F. M. FREEMAN.

BROODER.

APPLICATION FILED AUG. 16, 1915.

1,179,908.

Patented Apr. 18, 1916.

2 SHEETS—SHEET 1.

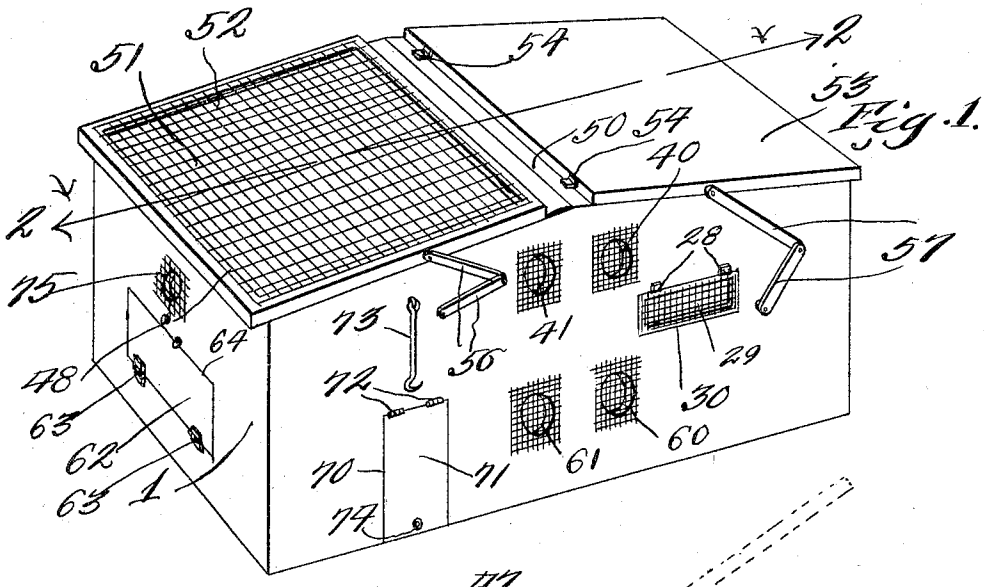


Fig. 1.

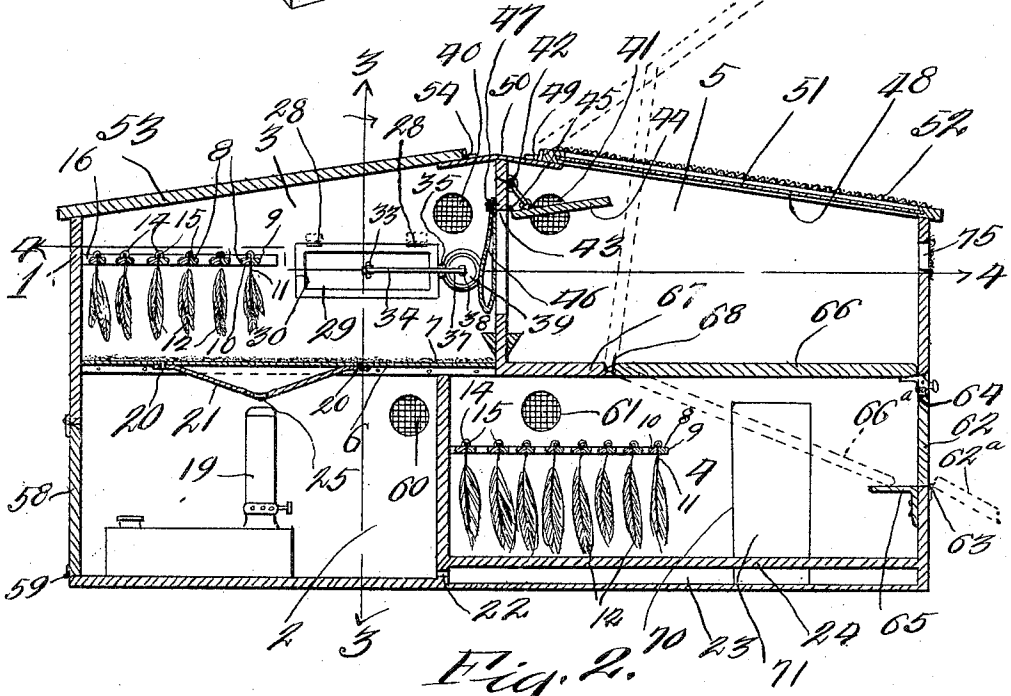


Fig. 2.

Inventor

F. M. Freeman

Witnesses

Frances Y. Boswell

Philip Terrell

By D. Swift & Co

Their Attorneys

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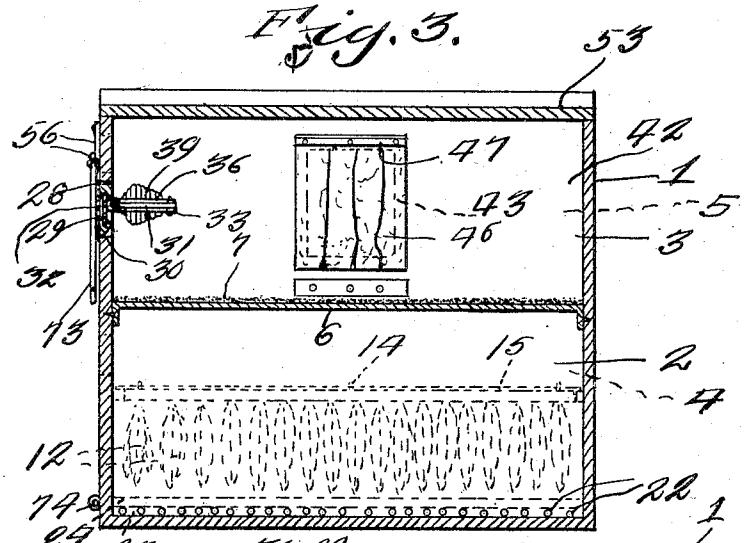
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2 SHEETS—SHEET 2.

Fig. 3.



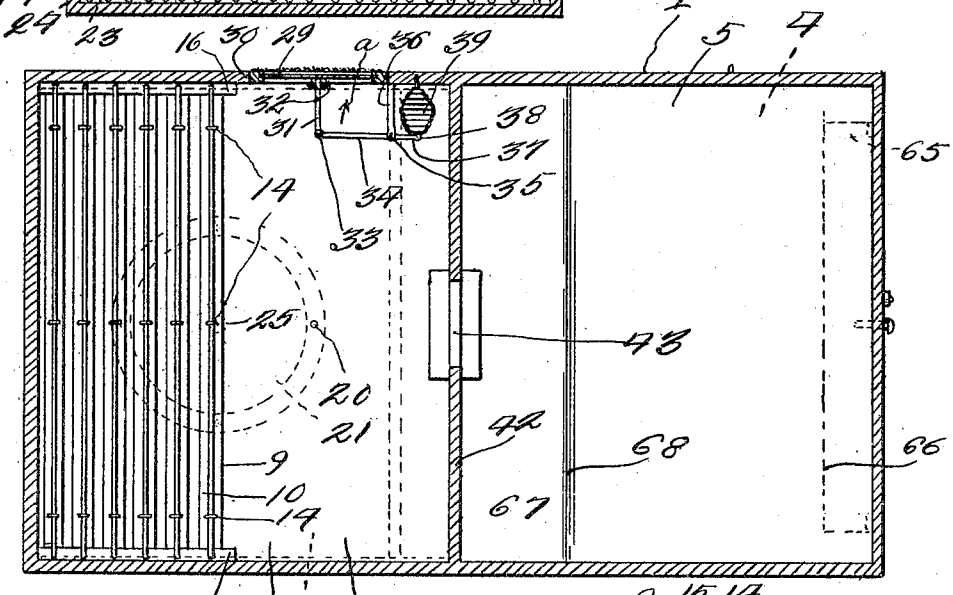


Fig. 4.



Fig. 5.

Witnesses

Frances G. Bowell

Philip Turell

Inventor

F. M. Freeman

By D. Swift & Co

Attorneys

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANCIS M. FREEMAN, OF DAVIS CITY, IOWA.

BROODER.

1,179,908. Specification of Letters Patent. Patented Apr. 18, 1916.

Application filed August 16, 1915. Serial No. 45,762.

To all whom it may concern:

Be it known that I, FRANCIS M. FREEMAN, a citizen of the United States, residing at Davis City, in the county of Decatur, State of Iowa, have invented a new and useful Brooder; and I do hereby 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 an improved brooder and coop for chickens and other fowl, and an object of the invention is to provide an improved, simple, efficient and practical device, which may be constructed reasonably cheap.

Another object of the invention is to provide improved means for suspending hovering feathers in the compartments of the brooder.

Another object of the invention is the provision of a heating chamber under one of the compartments, there being a cone-shaped deflector over the heater for deflecting the heat, a portion of which passes through an opening of the deflector and collects between the deflector and the floor of the compartment above the heating compartment, thereby confining some of the heat directly in contact with the flooring with such intense degree as to maintain the compartment above the heating compartment well heated.

Another object of the invention is to provide a brooder with a compartment on the ground floor, under which ground floor compartment a space is formed to receive heat through apertures of communication, from the heating compartment, to heat the ground floor compartment.

In practical fields the details of construction may necessitate alterations, falling within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a perspective view of the improved brooder constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view on line 2—2 of Fig. 1. Fig. 3 is a vertical sectional view on line 3—3 of Fig. 2. Fig. 4 is a horizontal sectional view on line 4—4 of Fig. 2. Fig. 5 is an enlarged detail sectional view of the clamping and supporting means for the hovering feathers.

Referring to the drawings, 1 designates a housing which may be any conventional contour or configuration, for example, rectangular in shape, and is provided with a heating compartment 2, a pair of brooding compartments 3 and 4, and a general compartment 5. The flooring 6 of the compartment 3 is constructed of sheet metal, as shown, on which a layer of sand or the like 7 is deposited, for scratching purposes. Arranged in the compartment 3 is a plurality of strips 8, each of which, as shown in Fig. 5 consists of two parts 9 and 10, between which the quills 11 of the hovering feathers 12 are clamped, the two parts being secured together by screws 13. Strips 8 have staples 14, through which the rods 15 extend, which rods in turn are supported upon the strips 16 secured to the inner faces of the side walls of the compartment 3, thereby supporting the strips 8 and the hovering feathers 12. The compartment 4 has similarly constructed strips and hovering feathers, therefore same reference characters are used to designate the corresponding parts to those of the strips 8. The heating compartment 2 is provided with a conventional form of heater or lamp 19.

Secured at 20 to the flooring 6 is a conical shaped deflector 21 having its apex portion concentric with the lamp, for deflecting the heat thoroughly about the compartment 2, and in such a manner as to permit part of it to pass through the apertures 22 into the space 23 below the flooring 24 of the compartment 4, to heat the same. Some of the heat from the lamp or heater passes through the opening 25 in the apex of the deflector 21, so as to be confined between the deflector and the sheet metal flooring 6 of the compartment 3, to maintain the flooring well heated, and to keep the sand dry and warm, so that the chicks may rest thereon. The litter can be easily scraped off the top of the sand, and the same replaced with a small amount of fresh sand, which is one of the features of sanitation relative to this improved brooder.

Hinged to one wall of the compartment 3

as shown at 28 is a closure 29, to cover an opening 30. This closure has an arm 31 pivoted to it as at 32, which in turn is pivoted at 33 to the lever 34 fulcrumed at 35 on a stationary arm 36, which projects from one of the side walls of the compartment 3. The end 37 of the lever 34 is connected in any suitable manner as shown at 38 to the thermostatic device 39, which expands as a result of the excessive heat in the compartment 3, thereby tilting the lever 34 in the direction of the arrow *a*, throws open the closure 29, thereby permitting the excessive heat to pass out of said opening, thereby automatically keeping the heat in the compartment 3 at a uniform temperature. A screened opening 40 is formed in one of the walls of the compartment 3, and a second screened opening 41 is formed in one of the walls of the compartment 5 to permit the foul air to pass off.

A suitable partition 42 divides the upper floor of the housing into the compartments 3 and 5, there being an opening 43 in said partition. A closure 44 is hinged at 45 to the compartment 42, for closing the opening 43. In the drawings the closure 44 is shown as being held open, to permit the chicks or fowls to pass from one compartment to the other. Fabric hovering strips 46 are secured by the metal strips 47 to the partition 42 above the opening 43; the strips 46 are arranged to hang loosely and substantially over the opening 43. The top 48 of the compartment 5 is hinged at 49 to the central part 50 of the housing, and is designed to be thrown upwardly as indicated in dotted lines, to permit access to the brooder. The top 48 has a glass plate 51 and a screening 52, which screening protects the glass, whereas the glass permits view to be had into the compartments. The closure or top 53 of the compartment 3 is hinged at 54, and may be raised and lowered, to gain access to the compartment 3. Both of the tops or closures 48 and 53 are limited in their opening positions by the links 56 and 57. The heating compartment 2 has a closure 58 hinged at 59, so as to permit acccess to the compartment. Screened openings 60 and 61 are provided in the walls of the compartments 2 and 4, to permit excessive heat and foul air to pass off. A closure 62 is hinged at 63 for closing the opening 64, there being a suitable shelf 65 at the lower edge of the opening 64. A section 66 of the flooring 67 of the compartment 5 is hinged at 68, and is designed to swing downwardly as shown in dotted lines at 66^a in contact with the shelf 65, in which case and when the closure 62 is swung down as in dotted lines at 62^a, the chicks or fowls may pass upwardly into the compartment 5 or compartment 3, by way of the opening 43. The section 66 of said flooring may be swung upwardly as shown in dotted lines, that is, when the top or closure 48 is opened, to gain access to the compartment 4. However, when the closure 62 is thrown down as in dotted lines at 62^a, and the section 66 disposed as shown in full lines in Fig. 2, the chicks or fowls may enter the compartment 4. The chicks or fowls may also pass through the opening 70, when the closure 71 which is hinged at 72 is hooked open by the hook 73 engaging the eye 74 into the compartment 4. A screened vent opening 75 is formed in the end wall of the compartment 5 to allow the foul air to pass off.

The invention having been set forth, what is claimed as new and useful is:

1. A brooder comprising a housing having compartments therein for the fowls, a heating compartment below one of the compartments which is provided with a metal flooring, a heater in the heating compartment, a conical deflector on the bottom of the sheet metal flooring and being concentric with the top of the heater for deflecting the heat, another of said compartments for the fowls having a heat space thereunder provided with apertures of communication with the heating compartment, the conical deflector having a space between it and the metal flooring and provided with an opening in the apex of the deflector to permit the heat from the heater to pass into said space for confinement therein to thoroughly heat the metal flooring.

2. A brooder comprising a housing having compartments therein for the fowls, a heating compartment below one of the compartments which is provided with a metal flooring, a heater in the heating compartment, a conical deflector on the bottom of the sheet metal flooring and being concentric with the top of the heater for deflecting the heat, said deflector having a space between it and the metal flooring and provided with an opening in its apex to permit a portion of the heat to pass into said space for confinement under the metal flooring for heating the same and keeping sand on its upper surface dry and warm.

3. Hovering means for a brooder comprising a plurality of strips, each strip consisting of two parts, hovering strips consisting of feathers having their quills between the parts, means for fastening the parts together, each of the strips consisting of the two parts having staples, rods extending through the staples, and means for supporting the rods to support the hovering means in the brooder.

4. Hovering means for a brooder comprising a plurality of strips having staples upon their upper faces, rods extending through the staples and having their extremities extended beyond the ends of the strips, supporting guides upon the opposite faces of a

chamber of the brooder, on which the extended extremities engage, thereby supporting the strips so as to be adjusted closer together or farther apart, and hovering strips consisting of feathers having their quills secured to the first strips and being suspended downwardly.

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

FRANCIS M. FREEMAN.

Witnesses:
L. A. BROWN,
W. A. CUMMINGS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."