

(No Model.)

E. BARNEY.
POULTRY BROODER.

No. 471,460.

Patented Mar. 22, 1892.

Fig. 1.

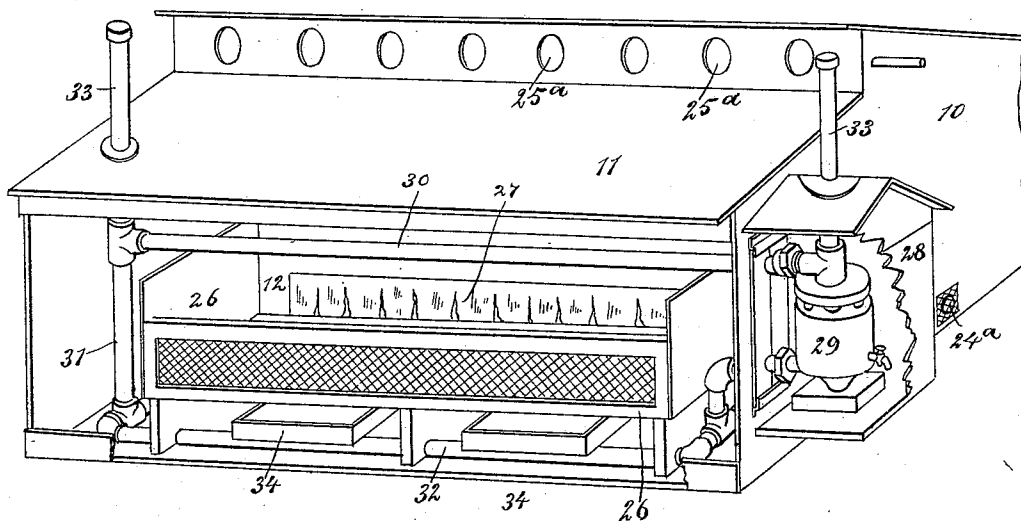


Fig. 2.

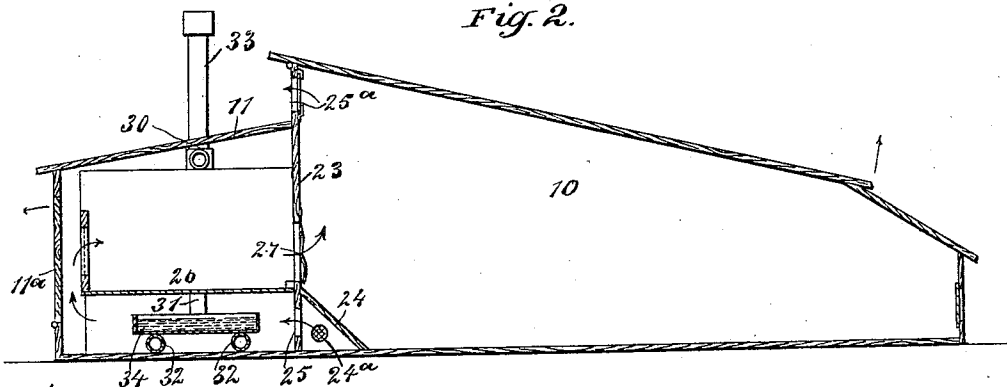
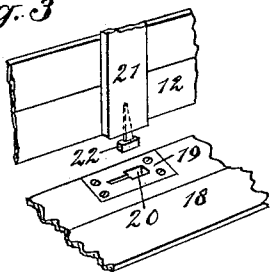


Fig. 3.



WITNESSES:

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Fig. 5.

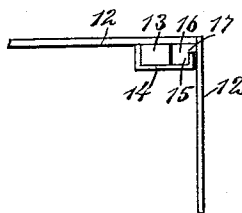
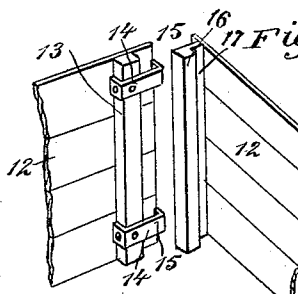


Fig. 4.



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UNITED STATES PATENT OFFICE.

EARL BARNEY, OF SCHENECTADY, NEW YORK.

POULTRY-BROODER.

SPECIFICATION forming part of Letters Patent No. 471,460, dated March 22, 1892.

Application filed May 4, 1891. Serial No. 391,464. (No model.)

To all whom it may concern:

Be it known that I, EARL BARNEY, of Schenectady, in the county of Schenectady and State of New York, have invented a new and Improved Poultry-Brooder, of which the following is a full, clear, and exact description.

My invention relates to improvements in brooders or artificial mothers; and the object of my invention is to produce a brooder for chickens, which will as nearly as possible conform to the laws of nature in brooding chickens, and will keep them provided with the requisite amount of heat and moisture, and which is also adapted to give them the necessary chance for exercise.

A further object of my invention is to construct the brooder in such a manner that it may be easily taken down or set up, so that it is well adapted for shipment.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a broken perspective view of the brooder embodying my invention, portions of the wall being removed to show its interior construction. Fig. 2 is a vertical cross-section of the same. Fig. 3 is an enlarged broken detail view showing the manner in which the bottom and side walls are connected. Fig. 4 is an enlarged detail view showing the corner construction of the brooder, and Fig. 5 is a broken plan of the united corners.

The brooder is provided with a main coop 10, which is only heated by the waste heat from the brooding-chamber 11, and this chamber is a sort of supplemental room built onto the back of the main coop and provided with a suitable door 11^a at the back. The side walls 12 of the coop and brooding-chamber are united in the following manner: One of the sides is provided near the corner with a vertical stud 13, which is firmly secured to it, and secured to this stud at intervals are clips 14, which extend toward the ends of the wall and which at their extreme ends are bent inward, as shown at 15, the bent portion being made to nearly touch the side wall. The ad-

jacent side wall 12 is provided with a stud 16, which is arranged near the edge of the wall and which is cut away on the inner side, as shown at 17, thus forming a recess to receive the bent ends 15 of the clips 14. It will thus be seen that the clips may be placed in position upon the stud 17, and the thickness of the stud is such that when the parts are locked together in this way the outer edge of the stud 16 will bear against the side of the stud 13, as best shown in Fig. 5.

The floor of the brooder 18 is provided near the edges and at intervals with plates 19, which are inlaid in the floor and which have key-hole slots 20 therein, and secured to the bottom of uprights 21 on the side walls 12 are headed lugs 22, which project slightly from the bottoms of the uprights and the ends of which are adapted to enter the larger portion of the key-hole slots 20. The side walls and uprights may then be pushed slightly along the floor, so that the shanks of the lugs will enter the narrow portion of the key-hole slots, and the walls and floor will then be locked securely together.

The main coop 10 and the brooding-chamber 11 are separated by a vertical partition 23, and extending diagonally from the lower portion of this partition to the floor of the main coop is a partition 24, which thus forms an air-space between it and the partition 23, as best shown in Fig. 2. This air-space is supplied with air from outside the brooder, the air entering through an opening 24^a in the side of the brooder, and opening from the air chamber or space into the brooding-chamber are apertures 25, so that the pure air which enters the air-space may pass through into the brooding-chamber. The outlet for the air is through the main coop and the openings 25^a in the upper portions of the same.

A brooding tray or frame 26 of common construction is supported in the brooding-chamber 11, and this tray communicates with the main chamber 10 by means of a curtained aperture 27, and the chicks which are supported on the tray may pass through the aperture and beneath the curtains and over the partition 24.

On the outside of the brooding-chamber and at one end is a boiler-house 28, which contains a heater or boiler 29, and any suitable

heater or boiler may be employed. The boiler is connected with circulation-pipes 30, 31, and 32, which extend longitudinally through the brooding-chamber, the pipe 30 being arranged
 5 above the brooding-tray 26, the pipes 32 beneath the tray, and the pipes 31 being arranged vertically at one end to connect the pipe 30 with the pipes 32. At each end of the heating apparatus are extension-pipes 33,
 10 one of which connects with a boiler and extends upward through the boiler-house and terminates in a cap and the other of which connects with the upper end of the pipe 31 and extends upward through it, and air-spaces
 15 are left in the upper portions of the pipes 33, and the air thus contained in these pipes serves as a cushion, as when the water is heated and flows upward into the pipe the air will be compressed, and as it is elastic it
 20 will react on the air, thus causing a series of pulsations which causes the air to circulate freely through the pipes.

Beneath the brooding-tray 26 and supported upon the pipes 32 are large flat tanks 34, which
 25 are filled with water, and the heat from beneath causes the water to evaporate slowly, and the air which enters through the apertures 25 and passes up through the brooding-chamber will thus be properly laden with
 30 moisture.

It will be noticed from the foregoing description that the air will enter the lower portion of the brooding-chamber through the apertures 25 and that it will pass from thence into
 35 the main coop and then out through the openings 25^a in the upper portion of the coop. The chicks which are in the brooding-chamber

will thus be constantly supplied with pure air, and as a portion of the heat is applied to the chamber from above and a portion from be- 40
 neath the heat will be applied to the chicks much as if they were hovered by a hen, and as a result they will flourish nicely. It will be noticed, too, that the main coop is supplied with heat from the brooding-chamber only, so 45
 that it will be comparatively cool and the chicks when they pass from the brooding-tray will thus be provided with a suitable place for exercise. Here, again, the brooder imitates nature, as the chicks will go into the 50
 warmer brooding-chamber to rest.

I have shown in the drawings an individual brooder; but the principle of my invention is the same when applied to a large brooding-house, as the coop and brooding-chamber may 55
 be made of any desired length and the air and heat may be supplied to the chamber in the manner described.

Having thus fully described my invention, I claim as new and desire to secure by Letters 60
 Patent—

A brooder comprising a main coop having an air-outlet in the upper portion, a brooding-chamber connected therewith, a tray supported centrally in the chamber and communi- 65
 cating with the coop, heat-circulation pipes arranged over and below the tray, moisture-tanks arranged between the lower pipes and the tray, and an air-inlet in the lower portion of the chamber, substantially as described.

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Witnesses:

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 JOSEPH G. GAY.