

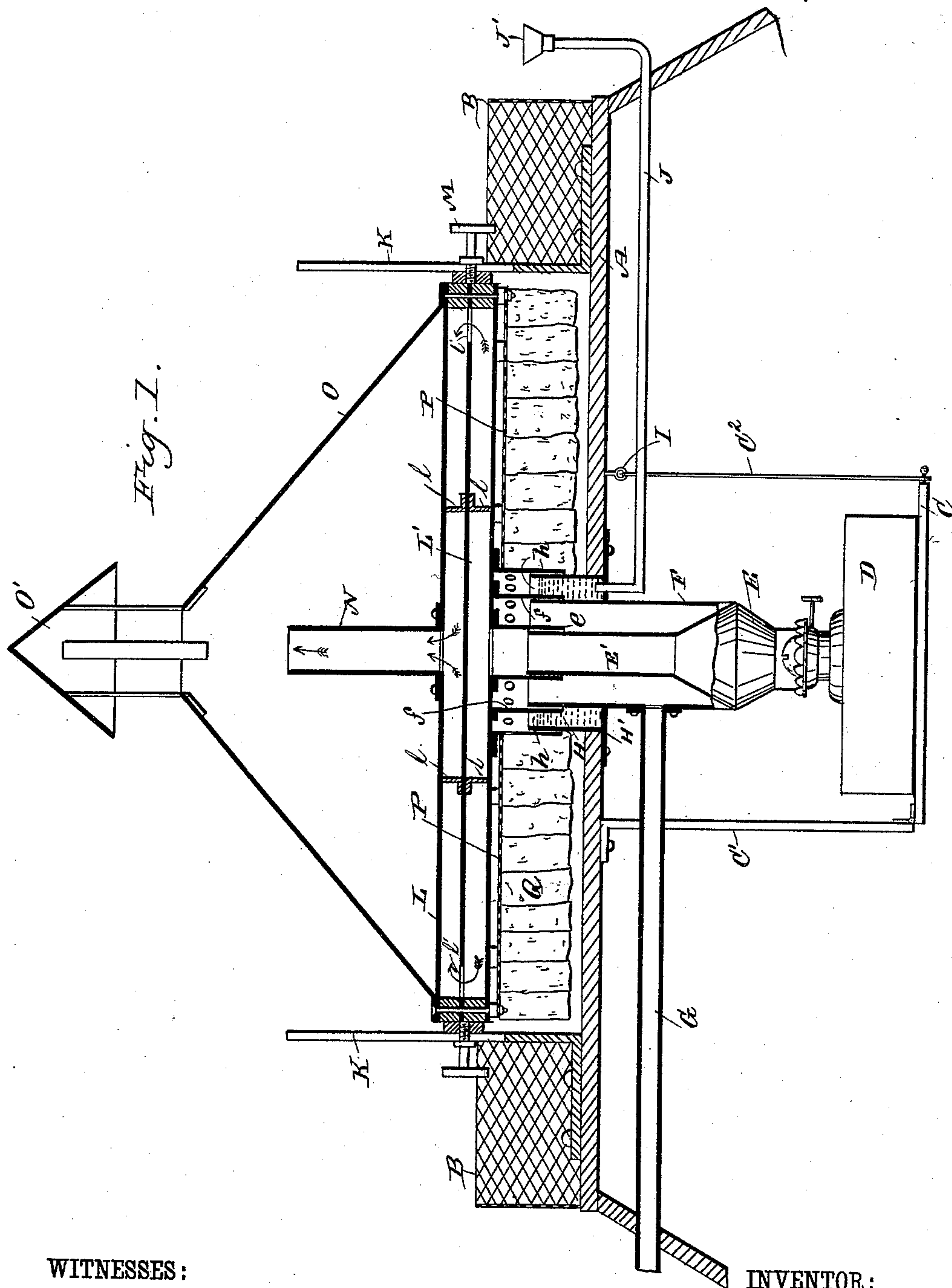
(No Model.)

2 Sheets—Sheet 1.

M. H. STRONG.
CHICKEN BROODER.

No. 331,096.

Patented Nov. 24, 1885.



WITNESSES:

Geo. G. Hoston
C. Sedgwick

INVENTOR:

M. H. Strong

BY

Murray

ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

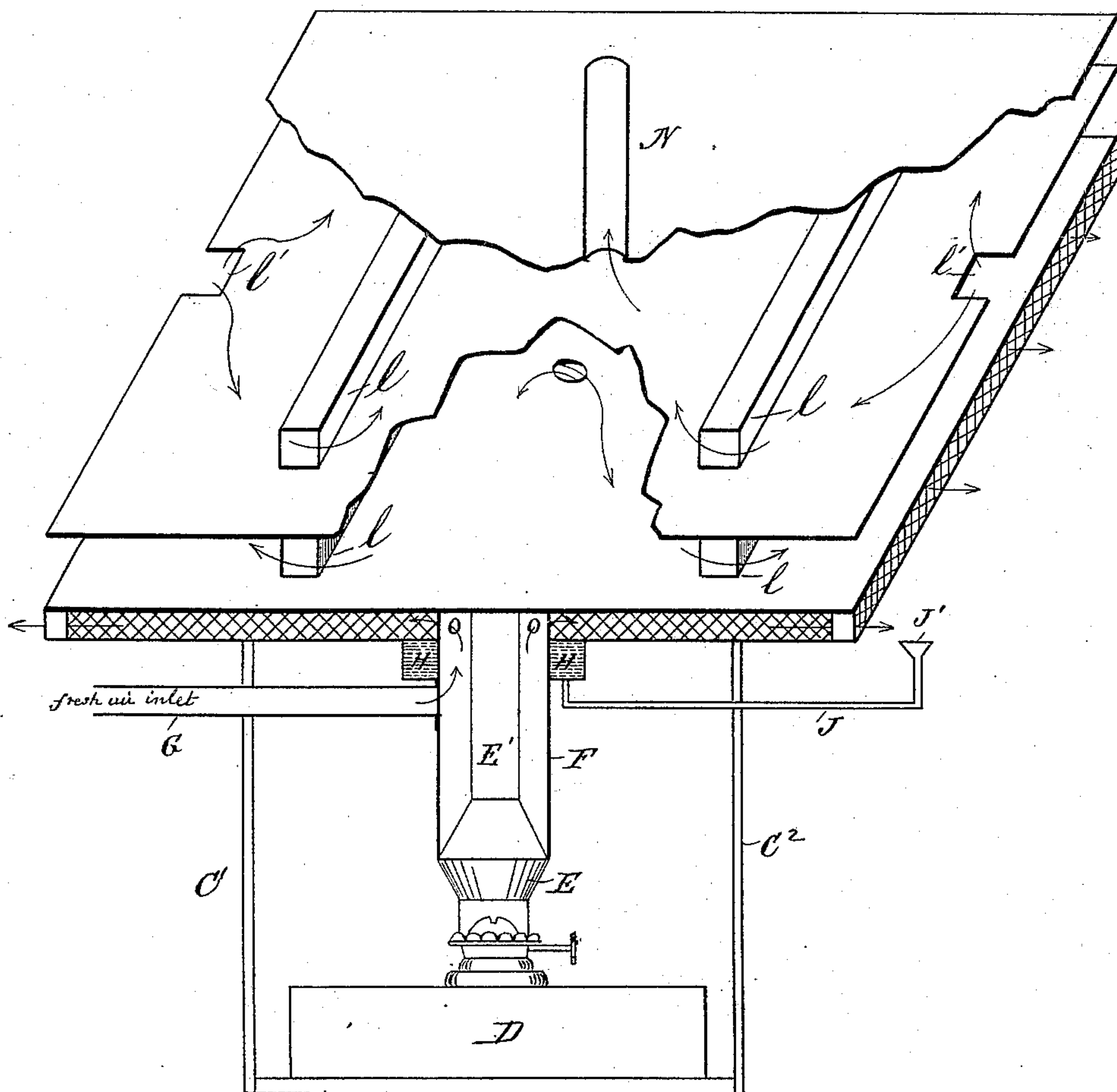
M. H. STRONG.

CHICKEN BROODER.

No. 331,096.

Patented Nov. 24, 1885.

Fig. 2.



WITNESSES:

Geo. H. Evans
John H. Hemon

INVENTOR:

M. H. Strong
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MAURICE H. STRONG, OF CINCINNATI, OHIO.

CHICKEN-BROODER.

SPECIFICATION forming part of Letters Patent No. 331,096, dated November 24, 1885.

Application filed July 29, 1884. Serial No. 139,063. (No model.)

To all whom it may concern:

Be it known that I, MAURICE H. STRONG, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Chicken-Brooder, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved chicken-brooder for raising chickens hatched by hens or by an incubator, and which brooder can be easily and thoroughly ventilated and can be adjusted to any desired height according to the height of the chicks.

Reference is to be had to the accompanying drawings, forming part of this specification, in which Figure 1 is a longitudinal sectional elevation of my improved brooder; and Fig. 2 is a perspective view, parts being broken away, of the brooder removed from the surrounding casing, the flannel strips being removed.

The floor A of the brooder is provided with suitable supports for holding it the desired distance from the ground, and the said floor is provided along its edges with a fence or railing, B, of wire netting, to prevent the chicks from dropping off the floor. A support, C, is hung on a hanger, C', projecting downward from the floor A, and the free edge of the support C is suspended by a rod or hook, C², the upper end of which is held by means of a staple, I, or other device to the under side of the floor A. On the support C a lamp, D, rests, which is provided with a chimney, E, in two parts, having the shape when placed together of the hood of a locomotive smoke-stack, and from the top of which chimney a flue, E', projects upward. On the edge of the widest part of the upper half of the chimney E an upright cylinder, F, is secured, which surrounds the flue E' and forms an air-chamber around the said flue. A pipe, G, extends from the lower part of the cylinder F to the exterior air, and is provided for the purpose of conducting fresh air into the cylinder F, which air is heated by the hot air in the flue E'. The upper part of the cylinder F is surrounded by an annular cup, H, the bottom H' of which is secured to the bottom of the floor A of the brooder and to the chamber F,

which cup H contains water filled into it by means of a tube, J, extending from the bottom of the cup H to a point outside of the brooder and terminating at its outer end in a funnel-shaped part, J'. On the upper surface of the floor A two vertically-forked or longitudinally-slotted standards, K, are secured, and between the same a flat heating chamber or box, L, is arranged, which is closed on all sides, and is held at the desired elevation by binding-screws M, passed through the slots of the standards K, and screwed into the end or side pieces of the said flat heating chamber or box L. By means of said screws the heating chamber or box L can be held at any desired elevation. The heating chamber or box L is provided with an intermediate horizontal partition, L', which divides the said box into two compartments, a lower and an upper compartment. From the upper compartment a flue, N, projects upward, and directly below the same a tube or neck, e, projects downward from the under surface of the heating chamber or box L, the tube e being of such diameter as to be adapted to receive the upper end of the flue E' of the chimney E of the lamp D. Surrounding the tube e a larger tube, f, projects downward from the bottom of the heating chamber or box L, and is adapted to receive the upper end of the cylinder F on the chimney E. Outside of the tube f a tube, h, projects from the under side of the heating chamber or box L, and is adapted to receive the upper end of the annular water-receptacle H. The said tubes projecting downward from the under side of the heating chamber or box L, fit quite closely against the upper ends of the tubes forming part of the chimney. As the top and bottom tubes—that is, the tubes projecting downward from the heating chamber or box L—and the tubes of the chimney telescope, they permit of raising and lowering the heating chamber or box L without interrupting the communication between the chambers formed by the lower tubes and the chambers formed by the upper tubes. A peaked or beveled hollow top, O, is formed on the top of the heating chamber or box L, to prevent the chicks from jumping upon the top of the heating chamber or box L and burn-

ing their feet or soiling the top of the heating chamber or box L. The top of the roof O is provided with a hood, O', of some suitable construction. A short distance below the under side of the heating chamber or box L a horizontal plate, P, of wire-netting or any other suitable perforated material, is held, and from the same a series of strips, Q, of flannel, or of any other soft woolen fabric, are suspended, the said strips reaching down to within a very short distance of the floor A of the brooder. The height of the brooding-space between the bottom of the box L and the floor A can be regulated according to the size and age of the chickens, thus preventing the latter from piling on each other and tramping, crowding, and smothering each other. The heating chamber or box L must always be so adjusted as to allow the chicks barely room enough to pass under. As they grow and increase in height, the heating chamber or box L is elevated, which, as stated before, can easily be done without disturbing the heating and ventilating apparatus. As the brooder can be adjusted according to the height of the chicks, my brooder can be used for larger poultry—such as young ducks, geese, and turkeys—which require more room than young chickens.

One of my main objects is to ventilate the space under the heating chamber or box L, so as to keep up a constant circulation of air under, over, and among the chickens. The hot air rising in the flue E' strikes the partition L' in the heating chamber or box L, and is deflected to the ends of the box, then passes into the upper compartment and out through the flue N, and from there through the hood and out at the top opening. Cross-pieces are placed between the plates L' and the top and bottom plates of the heating-chamber L, and these plates do not extend entirely across said chamber, so that the heated air will be caused to circulate evenly through the chamber. The division-plate is notched, as shown at l', to allow the air to pass up into the upper part of the heating-chamber L, as shown in Fig. 2. Fresh air passes into the chamber formed by the cylinder F through the pipe G, is heated in the said chamber, and passes through the apertures in the neck or tube f into the chamber above the water, whereby the said air is moistened, and the fresh heated and moistened air then passes through the apertures in the neck h into the space below the heating chamber or box L and forces out the foul hot air below the heating chamber or box L. At the same time sufficient heat is radiated from the heating chamber or box L over the chicks to supply the warmth naturally supplied by the mother-hen. This is a point of very great importance.

By arranging the screen P between the bottom of the heating chamber or box L and the flannel strips, I have secured a ventilating-

space between the chicks and the brooder, whereby the foul air can rise into the space between the screen and the bottom of the heating chamber or box L and be carried off more readily by the current of air coming from the heating apparatus, as described above. As the chicks cannot jump on the top of the brooder, the top will always be kept clean. The necessary supply of water can easily be provided without touching or disturbing the brooder. The flannel strips Q cover and protect the backs of the chicks in the same manner as the feathers of the hen would protect them.

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

1. In a chicken-brooder, the combination, with the floor, of standards on the same, and a heating-box held adjustably between the standards, substantially as herein shown and described.

2. In a chicken-brooder, the combination, with the floor, of slotted or forked standards on the same, a heating-box between the standards, and screws passing through the standards into the sides or ends of the heating-box, substantially as herein shown and described.

3. In a chicken-brooder, the combination, with the floor, of standards on the same, a vertically-adjustable heating-box between the standards, and means for locking the heating-box on the standards at the desired elevation, substantially as herein shown and described.

4. In a chicken-brooder, the combination, with a floor, of a vertically-adjustable heating-box held above the same, and of a peaked top on the said box, substantially as herein shown and described.

5. In a chicken-brooder, the combination, with the box L, having a horizontal partition, L', of the flue N, and an inlet-flue for hot air, all arranged and constructed substantially as herein shown and described.

6. In a chicken-brooder, the combination, with a heating-box, L, of the downwardly-projecting necks e and f, the lamp D, the chimney E, having a flue, E', the cylinder F, surrounding the flue, the upper end of the flue E' and of the cylinder F passing into the necks e and f, respectively, substantially as herein shown and described.

7. In a chicken-brooder, the combination, with the box L, and the downwardly-projecting necks e f h, of the lamp D, the chimney E, having a flue, E', the cylinder F, surrounding the flue, and the annular water-chamber H, formed around the cylinder F, substantially as herein shown and described.

8. In a chicken-brooder, the combination, with the heating-box, of a lamp, a flue for conducting the hot air from the lamp into the box, a cylinder surrounding the flue and forming an air-chamber, a pipe for conducting air into the air-chamber, a water-cup surround-

ing the air-chamber, and a pipe for conducting water into the said water-cup, substantially as herein shown and described.

5 9. In a chicken-brooder, the combination, with the platform A, and the heating device, of the heating-chamber L, above the platform, the horizontal partition L', having end openings, l', and the vertical upper and lower par-

titions, l l, of less width than the heating-chamber, whereby the hot air will be evenly distributed across the entire surface of the heating-chamber, substantially as set forth.

MAURICE H. STRONG.

Witnesses:

J. H. SCHULTZ,
G. H. RABE.