J. H. McELROY.

LAYING NEST.

APPLICATION FILED OCT. 8, 1910.

1,014,316.

Patented Jan. 9, 1912.

3 SHEETS—SHEET 1.

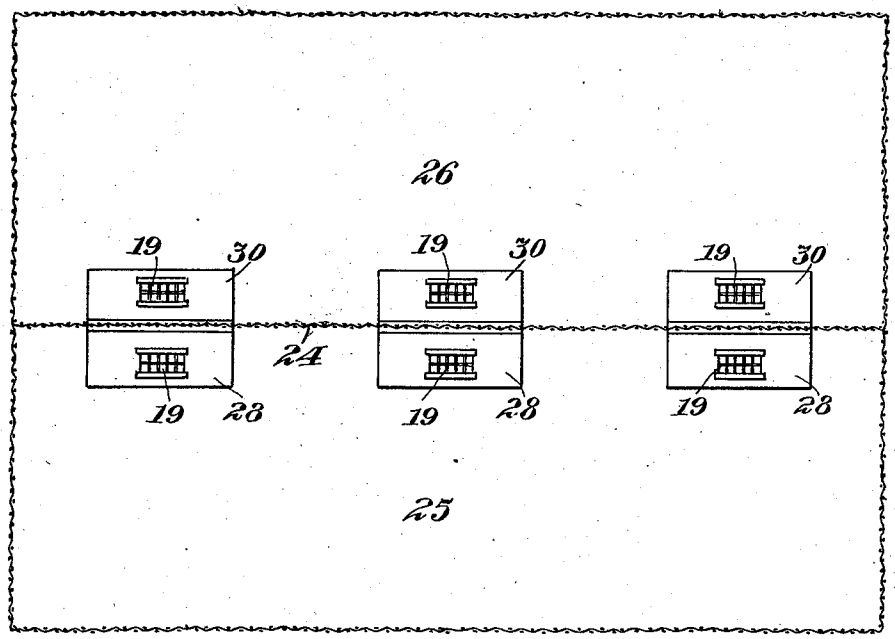

Fig. 1.

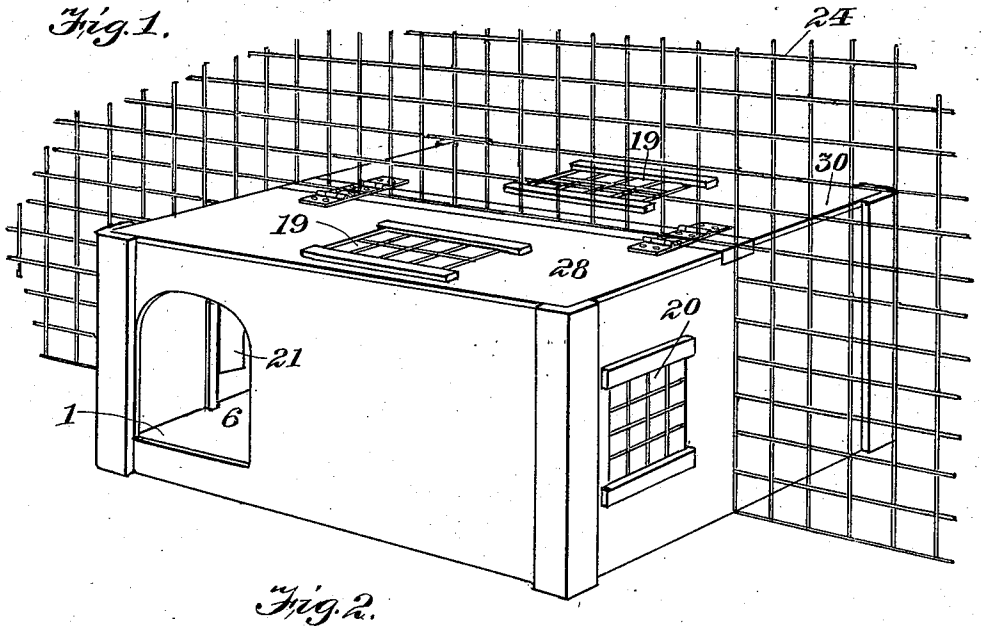

Fig. 2.

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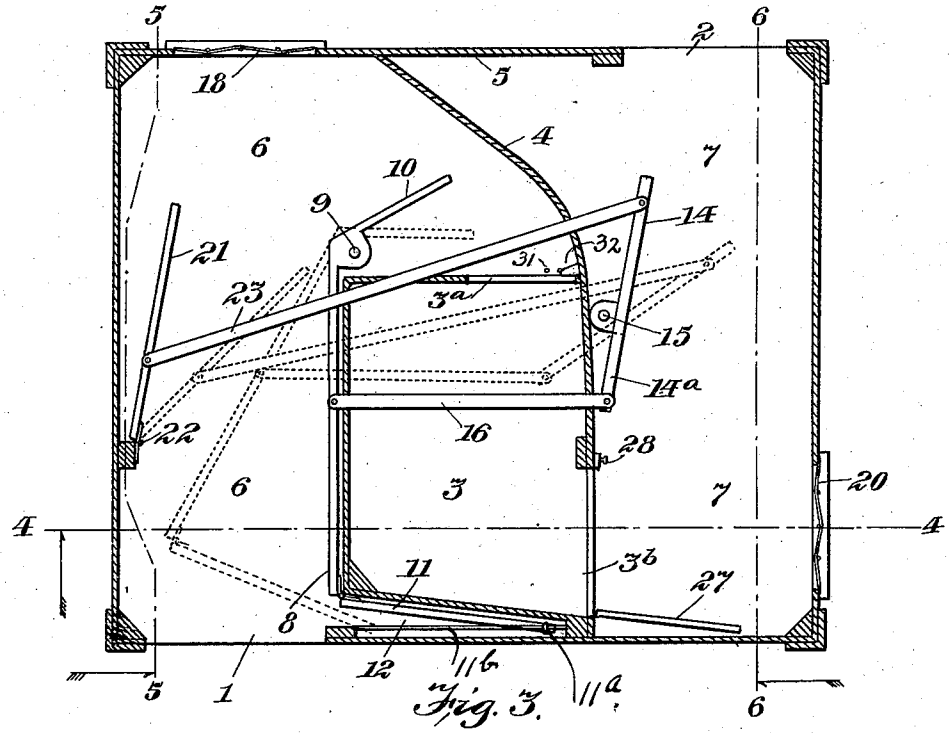

Fig. 3.

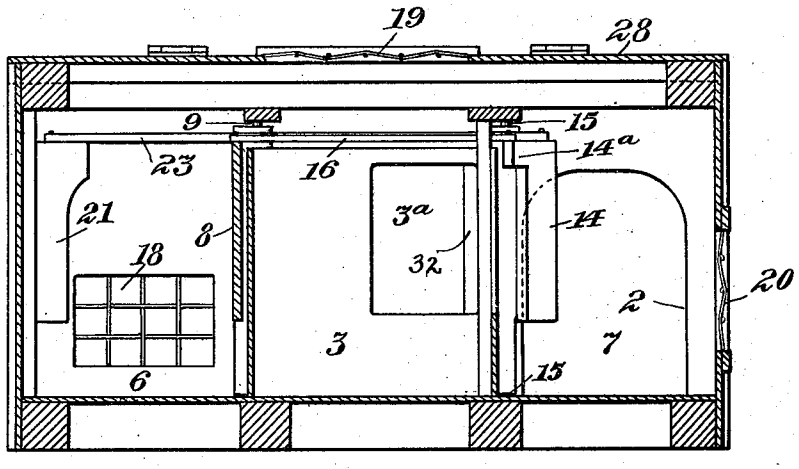

Fig. 4.

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3 SHEETS—SHEET 3.

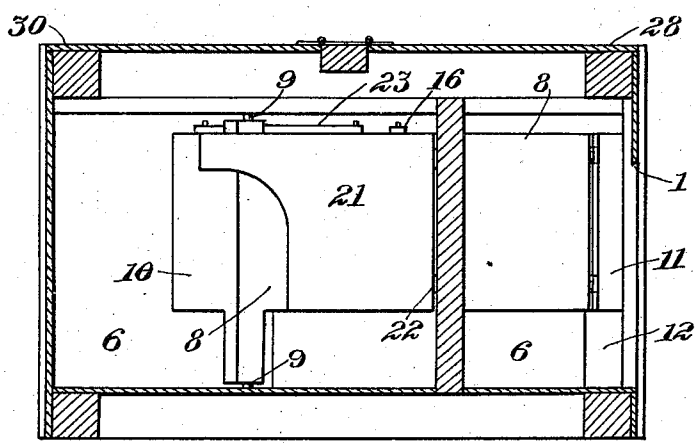

Fig. 5.

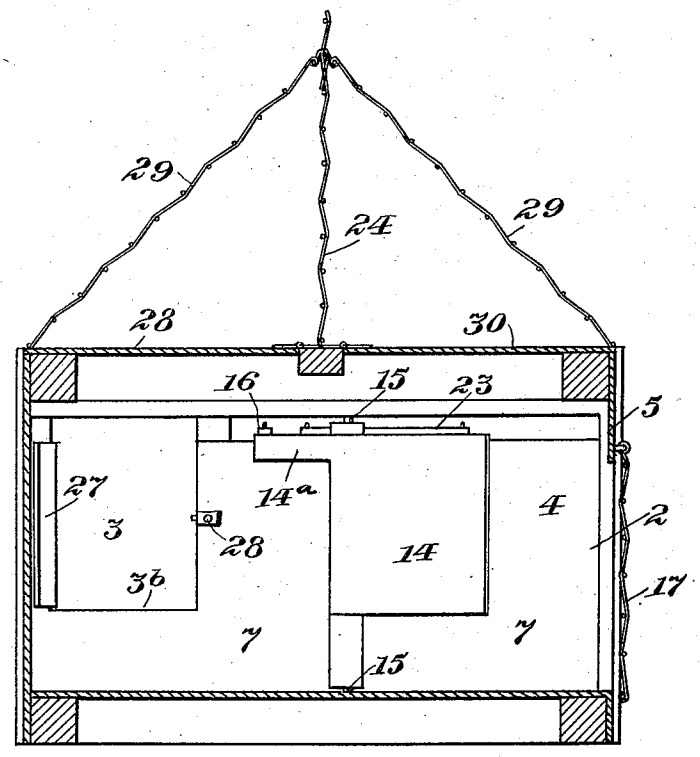

Fig. 6.

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UNITED STATES PATENT OFFICE.

JAMES H. McELROY, OF MIDDLETOWN, NEW YORK.

LAYING-NEST.

1,014,316. Specification of Letters Patent. Patented Jan. 9, 1912.

Application filed October 8, 1910. Serial No. 585,908.

To all whom it may concern:

Be it known that I, JAMES H. McELROY, a citizen of the United States, residing at Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Laying-Nests, of which the following is a specification.

My present invention relates to a nest and accessory devices for laying hens or other birds or fowl.

An important object thereof is that it permits one to know which of the hens are laying and which are not. It permits this to be done with all possible ease and with minimum attention on the part of the man in charge. This is in contradistinction to trap-nesting with the constant time and attention that such method requires, when resorted to for the purpose of discovering the lazy layers. However, the nest of my present invention can also be used as a trap-nest as will be hereafter pointed out, but such use will only be desirable when special details are desired to be known such as the individual character of the eggs laid by the various hens. These and other advantages will appear to those skilled in the art from an understanding of the following description in connection with the annexed drawings.

In the drawings, which show only one of the forms which my invention may take, Figure 1 is a top plan view with a plurality of nests within my invention shown in use in a specially devised inclosure; Fig. 2 shows in perspective and on a larger scale one of the nests in connection with a portion of the separating fence of the inclosure of Fig. 1; Fig. 3 is a horizontal section, partly in plan, of one of the nests of Fig. 1 on a larger scale; Fig. 4 is a vertical section on the line 4—4 in Fig. 3, looking in the direction of the arrow; Fig. 5 is a vertical section on the line 5—5 in Fig. 3 looking in the direction of the arrow; and Fig. 6 is a vertical section on the line 6—6 in Fig. 3 looking in the direction of the arrow, said figure additionally showing the wire partition 24 and the wire shields 29 in end view.

I will now describe the devices of the drawings, reserving it to the claims to point out the novel features and to define the scope of the invention, it being understood that the claims will be given due range of equivalents. In the first instance, I will describe the nest proper, and will afterward show how it may be used in connection with a specially arranged inclosure.

The particular laying nest shown consists of a box having an entrance opening 1 at the end of one side and an exit opening 2 at the opposite end of the opposite side. 3 is a laying or nest compartment within the box and has an entrance opening 3^a for the hen to pass into and an exit opening 3^b to pass out. 4 is a partition connecting across from one corner of the nest chamber to the rear side-wall 5 of the box. In short the plan view of Fig. 3 shows a general arrangement of the interior of the box consisting of an entrance passageway 6 leading from the entrance opening 1 back to the rear side wall and thence turning and leading to the entrance opening into the nest chamber. Furthermore, it shows an exit passageway 7 at the other end of the box leading from the exit opening from the nest chamber back to the rear side wall of the box and out through the exit opening 2 therein.

8 is a door controlling the entrance opening 1 and supported in the entrance passageway to swing about a vertical axis 9. This door opens by swinging outwardly relative to the entrance opening of the box and not swinging inwardly, which means that the door when swung inwardly bars the entrance passageway and cannot be opened by a fowl entering the entrance opening of the box and pressing against the door.

10 is a member, in this particular instance rigidly secured to the door 8 at an angle thereto so that it obstructs the entrance passageway 6 when the door is in closed position and is therefore necessarily pressed by the hen as she passes from said passageway into the nest compartment. When this happens said member 10 is moved from the position shown by the full lines to that shown by the dotted lines in Fig. 3 and this has the effect of operating the door 8 into its closed position (see the dotted lines in Fig. 3). In short, the hen in entering the nest compartment closes the door 8 behind her and prevents another fowl from entering until such time as she makes her exit as hereinafter described. To make this closing of the entrance opening of the box even more secure, although it is not an essential feature, but merely desirable, I have shown

a transversely extending door-leaf 11 hinged to the front end of the main door 8 so that when the main door is carried into closed position, it carries the leaf into the position shown by the dotted lines in Fig. 3, and still more effectual closes the entrance. Reversely, on the opening of the main door this leaf is received in a pocket 12 formed between the front wall of the box and the adjacent wall of the nest chamber. The top of the leaf 11 has an eye 11^a sliding along a supporting wire 11^b.

14 is a door or wicket in the exit passageway 7 swinging about a vertical axis 15 and having operative connection with the main door 8 so that as the hen leaves the nest chamber and makes her exit from the box by way of the exit passageway, she presses against this wicket and operates the main door from its then closed position into open position, thereby making the nest chamber accessible for the use of another hen. The actual connection between this wicket 14 and the main door consists of a link 16 connecting the middle of the top portion of the main door with a rear extension or arm 14^a from the wicket. The arrangement is such that the wicket is thereby placed in obstructing position across the exit passageway when the main door 8 is in its closed position, whereas said wicket when pressed out of obstructing position moves the main door into open position by means of the described connection.

The exit opening 2 from the box is controlled by a flap-door 17 hinged to the top of the opening. This door can swing outwardly but not inwardly. Thus the hen, as she leaves the box by the exit opening, does so by pushing against this flap-door but having once passed, the door swings down into place and she cannot return.

Means is provided to induce or lead the hen to pass continuously in forward direction through the entrance passageway 6 into the nest chamber 3 and thence to make her exit by way of the exit passageway 7; and to induce her not to attempt to make her exit from the nest chamber by way of the entrance passageway. The means for accomplishing this depends upon the discovery that the tendency of the fowl is to follow the light. Accordingly, I have placed a light opening 18 at the far end of the entrance passageway and a light opening 19 in the top or lid of the nest chamber. This naturally leads the fowl into the nest chamber. Then I have placed a light opening 20 at the near end of the exit passageway directly opposite the exit opening from the nest. This gives greater light in this direction and naturally leads the fowl into the exit passageway after laying her egg, rather than into the entrance passageway which on account of bend therein is relatively much darker where it connects with the nest chamber. Finally, there is a light opening at the exit 2 from the box accomplished in the particular devices of the drawings by making the trap-door of wire netting. In addition to these inducing means tending to lead the fowl in the right direction, I have provided a safeguard which prevents the fowl from making her exit by way of the entrance passageway even although she insists upon doing so. This may be accomplished in a variety of ways. That shown consists of a door 21 in the entrance passageway hinged to swing about a vertical axis 22, said door swinging inwardly to open and outwardly to close, relative to the entrance opening 1 in the box. This auxiliary door 21 is operatively connected by a link 23 with the forward end of the leaf 14. The result of this connection, together with the already described connection 16 between said leaf and the main door 8 is to operate the auxiliary door 21 into closed position whenever the main door is closed. In other words, the hen, as she presses the member 10 (as already described) in passing from the entrance passageway into the nest compartment, not only closes the main door 8, but also closes the auxiliary door 21, the then position of the doors being indicated by the dotted lines in Fig. 2. Should now the hen attempt to leave the nest in the wrong manner by way of the entrance passageway, she cannot get past the auxiliary door because it cannot be opened outwardly, that is, by pressure directed toward the entrance opening 1 of the box. In short, she will be obliged to turn around and reënter the nest chamber and make her exit, if at all, in the proper manner by way of the exit passageway 7. Without this auxiliary door or some equivalent means, it will be apparent that this same hen pressing outwardly against the main door 8 could have opened said door and gotten out of the box in the wrong manner by way of the entrance opening 1. Thus, it will be seen that the described nest is a means of preventing any hen that has entered the nest chamber from finding her way out except through the exit opening of the box.

I utilize the nest preferably as follows: I run a wire partition or separating fence 24 through the structure to separate it into two inclosures, a general or main inclosure 25 for all the fowl, and an adjacent inclosure 26 to receive only the hens that have laid. I locate the nest, or a plurality of them, as shown, in suitable openings in this separating fence or partition with the entrance openings 1 of the nests in communication with the general or main inclosure 25 and with the exit openings 2 of the nests in communication with the inclosure 26 for the hens that have laid. This arrangement is

shown by the plan view in Fig. 1 and by the partial perspective view in Fig. 2. Each day is started with all of the fowl in the general inclosure. As the hens lay, they pass by way of the entrance openings into the nest compartments and deposit their eggs, and then make their exit, which they must do, by way of the exit openings into the inclosure for hens that have laid. At the end of the day, note is made of all of the hens that have found their way into this second inclosure, whereupon they are turned back into the general inclosure through a suitable door in the separating partition. By studying this data from day to day, exact information is obtained as to the particular hens that are laying and those which are not. It will be noted that this information is obtained without devoting any more time or attention to the matter than making note at the end of the day of the hens in the second inclosure and then turning them back into the general inclosure.

In order that the nest may be used also as a "trap-nest," I provide a hinged door 27 at the exit opening from the nest chamber, together with a latch 28 for locking the door in closed position. To use the nest as a trap-nest, this door 27 is locked and consequently the hen, after she has entered and laid her egg in the nest chamber, cannot escape until released by the operator lifting the lid 28 over the nest chamber. In this way the operator is able to ascertain the kind of egg laid by each hen.

29 designates non-roosting shields preventing the fowl from roosting on top of the lids 28 and 30 of the nest, said shields in the particular form shown consisting of pieces of wire netting which hook onto the partition 24 above the nest and hang down at an incline in contact with the top edges of the nest; and being netting, do not obstruct the light to the nest.

As preferred materials for the construction of the nest, I use wood, fiber, or metal, lined with tar paper.

The nest is adapted to different sized fowls, small and large. Thus, the entrance opening 3^a to the nest chamber is made adjustable in width so that even a small hen cannot get into the nest chamber without contacting with the member 10 to fully operate the door 8 and connected parts. This adjusting means consists of a movable vertically disposed strip 32 having pins projecting from its bottom end which are received into corresponding holes 31 in the bottom of the box, there being a series of said holes to permit the described adjustment in the positioning of the strip. Preferably, too, there will be provided means for securing the upper end of the strip in its various positions of adjustment.

While it is possible that a hen might pass through the aforesaid nest without laying an egg, nevertheless, practically speaking, hens do not enter the nest except to lay their eggs and consequently to all practical intents and purposes the nest of my invention does separate the laying hens from the non-layers.

Having thus described my invention, what I claim is:

1. A device of the character described consisting of a box having a nest compartment, an entrance passageway leading from an entrance opening in the box to the nest compartment, and an exit passageway leading from the nest compartment through an exit opening in the box, a door controlling the entrance opening of the box, said door opening outwardly but not inwardly, a member in connection with said door located in obstructing position in the entrance passageway so as to be pressed by the hen in passing through said passageway into the nest compartment, whereupon said member operates the door from open into closed position, means operatively connected with the aforesaid door and obstructing the exit of the hen from the nest by the exit passageway, said member, when pressed by the hen, operating the door from closed into open position, and means controlling the exit opening of the box, said means permitting the hen to go out through the exit opening in the box, but not to enter.

2. A device of the character described consisting of a box having a nest compartment, an entrance passageway leading from an entrance opening in the box to the nest compartment, and an exit passageway leading from the nest compartment through an exit opening in the box, a door controlling the entrance opening of the box, said door opening outwardly but not inwardly, a member in connection with said door located in obstructing position in the entrance passageway so as to be pressed by the hen in passing through said passageway into the nest compartment, whereupon said member operates the door from open into closed position, means operatively connected with the aforesaid door and obstructing the exit of the hen from the nest by the exit passageway, said member, when pressed by the hen, operating the door from closed into open position, and an auxiliary door controlling the entrance passageway, said door opening inwardly but not outwardly and having operative connection with the first named door which closes it when the first named door is closed and which opens it when the first named door is open.

3. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means controlling

said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest.

4. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means controlling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest, the first of the aforesaid two doors which is encountered by the fowl at the entrance in passing to the nest being the outwardly opening door, and the next encountered door being the one which opens inwardly.

5. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means controlling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest, the first of the aforesaid two doors which is encountered by the fowl at the entrance in passing to the nest being the outwardly opening door, and the next encountered door being the one which opens inwardly, the aforesaid means at the exit opening consisting of a swinging door and links running respectively from opposite sides of the axis about which said door swings to the two doors at the entrance opening to the box.

6. A device of the character described consisting of a box containing a nest-chamber, said box having an entrance passageway leading from an entrance opening through the wall of the box to the nest-chamber, and an exit passageway leading from the nest-chamber out of the box through an exit opening in its wall, door means controlling said entrance which permits the fowl to enter but not to go out thereby, said means comprising two horizontally swinging doors located in and controlling the entrance passageway, the first door encountered from the entrance opening being one which opens only outwardly and the second door being one which opens only inwardly, connecting means between said doors giving them simultaneous operation in closing as well as in opening, and a member operatively connected with the doors, which member normally obstructs the entrance passageway to the nest and which member operates the aforesaid doors into closed position when said member is itself actuated by contact with the passing fowl, and means normally obstructing the exit passageway having operative connection with the aforesaid doors, which means operates them into open position when the fowl contacts with and actuates said obstructing means.

7. A device of the character described consisting of a box containing a nest-chamber, said box having an entrance passageway leading from an entrance opening through the wall of the box to the nest-chamber, and an exit passageway leading from the nest-chamber out of the box through an exit opening in its wall, door means controlling said entrance which permits the fowl to enter but not to go out thereby, said means comprising two horizontally swinging doors located in and controlling the entrance passageway, the first door encountered from the entrance opening being one which opens only outwardly and the second door being one which opens only inwardly, said doors being hinged at opposite sides of said passageway, a member on one of said doors in position to be contacted with by the fowl in entering the nest to actuate said door into closed position, connecting means between said doors giving them concerted action in opening and closing comprising a horizontally swinging

door opening outwardly in the exit passageway and further comprising links connecting this exit door with the aforesaid entrance doors, which links open both of the latter from the opening of the exit door and close the same from the closing of the exit door.

8. A device of the character described consisting of a box for containing the nest, said box having an entrance opening and an exit opening, and door means controlling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest, and a flap door at the exit opening of the box which opens only outwardly.

9. A device of the character described consisting of a box containing a nest-chamber, said box having an entrance passageway leading from an entrance opening through the wall of the box to the nest-chamber, and an exit passageway leading from the nest-chamber out of the box through an exit opening in its wall, door means controlling said entrance which permits the fowl to enter but not to go out thereby, said means comprising two horizontally swinging doors located in and controlling the entrance passageway, the first door encountered from the entrance opening being one which opens only outwardly and the second door being one which opens only inwardly, connecting means between said doors giving them simultaneous operation in closing as well as in opening, and a member operatively connected with the doors, which member normally obstructs the entrance passageway to the nest and which member operates the aforesaid doors into closed position when said member is itself actuated by contact with the passing fowl, and means normally obstructing the exit passageway having operative connection with the aforesaid doors, which means operates them into open position when the fowl contacts with and actuates said obstructing means, and a flap door at the exit opening of the box which opens only outwardly.

10. A device of the character described consisting of a box containing the nest, said box having an entrance opening and an exit opening, and door means controlling said entrance permitting the fowl to enter but not to go out thereby, said means consisting of two swinging doors one opening only outwardly and the other opening only inwardly, connecting means between the doors and a member on one of them which is positioned to contact with the fowl in entering the nest to operate said door into closed position which in turn operates the other door into closed position by means of said connecting means, and means at the exit opening which is operatively connected with said doors to obstruct the exit from the nest when the doors are in their closed position and to open said doors when said means is forced out of its said obstructing position by contact with the fowl in leaving the nest, a transversely extending door-leaf carried by the aforesaid entrance doors to obstruct the entrance-opening to the box and means for guiding said door-leaf.

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

JAMES H. McELROY.

Witnesses:
ALAN C. McDONNELL,
E. W. SCHERR, Jr.