May 13, 1941. A. E. ANDERSON 2,242,160

HEATER

Filed Dec. 7, 1938

Fig. 1.

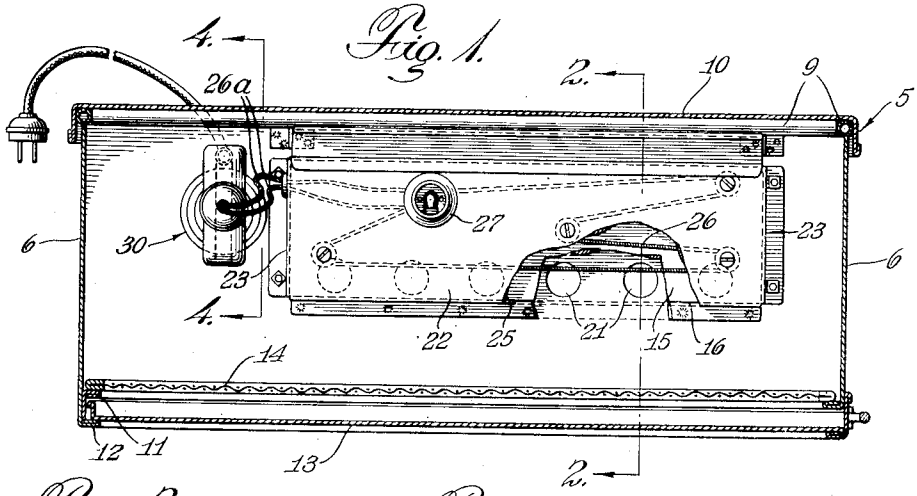


Fig. 3.

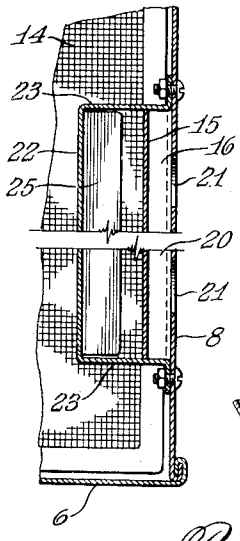


Fig. 2.

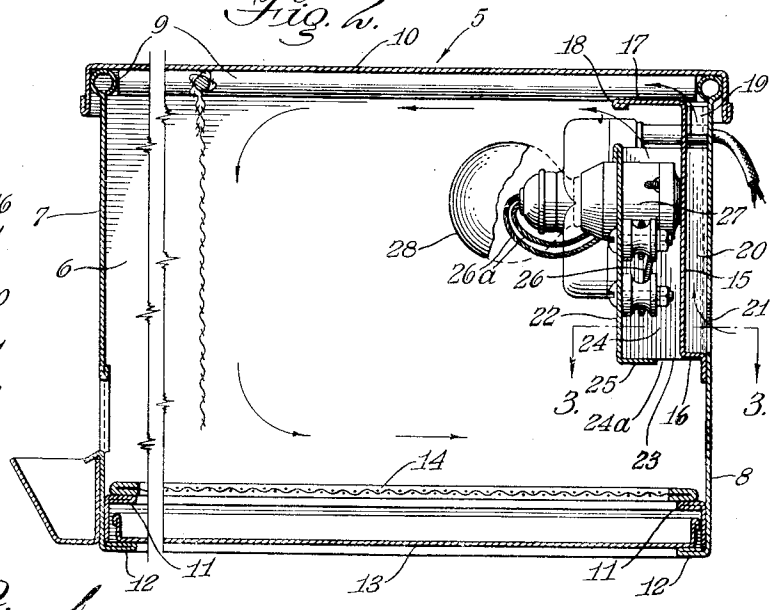
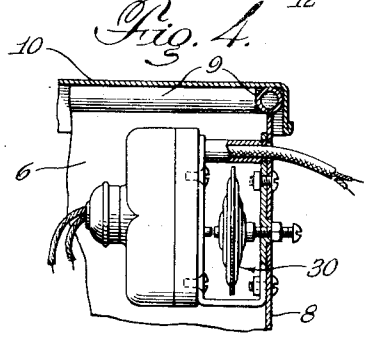


Fig. 4.



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Patented May 13, 1941 2,242,160

UNITED STATES PATENT OFFICE

2,242,160

HEATER

Albert E. Anderson, Quincy, Ill.

Application December 7, 1938, Serial No. 244,457

2 Claims. (Cl. 119—33)

My invention relates to heaters and more particularly to heaters especially adaptable for use in connection with chicken brooders and the like.

One of the principal objects of my invention is to provide a heater in association with a brooder and so constructed and arranged as to efficiently circulate and heat the air entering said brooder and also to effect a recirculation of air therein whereby to increase the efficiency of the brooder.

Another object of my invention is to provide a device of the character described which is simple in construction, durable in use, efficient in operation and economical in manufacture.

A further object of my invention is to provide a heater of the character described which is capable of attachment to brooders already in use without substantially modifying the same.

A still further object of my invention is to provide a new and improved heating means for a chicken brooder and which is so constructed and arranged as to have ready accessibility thereto and operable for permitting a constant and uniform supply of warm air to the brooder compartment.

Other objects and advantages will be apparent from the following description, appended claims and annexed drawing.

Referring to the drawing wherein like reference characters designate like parts throughout the several views:

Figure 1 is a transverse sectional view of a brooder having my invention applied thereto.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a sectional view taken on the line 4—4 of Figure 1.

In practicing my invention, I provide a brooder 5 of a substantially rectangular configuration in plan and fashioned with side, front and rear walls 6, 7 and 8 respectively. The upper ends of said walls terminate in rolled flanges 9 which support thereon a detachable cover or top 10. The lower ends of the walls 7 and 8 and one of the walls 6 are provided with spaced upper and lower guides 11 and 12 respectively. The other of said side walls 6 is formed with a slot through which is operable a sanitary tray 13 between the upper and lower guides 11 and 12 as clearly illustrated in Figures 1 and 2 of the drawing. The upper guides 11 support thereon a screened deck 14 on which chicks may run.

Secured to the rear wall 8 within said brooder and subjacent the top or cover 10 is my novel form of heater which comprises a rectangular casing including a back plate 15 formed at its lower edge with a rearwardly directed flange 16 attached to the wall 8, for instance by spot welding or the like. The upper end of the back plate 15 is formed with a forwardly directed flange 17, the outer end of which is provided with a rolled or folded lip 18 and the upper end of the back plate is secured to the rear wall 8 and spaced therefrom by means of brackets 19. The flange 16 and brackets 19 coact to space the back plate 15 from the rear wall 8 of the brooder to provide a fresh air heating chamber 20 and the rear wall 8 is fashioned with air inlet openings 21 directly above the flange 16.

A front plate 22 of the casing is formed with rearwardly extending side flanges 23 secured to the rear wall 8 by means of bolts and nuts and said front plate is spaced from the rear plate to form a recirculating chamber 24 therebetween. The flanges 23 embrace and effect closure of the sides of the fresh air heating chamber 20 as clearly illustrated in Figure 3. The lower end of the front plate 22 is fashioned with a rearwardly directed section or flange 25 terminating in proximity to the lower end of the rear plate 15 to provide an air inlet port 24a to the air recirculating chamber 24.

Located within the air recirculating chamber 24 and secured to the rear face of the front plate 22 is an electrical heating element 26 connected by means of wires 26a to a circuit of an electric lamp socket 27, the receptacle end of which extends through the front plate 22 and is provided with an electric lamp 28 disposed forwardly of the front plate and within the brooder chamber. Secured to the rear wall 8 and laterally of the heater is an adjustable thermostatic switch 30 connected in circuit with the heater and electric lamp and said thermostatic switch is connected to an electric power supply line and functions to automatically control said lamp and heating element whereby the heat within the brooder is controlled.

From the foregoing it will be apparent that air entering through inlet openings 21 is circulated upwardly in proximity to the top 10 and then into the brooder chamber. Air thus circulated, due to the flange 17 and top 10, is recirculated upwardly through the recirculating chamber 24 and back into the brooder chamber whereby to provide a continuous circulation of heated air therein.

A heater of the foregoing construction coacts with the brooder to maintain a continuous cir-

culation of heated air through the brooder chamber and which air is automatically controlled at a desired temperature by the thermostatic switch heretofore referred to.

It is obvious that the invention is not confined to the herein described use therefor as it may be utilized for any purpose to which it is adaptable. It is therefore to be understood that the invention is not limited to the specific construction as illustrated and described, as the same is only illustrative of the principles of operation which are capable of extended application in various forms, and that the invention comprehends all construction within the scope of the appended claims.

What I claim is:

1. In combination with a brooder having an air inlet in one wall intermediate its upper and lower ends, a heater comprising a casing secured to the inner face of said wall and spaced therefrom opposite the air inlet to provide a vertical narrow passage closed at its lower end below the inlet and having its upper end directed inwardly from said wall and opening within the brooder, said casing having a restricted opening in its lower end and a large opening at its upper end below the inwardly directed end of the narrow passage, and automatically controlled heating means within said casing.

2. In combination with a brooder having an air inlet in one wall intermediate its upper and lower ends, a heater comprising a rectangular casing including a back plate having a bottom flange directed toward and secured to said wall for spacing the plate therefrom opposite the air inlet to provide a narrow vertical passage having an upper end directed inwardly within the brooder, said casing having a restricted opening in its lower end and its upper end opening below the inwardly directed end of said passage, a heater in said casing intermediate its upper and lower ends, and means for automatically controlling said heater.

ALBERT E. ANDERSON.