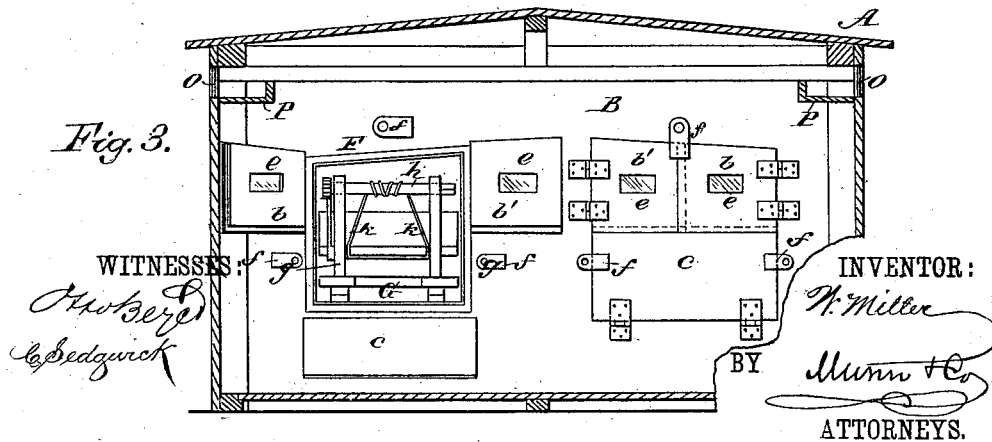
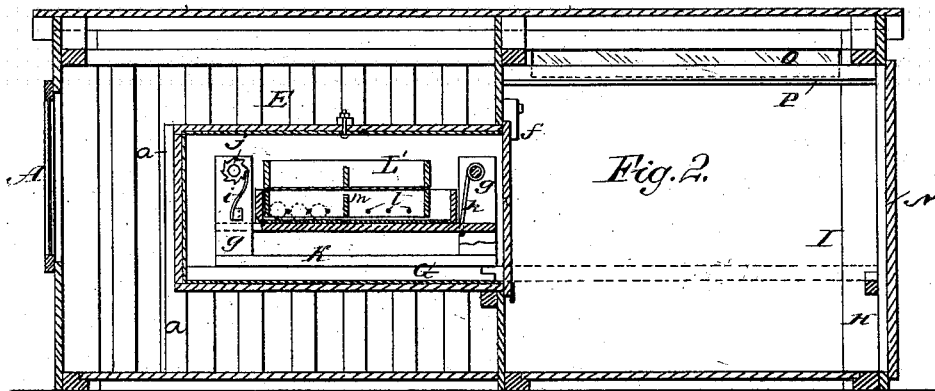
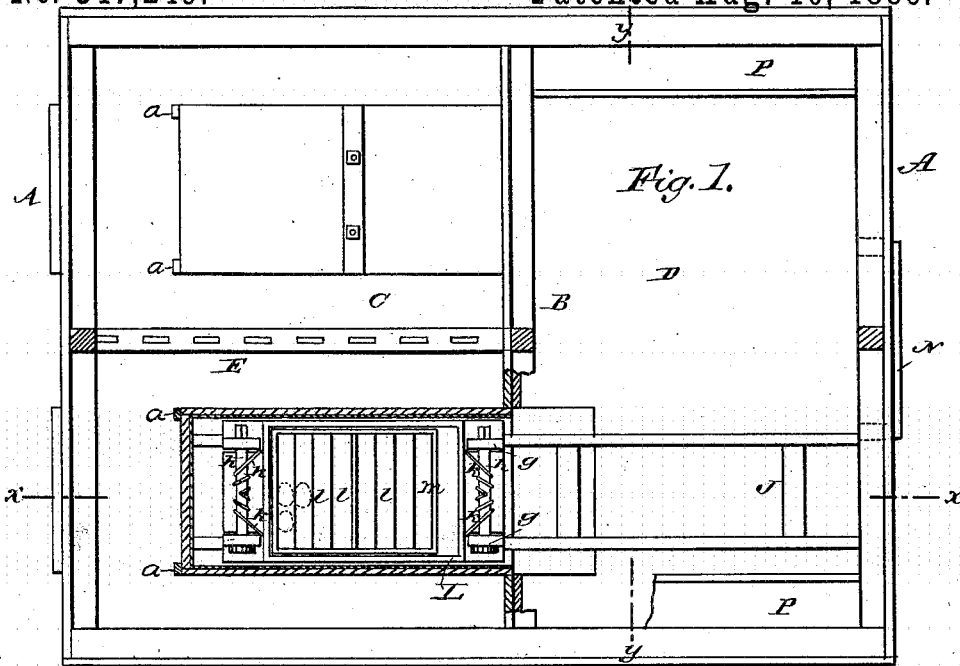


(No Model.)

W. MILLER.
INCUBATOR.

No. 347,249.

Patented Aug. 10, 1886.



UNITED STATES PATENT OFFICE.

WILLIAM MILLER, OF BRANTFORD, KANSAS.

INCUBATOR.

SPECIFICATION forming part of Letters Patent No. 347,249, dated August 10, 1886.

Application filed April 13, 1886. Serial No. 198,713. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MILLER, of Brantford, in the county of Washington and State of Kansas, have invented a new and useful Improvement in Incubators, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of my improved incubator with the top removed, and showing one of the ovens partly in section. Fig. 2 is a longitudinal section taken on line *xx* in Fig. 1. Fig. 3 is a vertical transverse section taken on line *yy* in Fig. 1.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

The object of my invention is to construct a simple, inexpensive, and effective incubator to be operated without the employment of lamps or stoves, and in which heat-regulators and draft-regulators are avoided.

My invention consists in an arrangement of ovens adapted to be heated by decaying vegetable matter—such as dead leaves, moist hay or straw, or manure—each oven being provided with a carriage for containing a quantity of eggs, and with devices for elevating the eggs as the heat is developed by the decomposition of the heating agent.

In carrying out my invention, I construct a suitable building, A, provided with a transverse partition, B, dividing the building into compartments C D. The compartment C is divided transversely by a slatted partition, E, on either side of which are arranged ovens F, whose open ends extend through the partition B, and whose inner ends are supported by standards *a*. The ovens F are made of sheet metal and are each provided with three doors, *b*, *b'*, and *c*. The door *c* is hinged to the bottom of the oven, and arranged to swing downward. The doors *b b'* are hinged to the sides of the oven, and are arranged to swing laterally. In the center of each door *b* is formed a window, *e*, through which the interior of the oven may be observed, and which, when necessary, may be employed as a ventilator. The lower edges of the doors *b b'* are rabbeted, so that when the lower door, *c*, is closed its upper edge will be received in the rabbet of the doors *b b'* when they are closed, thus

fastening the lower door. A button, *f*, pivoted to the partition B, turns over and fastens the doors *b b'*.

In each oven is placed a track-section, G, and in a beam, H, secured to the wall I of the compartment D, are formed notches for receiving the ends of a track-section, J, which corresponds with the track-section G, and is used in connection therewith when it is desired to remove the egg-carrier from the oven. The egg-carrier consists of a frame, K, having two standards, *g*, at each end, in which are journaled windlasses, *h*, each windlass being provided with a pawl, *i*, and ratchet *j*. In the frame K, between the posts *g*, is placed a tray, L, for containing the eggs, the bottom of the tray projecting between the posts *g* at either end, forming a guide for the tray as it is raised or lowered by the windlasses *h*, which are connected with the bottom of the tray by cords *k*. The bottom of the tray L is provided with a lining of flannel or felt for supporting the eggs, and in the tray is placed a movable frame, *m*, which is shorter than the tray, and which is provided with a series of transverse bars, *l*, between which the eggs are received. By moving the frame *m* in one direction or the other, or by bringing the bars *l* or the ends of the frame into engagement with the eggs, the eggs will be turned. The space below and at the sides and rear end of the oven is filled with a heating agent—such as decaying vegetable matter, or manure; and to protect the material of which the ovens are made I thoroughly coat the ovens with coal-tar or asphaltum, and the other parts of the incubator and building exposed to the action of the heating agent may be protected in the same manner. As the heating agent, which partly or wholly surrounds the oven, increases the temperature of the oven, the tray L, with its contents, is raised by means of the windlasses *h*, so as to keep the eggs under an approximately uniform temperature. I withdraw the frames K from the ovens, and sprinkle the eggs with water, and turn them by moving the frame *m* (as already described) as often as is required, generally twice a day. The heating agent around the ovens is changed in alternation, it being held in place around one of them while the other is being changed, by the slatted partition E.

In the front of the compartment D, I provide a door, N, and in the sides of the compartment, near the top, I form ventilating-windows O, inside of which, near the top of the building A, I place trays P, for receiving the chickens after they are hatched.

To protect the young chickens and keep them warm, I provide a tray, L', which I line with flannel, and above which I suspend pieces of flannel to act as an artificial mother to the chickens.

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

1. In an incubator, the combination, with the ovens, of the frames provided with uprights supporting windlasses, and the trays having their bottoms projecting and guided between said uprights, the said trays being connected to the cords of said windlasses, substantially as shown and described, and for the purpose set forth.

2. In an incubator, the combination of the building A, divided by the partition B into compartments C D, the ovens F, partly supported by the partition B and extending into the compartment C, the slatted partition E, dividing the compartment C, and means for closing the mouths of the ovens F, substantially as herein shown and described.

3. In an incubator, the combination, with the compartment inclosure or building, of the ovens disposed in one compartment-chamber of the inclosure or building, and the chicken-receiving trays arranged in the other compartment-chamber of said inclosure or building and having one of their ends arranged opposite ventilating-openings in the latter, substantially as and for the purpose set forth.

WILLIAM MILLER.

Witnesses:

SAMUEL M. RISHER,
PRISCILLA RISHER.