

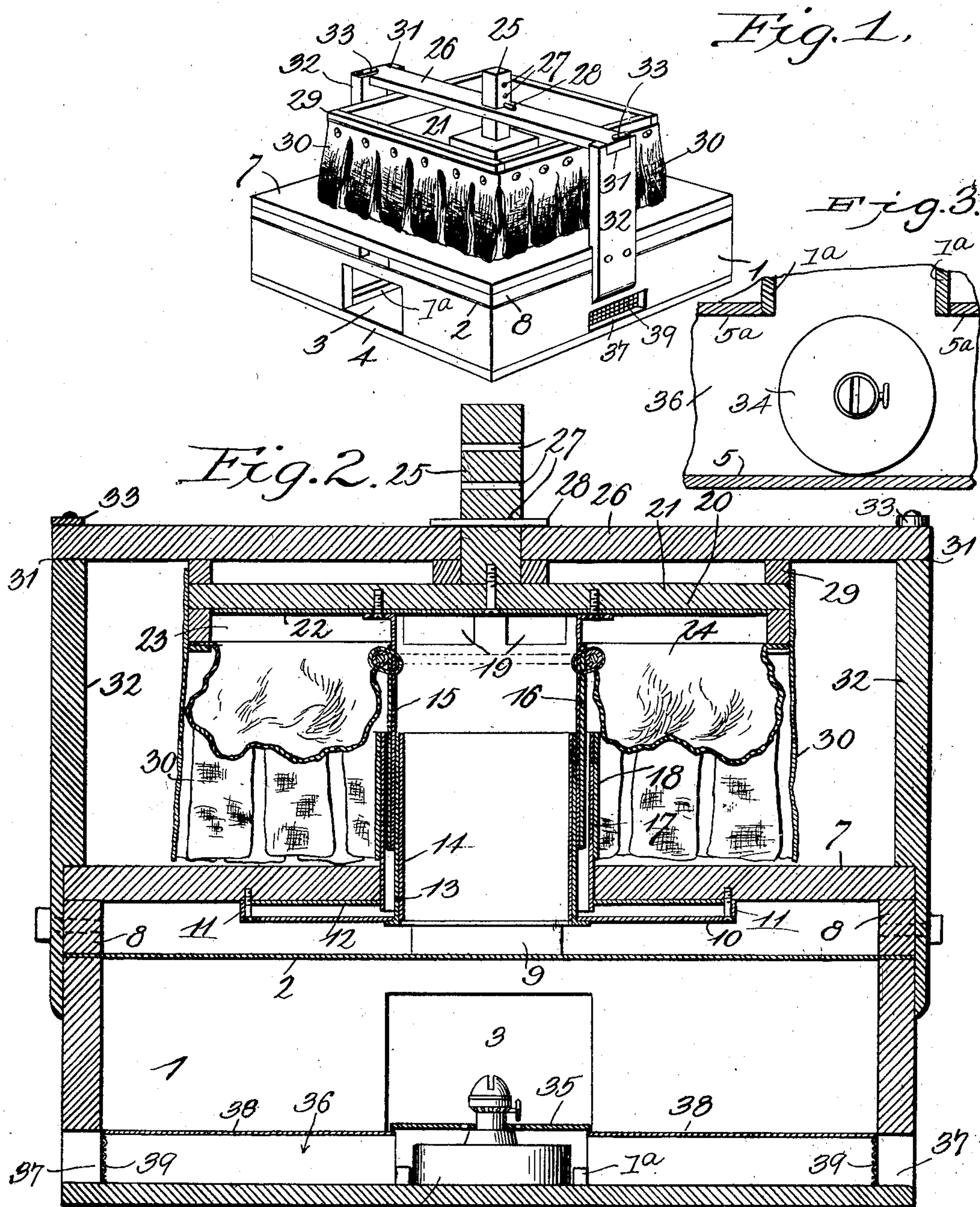
No. 733,938.

PATENTED JULY 21, 1903.

E. BATES.  
BROODER.

APPLICATION FILED SEPT. 23, 1902.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

EDWARD BATES, OF NEWARK, OHIO.

## BROODER.

SPECIFICATION forming part of Letters Patent No. 733,938, dated July 21, 1903.

Application filed September 23, 1902. Serial No. 124,590. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD BATES, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented a new and useful Brooder, of which the following is a specification.

The invention relates to improvements in brooders.

The object of the present invention is to improve the construction of brooders and to provide an exceedingly simple and inexpensive one adapted to afford fresh warm air to young chickens under a hover and capable of ready adjustment to arrange the hover to suit the growth of the chickens and to enable the said hover to be properly positioned with relation to the chickens.

A further object of the invention is to provide a brooder of this character having a hover which will present to the backs of the young chickens a yieldable loosely-arranged fabric of a loosely-woven character and to cause the fresh warm air from the heater to be diffused through the fabric upon the backs of the young chickens, thereby producing an effect closely resembling the contact of the feathers of a hen with young chickens.

The invention also has for its object to provide a brooder in which the parts will not become unduly heated and in which the hover and the curtain will be suspended by supporting devices which will not interfere with the ingress and egress of the young chickens.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a brooder constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail horizontal sectional view illustrating the arrangement of the cleats of the bottom of the lamp-chamber.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a box or casing forming a lamp-compartment and having a metallic top 2 and provided with a door 3, which is of sufficient

size to permit a lamp or other heater to be readily introduced into and removed from the casing. The bottom of the casing is provided with a lamp guide or way formed by cleats 1<sup>a</sup>, extending inward from the door to a lamp-receiving space, as hereinafter described. The reservoir of the lamp 34 is designed to be approximately two inches high, and the lamp is provided with a plate or diaphragm 35, located above the reservoir, to form an intervening space to which air is conducted through opposite side passages 36. These side passages 36, which extend from openings 37 of the opposite sides of the lamp-chamber, are formed by cleats 5 and 5<sup>a</sup> and strips 38, of sheet metal or other suitable material, secured to the upper edges of the cleats. The openings 37 are covered by wire-gauze 39, and the metallic bars are preferably galvanized or otherwise prevented from rusting. The air entering the lamp-chamber is conducted by the passages to the space beneath the plate or diaphragm 35, and it passes over the reservoir of the lamp to prevent the same from becoming heated. Ample ventilation is afforded by this construction to support combustion in the lamp or other heater and to prevent the font or reservoir of the same from becoming heated. The inner ends of the strips 38, which form the tops of the air-passages 36, are spaced apart at their inner ends to receive the lamp, and the cleats 5<sup>a</sup>, which are arranged at the front of the passage, terminate at the inner ends of the space, the rear cleat 5 being extended entirely across the lamp-chamber. The heating effect or capacity of the lamp or heater is increased, and the liability of an explosion is greatly lessened.

Mounted upon the box or casing is a floor or platform 7, spaced from the metallic top 2 by marginal strips or cleats 8, arranged directly above the walls of the box or casing. The strips or cleats 8 are provided with opposite openings 9, adapted to admit air into the space directly above the sheet-metal top 2, so that the air entering the brooder will be heated by the said top 2, which is maintained at the desired temperature by the said lamp or heater.



In order to prevent the bottom or floor 7 of the brooder from becoming unduly heated, a guard or shield 10 is centrally secured to the same, and it consists of a rectangular plate provided with marginal flanges 11 and forming a dead-air space at the center of the platform or floor 7, as clearly shown in Fig. 2. A sheet 12, of asbestos, is also secured to the floor or platform 7 directly above the shield, and by this construction the floor or platform of the brooder is prevented from becoming too hot. Extending upward from the shield is an inner or lower sleeve or section 13, provided with an inner asbestos lining 14 and extending upward into a depending sleeve or section 15, which is provided with an exterior covering 16, of asbestos. The sleeves or sections form a telescopic hot-air conduit which is capable of being varied in length to enable the brooder to be adjusted with the growth of the young chickens or other fowl. The floor or platform is provided with a central opening to receive the sleeves or sections, and it has secured to it a metallic guard or shield 17, consisting of a metal sleeve provided with a covering 18, of asbestos, and adapted to prevent the brood from coming in contact with the hot-air conduit. The upper sleeve or section 15 is provided at the top with apertures 19 and is attached to and carried by a hover 20, consisting of a top 21, of wood or other suitable material, having an asbestos lining 22 and provided with depending marginal strips 23, forming flanges, and a fabric bottom 24, supported by the marginal strips or flanges and by the upper sleeve or section 15. This fabric bottom, which is constructed of loosely-woven material, hangs in loose folds and is yieldable, and the hot air passing upward through the sleeves or sections escapes through the openings 19 and enters the hover and is diffused through the loosely-woven fabric bottom 24 upon the backs of the young chickens, thereby producing an effect similar to the contact of young chickens with the feathers of a hen. The hover is adapted to be lowered to a position close to the floor or platform of the brooder to arrange the brooder for the accommodation of young chickens or other fowl which have been just hatched in an incubator or otherwise, and the hover is adapted to be raised from time to time as the young chickens increase in size, and for this purpose the hover is provided with a centrally-arranged upwardly-extending stem 25, extending through an aperture of a supporting-bar 26 and provided with a series of perforations 27, arranged at intervals and adapted to receive a pin 28; but any other suitable means may be employed for securing the hover at the desired adjustment. The bar 26 also supports a curtain-frame 29, of rectangular form, having secured to it a depending fabric curtain 30, consisting of strips of suitable material and adapted to confine the heat within the brooder and afford a warm compartment for

the brood and at the same time permit the young chickens to pass readily into and out of the brooder. The horizontal supporting-bar may be secured in recesses 31 of standards 32 by pivoted buttons 33 or other suitable fastening devices, or it may be mounted in any other suitable manner. The standards are secured to the cleats of the floor or platform 7 and are carried by the latter; but as the brooder is adapted for use outdoors with a suitable run attachment or may be used in a box or in a regular brooder-house system the bar may be supported in any desired manner, and I desire it to be understood that these and similar changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

The hover is adjustable independently of the curtain, which is not affected by the raising and lowering of the hover.

It will be seen that the yieldable bottom of the hover is adapted to come in direct contact with the backs of the young chickens or other fowl, that the ingress and egress of the young chickens is not interfered with by posts or supports, and that there is no liability of the chickens becoming crowded or crushed. It will also be apparent that the upper portion of the brooder may be readily lifted from the lower portion of the apparatus to enable the parts to be conveniently cleaned.

What I claim is—

1. A brooder provided with a hover having a yieldable bottom arranged to come in direct contact with a brood and adapted to permit hot air to pass through it, means for adjusting the hover vertically, and telescoping sections for conducting heat to the hover, substantially as described.

2. A brooder provided with a hover consisting of a top provided with marginal flanges and a fabric bottom loosely arranged and adapted to come in direct contact with a brood, means for adjusting the hover and telescopic sections for conducting heat to the hover, the upper section being carried by the hover and being provided with apertures communicating with the interior of the same, substantially as described.

3. A brooder comprising a floor or platform, a vertically-adjustable hover located above the platform and provided with a yieldable bottom arranged to come in direct contact with a brood, telescopic sections connected with the hover and with the floor or platform for conducting hot air to the said hover, and a stationary curtain-support having a depending curtain, substantially as described.

4. A brooder comprising a floor or platform, a supporting-bar, a vertically-adjustable hover suspended from the supporting-bar and provided with a yieldable bottom, a curtain-frame fixed to the support and provided with a depending curtain, and telescopic sections



connected with the floor or platform and with the hover for conducting hot air to the latter, substantially as described.

5 A brooder comprising a floor or platform, a vertically-adjustable hover having a yieldable bottom arranged to come in direct contact with the brood, a stationary curtain-supporting frame provided with a curtain, telescopic sections for conducting hot air to the  
10 hover, and a sleeve surrounding the sections and extending upward from the floor or platform to form a guard, substantially as described.

6. A brooder comprising a box or casing  
15 adapted to receive a suitable heater, a floor or platform located above the box or casing and spaced therefrom and provided with an opening, a vertically-adjustable hover, telescopic sections connected with the floor or  
20 platform and the hover and communicating with the interior of the latter, and a curtain, substantially as described.

7. A brooder comprising a lower compartment adapted to receive a heater, a floor or

platform spaced therefrom, a hover located 25 above the floor or platform, a hot-air conduit extending from the floor or platform to the hover and communicating with the interior of the latter, and a shield arranged at the lower face of the floor or platform and provided with marginal flanges and forming a  
30 dead-air space, substantially as described.

8. A brooder comprising a box or casing designed to receive a suitable heater and provided at opposite sides with passages extending inward from the exterior of the box or casing and spaced apart at their inner ends to receive a heater whereby the cold air is caused to pass over the reservoir thereof, and  
35 a hover located above the box or casing, substantially as described. 40

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD BATES.

Witnesses:

B. O. HORTON,  
HARRY SCOTT.