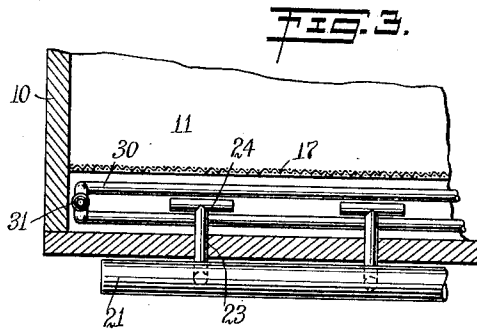
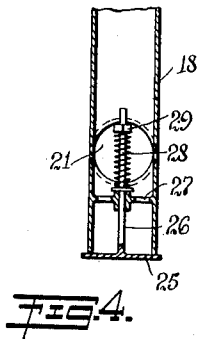
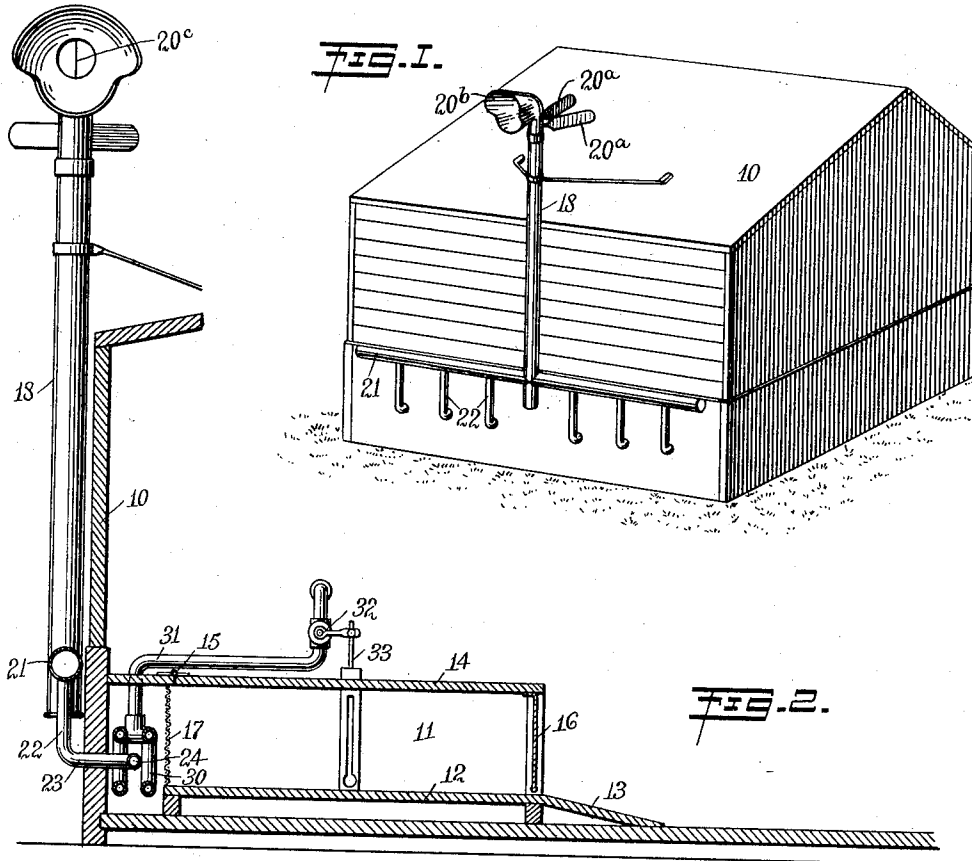


C. W. BRICK.
VENTILATOR FOR BROODER HOUSES.
APPLICATION FILED JULY 9, 1912.

1,063,769.

Patented June 3, 1913.



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CHARLES W. BRICK, OF CROSSWICKS, NEW JERSEY.

VENTILATOR FOR BROODER-HOUSES.

1,063,769.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed July 9, 1912. Serial No. 708,429.

To all whom it may concern:

Be it known that I, CHARLES W. BRICK, a citizen of the United States, and a resident of Crosswicks, in the county of Burlington and State of New Jersey, have invented a new and Improved Ventilator for Brooder-Houses, of which the following is a full, clear, and exact description.

My invention relates particularly to a means for ventilating brooder houses, and an object of the invention is to provide an improved form of ventilator, and to provide in connection therewith, means for heating the air inducted by the ventilator; and to provide a safety valve exteriorly of the brooder house, whereby to prevent the delivery of too strong a current of air thereto.

The invention will be particularly described in the specific description herein-after to be given.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the brooder house, having my invention applied thereto: Fig. 2 is a sectional elevation on an enlarged scale: Fig. 3 is a fragmentary sectional plan view: and Fig. 4 is a detail vertical section of the lower end of the standpipe of the ventilator, showing the safety valve.

In carrying out my invention in the form illustrated, the brooder house 10 may be of any approved general construction, and within the same I prefer to arrange a hover compartment or compartments 11, the bottom 12 of which is raised above the floor of the brooder house to provide an air space therebeneath, and the front end 13 of the bottom 12 is desirably arranged on an incline. The roof or top 14 of the hover 11 may be hinged as at 15, to permit the top to be raised for cleaning. At the front open end of the hover 11, a curtain 16 is desirably provided which may be secured to the top 14. The rear end of the hover is provided with a screen 17 to prevent the chicks from falling against heating elements hereinafter described.

At the outside of the brooder house 10 an air supply pipe is provided, consisting of a standpipe 18, the upper end of which is provided with a funnel 20 and adapted to turn, the funnel having vanes 20^a to present

the funnel to the wind. The funnel 20 projects laterally, and at the upper side has a forwardly projecting and overhanging hood 20^b to prevent the entrance of rain to the interior. The vanes 20^a are disposed at an angle to each other so that the vanes diverge in an outward direction. The diverging vanes are found very effective in maintaining the funnel presented to the wind. If desired, a rod 20^c may be provided within the funnel and suitably supported at its lower end within the pipe 18, the upper end of the pipe serving to support the funnel at the top, by permitting it to turn. Near the lower end of the standpipe 18, a horizontal header or manifold 21 is arranged, and communicates between its ends with the standpipe 18, which header is tapped by a series of branch pipes 22, these pipes bending laterally, as at 23, and extending within the brooder house at the rear of the compartment 11 behind the screen 17. The inner ends of the branch pipes terminate in open-ended T-heads 24. To prevent too strong a current of air from entering the brooder house, the lower open end of the standpipe 18 is commanded by a safety valve in the form of a disk 25, having a spindle 26, that may be guided by a spider 27 within the standpipe below the header 21, the spindle 26 having a spiral spring thereon, the tension of which can be adjusted by a nut 29, whereby the valve will be sufficiently sensitive to open under an excessive air pressure in the standpipe 18.

In order to heat the air entering the brooder house, a bank of pipes 30 is provided, said pipes ranging along the interior of the brooder house at the back of the hover 11 behind the screen 17, and being spaced apart to surround the T-heads. The pipes 30 are adapted to be heated by means of a fluid-heating medium, such as water or air, and in practice any known form of connections will be employed in connection with the bank pipes for the inlet and escape of the fluid. In the drawings an inlet pipe 31 is shown, which may be provided with a valve 32 controlled by any known form of thermostatic device, one of which is conventionally indicated at 33 in Fig. 2.

With my improved invention it will be seen that a supply of fresh air is insured through the various inlet branch pipes 23 and their T-heads 24; the air will be effectively heated by contact with the pipes 30,

and it is apparent that the chicks are prevented by the screen 17 from falling against the heater pipes.

It will be understood that I do not wish to
5 limit myself to the exact details shown for tapping the air supply pipes and delivering the air at proper points relatively to the heating pipes and the hovers of the brooder house to furnish the hovers with the necessary supply of heated fresh air.

It will be evident that the arrangement of the funnel, standpipe and manifold, with the necessary branches, furnishes a supply of air practically under pressure, so that
15 complete ventilation is assured.

The standpipe being subject to high wind pressure, the provision of the safety valve is important and the location of the valve at the end of the standpipe, as well as the
20 form of the valve, give the advantage that the valve is conveniently located, and its disk form serves a two-fold purpose, of a valve and an end for the standpipe. The position of the safety valve in the standpipe, which
25 constitutes the main supply pipe, prevents excessive pressure in the manifold and branch pipes, and avoids the necessity of a separate safety valve for each branch pipe.

Having thus described my invention, I
30 claim as new and desire to secure by Letters Patent:

1. The combination with a brooder house and other structure, of an exterior inlet pipe forming an air supply, a header pipe
35 connected between its ends with the inlet pipe, a safety valve arranged at the end of the inlet pipe, and a series of branch pipes tapping the header pipe and extending into the house, to the interior.

2. A ventilating means for brooder houses and other structures, comprising an exterior standpipe, one end of which constitutes an inlet, the opposite end of the stand pipe
40 having an opening, a safety valve commanding said opening, the safety valve being in

the form of a disk, a spindle on said disk within the standpipe, a spring on the spindle, a header pipe communicating with the standpipe above the safety valve, and a series of branch distributing pipes extending
50 from the header within the structure to be ventilated.

3. A ventilator for a brooder house and other structures, comprising a supply pipe having an inlet, a safety outlet, and a safety
55 valve commanding said outlet, the said supply pipe having a second outlet between the safety outlet and the inlet, said second outlet being in communication with the interior of the brooder house or other structure.

4. A ventilator for brooder houses and other structures, comprising an exterior supply pipe having an inlet subject to wind pressure, a header connected with said supply pipe, a series of distributing pipes tapping
65 the header and communicating with the interior of the brooder house or other structure, the supply pipe having a safety outlet, and a safety valve commanding said safety outlet.

5. A ventilator for brooder houses and other structures, comprising an exterior supply pipe having at one end an air inlet subject to wind pressure, a safety air outlet at the opposite end, an air delivery outlet, between
70 the ends of the supply pipe communicating with the interior of the brooder house or other structure, and a safety valve commanding the mentioned safety outlet and consisting of a closure disk, a stem extending
80 axially within the supply pipe, and a spring on said stem tending to maintain the disk in the closed position.

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

CHARLES W. BRICK.

Witnesses:

J. L. McAULIFFE,

PHILIP D. ROLLHAUS.