

No. 792,391.

PATENTED JUNE 13, 1905.

F. BORNE.
EGG TRAY FOR INCUBATORS.
APPLICATION FILED JAN. 31, 1905.

FIG. 1.

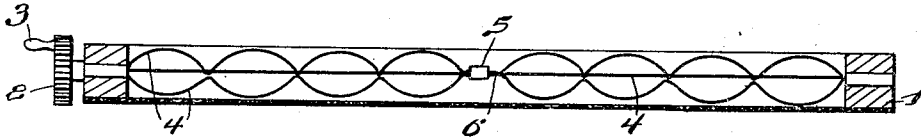


FIG. 2.

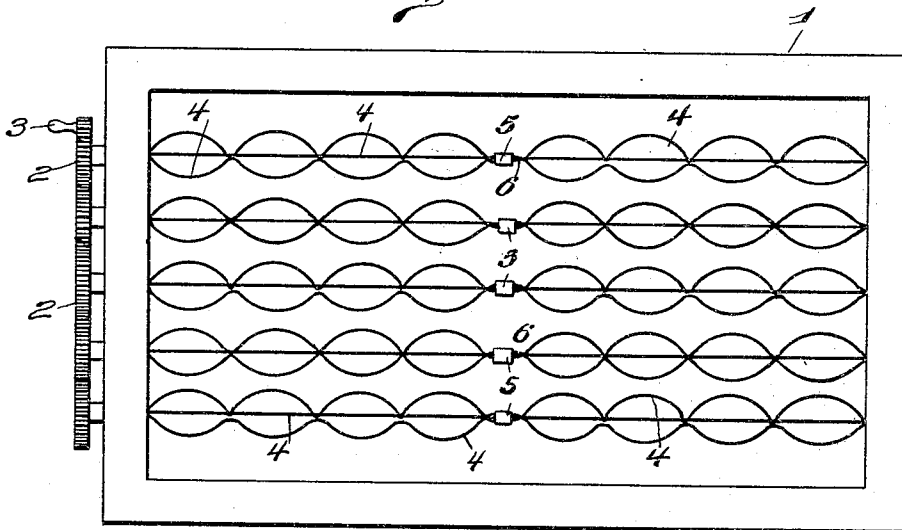
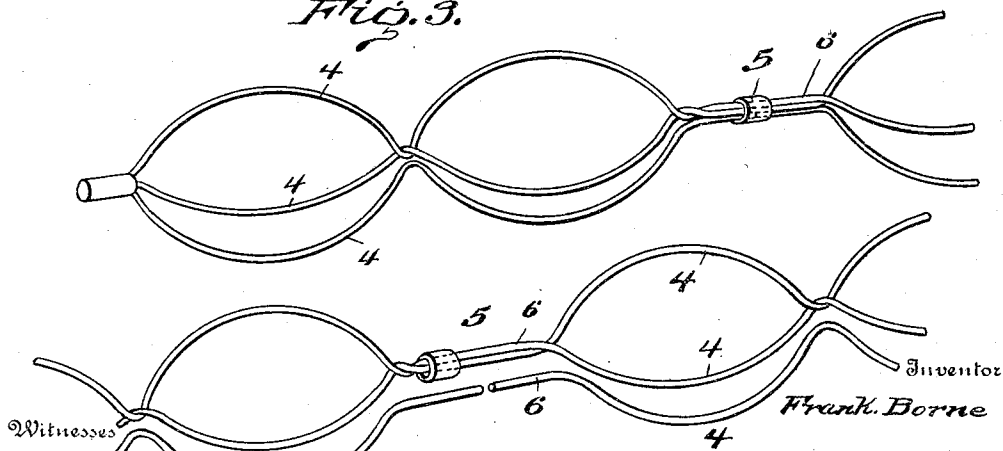


FIG. 3.



Witnesses

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FIG. 4.

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UNITED STATES PATENT OFFICE.

FRANK BORNE, OF DESOTO, MISSOURI.

EGG-TRAY FOR INCUBATORS.

SPECIFICATION forming part of Letters Patent No. 792,391, dated June 13, 1905.

Application filed January 31, 1905. Serial No. 243,532.

To all whom it may concern:

Be it known that I, FRANK BORNE, a citizen of the United States, residing at Desoto, in the county of Jefferson and State of Missouri, have invented certain new and useful Improvements in Egg-Trays for Incubators, of which the following is a specification.

The purpose of this invention is to provide a tray of novel formation especially designed for supporting eggs during the process of incubation. As is well known, it is imperative that the eggs be changed or shifted periodically and inspected, so as to remove any that may have become spoiled.

This invention provides a tray which may be safely handled to facilitate inspection of all the eggs carried thereby without necessitating touching the same with the hands or removing them from the tray and at the same time will enable the eggs to be turned when required to change their relative position.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a tray embodying the invention. Fig. 2 is a top plan view thereof. Fig. 3 is a detail perspective view of a portion of one of the egg-holders. Fig. 4 is a detail perspective view of the parts shown in Fig. 3, one of the holder elements being released.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In its organization the tray comprises a frame 1 and a series of egg-holders mounted in the frame for rotation. The journals of the egg-holders are extended at one end and provided with gear-wheels 2, which are in

meshing relation, whereby rotation imparted to one of the gear-wheels will cause a corresponding movement of the series, with the result that all of the egg-holders receive a synchronous movement, so as to shift the relative position of the eggs when required. For convenience of rotation a handle 3 is fitted to one of the gear-wheels and may be removable so as not to be in the way or occupy valuable space.

The egg-holders are of like formation, each consisting of a plurality of members so arranged as to embrace the sides of the eggs and prevent their displacement during handling of the trays or rotation of the holders. In the preferable construction each egg-holder is formed of a plurality of members 4, usually three in number, arranged equidistant. Two of the members are relatively fixed, whereas the third member is movable to admit of placing the eggs in position. The holder members are preferably formed of wire and are crimped, so as to form a series of cells or pockets to hold the eggs separated and retain them in proper position. The outer extremities of the holder members are merged or connected in a manner to form journals which obtain bearings in the end bars of the frame 1. The relatively fixed members are interlocked at points between the crimps, as indicated most clearly in Figs. 3 and 4. The wires are comparatively light, so as to cover a minimum amount of the shell, whereby provision is had for ready escape of the chicks at the end of the hatching period and whereby heat and pure air may have access to every portion of the eggs. The movable holder member is preferably separated at a point intermediate the length of the holder, the contiguous ends being secured to each other and to the remaining members of the holder by means of a slide or cuff 5 or like fastener. At the point corresponding to the separation of the movable holder member the elements come together and form a neck portion 6, upon which the slide or cuff 5 is mounted. When it is required to liberate the movable holder member, the slide 5 is moved toward one end of the neck portion 6, so as to clear the joint between the separable ends of the movable

holder member, thereby releasing a section of said member. The cuff is now shifted to the opposite end of the part 6, thereby releasing the other section of the movable holder member. After the eggs have been placed in position the sections of the movable holder member are moved inward, so as to lightly clamp the eggs, and are held in place by proper manipulation of the slide or cuff 5 in a manner herein stated.

From the foregoing it will be observed that a tray constructed in accordance with this invention is comparatively light and when filled with eggs may be handled without fear of displacing any of the eggs, thereby admitting of candling or otherwise inspecting the eggs to determine their condition, while at the same time provision is had for turning the eggs at stated periods to shift their position. Having thus described the invention, what is claimed as new is—

1. An egg-tray for incubators provided with egg-holders, each holder consisting of a number of complementary members of pliable material grouped about a central line and bent to provide corresponding crimps in their length to form a plurality of cells in longitudinal alinement which embrace and hold the eggs against displacement.

2. An egg-tray for incubators provided with egg-holders, each holder consisting of a number of complementary members grouped about a central line and having corresponding crimps in their length to form a plurality of cells in longitudinal alinement, and means for joining the members at the crimps to hold them in place.

3. In an egg-tray for incubators, an egg-

holder composed of a plurality of similarly-crimped elements which unitedly form egg cells or pockets, some of the elements being interlocked intermediate of the crimps and another of the elements being removable to admit of placing the eggs in position, and means for securing the movable element to confine the eggs and prevent their casual displacement.

4. In an egg-tray for incubators, the combination of a frame, a series of egg-holders mounted in the frame for rotation, and means for turning the egg-holders to shift the position of the eggs, said egg-holders consisting of a plurality of members similarly crimped to form a plurality of cells or pockets.

5. In an egg-tray for incubators, the combination of a frame, egg-holders mounted in the frame for rotation, means for turning the egg-holders, each of the egg-holders being formed of a plurality of members similarly crimped to form egg cells or pockets, and portions of said members being brought together to form journals, substantially as set forth.

6. In an egg-tray for incubators, an egg-holder comprising a plurality of members arranged to embrace the eggs and having similar crimps to form cells or pockets, one of the members being movable to admit of placing the eggs in position, and means for securing the movable member to retain the eggs against casual displacement, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK BORNE. [L. s.]

Witnesses:

T. H. YEAGER,
GEORGE G. WATT.