Feb. 3, 1925. 1,525,381

H. P. FALLS

TRAP NEST

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Fig. 1.

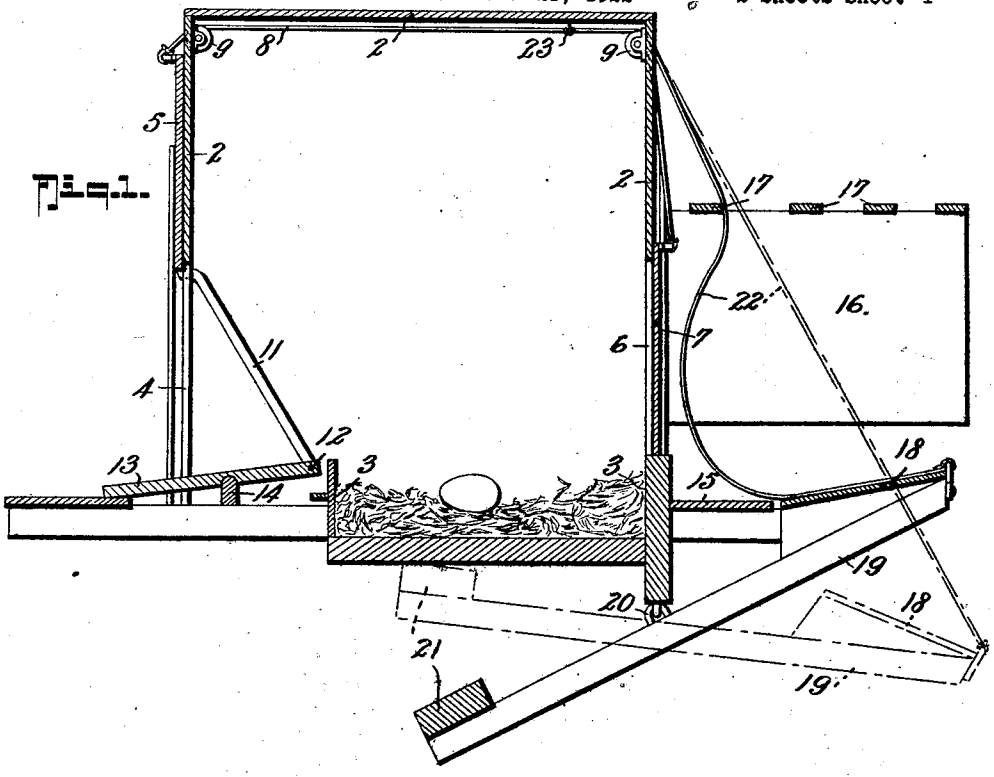
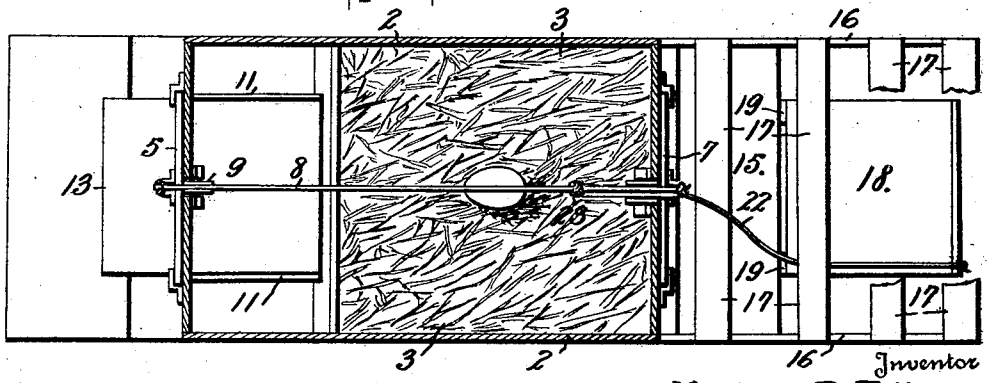


Fig. 2.



Inventor

Herbert P. Falls.

By Fred G. Dieterich & Co

Attorneys

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Fig. 4.

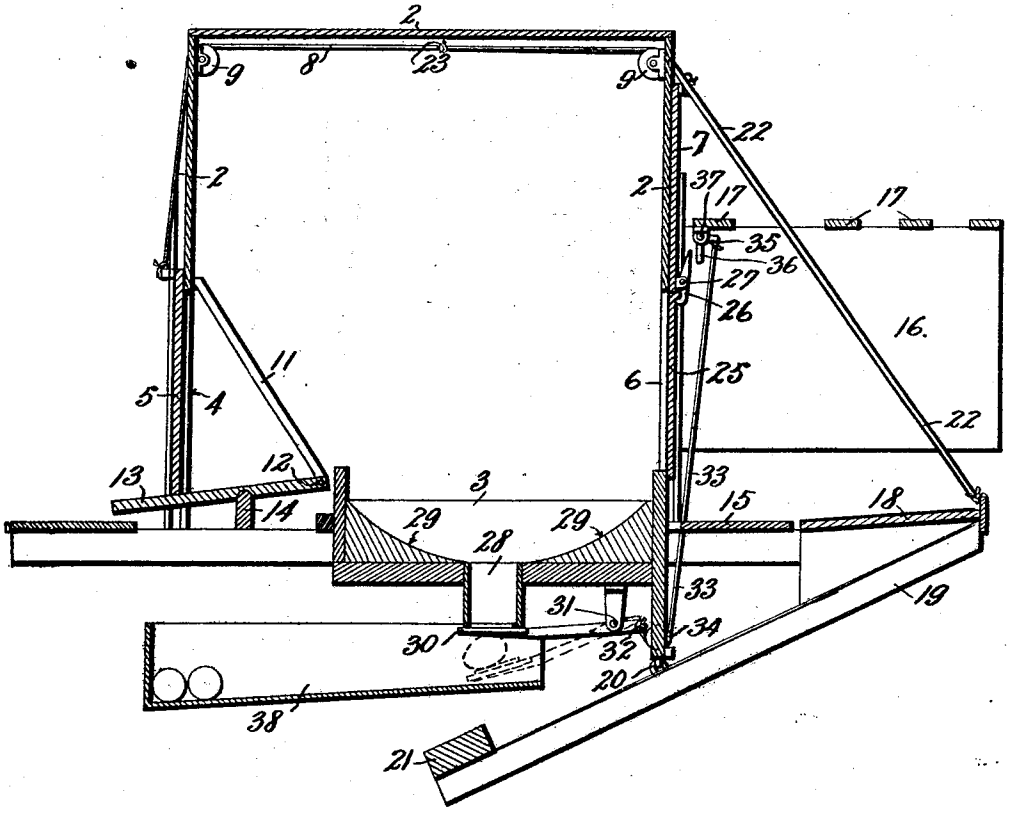
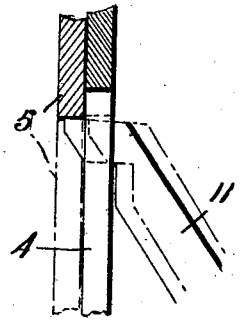


Fig. 5.



Inventor
Herbert P. Falls.

By Fred G. Dieterich & Co.
Attorneys

Patented Feb. 3, 1925. 1,525,381

UNITED STATES PATENT OFFICE.

HERBERT P. FALLS, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

TRAP NEST.

Application filed November 29, 1922. Serial No. 604,012.

To all whom it may concern:

Be it known that I, HERBERT P. FALLS, a citizen of the Dominion of Canada, residing at Vancouver, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Trap Nests, of which the following is a specification.

This invention relates to a trap nest for domestic fowl and is designed to afford a laying hen the desired relief from interference by other hens, while laying.

The invention is particularly described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Fig. 1 is a longitudinal section of the nest through the entrance and exit doors, and

Fig. 2 is a sectional plan of the same.

Fig. 3 is an enlarged detail of the support which maintains the entrance door in the open position.

Fig. 4 illustrates a supplementary feature designed to maintain closure of the exit aperture until the occupant of the nest box has laid an egg.

In these drawings 2 represents the box or coop in which the nest 3 is located. This nest box is provided with an entrance 4 closable with a door 5 vertically slidable in guideways, and on the opposite side of the nest 3 is the exit opening 6 closable with a door 7 vertically slidable in guideways. These doors 5 and 7 are connected together by a flexible line 8 passing over sheaves or pulleys 9 in the upper part of the nest box, the connection being such that one door is open while the other is shut, but the weight of the door 5 preponderates and tends to close the doorway 4.

The door 5 is normally retained in the open position by a strut 11 pin-connected at 12 to the inner end of a tread board 13, extending through the opening 4 and tiltable about a fulcrum 14. The upper end of the strut 11 is notched to rest on the underside of an aperture through which it projects in the path of the door 5 to hold it open.

This retaining end of 11 is withdrawn when a bird passes through the entrance 4 and reaches the inner end of the tread board 13, when the weight of the board tilts that end of the board and permits the door 5 to fall, under its preponderating weight, and close the opening. Simultaneously the door 7 of the exit opening 6 is raised as the door 5 falls.

When the hen has laid its egg in the nest 3, it passes out through the open exit 6, the door of which was opened when the entrance door fell.

Outside the exit opening 6 is a platform 15 with a side board 16 on each side projecting beyond it, and spars 17 across between the side boards and beyond the platform 15. Within the protection of the side boards 16 is a tread board 18 extending across between the outer ends of levers 19, which are pivotally connected at 20 to the underside of the nest box and provided on the other end with a counterweight 21 that will normally maintain the tread board 18 at the approximate level of the platform 15, but that will be depressed by the weight of the hen on its outer end when passing out. The side boards 16 and top spars 17 prevent the bird from flying to either side or upward and require it to pass over the tread board 18.

The outer end of this tread board 18 is connected by a flexible line 22 at 23 to the line 8 by which the doors 5 and 7 are connected, so that the weight of the bird as it passes out, overcomes the preponderating weight of the entrance door 5 and raises that door to the open position where it latches and simultaneously lowers the exit door 7, so that the nest is in readiness for another bird.

The advantages of the nest will be apparent to a poultry fancier or breeder. The nests, when unoccupied, stand open for any bird wishing to lay, but as soon as occupied the entrance door closes and prevents interference from that side while the exit door is opened for the bird to pass out to the other side after laying. If the nest is placed between two otherwise separated enclosures, the birds that have laid their eggs, are separated from those that have not.

In the operation of the nest as so far described, a hen may enter the nest and, without laying, may pass through the nest box and find its way among the hens which are supposed to have laid, and as it is desirable that the fancier know what hens have laid and what have not, the supplementary device illustrated in Fig. 4 is provided to prevent a hen passing out unless she has laid an egg in the nest.

This device comprises a supplementary door 25 which is releasably connected to the lower edge of the exit door 7, the connection being made by means of a hook latch 26 pivoted at 27 to the lower edge of the door 7 and is produced upward beyond the pivot. In the centre of the nest 3 is a pocket or depression 28 toward which the bottom of the nest is sloped as at 29. The bottom of this pocket 28 is closed by a drop door 30 pivoted at 31, and on the opposite side of the pivot is connected at 32 to a flexible line 33, which passes around a sheave 34 and is connected at 35 to a bell crank lever 36 pivoted at 37 to one of the spars 17 above the exit aperture 6. The other end of this bell crank lever 36 is approximate the upper end of the hook latch 26 when the door 7 is raised.

With this arangement, although a hen, on entering the nest box, may effect closure of the entrance door 5 and will raise the exit door 7, the supplementary door 25 is drawn up with the door 7 and maintains closure of the exit aperture 6. The hen, unless she lays an egg, is, therefore, retained in the nest box until the owner effects its release; but if the hen is a laying hen and deposits an egg in the nest the egg will roll into the pocket 28 and its weight, falling on the drop door 30, will move that end of the door downward and the other end upward, and will, therefore, pull down the end 35 of the bell crank lever 36 to project the other end of that lever into engagement with the upwardly projecting end of the latch 26 and withdraw the latch and permit the supplementary door 25 to fall open and permit the hen to pass through the exit aperture 6.

As before, when the weight of the out-passing hen acts on the tread board 18, the exit door 7 is drawn down and automatically latches itself again to the supplementary door 25.

The eggs, which pass through the drop door 30, will be delivered into a drawer 38 beneath, the bottom of which is sloped away from the pocket.

A distinct advantage lies in the connection of the doors together by the line 8 over the sheaves 9, whereby they are checked in their downward and upward movement, and do not alarm the hen about to lay.

Having now particularly described my invention, I hereby declare that what I claim as new and desire to be protected in by Letters Patent, is:

1. A trap nest, comprising the combination with a nest box having an entrance and an exit aperture, means including slidable doors for closing the apertures, said means normally tending to close the entrance aperture, means for retaining the entrance aperture open, means in the entrance aperture and operative by the passage of a fowl through it for releasing the retaining means and permitting the closure of that aperture, and means operative by passage of a fowl through the exit aperture for closing that aperture and thereby opening the entrance aperture.

2. A trap nest, comprising the combination with a nest box having an entrance and an exit aperture, a slidable door closing each aperture, the door of the entrance aperture being heavier than that of the closing aperture, means for connecting the entrance and exit doors together that one is always in its open position when the other is in its closed position, means for retaining the entrance door open, means operative by the entrance of a fowl for withdrawing the retaining means and permitting the entrance door to close, whereby the exit door is simultaneously opened, and means operative by the passage of the bird through the exit door for closing the exit door and opening the entrance door.

3. A trap nest, comprising the combination with a nest box having an entrance and an exit aperture, means including slidable doors for closing the apertures, said means normally tending to close the entrance aperture, means for retaining the entrance aperture open, means operative by the entrance of a fowl for withdrawing the support and allowing the entrance door to close and open the exit door, and means operative by the passage of the bird through the exit door for closing the exit door and opening the entrance door.

4. A trap nest comprising the combination with a nest box having an entrance aperture and an exit aperture, means for closing said apertures, said means normally tending to close the entrance aperture, means for normally maintaining said closing means in position to open said entrance aperture and close said exit aperture, means operative by passage of the fowl through the entrance for releasing said maintaining means to permit the entrance aperture to be closed, means operative by deposit of an egg in the nest for effecting an opening of the exit aperture, and means beyond the exit aperture operative by departure of the fowl from the nest box for effecting a closing of the exit aperture and a simultaneous opening of the entrance aperture.

5. A trap nest, comprising the combination with a nest box having an entrance and an exit aperture, means including slidable doors for closing the apertures, said means normally closing the entrance aperture, means for retaining the entrance aperture open against the closing tendency, means in the entrance aperture and operative by the passage of a fowl through it for releasing the retaining means and permitting the entrance door to close, means operative by deposit of an egg in the nest for opening

the door of the exit aperture, and means operative by departure of the fowl from the exit for closing the door of that aperture and opening the entrance door.

6. A trap nest, comprising the combination with a nest box having an entrance and an exit aperture, a slidable door closing each aperture, means for connecting the doors together that one door is open when the other is closed, the entrance door normally being closed, a supplementary door releasably connected to the lower edge of the exit door, means holding the entrance door open, means operative by passage of a fowl into the nest box for withdrawing said holding means and permitting the entrance door to close and to raise the exit door and bring the supplementary exit door opposite the exit aperture, an aperture in the bottom of the nest box, a drop door closing the aperture, and means cooperative with movement of the drop door for releasing the supplementary exit closing door and permitting it to fall and open the exit.

In testimony whereof I affix my signature.

HERBERT P. FALLS.