Jan. 2, 1923. 1,440,756.

C. U. WINBERG.

POULTRY BROODER.

ORIGINAL FILED OCT. 25, 1921.

2 SHEETS—SHEET 1.

Fig. 1

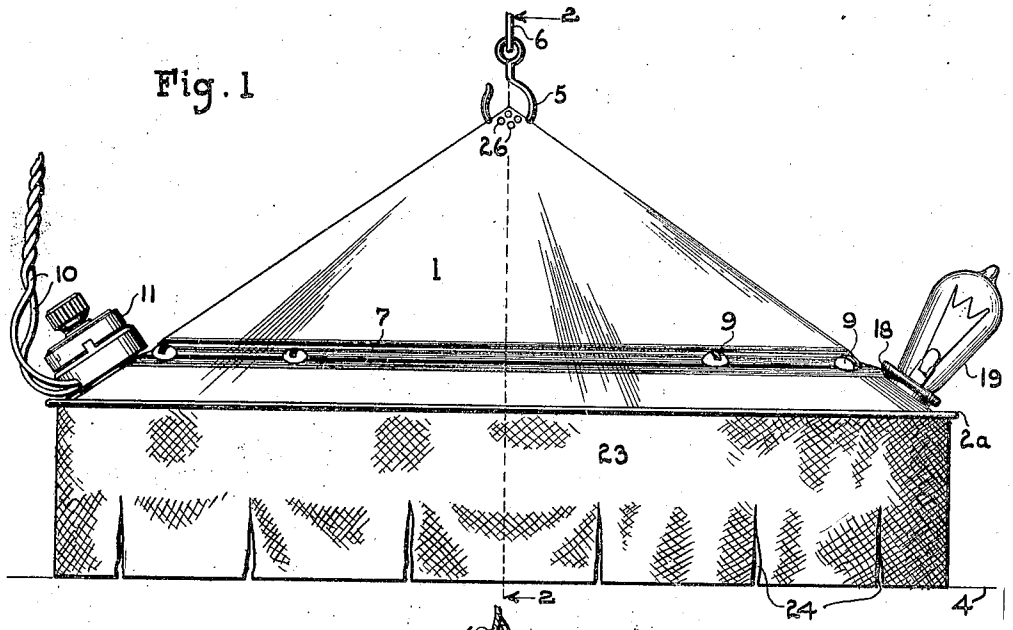
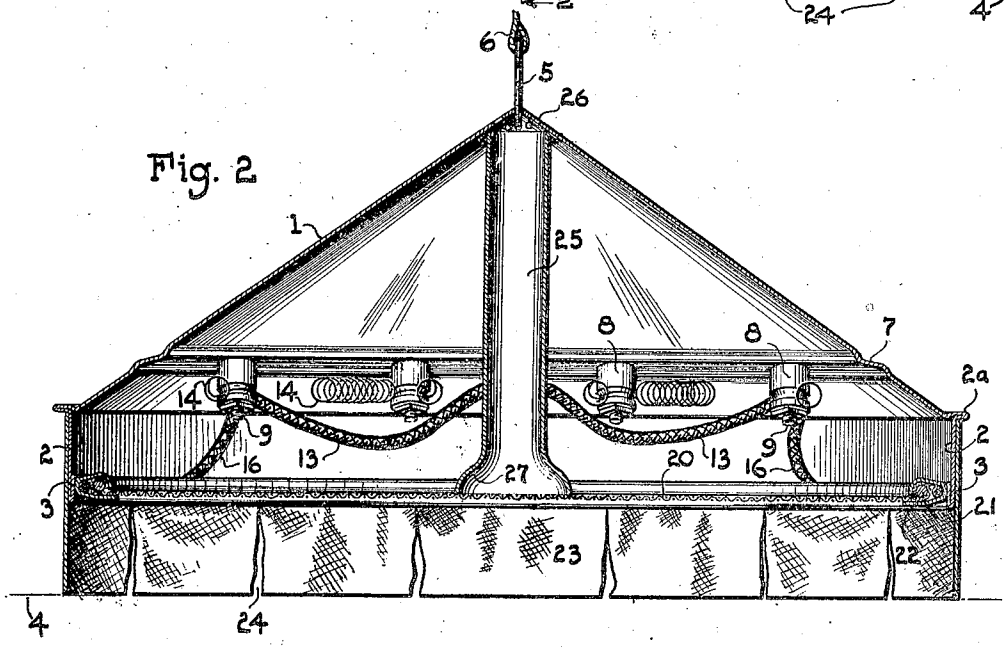


Fig. 2



Charles U. Winberg
INVENTOR

WITNESSES
Frank B. Cook
Howard D. Orr.

BY E. G. Siggers
ATTORNEY

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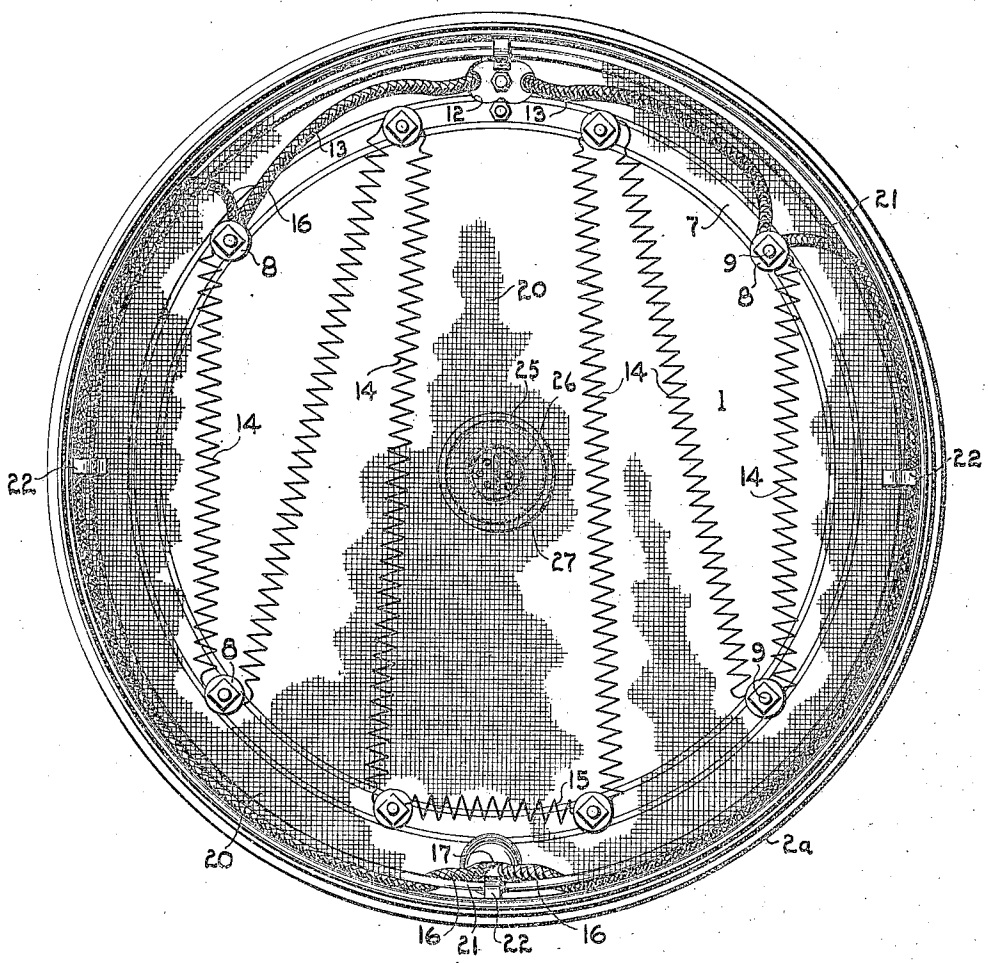

Fig. 3

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Patented Jan. 2, 1923. 1,440,756

UNITED STATES PATENT OFFICE.

CHARLES UNO WINBERG, OF SEATTLE, WASHINGTON.

POULTRY BROODER.

Application filed October 25, 1921, Serial No. 510,253. Renewed September 20, 1922. Serial No. 589,485.

To all whom it may concern:

Be it known that I, CHARLES U. WINBERG, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Poultry Brooder, of which the following is a specification.

This invention relates to poultry brooders.

The object is to provide a device for use in connection with incubator hatched chicks whereby the latter may find ample space to hover beneath the roof of the brooder and within the confines of sheltering curtains surrounding the margin thereof, and to be subjected to a uniform degree of heat throughout the entire area, thus avoiding the usual crowding and constant movement of the individual chicks in an effort to gain positions nearest to the heating means found in the ordinary devices of this class.

Another object is to provide an electrically heated brooder having means for freely admitting the heat from resistance coils to reach to the floor or other support for the chicks, and at the same time prevent their coming into contact with the same by means of a screen arranged over their heads a suitable distance to permit their free movement within the confines of the brooder.

A further object is to provide a brooder having means for admitting the chicks at any point around the periphery thereof or permitting them to leave the same in like manner, the walls of the brooder immediately closing again thereafter to exclude the cold atmosphere and maintain a uniform temperature within, the device being suspended from above to permit of such action of the chicks.

A still further object is to provide ventilating means for the interior of the brooder whereby the same may be supplied with fresh air caused by a constant upward flow of heated air through the ventilator, resulting in a gentle inflow of fresh air from beneath the bottom of the confining or sheltering curtains and between the crevices therein, thus avoiding subjecting the chicks to any violent drafts of air which often prove disastrous.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of this specification; it being understood that while the drawings show a practical form of the invention, the latter is not to be confined to strict conformity therewith, but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claims.

Referring to the drawings in which similar reference characters designate corresponding parts throughout the several figures:

Figure 1 is a side elevation of the improved brooder.

Figure 2 is a vertical, diametrical section of the same, taken on the line 2—2 of Figure 1.

Figure 3 is an inverted plan view of the brooder.

The brooder comprises a pyramidal hood or cover 1, circular in plan view, and made of a sheet of suitable metal having its center formed into an apex considerably higher than the marginal edges thereof, and its joined edges (not shown) may be overlapped and riveted or soldered together or crimped in a well-known manner.

The hood or cover 1 is provided with an integral, marginal flange 2 depending from its outer circular edge and entirely around the same, the metal comprising the flange being returned upon itself at the bottom thereof to form a strengthening and stiffening rib 3 at the base of the flange, and in spaced relation to the floor or other support 4 for the chicks, when the hood or cover is suspended in such manner by means of a hook 5 passing through suitable apertures formed in the metal of the hood at the apex thereof, said hook being adapted to hang from a wire or cord 6 from some overhead support.

The walls of the slanting roof portion of the hood or cover 1, at a point adjacent to the upper edge of the depending flange 2, are bent to provide a substantially horizontal step-like ring 7 which not only strengthens the cover and acts to prevent denting the

same, but provides a convenient place for the attachment of a series of insulators or posts 8, located beneath the cover and held to the same by means of bolts 9 having their heads preferably located on the upper or outside of the cover.

Conductors 10 coming from any suitable source of electrical energy are appropriately connected to a multi-point snap switch 11 mounted upon the upper side of the cover or hood 1 and over an opening 12, as shown in Figure 3 of the drawing, through which other conductors 13 lead in opposite directions to a pair of the insulating posts 8. The terminals of the wires are here connected to resistance wires, preferably formed into coils 14, which are passed back and forth between and attached to the insulating posts 8 in any desired manner so as to cover the area within the enclosure, and the other terminals of said resistance wires are connected to a pair of the insulating posts 8 diametrically opposite to the inlet of the conductors 13, where they are joined by a transversely disposed resistance coil 15.

Leading from the posts 8 having the inlet ends of the resistance coils attached thereto, are other conductors 16 also in electrical connection with the feeders 13, and provided with the usual insulating covering and passing around in the interior of the flange 2 of the hood and substantially on a level with the stiffening rib 3 to a point diametrically opposite to the inlet 12, where they pass through an opening 17 and having their terminals connected to an ordinary lamp socket 18, attached to the cover on the outside thereof and adapted to have an ordinary electric lamp 19 screwed into the same, to enable the operator to know at a glance when the current is turned on by the switch 11 and the heating of the brooder is in progress.

A circular screen 20 formed of some suitable wire mesh, having its margin bound to a stiff wire ring 21 of a diameter to freely enter within the depending flange 2, is adapted to be placed therein and to be held in position by flexible metal clips 22, soldered or otherwise secured to the return bend 3 of the flange 2 and at spaced intervals around the same, the said screen confining the resistance coils 14 and preventing the chicks from coming in contact with the same.

A band 23 of some soft flexible woven fabric, such as double-faced, extra heavy canton flannel, is fitted tightly around the depending flange, its upper edge abutting against the bead 2[a] formed between the body of the hood or cover and the said depending flange, and projecting below the return bend 3 sufficiently to nearly touch the floor or ground 4, the said lower projecting portion being provided with spaced slits 24 to facilitate the entrance of the chicks into the interior of the brooder.

A ventilating tube 25 formed of suitable metal, has its upper end soldered or otherwise secured to the interior of the apex of the hood or cover 1, which is provided, within the confines of said tube, with a series of perforations 26 for the outlet of warmed, rising air passing through the tube 25 from below the screen 20, the lower end of the ventilator being provided with the flaring mouth 27 resting directly upon the screen 20.

When the switch is turned on the resistance coils become heated and heat the air throughout the brooder, the chicks being prevented from becoming burned thereby by reason of the screen, and during the time the electric current is turned and the heating process progressing the lamp 19, which is preferably of low wattage, is glowing and constitutes a signal to the operator that the device is in proper operation.

From the foregoing it will be seen that a simple and economical brooder has been provided which may be operated at a low cost, and by reason of its simple construction, may be cheaply manufactured and sold cheaply, that the chicks may hover within the same and encounter an even temperature without any danger of becoming burned by coming in contact with the heating elements.

What is claimed is:—

1. A poultry brooder comprising an inverted sheet-metal hood provided with a depending marginal flange, a band of fabric stretched around the flange and extending below the same and having its lower extending portion slitted to provide curtains, means for suspending the hood, insulators mounted within the hood, resistance coils reaching from insulator to insulator to cover the area within the hood above the lower edge of the flange, electric conductors entering the hood and connecting with the coils and having a switch and a glow lamp included in the circuit, said switch and lamp being located on the outside of the hood, clips carried by the flange to support the conductors, and a circular screen also supported by the clips above the bottoms of the curtains.

2. A poultry brooder comprising an inverted sheet-metal hood provided with a depending marginal flange, a band of fabric stretched around the flange and extending below the same and having its lower extending portion slitted to provide curtains, means for suspending the hood, insulators mounted within the hood, resistance coils reaching from insulator to insulator to cover the area within the hood above the lower edge of the flange, electric conductors entering the hood and connecting with the coils and having a switch and a glow lamp included in the circuit, said switch and

lamp being located on the outside of the hood, clips carried by the flange to support the conductors, a circular screen having a marginal ring also supported by the clips above the bottoms of the curtains, and a ventilator tube extending to the screen and secured to the apex of the hood, the latter having perforations to provide an outlet for the ventilator.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

CHARLES UNO WINBERG.