14 suitably notched and bent at its upper end as best shown in Figs. 2 and 3 permits baby chicks 31 to enter and leave the brooder through the entrance and exit 30. The tabs 32 of the ramp 14 engage the wall member 11 at each side of the entrance and exit opening 30 and prevent the upper end of said ramp 14 from falling from the floor level of the brooder, one of the tabs 32 being shorter than the other to admit of dis-

assembling the ramp from the brooder during cleaning.

By constructing brooders as disclosed herein, warm air currents from the heating element **19** are spread radially by the heat baffle **27** and are mixed with fresh air entering the vents **23**, which warmed and freshened air rises through the reticulated floor **12** in sufficient uniformity to prevent the huddling and attendant smothering of some of the chicks. The circular roof vent **29** creates a "stack action" of air currents through the brooder.

Brooders embodying the invention heat evenly, prevent crowding and smothering of chicks, provide an even flow of freshened warmed air uniformly to the chicks and admit of complete sanitation with a minimum of work. In brooders embodying the invention, the more chicks that come in the brooder the more evenly the heat spreads among the chicks, therefore, the desire for the chicks to crowd is eliminated.

Although but one embodiment of the invention has been disclosed and described in detail, it is obvious that many changes may be made in the size, shape, arrangement and detail of the various elements of the invention, it not being intended to limit the scope of the invention except by the terms of the appended claims.

I claim:

1. A brooder of the class described comprising a base member, a wall, a roof, a reticulated floor disposed between said base and roof, means providing chicks with access to said floor, a heat reflector centrally disposed on said base formed to direct heat currents upwardly therefrom, a heating element in said heat reflector, the said roof and walls having suitable apertures therethrough to provide stack action through said brooder from below said reticulated floor, and a heat baffle on said floor centrally disposed with respect to said heat reflector of sufficient size to disperse heat currents from said heating element outwardly from said heat baffle and provide warm air flow through said reticulated floor around chicks thereon whereby to prevent excessive huddling of chicks in the brooder.

2. A brooder of the class described comprising a base member, a wall, a roof, a reticulated floor disposed between said base and roof, the said wall having a portal therethrough, and means providing chicks with access to said floor, a heat reflector centrally disposed on said base formed to direct heat currents upwardly therefrom, a heating element in said heat reflector, and a heat baffle substantially the same size as said heat reflector disposed on said floor above said heat reflector, the said roof having a stack aperture therethrough central with respect to said heat reflector and said heat baffle, the said wall having vent apertures evenly spaced therearound adjacent said floor through which fresh air passes and becomes mixed with warmed reflected air from said heating element as the said warmed reflected air flows through said reticulated floor around chicks thereon and thence through said stack aperture.

3. A brooder characterized by being subject to rapid assembly and disassembly comprising a circular base, a cylindrical wall portion, a circular roof, tabs extending upwardly from said base and downwardly from said roof removably retaining said cylindrical wall portion concentric with respect to said base and roof, inwardly disposed shelf members circumferentially spaced around said cylindrical wall portion, a floor comprising an annular outer ring including reticulated flooring material stretched thereon supported on said shelf members, a heating element and an inverted frusto-conical heat reflector disposed centrally on said base, a circular heat baffle supported on said floor above said heat reflector, the said cylindrical wall member having fresh air inlet apertures spaced therearound adjacent the bottom thereof, the roof member having a centrally disposed stack aperture, the said cylindrical wall portion having a portal therethrough above said reticulated floor, and a ramp from the base level outside said brooder to said floor level suitably notched to engage and become removably anchored to the cylindrical wall at each side of said portal, the said brooder providing a sufficiently even flow of mixed warm and fresh air upwardly through the said reticulated floor to prevent excessive huddling of chicks with the consequent loss of numbers thereof.

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