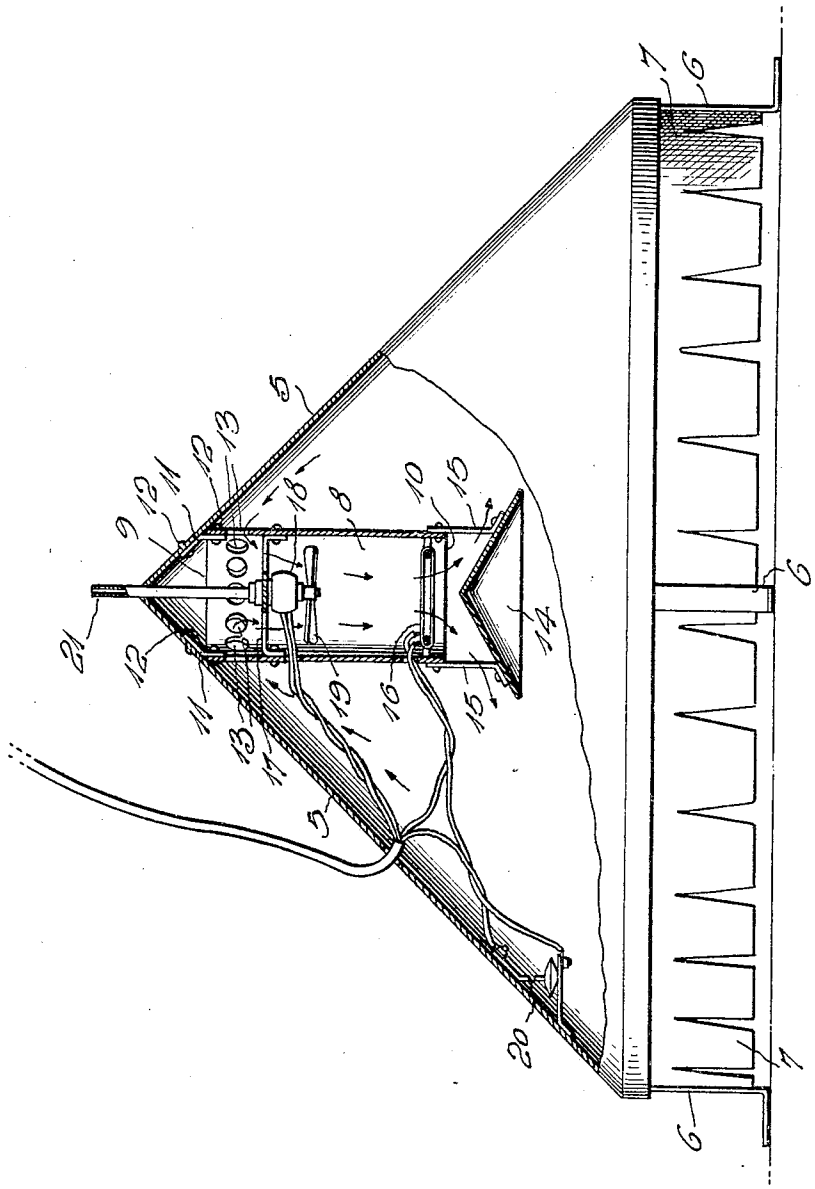
March 29, 1932. A. C. McFEETERS 1,851,364

BROODER

Filed April 3, 1931



Inventor

Witness
H. Woodard

Arthur C. McFeeters

By A. B. Williamson & Co

Attorneys.

Patented Mar. 29, 1932

1,851,364

UNITED STATES PATENT OFFICE

ARTHUR C. McFEETERS, OF HIGGINSVILLE, MISSOURI

BROODER

Application filed April 3, 1931. Serial No. 527,525.

The invention aims to provide a new and improved electrically heated brooder in which unique provision is made for maintaining a constant circulation of the heated air and thus insuring uniform heating of the brooder regardless of temperature changes in the room or in the open, in which it is used.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawing in which the figure is a vertical sectional view partly in elevation.

A preferred construction has been shown and will be specifically described, with the understanding however, that within the scope of the invention as claimed, variations may be made.

The numeral 5 on the drawing denotes a conventional conical shelter provided with supporting legs 6 and with a depending curtain 7 of fabric or the like.

A vertically elongated cylindrical casing 8 is disposed in the shelter and is provided with open upper and lower ends 9 and 10. The upper end of the casing abuts the central portion of the shelter 5 and is secured to it in any desired manner, for instance, by brackets 11 and rivets 12. Air admission openings 13 are formed through the upper portion of the casing 8, at circumferentially spaced points, so that air from the interior of the shelter may enter said casing. This air is heated within the casing and is discharged through the open lower end 10 of the latter, and to spread the discharged air, a conical deflector 14 is mounted under said end 10, vertical suspenders 15 being shown, said suspenders being secured at their upper ends to the casing 8 and at their lower ends to the deflector 14.

Suitably mounted within the lower end portion of the casing 8, is an electric heating element 16 for heating the air flowing through said casing. Mounted in the upper end of this casing, on a suitable support 17, is an electric motor 18 whose shaft carries a fan 19. Driving of the motor causes the fan 19 to downwardly force air through the casing 8, said air entering through the opening 13 and discharging through the open end 10, the heated, discharged air being spread throughout the interior of the shelter, by the deflector 14. As the warm air is discharged into the lower portion of the shelter and the relatively cool air is taken from the upper end of said shelter, effective circulation of the warm air is effected to obtain uniform heating, and it will be observed that the deflector 14 is so spaced from the floor line of the brooder as to be above the heads of the chicks. Moreover, due to the continual circulation of air striking this deflector, it will be kept at a fairly low temperature so that there will be no tendency of the chicks to crowd immediately under it.

An electric circuit is shown for the heater 16, embodying a thermostatic switch 20 controlled by the temperature within the brooder. A separate circuit is provided for the motor 18, so that the fan 19 will be continuously driven even when the heater 16 is cut out of operation by the switch 20.

The vertical tube 21 extending through the top of the shelter 5 to the motor 18, is merely a lubricating tube through which a few drops of oil may be fed from time to time.

I claim:—

1. In a brooder of the type in which an electric heater is disposed within a substantially conical shelter having a depending flexible apron; a vertically elongated casing in which said heater is mounted, means mounting said casing centrally in said shelter, the upper end of said casing being in communication with the highest portion of the shelter, said casing being open at its lower end and having a flared air deflector spaced downwardly from said lower end but positioned above the poultry space of the shelter, and an electric fan mounted in said casing for downwardly forcing air from the highest part of the shelter and discharging it between said deflector and the lower end of said casing.

2. A brooder comprising a conical shelter, a vertically elongated cylindrical casing having its upper end secured in the central portion of said shelter, said upper end of the casing having circumferentially spaced open-

ings for admitting air to the casing from the interior of the shelter, the lower end of said casing being spaced above the floor line of the shelter and being open to discharge air into said shelter, a conical deflector under said casing to spread the discharged air, suspenders for said deflector secured to the latter and to said casing, an electric air heater mounted in the lower portion of said casing, an electric motor mounted vertically in the upper portion of said casing, and a fan on the motor shaft for downwardly forcing air through the casing.

In testimony whereof I affix my signature.

ARTHUR C. McFEETERS.