April 28, 1925. 1,535,512

I. N. WAGGONNER

TRAP NEST

Filed May 9, 1922

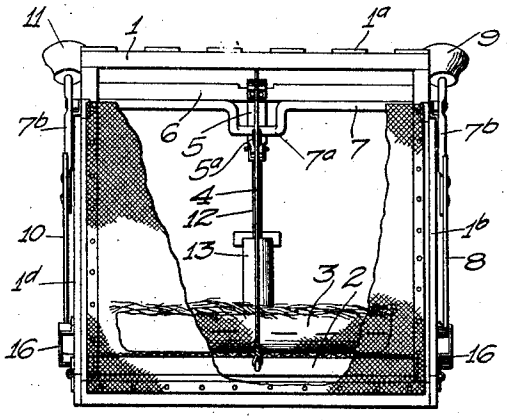


Fig. 2.

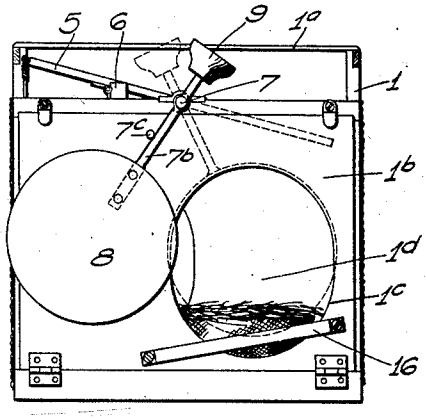


Fig. 1.

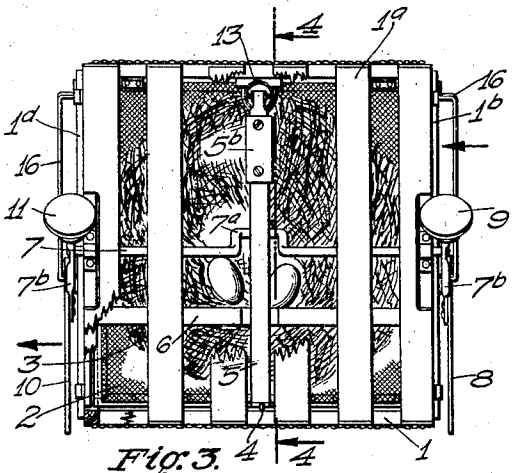


Fig. 3.

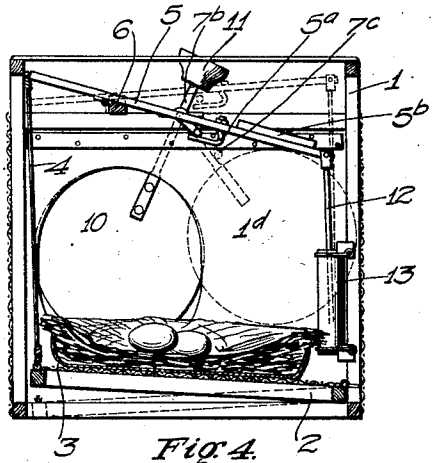


Fig. 4.

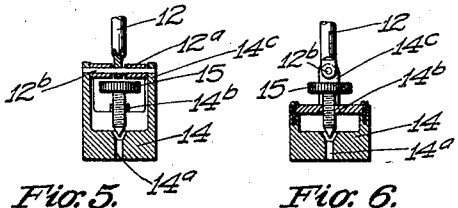


Fig. 5.

Fig. 6.

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UNITED STATES PATENT OFFICE.

ISAAC N. WAGGONNER, OF SAN DIEGO, CALIFORNIA.

TRAP NEST.

Application filed May 9, 1922. Serial No. 559,515.

To all whom it may concern:

Be it known that I, ISAAC N. WAGGONNER, a citizen of the United States, residing at San Diego, in the county of San Diego and State of California, have invented a certain new and useful Trap Nest, of which the following is a specification.

My invention relates to a trap nest for the purpose of selecting laying hens from a group and the objects of my invention are: First, to provide a nest of this class operated by the weight of the hen with a time entrance closure means so that a hen not wanting to lay may get out before the closure is completed; second, to provide such a means in which the time of closing and opening may be adjusted and regulated; third, to provide a nest of this class by the use of which the hen may be permitted to enter on one side of a partition and exit on the other side, thus separating the hens that have laid from those that have not; fourth, to provide a nest of this class in which the entrance door is closed and the exit door opened by the weight of the hen on the nest and the exit door closed and the entrance door opened upon her removal from the nest; fifth, to provide such a nest in which a partial closure of the exit is facilitated; sixth, to provide a novelly constructed trap nest of this class and seventh, to provide a nest of this class which is positive in its action, adjustable, durable, efficient and which will not readily deteriorate or get out of order.

With these and other objects in view as will appear hereinafter my invention consists of certain novel features of construction, combination and arrangement of parts and portions as will be hereinafter described in detail and particularly set forth in the appended claims reference being had to the accompanying drawings and to the characters of reference thereon which form a part of this application in which:

Figure 1 is a front elevational view of my hen's nest with the entrance door open showing the closed position of the doors by dotted lines; Fig. 2 is a side elevational view at a right angle from that of Fig. 1 showing a portion of the screen broken away to facilitate the illustration of a portion of the interior construction; Fig. 3 is a top or plan view of my trap nest showing portions broken away to facilitate the illustration; Fig. 4 is a sectional view through 4—4 of Fig. 3 and showing by dotted lines some of the varying operating positions of the exit door and interior operating mechanism; Fig. 5 is an enlarged detailed sectional view of the plunger and regulating valve for timing and regulating the closure and Fig. 6 is a similar view at a right angle thereto.

Similar characters of reference refer to similar parts and portions throughout the several views of the drawings.

The casing 1, nest support 2, nest member 3, cable 4, lever 5, lever support 6, crank member 7, entrance door 8, weight 9, exit door 10, weight 11, plunger rod 12, cylinder 13, plunger member 14, adjusting screw 15 and door supports 16 constitute the principal parts and portions of my trap nest.

The frame 1 is preferably hollow cube shaped but may be other shapes if desired. It is open at the bottom and provided on the top with slats 1^a. It is provided on the front side with a door 1^b hinged at the bottom and latched at the top which door is provided with a circular opening 1^c which is the entrance opening. The back side is also provided with a similar hinge door 1^d with an opening in the opposite end from the opening in the door 1^b. The opposite sides are provided with wire mesh, being the preferred construction, though they may be slats or solid if desired. Pivotally mounted at the bottom on one side is the nest support 2 upon which is mounted a nest member 3 adapted for the nest. This support 2 is preferably rectangularly shaped and at its middle on its free side is connected the one end of a cable 4 which extends upwardly and connects at its upper end with the one end of the lever 5 which is pivotally mounted on a cross bar 6 intermediate its ends. The other end of said lever 5 is pivotally connected with the plunger rod 12. This lever 5 is provided on its lower side with a clip member 5^a a portion of which is positioned substantially parallel with the lever 5 and spaced some distance therefrom. Positioned between the lever 5 and the parallel portion of the member 5^a is the crank portion 7^a of the crank member 7 and this crank member is journaled at opposite sides on the front and back sides of the frame near the top at the middle substantially in alignment with the support 6. Rigidly secured to the opposite ends of this crank member 7 are arms 7^b. To the arm 7^b on the front side is secured a door mem-

ber 8 and on its opposite end a weight 9 while on the back side on a similar arm 7^b is secured a door 10 and on its opposite end a weight 11. Mounted on the front and back sides are provided stop members 7^c which are adapted to be engaged by the arm 7^b for stopping the movement of the door member when it reaches a certain position in the opening and closing. It will be here noted that these doors are positioned practically in alignment with each other so that when the one door is opened the other one is closed. Reciprocably mounted in the cylinder and pivotally connected to the lower extended end of the plunger rod 12 is a plunger member 14 which is provided with a central hole 14^a therein. The size of said hole is regulated by means of an adjusting screw 15, the one end of which is adapted to engage said hole for regulating the size of the opening or passage way therethrough. This adjusting screw 15 is mounted in threads in a cross bar 14^b. This cross bar is provided with bifurcated lugs 14^c which extend upwardly and between which the hollow bar 12^a is supported by means of a pin 12^b the ends of which extend into said lugs 14^c. This plunger member 14 is practically the same diameter as the interior of the cylinder 13 and this cylinder is provided with a small quantity of oil, preferably castor oil because it is not materially affected by change of temperature like some other oils. The oil is permitted to pass through the opening 15^a regulated by the adjusting screw 15 for regulating the movement of the plunger in the cylinder 13, thus regulating the movement of the lever 5 which in turn regulates the movements of the doors the action being partial vacuum.

A considerable clearance is provided between the member 5^a and the lever 5 for the movement of the crank portion 7^a and the crank member 7 therebetween thus permitting a quick partial closing of the exit door of said trap nest while the closing of the entrance door is slow and gradual. The lever 5 is provided with a weight 5^b to raise the nest after the hen leaves.

It will be noted that the reason for the slow closing of the entrance door is so that if a hen happens to casually go into the nest and not for the purpose of laying and wishes to get out again and does not remain there any length of time it can again pass out through the entrance door. Over the lower edge of these doors when they are in the closed position are provided supports 16 which are adapted to support the lower side of the door when in closed position to prevent them being forced outwardly.

Though I have shown and described a particular construction, combination and arrangement of parts and portions I do not wish to be limited to this particular construction, combination and arrangement but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

It is obvious that with this construction there is provided a trap nest which may be placed in a partition between two pens so that the front door opening communicates with the one pen and the other door opening with the other of said pens; that the hen desiring to lay will pass through the entrance opening 1^c, the door 8 being open as the weight of the nest and support are counterbalanced by the lever weight 5^b and operating mechanisms supporting the door in open position, as shown by solid line in Fig. 1 of the drawings. If the hen is simply a casual observer and not intending to lay it may walk on the nest or stand on the nest for some time, and, because of the time of slow closing of the door caused by the movement of the oil through the opening 14^a, may have sufficient time to pass out through the entrance opening. However, if the hen remains long on the nest the entrance door will gradually close as timed by the passage of oil through the opening 14^a, at the same time the exit door will open so that after the hen has laid it will pass through the exit door and as soon as it leaves the nest and passes through the door there will be a quick movement of the doors, the entrance door to open and the exit door to close for a slight distance caused by the clearance between the portion 7^a and the space between the member 5^a and the lever 5 after which the entrance door as well as the exit door move slowly until the exit door is closed and the entrance door open ready for the next hen to enter said nest. The time for opening and closing the doors may be regulated by the adjusting screw 15 in the plunger member 14 regulating the size of the passage 14^a.

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

1. A trap nest, including a casing with an entrance opening on one side and an exit opening on the opposite side, a nest pivotally mounted in said casing, a lever connected at one end with said nest, a plunger rod pivotally connected with the other end of said lever, a fulcrum across said casing upon which said lever is pivotally mounted intermediate its ends; a plunger pivotally mounted on said plunger rod and a cylinder in which said plunger is reciprocably mounted, a crank shaft mounted across said casing transversely to said lever, the crank portion of which is adapted to engage said lever, a clip member spaced from said lever adapted to engage the other side of said crank portion, arms secured on the opposite ends of said crank member extending in opposite

directions from said crank member, doors secured to the one ends of said arms and weights secured on the opposite ends thereof.

2. A trap nest, including a casing with an entrance opening on one side and an exit opening on the opposite side, a nest pivotally mounted in said casing, a lever connected at one end with said nest, a plunger rod pivotally connected with the other end of said lever, a fulcrum across said casing upon which said lever is pivotally mounted intermediate its ends, a plunger pivotally mounted on said plunger rod and a cylinder in which said plunger is reciprocably mounted, a crank shaft mounted across said casing transversely to said lever, the crank portion of which is adapted to engage said lever, a clip member spaced from said lever adapted to engage the other side of said crank portion, arms secured on the opposite ends of said crank member extending in opposite directions from said crank member, doors secured to the one ends of said arms and weights secured on the opposite ends thereof, means for regulating the movement of said plunger in said cylinder, and stop means for regulating the movement of said door supporting arms.

3. A trap nest, including a casing, doors pivotally mounted on opposite sides of said casing, a hen's nest pivotally mounted in the bottom of said casing and oil, valve and plunger regulated means for regulating and timing the movement of said doors operated by the pivotal movement of said nest.

4. A trap nest, including a casing with offset openings in its front and back sides, a shaft extending across the casing, doors secured to said shaft on opposite sides of said casing adapted to swing edgewise adapted to cover said openings one at a time and means actuated by the weight of the hen on the nest for operating said doors.

In testimony whereof, I have hereunto set my hand at San Diego, California, this 1st day of May, 1922.

ISAAC N. WAGGONNER.